THE UNDER SECRETARY OF DEFENSE
3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

ACQUISITION,
TECHNOLOGY
AND LOGISTICS

APR 21 2004

MEMORANDUM FOR INFRASTRUCTURE STEERING GROUP MEMBERS

SUBJECT: Final Review of the JCSG Military Value Analysis Reports

At our April 2, 2004, meeting the ISG agreed that the BRAC Deputy Assistant Secretaries (DASs) would, by April 16, 2004, propose resolution of those cross-cutting military value issues not resolved at the April 2, 2004, ISG meeting (surge, outyear funding, and qualifications of on-site contractors) and all the issues specific to the Joint Cross-Service Groups' (JCSGs) military value reports. We also agreed that we would provide the reports and the proposed DAS resolution for formal coordination.

The BRAC DASs held meetings with JCSG representatives over the past two weeks to discuss the issues. These meetings resulted in a series of draft memoranda to each JCSG Chair that reflect the DASs' proposed resolution of issues regarding each report. The draft memoranda amend the attached reports and state that ISG approval of the report is subject to the incorporation of the comments contained in the memoranda. The memoranda request that each JCSG provide a final copy of the report that reflects the incorporation of the comments in the memoranda. There will be no further review of the reports after this last step. Resolving inconsistencies in the questions will be handled through the data standardization process.

Please provide your coordination on the reports and the draft memoranda which will amend them no later than May 5, 2004. If you have any questions, please contact Mr. Pete Potochney, Director, Base Realignment and Closure at (703) 614-5356.

Michael W. Wynne
Acting USD (Acquisition, Technology & Logistics)
Chairman, Infrastructure Steering Group

cc: MilDep BRAC DASs
JCSG Chairs

DRAFT

MEMORANDUM FOR CHAIRMAN, EDUCATION AND TRAINING JOINT CROSS-SERVICE GROUP

SUBJECT: Education and Training Joint Cross-Service Group (E&T JCSG) Report on Military Value Analysis

The Infrastructure Steering Group (ISG) has reviewed the E&T JCSG Military Value report submitted to it on March 25, 2004. The ISG appreciates the dedicated effort and military judgment that your members, as the experts in the field, put into revising this report in response to our initial comments. The ISG is also pleased that E&T JCSG Chair and the Technical JCSG Chair have signed a Memorandum of Agreement to codify coordination between the two groups in relation to open-air ranges. As part of the process to review issues raised by the Military Departments, the ISG tasked the BRAC Deputy Assistant Secretaries (DASs) to develop recommendations for resolving issues with the military value reports. The BRAC DASs met to review the issues pertaining to your JCSG. Representatives from the Education and Training JCSG participated in the discussion with the DASs to ensure the issues were well understood and potential solutions were implementable and reasonable. Subject to incorporation of the comments expressed herein, the ISG approves your report as the basis for your military value analysis.

In its report, the E&T JCSG Range Subgroup factors the cost of training on ranges under selection criteria four with supporting rationale for the weights assigned. The ISG agrees with this approach for military value where range functions are currently being performed. However, during scenario development the Range Subgroup will need to take into consideration cost implications associated with conducting training on ranges that are not mission funded as training ranges before developing recommendations for realignment of the function.

Please revise the Flight Training section of the report to distinguish between those questions that were already asked in Data Call 1 and new questions.

The graduate level flight training function which includes Joint Strike Fighter (JSF) and Unmanned Air Vehicles (UAV) remains assigned to the E&T JCSG Flight Training Subgroup and should be evaluated for military value as described in your plan. The ISG will be considering this topic in the near future. Should that discussion require changes to your report, you will be so notified.

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After incorporation of the directed revisions above, please provide a final copy of your Military Value Analysis Report to the OSD BRAC Office. If you have any questions regarding these comments, please contact Peter Potochney, Director, Base Realignment and Closure, at 614-5356.

Michael W. Wynne
Acting USD (Acquisition, Technology & Logistics)
Chairman, Infrastructure Steering Group

cc: Infrastructure Steering Group Members
MilDep BRAC DASs

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EDUCATION AND TRAINING JOINT CROSS-SERVICE GROUP

MILITARY VALUE ANALYSIS REPORT

TO THE INFRASTRUCTURE STEERING GROUP

25 March 2003

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EXECUTIVE SUMMARY

Military Value Analysis Report

The Education and Training Joint Cross Service Group (E&T JCSG) has four subgroups: Flight Training (FT), Professional Development Education (PDE), Specialized Skill Training (SST), and Ranges & Collective Training Capability. Each E&T JCSG subgroup focused Military Value Analysis calculations on the existing physical plants' capability to perform specific functions based upon DoD selection criteria, reference Federal Register published February 12, 2004. Each subgroup reviewed a distinct functional area (e.g. category of institutional training) within the purview of the E&T JCSG. The E&T JCSG was designated to evaluate AC/RC institutions, SOF schools, defense agencies' schools, and civilian institutions, with the exceptions of healthcare and intelligence professionals' education and training. Also excluded from E&T JCSG analysis were those categories/sub-categories of institutional education and training to be evaluated by the Services, e.g. recruit training, officer acquisition training, junior officer PME, enlisted leadership programs, and Army One Station Unit Training.

E&T JCSG "schools" functions encompass designated Flight Training, Specialized Skill Training, and professional education programs (intermediate and senior PME, Graduate Education, and Other Full-Time Education Programs) regardless of Service component, agency or curricula content. The Ranges and Collective Training Capability Subgroup was designated to evaluate training ranges, test and evaluation ranges, and simulation centers. Military Value Analysis for each function within the purview of the E&T JCSG is described separately in subsequent sections of this report.

Assumptions: Key considerations that guide the E&T JCSG approach to Military Value Analysis:

1. The primary objective of military education and training is to provide operational forces with sufficient numbers of personnel who are educated and trained to assume duty responsibilities in both Active and Reserve military units. The extent to which DoD education and training establishments provide military members the knowledge and skills they need to perform their operational/wartime missions is one of the cornerstones of readiness.

2. The following guiding principles were developed by the Education and Training Joint Cross Service Group and are inherent to subgroup deliberations:
    - Advance jointness
    - Achieve synergy
    - Capitalize on technology
    - Exploit best practices
    - Minimize redundancy

3. All BRAC data must be certified. Amplification guidance for data call questions will be specified as appropriate to direct installations to use certifiable databases. Current public source data (as incorporated in the AT&L sponsored Installation Visualization Tool) provide visual situation information for sensitivity analysis and supplemental follow-up queries. Certified responses to Military Value data call questions take precedence over reference data bases. However, significant variances may warrant subsequent data call queries.

4. Imperatives applicable to E&T JCSG analysis will be vetted through and provided by the ISG. The E&T JCSG anticipates such ISG guidance will codify the Department's intent to preserve capabilities or access to capabilities that are essential to satisfy education and training requirements.

5. The E&T JCSG established a common set of Quality of Life metrics and questions in order to provide greater uniformity throughout the process. Subgroups selected from the common set recognizing that some metrics were not applicable to their function and that some metrics would be given differing weights as appropriate to the different subgroups. For example, SST will place a greater weight on transient housing than would other groups, while PDE would be more concerned with adequacy of family housing. The reasoning behind the number of questions with relatively low weights per question is that no single factor will decide the Quality of Life metric; one must conduct analysis based on the aggregate score.

E&T JCSG resource requirements. Each Service and DoD agency is responsible for resourcing their participation throughout the BRAC 2005 process. The designated E&T JCSG subgroup lead (Service/JCS) is also responsible for funding requirements to administer subgroup activities.

Section 1: Flight Training Subgroup Military Value Analysis

1. Definition and scope of functions. The scope of analysis for the Flight Training subgroup includes all DoD installations and processes that support the function of Aircrew Flight Training associated with the following flight training sub-functions. Note: Aircrew members are those who maintain a record of flight activity and receive compensation for performing flight duties in their specialty.

    a. Undergraduate Training

        i. Fixed-Wing Pilot
        ii. Rotary-Wing Pilot
        iii. Navigator / Naval Flight Officer

    b. Graduate-level Training

        i. Rotary-Wing / Tilt-Rotor Pilot (H-60 series, V-22)
        ii. Jet Pilot (JSF)
        iii. Operational Support Aircraft Pilot (C-12)
        iv. Airlift Pilot (C-130J)
        v. Unmanned Aerial Vehicles Operators (UAVs) (Global Hawk)

    c. Not included are: retiring aircraft (within BRAC implementation window of 2011), Service-unique aircraft, single-site aircraft, and specialized aircraft training (e.g., Special Ops aircraft).

    d. Air Battle Manager (ABM) training and maintenance training associated with JSF and C-130J are assigned to the Specialized Skills subgroup.

    e. Enlisted Aircrew Undergraduate training is assigned to Specialized Skills subgroup ("A" Schools, "3" Level Training) because their training does not involve actual flying until Graduate-level Training.

    f. The Flight Training subgroup will work with the Ranges subgroup on environmental issues impacting Military Value Analyses for flight training.

2. Organization. The Flight Training subgroup is chaired by Chief of Naval Air Training (CNATRA), RADM George Mayer.

3. Process for establishing Scoring Plan for Military Value.

    a. The Flight Training subgroup identified each Service's flight training activities/locations and categorized the training into graduate or undergraduate level sub-functions. The Military Value Analysis Scoring Plan was developed using the following steps:

i. The Flight Training subgroup identified six global attributes that apply to each sub-function.
ii. The four DoD selection criteria were given weighted value based on relative importance in assessing the Military Value of a site (reference paragraph 4, below).
iii. Each attribute was evaluated by sub-function and criteria for applicability. If it applied, it was then given a relative score for selection criteria. The four criteria weights for each attribute were totaled for an overall weight.
iv. A list of metrics was created for each attribute and weighted according to each sub-function.
v. The overall weight for each attribute was then compared across the sub-functions to ensure congruence with the subgroups military judgment. Significant differences in scoring were reviewed to ensure rationale was just.

b. Assumptions (key assumptions that guide E&T JCSG FT subgroup's analytical approach).

i. Installations with larger capacities are of comparatively greater Military Value for flight training.
ii. Managed Training Areas (particularly Airspace) would be extremely hard to reconstitute if lost due to the BRAC process.

4. <u>DoD Selection Criteria (Military Value)</u>. (Attachment 1, FT Scoring Plan)

a. Criteria 1: The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including impacts on joint warfighting, training, and readiness.

i. Overall weight for Criteria 1 is 40% - the installation's ability to meet each Service's training requirements (e.g. student throughput) in support of the projected force structure has greater value than any other criteria. It accounts for all factors such as weather, airfield facilities, training areas, environmental, and encroachment issues.
ii. The subgroup identified six attributes that applied to all eight sub-functions. The weighting of each attribute varies according to each sub-function. The attributes include:
1) Airfield Capacity - runway capacity at main field, runway exits (taxiways), hangars, and ramp space.
2) Weather (VFR/IFR, winds, icing, and weather attrition factor. Weather is a significant factor for Undergraduate flight training and UAVs.).
3) Environment (encroachment, safety zones, air quality, noise abatement, and biological/habitat constraints. Environmental constraints can significantly impact the military's ability to perform the mission).
4) Quality of Life (availability of child development, housing, and cost of living are primary measures of QoL).
5) Managed Training Areas (special use airspace, outlying/auxiliary fields, military training routes, airspace encroachment, and ranges).

6) Ground Training Facilities (classrooms, simulator bays, and special training facilities).

iii. Weights for each attribute and metric vary according to the sub-function. Attachment 1 contains the rationale for the weights for each attribute and metric for each flight training sub-function.

iv. Questions and weight for each metric is listed in Attachment 1, by sub-function.

b. Criteria 2: The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.

i. Overall weight for Criteria 2 is 35% - installation/infrastructure (particularly airspace and runway capacity) received the next highest value due to limited ability to reconstitute/reproduce these assets.

ii. The subgroup identified six attributes that applied to all eight sub-functions. The weighting of each attribute varies according to each sub-function. The attributes include:

1) Airfield Capacity - runway capacity at main field, runway exits (taxiways), hangars, and ramp space.
2) Weather (VFR/IFR, winds, icing, and weather attrition factor. Weather is a significant factor for Undergraduate flight training and UAVs.).
3) Environment (encroachment, safety zones, air quality, noise abatement, and biological/habitat constraints. Environmental constraints can significantly impact the military's ability to perform the mission).
4) Quality of Life (availability of child development, housing, and cost of living are primary measures of QoL).
5) Managed Training Areas (special use airspace, outlying/auxiliary fields, military training routes, airspace encroachment, and ranges).
6) Ground Training Facilities (classrooms, simulator bays, and special training facilities).

iii. Weights for each attribute and metric vary according to the sub-function. Attachment 1 contains the rationale for the weights for each attribute and metric for each flight training sub-function.

iv. Questions and weight for each metric is listed in Attachment 1, by sub-function.

c. Criteria 3: The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations to support operations and training.

i. Overall weight for Criteria 3 is 5% - received the lowest value due to no Service-documented surge requirements. Accelerating, truncating, or canceling segments of training syllabi and using existing infrastructure will most likely meet any contingency training requirements.

ii. The subgroup identified six attributes that applied to all eight sub-functions. The weighting of each attribute varies according to each sub-function. The attributes include:
    1) Airfield Capacity - runway capacity at main field, runway exits (taxiways), hangars, and ramp space.
    2) Weather (VFR/IFR, winds, icing, and weather attrition factor. Weather is a significant factor for Undergraduate flight training and UAVs.).
    3) Environment (encroachment, safety zones, air quality, noise abatement, and biological/habitat constraints. Environmental constraints can significantly impact the military's ability to perform the mission).
    4) Quality of Life (availability of child development, housing, and cost of living are primary measures of QoL).
    5) Managed Training Areas (special use airspace, outlying/auxiliary fields, military training routes, airspace encroachment, and ranges).
    6) Ground Training Facilities (classrooms, simulator bays, and special training facilities).

iii. Weights for each attribute and metric vary according to the sub-function. Attachment 1 contains the rationale for the weights for each attribute and metric for each flight training sub-function.

iv. Questions and weights for each metric are listed in Attachment 1, by sub-function.

d. Criteria 4: The cost of operations and the manpower implications.

i. Overall weight for Criteria 4 is 20% - significant cost drivers such as distance to Managed Training Areas (MTAs), environmental constraints, and conditions of facilities impact the military value of an installation.

ii. Attributes and weights for criteria and a rationale for that weighting scheme. The subgroup identified six attributes that applied to all eight sub-functions. The weighting of each attribute varies according to each sub-function. The attributes include:
    1) Airfield Capacity - runway capacity at main field, runway exits (taxiways), hangar and ramp space.
    2) Weather (VFR/IFR, winds, icing, and weather attrition factor. Weather is a significant factor for Undergraduate flight training and UAVs.).
    3) Environment (encroachment, safety zones, air quality, noise abatement, and biological/habitat constraints. Environmental constraints can significantly impact the military's ability to perform the mission).
    4) Quality of Life (availability of child development, housing, and cost of living are primary measures of QoL).
    5) Managed Training Areas (special use airspace, outlying/auxiliary fields, military training routes, airspace encroachment, and ranges).
    6) Ground Training Facilities (classrooms, simulator bays, and special training facilities).

iii. Weights for each attribute and metric vary according to the sub-function. Attachment 1 contains the rationale for the weights for each attribute and metric for each flight training sub-function.

iv. Questions and weight for each metric is listed in Attachment 1, by sub-function.

5. Military Value Data Call.

a. Data call questions that support each metric are provided in Microsoft Word format in Attachment 1.

i. Capacity Analysis data call questions that will be used for Military Value Analysis are indicated.
ii. New Capacity Analysis questions (omitted or consolidated from prior data call) that are necessary to support MVA are also indicated.

b. All questions shall be submitted in the Input Question Tool (IQT) after this E&T JCSG Military Value Analysis Report is submitted to the ISG.

c. Sensitivity analyses with notional data have tested the ability of metrics to differentiate responses and thereby provide discriminatory insight to the MV model. The resulting values were consistent with the intensions of the metrics.

6. Issues Impacting Analysis. None

Analysis of Graduate-level Flight Training sub-functions should continue as described in the paragraph 1, Definition and scope of functions, above, until the ISG advises otherwise.

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Section 2: Professional Development Education Subgroup Military Value Analysis

1. Definition and scope of functions. Installations and processes in the Professional Development Education category include DoD Professional Military Education (PME) and Other Professional Education. The April 22, 2003 DepSecDef memorandum provided the E&T JCSG an attachment that revised specific functions for E&T JCSG analysis IAW April 4, 2003 ISG meeting decisions. Professional Development Education is a category of institutional learning that includes educational courses conducted at Service or civilian institutions to broaden the outlook and knowledge of personnel or to impart knowledge in advanced academic disciplines and attended on a full-time basis. The following are functions or sub-functions to be analyzed by the PDE subgroup:

    a. Professional Military Education (PME). The ISG approved E&T JCSG analysis of intermediate and senior officer military service schools and colleges. Primary (e.g. junior-officer) PME and enlisted leadership programs within this category are to be addressed via Service BRAC processes, if desired. All PME is Service-directed education.

        i. Joint Professional Military Education (JPME). JPME is a subset of PME which (due to its criticality to DoD's capability to conduct joint operations) merits specific BRAC 2005 analysis. The institutions and programs under consideration support fulfillment of the educational requirements for joint officer management.
        ii. JPME is an OSD/JCS directed subset to Title 10.

    b. Graduate Education. PDE subgroup analysis encompasses advanced academic disciplines, graduate education, and education programs funded within this sub-function (e.g. Program Element 804752).

    c. Other Full-Time Education Programs. "Other full-time education" and federal civilian service leader development programs include all professional education attended full-time (normal institutional workday) and are not restricted to "degree granting" development/education programs. These programs are also funded via PE 804752.

        i. Federal Civil Service Civilian Leader Development including the Defense Leadership and Management Program (DLAMP) enables DoD civilian leaders to assume broader responsibilities by expanding their knowledge of the Department's national security mission.
        ii. Professional education programs include courses such as those for military attorneys and chaplains.
        iii. IAW the ISG, education for healthcare and intelligence professionals will be analyzed by the Medical JCSG or Intelligence JCSG.

2. Organization. The Professional Development Education subgroup is chaired by JCS/VDJ-7 COL (P) Thomas Maffey.

3. Process for establishing Scoring Plan for Military Value.

   a. Methodology

      i. First the subgroup established the four DoD selection criteria in order of importance. Next the subgroup designed five attributes that were indicative of Military Value in the sub-functions. Finally, the subgroup selected metrics that would measure the five attributes and developed questions that would allow data to be collected for each.
      ii. For the analysis of historical data, the basis will be academic years 2000-2002. Due to anomalies caused by Operation IRAQI FREEDOM and Operation ENDURING FREEDOM, student data for academic year 2003 will not be used. Analysis will parallel force projection figures to account for manning combat operations.

   b. Assumptions (key assumptions that guide E&T JCSG PDE subgroup's analytical approach): None.

4. DoD Selection Criteria (Military Value). (Attachment 2, PDE Scoring Plan)

   a. Criteria 1: The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including impacts on joint warfighting, training, and readiness.

      i. Overall weight for each sub-function is 40%. Mission requirement is the most important because a professionally developed and educated officer is critical to the ability of the force to support the National Military Strategy (NMS) and meet current and future warfighting requirements of the Combatant Commander (COCOM).
      ii. Attributes and weights for criteria and a rationale for that weighting scheme:
         1) Educational output: PME/JPME 25; Military graduate education 30; Other full-time education 30. Output is an important indicator of excess capacity and indicates total value of educated leaders.
         2) Facilities: PME/JPME 25; Military graduate education 30; Other full-time education 30. Facilities are critical for the measure of existing and potential capacity.
         3) Educational staff: each sub-function 20. A high quality, balanced (40% to 70% military) staff with managed turnover is valued in terms of currency, expertise, and continuity in operations. Conversely, a predominately civilian administrative support staff is valued for its continuity and its positive impact on military manpower.
         4) Location: Weight PME/JPME 20; Military graduate education 10; Other full-time education 10. Access to senior political, military, and interagency decision makers plays a role in building and maintaining synergy, currency, and mentorship. Access to Service and Joint centers of excellence (doctrine development, simulation centers, and

experimentation), operational commands, and other PME institutions facilitates the synergy of faculty sharing, collaboration, mentoring, efficiency, and currency of curriculum. These attributes affect PME and JPME institutions differently than military graduate education and other full-time education.

5) Quality of Life: each sub-function 10. Quality of Life is an aggregate factor in attracting and retaining high quality faculty and staff as well as in the overall educational experience and climate for the students and family members.

iii. See Attachment 2 (Scoring Plan) for metrics for each attribute identified above, weighting for each metric, and a rationale for that weighting scheme.

iv. See Attachment 2 (Scoring Plan) for questions and weights for each metric.

b. Criteria 2: The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.

i. Overall weight by sub-function is: PME/JPME 30; Graduate education 25; Other full-time education 20. Land and facilities are the most important consideration for potential expandability, relocation, or consolidation.

ii. Attributes and weights for criteria and a rationale for that weighting scheme:

1) Educational output: PME/JPME 25; Military graduate education 30; Other full-time education 30. Output is an important indicator of excess capacity and total value of educated leaders.

2) Facilities: PME/JPME 25; Military graduate education 30; Other full-time education 30. Facilities are critical for the measure of existing and potential capacity.

3) Educational staff: each sub-function 20. A high quality, balanced (40% to 70% military) staff with managed turnover is valued in terms of currency, expertise, and continuity in operations. Conversely, a predominately civilian administrative support staff is valued for its continuity and its positive impact on military manpower.

4) Location: Weight PME/JPME 20; Military graduate education 10; Other full-time education 10. Access to senior political, military, and interagency decision makers plays a role in building and maintaining synergy, currency, and mentorship. Access to Service and Joint centers of excellence (doctrine development, simulation centers, and experimentation), operational commands, and to other PME institutions facilitates the synergy of faculty sharing, collaboration, mentoring, efficiency, and currency of curriculum. These attributes affect PME and JPME institutions differently than military graduate education and other full-time education.

5) Quality of Life: each sub-function 10. Quality of Life is an aggregate factor in attracting and retaining high quality faculty and staff as well as

in the overall educational experience and climate for the students and family members.

iii. See Attachment 2 (Scoring Plan) for metrics for each attribute identified above, weighting for each metric, and a rationale for that weighting scheme.

iv. See Attachment 2 (Scoring Plan) for questions and weights for each metric.

c. Criteria 3: The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations to support operations and training.

i. Overall weight for each sub-function is 10%. Contingency and mobilization is the least important criterion to this function since education is a planned program and is not impacted by mobilization surge requirements; however, it does have a future force component impact.

ii. Attributes and weights for criteria and a rationale for that weighting scheme:

1) Educational output: PME/JPME 25; Military graduate education 30; Other full-time education 30. Output is an important indicator of excess capacity and indicates total value of educated leaders.

2) Facilities: PME/JPME 25; Military graduate education 30; Other full-time education 30. Facilities are critical for the measure of existing and potential capacity.

3) Educational staff: each sub-function is 20. A high quality, balanced (40% to 70% military) staff with managed turnover is valued in terms of currency, expertise, and continuity in operations. Conversely, a predominately civilian administrative support staff is valued for its continuity and it's positive on military manpower.

4) Location: Weight PME/JPME 20; Military graduate education 10; Other full-time education 10. Access to senior political, military, and interagency decision makers plays a role in building and maintaining synergy, currency, and mentorship. Access to Service and Joint centers of excellence (doctrine development, simulation centers, and experimentation), operational commands, and to other PME institutions facilitate the synergy of faculty sharing, collaboration, mentoring, efficiency, and currency of curriculum. These attributes affect PME and JPME institutions differently than military graduate education and other full-time education.

5) Quality of Life: each sub-function is 10. Quality of Life is an aggregate factor in attracting and retaining high quality faculty and staff as well as in the overall educational experience and climate for the students and family members.

iii. See Attachment 2 (Scoring Plan) for metrics for each attribute identified above, weighting for each metric, and a rationale for that weighting scheme.

iv. See Attachment 2 (Scoring Plan) for questions and weights for each metric.

d. Criteria 4: The cost of operations and the manpower implications.

i. Overall weight for criteria by sub-function: PME/JPME 20; Graduate education 25; Other full-time education 30. Rationale for weighting scheme: Cost and Manpower are important and represent the significant investment required to meet both Service and Joint education objectives.

ii. Attributes and weights for criteria and a rationale for that weighting scheme:

1) Educational output: PME/JPME 25; Military graduate education 30; Other full-time education 30. Output is an important indicator of excess capacity and indicates total value of educated leaders.

2) Facilities: PME/JPME 25; Military graduate education 30; Other full-time education 30. Facilities are critical for the measure of existing and potential capacity.

3) Educational staff: each sub-function 20. A high quality, balanced (40% to 70% military) staff with managed turnover is valued in terms of currency, expertise, and continuity in operations. Conversely, a predominately civilian administrative support staff is valued for its continuity and its positive impact on military manpower.

4) Location: Weight PME/JPME 20; Military graduate education 10; Other full-time education 10. Access to senior political, military, and interagency decision makers plays a role in building and maintaining synergy, currency, and mentorship. Access to Service and Joint centers of excellence (doctrine development, simulation centers, and experimentation), operational commands, and to other PME institutions facilitates the synergy of faculty sharing, collaboration, mentoring, efficiency, and currency of curriculum. These attributes affect PME and JPME institutions differently than military graduate education and other full-time education.

5) Quality of Life: each sub-function 10. Quality of Life is an aggregate factor in attracting and retaining high quality faculty and staff as well as in the overall educational experience and climate for the students and family members.

iii. See Attachment 2 (Scoring Plan) for metrics for each attribute identified above, weighting for each metric, and a rationale for that weighting scheme.

iv. See Attachment 2 (Scoring Plan) for questions and weights for each metric.

5. <u>Military Value Data Call</u>.

a. Data call questions that support each metric are provided in Microsoft Word format in Attachment 2.

i. Capacity Analysis data call questions that will be used for Military Value Analysis are indicated.

ii. New Capacity Analysis questions (omitted or consolidated from prior data call) that are necessary to support MVA are also indicated.

b. All questions shall be submitted in the Input Question Tool (IQT) after this E&T JCSG Military Value Analysis Report is submitted to the ISG.

c. Sensitivity analyses with notional data have tested the ability of metrics to differentiate responses and thereby provide discriminatory insight to the MV model. The resulting values were consistent with the intensions of the metrics.

6. Issues Impacting Analysis. None.

Section 3: Specialized Skill Training Subgroup Military Value Analysis

1. Definition and scope of functions. Installations and processes in the Specialized Skill Training category include all institutional training that provide officer and enlisted personnel with new or higher-level skills in military specialties or functional areas to match specific job requirements and include the sub-categories of initial skill, skill progression, and functional training.

    a. Initial Skill Training. Instruction in a specific skill leading to the award of a Military Occupational Specialty or rating/classification at the lowest level; completion qualifies the individual for a position in the job structure (Air Force Specialty Code, Military Occupational Specialty, and Naval Enlisted Classification awarding courses).

    b. Skill Progression Training. Instruction for personnel after Initial Skill Training, and usually some experience working in their specialty, to increase job knowledge and proficiency and to qualify individuals for more advanced job duties.

    c. Functional Training. Instruction for personnel in various Military Occupational Specialties who require specific additional skills or qualifications without changing their primary specialty or skill level.

2. Organization. Specialized Skill Training is a subgroup of the Education and Training Joint Cross Service Group and is chaired by Maj Gen William M. Fraser, Air Education and Training Command, Director of Operations (AETC/DO).

3. Process for establishing Scoring Plan for Military Value.

    a. The Military Value Analysis guidance as established by OSD provides a means (parametric methodology) to rank order facilities based on measures of merit and quantified facility attributes. Based on this guidance, the Joint Cross Service Group Specialized Skill Training subgroup requested service briefs on their training core competencies, philosophy, and most important attributes. Given the established criteria, and based upon the briefings, the subgroup determined the attributes as location, Quality of Life, training facilities / resources, support for other missions, training mission/throughput, and environmental constraints / expansion potential (see Attachment 3). After completion of this approach, OSD BRAC and Military Department directors worked with the sub-group to ensure data call questions and attributes were consistent with the collection and certification process.

    b. Assumptions:

        i. Known Service equities and core training concepts can and should be preserved.
        ii. The key elements for SST production are classrooms, billeting, messing, faculty, and equipment. Higher Military Value is given for more capacity.
        iii. Based on Service inputs, surge and maximum capacity requirements are identical. Although surge is not a primary criterion in the Military Value Scoring

Plan, mobilization and contingency factors were figured into the SST Scoring Plan. SST steady state loading cannot be achieved; therefore, a contingency was factored within the Scoring Plan.

iv. The infrastructure objectives of the BRAC process are exclusive of Service qualitative training requirements (tasks, conditions, and standards). Therefore, existing Service qualitative training requirements must be maintained.

v. SST will assume responsibility for Enlisted Flight Training from the Flight Training subgroup based on 27 January 2004 E&T JCSG decision and the USAF Air Battle Manager (ABM) IAW 11 March 2004 ISG guidance.

4. DoD Selection Criteria (Military Value). (Attachment 3, SST Scoring Plan) These measures reflect the cumulative measures of the attributes.

a. Criteria 1: The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including impacts on joint warfighting, training, and readiness.

i. Overall weight (percentage) for current and future mission requirements criterion is 43 (Initial Skills), 43 (Skills Progression), and 45 (Functional Training). Of the four given criteria, current and future mission requirements reflect the highest value. It measures the value of student load and training content (tasks, conditions, and standards) to meet the readiness requirements of the operating forces and supporting establishments. Other criteria are in a supporting or subordinate role.

ii. Attributes and weights for criterion and a rationale for that weighting scheme. (See Attachment 3, Military Value Scoring Plan).

iii. Metrics for each attribute, weighting for each metric and a rationale for that weighting scheme. (See Attachment 3, Military Value Scoring Plan)

iv. Questions for each metric and weight for each question. (See Attachment 3, Military Value Scoring Plan)

b. Criteria 2: The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.

i. Overall weight (percentage) for land and facilities criterion is 32 (Initial Skills), 32 (Skills Progression), and 35 (Functional Training). Of the three remaining criteria, land and facilities reflects training capacity which is the major supporting criteria for current and future mission requirements. Further, it measures fixed facilities and property that cannot be easily changed.

ii. Attributes and weights for this criterion and a rationale for that weighting scheme. (See Attachment 3, Military Value Scoring Plan)

iii. Metrics for each attribute, weighting for each metric, and a rationale for that weighting scheme. (See Attachment 3, Military Value Scoring Plan)

iv. Questions for each metric and weight for each question. (See Attachment 3, Military Value Scoring Plan)

c. Criteria 3: The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations to support operations and training.

i. Overall weight (percentage) for land and facilities criterion is 10 (Initial Skills), 10 (Skills Progression), and 8 (Functional Training). This criterion measures the value of the unknown or unquantifiable nature of contingencies. As a result, it is weighted the lowest of all the criteria.
ii. Attributes and weights for criterion and a rationale for that weighting scheme. (See Attachment 3, Military Value Scoring Plan)
iii. Metrics for each attribute, weighting for each metric, and a rationale for that weighting scheme. (See Attachment 3, Military Value Scoring Plan)
iv. Questions for each metric and weight for each question. (See Attachment 3, Military Value Scoring Plan)

d. Criteria 4: The cost of operations and the manpower implications.

i. Overall weight (percentage) for cost and manpower is 15 (Initial Skills), 15 (Skills Progression), and 12 (Functional Training). This criterion measures the value of resources and manpower. Because this criterion is more variable, it can be managed or adjusted to meet changing requirements.
ii. Attributes and weights for criterion and a rationale for that weighting scheme. (See Attachment 3, Military Value Scoring Plan)
iii. Metrics for each attribute, weighting for each metric, and a rationale for that weighting scheme. (See Attachment 3, Military Value Scoring Plan)
iv. Questions for each metric and weight for each question. (See Attachment 3, Military Value Scoring Plan)

5. Military Value Data Call.

a. Data call questions that support each metric are provided in Microsoft Word format in Attachment 3.

i. Capacity Analysis data call questions that will be used for Military Value Analysis are indicated.
ii. New Capacity Analysis questions (omitted or consolidated from prior data call) that are necessary to support MVA are also indicated.

b. All questions shall be submitted in the Input Question Tool (IQT) after this E&T JCSG Military Value Analysis Report is submitted to the ISG.

c. Sensitivity analyses with notional data have tested the ability of metrics to differentiate responses and thereby provide discriminatory insight to the MV model. The resulting values were consistent with the intensions of the metrics.

6. Issues Impacting Analysis. The Specialized Skill Training subgroup had no unresolved issues affecting Military Value Analysis.

Section 4: Ranges and Collective Training Subgroup Military Value Analysis

1. Definition and scope of functions. The scope of analysis for the Ranges and Collective Training Capability subgroup includes all DoD Active Component and Reserve installations and processes that support collective training capabilities to include Service unit, and interoperability (cross-service) and joint training functions. This assessment includes training, test and evaluations (T&E) ranges, and training simulations centers. For comprehensive assessment of range capabilities, Army and Air National Guard ranges are included in this Military Value Analysis.

    a. The Ranges and Collective Training Capability subgroup, hereinafter referred to as the "Ranges subgroup," includes members from OSD and Service T&E staffs and collaboratively supports the Technical Joint Cross Service Group (TJCSG). The Ranges subgroup will work with the Flight Training subgroup on environmental issues impacting Military Value analyses for flying training.

    b. The primary functions assessed for Military Value are:

        i. Training: (Unit/Collective, Interoperability, Joint, and Simulation Centers)
            1) Unit/Collective: Instruction and applied exercises that prepare an organizational team (such as a squad, aircrew, battalion, or multi-Service task force) to accomplish required military tasks as a unit.
            2) Interoperable Training (Service-to-Service or Cross-Service): US Military Service components training that ensures the ability of systems, units, or forces to provide services to and accept services from other systems, units, or forces and to use the services, so exchanged, to enable them to operate effectively together during multi-Service operations. Services are responsible for providing interoperable forces to Combatant Commanders. Interoperability training is based on joint doctrine, and Joint Tactics Techniques and Procedures (JTTP).
            3) Joint Training: US military training based on joint doctrine or JTTP to prepare joint forces and/or joint staffs to respond to strategic and operational requirements deemed necessary by Combatant Commanders to execute their assigned missions. Joint training involves forces of two or more military departments interacting with a Combatant Commander or subordinate joint force commander; involves joint forces and/or joint staffs; and is conducted using joint doctrine and JTTP.
            4) Simulation Center. For the purpose of this effort, "simulation centers" will be defined as those capabilities that support Service unit training and DoD Interoperability and joint training. Simulation Center functions will be classified as:
                a) Virtual Simulation: A simulation involving real people operating simulated systems. Virtual simulations inject human-in-the-loop in a central role by exercising motor control skills (e.g., flying an airplane), decision skills (e.g., committing fire control resources to action), or communication skills (e.g., as members of a Command, Control, Communications, Computers, & Intelligence team).

(*Reference*: DoD 5000.59-P, "Modeling and Simulation Master Plan," October 1995).

b) Constructive Model or Simulation: Models and simulations that involve simulated people operating simulated systems. Real people stimulate (make inputs) to such simulations, but are not involved in determining the outcomes (*Reference*: DoD 5000.59-P, "Modeling and Simulation Master Plan," October 1995).

ii. Test & Evaluation (T&E):

1) T&E functions: Armaments/munitions (including directed energy), electronic combat, space combat, and ballistic missiles, Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (to include information operations/information assurance), air combat, land combat, chemical/biological defense, and sea combat.

2) T&E Resource Categories: Open-air ranges are one of six commonly recognized T&E resource categories used in acquisition support. These categories are:

a) Digital Modeling and Simulation Facility (Digital Models and Computer Simulations). Simulation facilities include manned simulators.

b) Hardware in the Loop (HITL) Facility. HITL facilities are used to evaluate actual or proposed system hardware elements in a secure, controlled environment.

c) Integration Laboratory (IL). ILs are most often used to support hardware and software development and to assess a complete range of sub-system performance.

d) Installed System Test Facility (ISTF). ISTFs provide capabilities to evaluate developing systems installed on, and integrated with, their intended host platform, as well as to test the whole platform.

e) Measurement Facility (MF). MF facilities range in size from large climatic chambers to small laboratories and open-air facilities that perform measurements of material properties.

f) Open Air Range (OAR). Specifically bounded or designated geographic areas, including Operating Areas (OPAREAs), that encompass a landmass, body of water (above and below surface), and/or airspace used to conduct test and evaluation (as defined above) of military hardware, personnel, tactics, munitions, explosives, or electronic combat systems.

2. Organization. The Ranges subgroup is chaired by MG Buford Blount, Deputy Director of the Army Staff (DAS). The Ranges subgroup is organized into five working groups:

a. Ground Training: Army led with Marine Corps.
b. Air Training: Air Force led with Navy and Marine Corps.
c. Maritime Training: Navy led with Marine Corps and Air Force.
d. T&E: Army led with members from OSD and Service T&E Staffs.
e. Training Simulation Centers: Navy led with all Service Training Staffs.

3. Process for establishing Scoring Plan for Military Value. (Reference: USD (AT&L) memorandum, Subject: BRAC 2005 Guidance for the Education and Training Joint Cross Service Group (JCSG), 16 July 2003. This memorandum provided the Chairman, Education and Training Joint Cross Service Group with the guidance on the process and overall approach for the Capacity Analysis, Military Value Analysis, and Scenario Development for the Base Realignment and Closure 2005.)

    a. The Ranges subgroup is responsible for the Military Value assessment of all ranges for both the training and T&E functions on ranges. E&T JCSG and Technical JCSG chairs agreed on procedures to facilitate proper consideration of the value of Open Air Ranges (OAR) to the Research, Development and Acquisition (RDA) T&E function within DoD. A Memorandum of Agreement (MOA) codifies coordination procedures already being followed between the two JCSG's in relation to ranges. The MOA, currently being coordinated for E&T and Technical JCSG chairmen signatures, will specify the following:

        i. Procedure to assure compatibility with the TJCSG Mil Value plans. The T&E range scoring plan was created with the involvement of TJCSG members.
        ii. Scenarios. The TJCSG Cross Integration Team (CIT) and T&ESWG shall cooperatively identify scenarios; they will coordinate on all scenarios sent to either the E&T JCSG principals or the TJCSG principals that involve RDAT&E ranges.
        iii. Military Value. TJCSG does military value scoring analysis for all RDAT&E technical facilities except for open air ranges. T&ESWG does military value scoring analysis for RDAT&E range facilities. Each scoring group will coordinate with each other before each JCSG chair approves their analysis.
        iv. Communications. The TJCSG Cross Integration Team (CIT) and T&ESWG chairs are expected to routinely coordinate on matters of mutual interest and raise issues early.

    b. The Military Value Analysis guidance as established by OSD provides a means to rank order ranges/range complexes/OPAREAs on measure of merit and quantified attributes (USD (AT&L) Memorandum, Subject: Congressional Reporting Requirements on BRAC, December 16, 2003, directed the Assistant Secretaries and Director of the Defense Logistic Agency, to provide a report including a force structure plan, a worldwide inventory of installations, a description of the inventory necessary to support the force structure, a discussion on categories of excess infrastructure and an economic analysis of the effect of closure and realignments. For the requirement to discuss categories of excess infrastructure and infrastructure capacity, rank order based upon measure of merit and quantified attributes will be used).

        i. Ranges were assigned to the E&T JCSG where they were separated into the two primary mission areas supported: Training and Test and Evaluation (acquisition support/technical). A team of subject matter experts supported

each mission area. Each team determined the relative importance of the established BRAC military value. Each team then designed attributes that were indicative of Military Value in their respective mission. Finally, each team selected metrics that would measure the attributes and developed supporting questions to gather data to score the metrics.

ii. The four DoD selection criteria were weighted based on relative importance in assessing the Military Value of Training and T&E ranges. The military value for T&E ranges was clarified in the "DOD's Final BRAC Criteria" [Federal Register: February 12, 2004 (Volume 69, Number 29)], B(2)(e), on Page 6950 that stated: "Research, development, engineering, procurement and other technical capabilities are elements of military value captured within criteria one through four. The Department will consider military value in a way that incorporates these elements." Each attribute under each criterion was evaluated for applicability (Training selected and evaluated fourteen separate attributes, T&E selected and evaluated five attributes that were the same across the four criteria). If they applied, they were given relative weights.

iii. Each attribute under each criterion was evaluated for applicability (Training selected and evaluated fourteen separate attributes, T&E selected and evaluated five attributes that were the same across the four criteria). If they applied, they were given relative weights.

iv. A list of metrics were developed and weighted for each attribute. Then the question was developed for the metric measurement. Each question was identified as Military Value, where the question would go out on the Mil Val data call, or Capacity, where the data was already asked for in the capacity data call and that data would be used for Mil Val measurement and analysis.

v. The scoring weights of the metrics and attributes were compared to ensure congruence within the Range subgroup's respective Training and T&E sub-group's military judgment and to verify the rationale for differences between the Training and T&E attributes, metrics, and scoring plans.

c. The Training and T&E functions differ in their use of ranges – either or both functions may exist on a given range. In developing Mil Val attributes, these two functions were identified early as unique and requiring differing approaches to Mil Val analysis. This was described early in the capacity phase of the process and during the Mil Val development was agreed to by OSD BRAC as consistent with multiple functions within the other Subgroups of the E&T JCSG. However, the Ranges Subgroup was unanimous in interpreting OSD Criterion #2 to be, by definition, its primary focus resulting in the same weight for both functions.

i. Since OSD Criterion #2 specifically addresses Ranges, the sole business of the E&T JCSG Ranges subgroup, we were presented with a challenge in determining how to assess the other three criteria. This challenge is unique to the Ranges subgroup since the other JCSGs and other subgroups within the E&T JCSG would address ranges as only one of a number of considerations. When assessing the Military Value of ranges relative to

OSD Criteria, the Range subgroup concluded that Criterion #2 uniquely encompassed range capability across the air, land, and sea environments and supported all types (unit, collective, interoperable, and joint) of training and established the fundamental value of a range for current mission requirements. We addressed the challenge by focusing on the "future" term in Criterion #1. Criterion #1 is used to address future requirements (expected extrapolations of current requirements) without duplicating current requirements in Criteria #2. We developed attributes under Criterion #1 that address future range requirements for training, and we concentrated current requirement attributes in Criterion #2.

ii. Ranges vary drastically in functions they perform, features (climate and terrain), size, types, and scopes of weapon system testing they can support. The costs to operate these ranges vary accordingly to complexity of the supporting physical plant (e.g., types of instrumentation, size, and threat environment), personnel required, workload and encroachment issues. Military Value based on cost of operations of a range is of little value in differentiating among T&E ranges, since each is so different and have so many variables – costs are not a significant differentiating factor. Cost considerations are not as significant to DoD as the Military Value of a range's ability and capability to support missions.

d. Scoring Plans for Training and Testing within the Ranges subgroup were briefed and approved by the E&T JCSG Range principals on January 5, 2004.

e. Each Scoring Plan addresses the Military Value Selection Criteria as issued on June 27, 2003, and finalized February 12, 2004, by the Federal Register Vol. 69, No. 29.

f. Scoring plan worksheets for training and T&E criteria, attributes, and metrics are contained in Attachment 4 in this report. The absolute primacy of Criteria 2 is driven by the idea that it encompasses the range's capability across the air, land, and sea environments, to support all types (unit, collective, interoperable, joint) of training, excluding any encroached areas. The subgroup feels the availability of air, land, and sea environments is the fundamental military value of a range.

g. Separate Scoring Plans were developed for the Training and T&E Functions within the Ranges subgroup to reflect their respective mission requirements. The following table demonstrates the cross-walk of the Training and Testing functions and how the different attributes generally relate.

T & E Attributes	Training Attributes	Remarks
Personnel (14%)	Current Operating Costs (7%)	T&E: Includes technical personnel. Tng/T&E: Includes cost of personnel.
Workload (7%)	Range Capability by Unit Type (10%) Mission Capability (7.5%) Range Requirement Mobilization (10%)	T&E: Capture test hours Tng: Capture capability to support Training activities.
Physical Plant (40%)	Baseline Capability (11.7%) Future Weapons Systems (10%) Simulation Center Capability (2.3%)	Tng/T&E: Measure the physical space & characteristic of the physical space & capabilities.
Encroachment (25%)	Encroachment (4.7%) Ability to Expand (4%) Environmental Costs (3%) Ability to Reconfigure (2%)	Tng/T&E: Captures limitations and encroachments costs.
Synergy (14%)	Future Training (4%) Joint Training Capability (21.4%) Cross Functional Capability (2.4%)	T&E: Multiple T&E functions, jointness and co-location with technical infrastructure. Tng: Jointness, cross-functional capability with T&E and capability to support future training doctrine

h. Assumptions (key assumptions that guide E&T JCSG Ranges subgroup's analytical approach) None.

i. For T&E, this scoring methodology will provide a ranked list of T&E ranges reflecting clear bands of military value.

4. DoD Selection Criteria (Military Value).

   a. Criteria 1: The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on Joint Warfighting, training, and readiness.

      i. Overall weights (percentages) for criteria and a rationale for that weighting scheme:
         1) Training: 20%. Assessment based on future weapons systems employed in training, and on future Service, interoperability, and joint training doctrine.
         2) T&E: 30%. Assessment of technical capabilities required to perform T&E of current and future weapons systems.

      ii. Attributes and weights for criteria and a rationale for that weighting scheme:
         1) Training:
            a) Future Weapons Systems with Current Capacity. This attribute measures future weapons footprints against current range capacity. Key metrics are extended range weapons, extended reach maneuver units, UAV, and frequency restrictions. Simulations capability to support future systems is included here.
               Weight: 50%
            b) Future Training Doctrine (T2 & JNTC): This attribute measure some key aspects of the JNTC concept – instrumentation evaluation of training, live OPFOR, and threat targets.
               Weight: 20%
            c) Ability to Expand. This attribute considers external factors that assess land ownership, airspace, and seaspace with regard to expandability of a range for training.
               Weight: 20%
            d) Ability to reconfigure. This attribute measures presence of mobile range instrumentation that permit reconfiguration to support training on future weapons systems and doctrine.
               Weight: 10%
         2) T&E:
            a) Personnel: Assessment of the experience, education, and certification of personnel to meet current and future mission requirements.
               Weight: 25%
            b) Workload: Assessment of the amount of T&E workload performed.
               Weight: 20%
            c) Physical Plant: Assessment of space, natural features, range facilities, and availability.
               Weight: 20%
            d) Synergy: Assessment of T&E functions performed, customer base, and co-location with other T&E resources.
               Weight: 15%

e) Encroachment: Assessment of sustainability, based on limitations imposed by encroachment.

Weight: 20%

iii. Metrics for each attribute identified above; weighting for each metric and a rationale for that weighting scheme. See Attachment 4.

iv. Questions for each metric and weight for each question. See Attachment 4.

b. Criteria 2: Availability and condition of land, facilities, and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.

i. Overall weights (percentages) for criteria and a rationale for that weighting scheme.

1) Training: 50%. Assessment based on current weapons systems employed in training, and on current Service, interoperability, and joint Training Doctrine and requirements.

2) T&E: 50%. Assessment of size, availability, and facility condition to support T&E.

ii. Attributes and weights for criteria and a rationale for that weighting scheme.

1) Training:

a) Mission Capability. This attribute measures the range's capability to support its current requirements as determined by each service.

Weight: 15%

b) Base Line Capabilities. This attribute provides the current baseline capability of the range in terms of land, airspace, sea, littoral space, and urban training.

Weight: 23.4%

c) Joint Training Capability. This attribute considers any "embedded" training capability of one Service on another Service's range (e.g., Class A USAF bombing range on an Army range complex). It also considers history of other Service, Allied and Federal agency utilization of the range or simulation capability. It considers the operational setting (e.g., desert, arctic, etc) as a capability to reflect, in training, a Combatant Commander's AOR and scores scarce settings as a high value asset. This attribute also measures and values proximity of Service ranges to those of other Services. This attribute assesses range capability to support Joint Tactical Task as well as Simulation capability to support Joint Tactical and Joint Operational Tasks.

Weight: 42.9%

d) Cross Functional. This attribute assesses presence of training – T&E cross-functional range capability based on embedded assets and past utilization.

Weight: 4.7%

e) Simulation Center Capability. This attribute focuses on the simulators capability to support training and includes consideration of connectivity, mission rehearsal, simulation types, and simulation utilization.

Weight: 4.6%

f) Encroachment. This attribute concentrates on the encroachment of ranges by environmental regulation and urbanization. It considers environmental and Federal agency regulation negatively impacting the range as well as measures to manage adjacent urbanization.

Weight. 9.4%

2) T&E:

a) Personnel:

Weight: 00%

b) Workload:

Weight: 00%

c) Physical Plant: Assessment of size, natural features, range facilities, and availability.

Weight: 55%

d) Synergy: Assessment of T&E functions performed, customer base, and co-location with other T&E resources.

Weight: 15%

e) Encroachment: Assessment of sustainability, based on limitations imposed by encroachment. Weight: 30%

iii. Metrics for each attribute identified above; weighting for each metric and a rationale for that weighting scheme. See Attachment 4.

iv. Questions for each metric and weight for each question. See Attachment 4.

c. Criteria 3: The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.

i. Overall weights (percentages) for criteria and a rationale for that weighting scheme.

1) Training: 20%. Assessment based on capability to support mobilization surges and future, steady state force structure training requirements.

2) T&E: 10%. Assessment of technical capabilities required to perform T&E to meet surge requirements for current and future weapons systems.

ii. Attributes and weights for criteria and a rationale for that weighting scheme.

1) Training:

a) Range Requirements Mobilization (Surge). This attribute measures a range's capability to absorb higher levels of training than are routinely experienced now.

Weight: 50%

b) Range Capability by Unit. This attribute measures the capability to add numbers of key unit types to the training load of a range.
Weight: 50%

2) T&E:

a) Personnel: Assessment of the experience, education, and certification of personnel to meet surge requirements.
Weight: 25%

b) Workload: Assessment of T&E workload performed.
Weight: 10%

c) Physical Plant: Assessment of size, natural features, range facilities, and availability.
Weight: 25%

d) Synergy: Assessment of T&E functions performed, customer base, and co-location with other T&E resources.
Weight: 20%

e) Encroachment: Assessment of sustainability, based on limitations imposed by encroachment.
Weight: 20%

iii. Metrics for each attribute identified above; weighting for each metric and a rationale for that weighting scheme. See Attachment 4.

iv. Questions for each metric and weight for each question. See Attachment 4.

d. Criteria 4: The cost of operations and the manpower implications.

i. Overall weights (percentages) for criteria and a rationale for that weighting scheme.

1) Training: 10%. Assessment based on current baseline budget required to operate and maintain the range facilities. Assessment also considers environmental management mitigation costs.

2) T&E: 10%. Assessment of the cost of ownership.

ii. Attributes and weights for criteria and a rationale for that weighting scheme.

1) Training:

a) Total Budget. This attribute captures the total operating cost of the range over the past 3 years.
Weight 70%

b) Environmental costs. This attribute captures the environmental costs of the range in terms of environmental operating budget and fines over the past 3 years.
Weight: 30%

2) T&E:

a) Personnel: Assessment of the cost of military and government personnel, and range support contracts.
Weight: 40%

b) Workload:
Weight: 00%

c) Physical Plant: Assessment of operating, maintenance, and material costs.

Weight: 40%

d) Synergy:

Weight: 00%

e) Encroachment: Assessment of the cost of compliance imposed by encroachment issues.

Weight: 20%

iii. Metrics for each attribute identified above; weighting for each metric and a rationale for that weighting scheme. See Attachment 4.

iv. Questions for each metric and weight for each question. See Attachment 4.

e. Summary of training key areas of interest and supporting attributes across the four OSD "final" criteria:

Training Area of Interest	**Supporting Training Attribute(s)**	**Total Weight of Area of Interest**
Joint/Interoperability Training	1-2; 2-3	.26
Baseline Range Capability	2-1; 2-2; 3-1; 3-2	.39
Simulation Capability to Support Training	1-1-5; 2-3-7; 2-5	.04
Capability to Support Future Weapons & Doctrine	1-1; 1-2; 1-3-1; 1-4	.17
Encroachment	1-1-4; 1-3-1; 2-2; 2-6; 4-2	.21
Costs	4-1; 4-2	.10
SubTotal		1.17

Note: Overlap/dual count between costs and encroachment -(.03)
Encroachment directly impacts/intertwined with baseline capacity and joint capability -(.14)
Total: 1.00

f. Summary of testing key areas of interest and supporting attributes across the four OSD "final" criteria.

T&E Areas of Interest = T&E Attributes	Total Weight of Area of Interest
Personnel	.14
Workload	.07
Physical Plant	.40
Synergy	.25
Encroachment	.14
Totals	1.00

5. Military Value Data Call.

a. Data call questions that support each metric are provided in Microsoft Word format in Attachment 4.

i. Capacity Analysis data call questions that will be used for Military Value Analysis are indicated.
ii. New Capacity Analysis questions (omitted or consolidated from prior data call) that are necessary to support MVA are also indicated.

b. All questions shall be submitted in the Input Question Tool (IQT) after this E&T JCSG Military Value Analysis Report is submitted to the ISG.

c. Sensitivity analyses with notional data have tested the ability of metrics to differentiate responses and thereby provide discriminatory insight to the MV model. The resulting values were consistent with the intensions of the metrics.

i. Training ranges: A sensitivity analysis was conducted on the Range subgroup's training range military value algorithm to ensure it supports key areas of interest and attributes across the four OSD "final" criteria. The goal was to determine the likelihood that scoring system could differentiate between ranges with various attributes. The results of the "key area of interest" shows the overall weights to be in line with joint interoperability, encroachments, and baseline capabilities composing 86% of the available 100%. In general, the military value of a training range is driven by two fundamental qualities. The first is size. Shear unencroached space is a primary driver for the military value score. The other major factor is the number of environments a range has available. Each environment (air, land, sea, and littorals), is unique and the military services require all of these. True joint training will require training range complexes with multiple environments available. Therefore, for a maximum score, a training range will have to have multiple environments available. A large training range complex with all environments available is the only training range likely to achieve a maximum score. While it is not envisioned that any training range will score a 1 or 100, the additive nature of multiple environments and the fact that unencroached size is the primary evaluator of any environment, ensures that a wide variety of scores will result. To conduct the sensitivity analysis, four actual training range/range Complex/OPAREAs were selected. For each training range/range Complex/OPAREA, likely normalized scores were estimated for each metric, and the overall military value score was calculated based on the weights of the metrics. Estimates of metric values for each training range/range Complex/OPAREA were based on general knowledge regarding each training range/range Complex/OPAREA. Notional data used to date has affirmed that the scoring mechanism works properly and the scoring results will follow the intended algorithm. Results are appropriately sensitive to the inputs selected by the JCSG working group. New capacity analysis questions (omitted or consolidated from prior data call) that are necessary to support MVA are also indicated.
ii. T&E ranges: A sensitivity analysis, using notional data, was conducted by the T&E Sub-working Group (T&ESWG) on the military value algorithm for T&E ranges. The MV of each T&E range will be determined according to five attributes as weighted according to applicability to the four mandatory BRAC 2005 military value criteria. These attributes are ***Personnel***, ***Workload***, ***Physical Plant***, ***Synergy***,

and ***Encroachment***. With the exception of the ***Workload*** attribute, each attribute will be supported by metrics that will in turn be weighted relative to the respective attribute for each criterion. (The ***Workload*** attribute serves as its own metric). Each metric will be supported by one or more questions supplied by the BRAC 2005 Capacity and MV data calls. The questions will also be weighted according to their respective metric. The responses to the questions are to be scored according to the scoring formulas.

6. Issues Impacting Analysis. None; E&T JCSG, T JCSG, and ISG concerns regarding T&E ranges have been addressed and resolved, reference E&T JCSG and T JCSG MOA.

DRAFT

MEMORANDUM FOR CHAIRMAN, HEADQUARTERS AND SUPPORT ACTIVITIES JOINT CROSS-SERVICE GROUP

SUBJECT: Headquarters and Support Activities Joint Cross-Service Group (H&SA JCSG) Report on Military Value Analysis

The Infrastructure Steering Group (ISG) has reviewed the H&SA JCSG Military Value report submitted to it on March 25, 2004. The ISG appreciates the dedicated effort and military judgment that your members, as the experts in the field, put into revising this report in response to our initial comments. As part of the process to review issues raised by the Military Departments, the ISG tasked the BRAC Deputy Assistant Secretaries (DASs) to develop recommendations for resolving issues with the military value reports. The BRAC DASs met to review the issues pertaining to your JCSG. Representatives from the Headquarters and Support Activities JCSG participated in the discussion with the DASs to ensure the issues were well understood and potential solutions were implementable and reasonable. Subject to incorporation of the comments expressed herein, the ISG approves your report as the basis for your military value analysis.

In its report, the Headquarters and Support Activities JCSG proposes to include service regional administrative headquarters when reviewing the fourteen common support functions within geographic clusters. The ISG is concerned that this review may not take into account efficiencies already achieved through regionalization, as well as functional lack of compatibility between the geographic clusters selected by the JCSG and the regional headquarters area of responsibility. This functional review is to include the common support provided by a headquarters for itself or other headquarters within the specific geographic cluster, but will not include support provided to or from the installation level. The inclusion of regional headquarters in the review should only be undertaken if the regional headquarters is physically located within the boundaries of the geographic cluster. No attempt should be made to include a review of regional headquarters functions providing support outside of the geographic cluster, even if the regional headquarters manages an administrative function within the cluster. Following discussions with the JCSG, the DAS representatives expressed satisfaction that the questions presented in the military value report do provide sufficient consideration for efficiencies of regional structures. Therefore, please revise your report to ensure this issue is clearly articulated and the boundaries are fully understood prior to the start of any analysis. Your revision should include working with the Military Departments to clearly define the installations or activities to target the military value questions needed to conduct this analysis.

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In its review of civilian personnel centers, the Headquarters and Support Activities JCSG proposes to collect data on the time it takes to fill civilian personnel positions, commonly known as fill time. While the ISG considers fill time to be a good indicator of effectiveness of a civilian personnel center, the ISG is concerned that the proposed metric may not distinguish between the fill times for professional and wage grade positions. This is particularly important for locations that specialize in a specific grade (e.g., white collar or blue collar) for filling civilian positions. As you proceed with your military value analysis, please be aware of possible disparate processes to determine if the demographic differences influence the analysis.

In its report, the Headquarters and Support Activities JCSG requests data pertaining to office and administrative space standards. A common space standard is required to ensure a fair and accurate analysis during the BRAC process. Accordingly, after initial review of capacity data, the JCSG is tasked to recommend a common space standard that can be applied during analysis and scenario development. This recommendation should be coordinated with the services, and presented to the ISG for final approval.

After incorporation of the directed revisions above, please provide a final copy of your Military Value Analysis report to the OSD BRAC Office. If you have any questions regarding these comments, please contact Peter Potochney, Director, Base Realignment and Closure, at 614-5356.

Michael W. Wynne
Acting USD (Acquisition, Technology & Logistics)
Chairman, Infrastructure Steering Group

cc: Infrastructure Steering Group Members
MilDep BRAC DASs

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HEADQUARTERS AND SUPPORT ACTIVITIES

JOINT CROSS SERVICE GROUP

MILITARY VALUE ANALYSIS REPORT

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Section 1 Introduction

1. Introduction. The Military Value Analysis phase of the Base Realignment and Closure (BRAC) process begins with development of a quantitative method for assessing the military value of headquarters, organizations and activities performing Headquarters and Support Activities Joint Cross Service Group (HSA JCSG) functions at current locations. This report discusses the methodology and approach used to develop the military value models. It also provides model frameworks—attributes and metrics supporting each selection criteria; weights for the metrics, attributes, and criteria; justification for weights and alignment; proposed questions supporting each metric; and the metric's scoring plan. The scoring plan specifically considers the unit of measurement for a metric, the estimated range of data and assignment of values to a function e.g., linear increasing.

a. Selection Criteria. The JCSG used Final Selection Criteria 1-4 to guide the development process. For all HSA JCSG models, metrics supporting Criterion 1 measure the military value of a current location's readiness to support the particular function under review. For example, metrics supporting Criterion 1 of the Civilian Personnel model measure the military value of the location's ability to support performance of the personnel mission, rather than the military value of the function's contribution to operational readiness of the Department of Defense (DoD). Criteria 2-4 are viewed similarly in that they are functionally aligned.

b. Guiding Principles. The HSA JCSG used the following overarching guiding principles as planning guidance for model development: improve jointness and total force capability; eliminate redundancy, duplication and excess capacity; enhance force protection; exploit best business practices; increase effectiveness, efficiency and interoperability and reduce costs. Other foundational objectives include rationalization of location of headquarters and administrative organizations and activities within the District of Columbia (DC) area (100-mile radius of the Pentagon); movement of headquarters in leased space onto installations; co-location/consolidation of headquarters, administrative activities, and activities performing common functions across DoD components; reduction of stand-alone headquarters; and creation of joint pre-deployment/redeployment processing sites.

c. Common Assumptions. The following assumptions apply to the joint review and analysis of all HSA JCSG activities/functions. Individual models contain additional assumptions and are provided in detail in Section 2 of this report.

(1) Reengineering of common business related processes to consolidate service and joint activities will achieve more efficient accomplishment of joint and common functions and should be considered for potential savings, as well as reduction in the real estate footprint.

(2) Analysis of functions may result in recommendations to eliminate duplicate services, reduce administrative, technical and supervisory overhead, and/or reduce facilities.

(3) Recommendations resulting from analyses could include installation realignments, and/or movement of organizations not presently on DoD installations to space that becomes available on DoD installations. (DoD installation defined as owned space with a controlled perimeter and access.)

(4) Leased space is less desirable than government owned space on DoD installations, and is devalued in scoring plans.

(5) Over time, changes in systems, processes, and technical advances in automation have created opportunities to adjust physical location and size of activities.

(6) Many and varied DoD activities perform common headquarters, administrative and business related functions.

(7) Continuity of government requires redundant capabilities within and between headquarters of some commands.

(8) The location of specific headquarters, commands, and functions may be strategically significant.

(9) Stand-alone military facilities/installations are less desirable than co-location.

(10) Services and the JCSGs will share analytical data.

(11) Elements of JCSG and Service analyses may overlap.

(12) All DoD installations (as defined in 1. c. (3) above) generally provide an equal level of force protection.

d. Linkage to the Overall BRAC Process. The military value modeling process links directly to other BRAC processes. Capacity analysis defines where functions are performed and provides an estimate of physical and operational excess capacity. Capacity and military value data are input to an optimization model that provides a starting point for scenario development. In some cases, HSA JCSG's military value models will not be optimized. In several instances, the population of realignment possibilities is too small; in others, business process reengineering will drive recommendations, so a simpler analytical process will suffice. Ongoing functional analysis, not embodied in a particular BRAC process, helps determine constraints that will influence the optimization and scenario development processes. Functional analysis also helps the analyst develop an organization's candidate reconfiguration based on changes or modifications to the way the organization approaches its core functions and/or business lines.

2. Model Development Approach.

a. Analysis Team. The understanding that this JCSG had no counterpart during previous BRAC actions and the realization that no Headquarters and Support Activities models existed led the JCSG to establish a joint analysis team. The team was assembled in mid-September 2003 and is comprised of representatives from the Center for Army Analysis, the Center for Naval Analyses and the Air Force Studies and Analyses Agency. Eight analysts contributed a total of over 3600 hours of effort in development of the military value models and scoring plans found at Section 2 of this report.

b. Military Value Interviews. The analysis team conducted a series of non-attributional interviews that provided insight into the members' views of the military value process, specifically, and the BRAC process in general. In addition to identifying member intent, the interviews helped

determine imperatives, objectives, and assumptions that will guide the JCSG's military value process. The original intent was to interview JCSG members only, but as the process evolved, the interviews were expanded to include the service BRAC Chiefs, the Office of the Secretary of Defense (OSD) BRAC Chief, and the former Chairman of the HSA JCSG.

c. Subject Matter Experts/Service Liaisons. Throughout the model development process, JCSG teams consulted with various subject matter experts across the components of the Department of Defense. In addition, the JCSG established an open process, encouraging the participation of Military Department liaisons.

d. Approach.

(1) The JCSG used an iterative approach in building the military value models. The Group determined the number of models desired by examining each function under review. The intent was to create sufficient detail for the military value process using a minimum number of models. Consideration of the JCSG's scope of analysis as defined in the Capacity Report, common metrics across the functions, and the nature of decisions desired in each function assisted the JCSG in determining the number of models needed and helped define their respective scopes.

(2) The analysis team used the decision science-based Multi-Attribute Value Theory (MAVT) approach for model development. MAVT uses a hierarchical representation of a decision-maker's objectives or criteria, and their supporting attributes and metrics, to assess value of a group of competing alternatives. The process started with definition of overarching goals of the study effort. The selection criteria were initially difficult to align to functional relevance of the unique functions under consideration by the HSA JCSG. As a result, the analysis team added another hierarchical level in the development process—goals. Goals were developed in each functional area and then aligned to criteria 1-4. Examples of goals are "Security of Personnel and Facilities" and "Maintain Excellent Customer Service" supporting the first selection criteria, and "Stewardship Of Resources" supporting the fourth. The goals were then used to develop attributes and metrics, which are mechanisms for measuring how well each activity or installation rates for each goal and criteria. The process of developing these hierarchical structures was iterative. The initial sessions were used to develop goals and attributes that supported each criterion. The next series of sessions revisited the goals and attributes and began developing metrics for each. The final round of sessions revisited the goals, attributes, and refined metrics to include detail on the unit of measure of the data, the range, and the value function or scoring plan. This series of sessions also included the development of questions supporting each metric. The draft scoring plans were then presented to the JCSG members and representatives from OSD BRAC, and refined based on feedback. The eventual implementation of the military value models will use the Logical Decisions software.

(3) The specific process of determining weights began with asking each group member to assess weights across the selection criteria (at the top of the hierarchy). The group set these numbers aside and began the detailed process of weighting at the metric level. The groups were asked to rank from best to worst the metrics in importance to military value. Once the rankings were determined, the Smarter Method was used to determine weights. The results of this step were considered a starting point. The weights were rolled up through the hierarchical structure to the criteria level. The group determined weights were then compared to the weights each had individually thought were important.

(4) If the two were close, the process stopped. If not, the group then discussed their differences, reached a negotiated common position, and the Direct Entry method was used to adjust the weights. The weighing schemes have been updated and modified several times through the iterative development and review process due to the modification of the models (e.g., removal or addition of metrics).

3. Caveats.

a. Visibility of Data. The military value models were developed prior to receipt of the capacity data. Because of this situation, the models were developed as a best estimate from expert consensus; the scoring plans and metrics are the best available without seeing the actual data. However, there may be cases where the estimates are insufficient after seeing the actual data. As a result, there is a possibility that metrics, scoring plans, and weights may need to be modified. If this scenario arises, the issues, justification, and recommended changes will be sent to the OSD BRAC office, and potentially to the ISG, for approval.

b. Evaluation of Models.

(1) The HSA JCSG Analysis Team exercised each military value model with notional data to verify and/or validate (V&V) the model. Verification of models included checking the execution of the model code to ensure it operated correctly and met the general intent of the functional experts who generated the model. Validation, a more detailed effort, included ensuring the model was an accurate representation of how it functions with real data. Specific aspects considered in validation included validating individual metrics against functional expert intent and identifying potentially sensitive metrics.

(2) The results of model rehearsals are only as accurate as the notional data feeding them. Since time constraints did not allow a detailed testing of each model, a model prioritization scheme guided the process. The most detailed V&V completed was of the Major Admin and Headquarters Activities model. In this case, sample data was fit to statistical distributions, which were then used to generate random sets of “notional” data. In other words, the actual data was not used directly in the rehearsal, but real data was the foundation of the notional data. In cases where real data was not available for the metric, subject matter experts were queried as to the likely shape of the data distribution. The V&V processes for the Civilian Personnel, Military Personnel, and Defense Finance and Accounting Service (DFAS) models were similar, however sample data was not as accurate; therefore, the results are not as robust. Verification of the remaining models was accomplished with less data resolution. Input obtained from subject matter experts included the highest expected value, lowest expected value, and most likely value for each metric. These data points were the foundation of the statistical distributions used to fit the data used in the verification process.

(3) Results of the rehearsals are favorable given the assumed set of notional data used during V&V process (es). These results could change if the actual capacity and military value data are significantly different than the notional data used. Each model demonstrated that it functions correctly, meets the intent of the functional experts, and is consistent with the scoring plans provided in this report. However, several metrics were identified as being potentially sensitive. This means a slight variation in their weights or value functions could potentially significantly alter the military value scores and associated rankings of the alternatives. The scoring plans for these metrics were not altered. However, as the data supporting military value is received, the data, value functions, and weights of

the metrics will be scrutinized closely. If there is an indication that a change would better support the intent of the HSA JSCG as outlined in this report, the issues, justification, and recommended changes will be sent to the OSD BRAC office, and to the ISG, for approval as necessary.

c. Reduction of Scope. The JCSG will review all functions in its Middle Tier following receipt of capacity data to determine where to best focus its efforts. In addition, the HSA JCSG is moving the functions of Financial Management Transactional Services and installation-level Military Personnel from the Top Tier to the Middle Tier. Finally, after a careful analysis, the JCSG recommends that base level communications not be reviewed as a stand-alone function. Base level communications attributes and metrics are embedded within military value models of other HSA JCSG functions.

Section 2: Military Value Approach and Scoring Plans

JCSG Military Value Summary

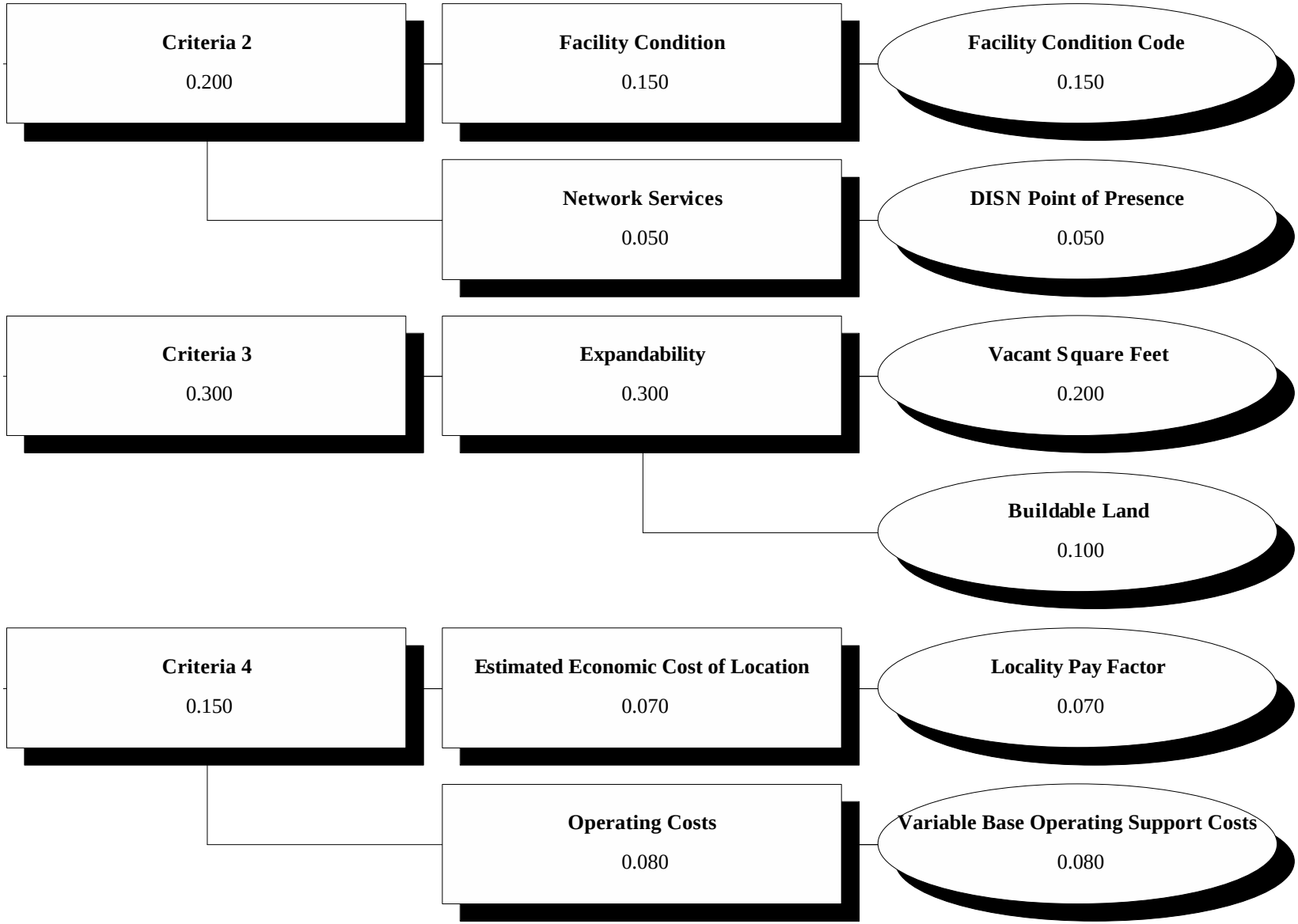
Scoring Plan	Number of Attributes	Criterion 1	Criterion 2	Criterion 3	Criterion 4
Civilian Personnel Offices	8	35%	20%	30%	15%
Major Admin & Headquarters Activities	14	47%	39%	10%	4%
Mobilization	8	9%	6%	81%	4%
Military Personnel Centers	8	30%	20%	35%	15%
Correctional Facilities	10	40%	30%	15%	15%
Defense Finance and Accounting Service	8	40%	17%	12%	31%
Computing Services	4	40%	10%	20%	30%

JCSG Military Value Summary—Geo Clusters

Scoring Plan	Number of Attributes	Criterion 1	Criterion 2	Criterion 3	Criterion 4
Installation Military Personnel	4	35%	30%	15%	20%
Local Finance and Accounting	8	38%	20%	31%	11%
Installation Management	10	39%	11%	7%	43%
Headquarters Support Activities	8	35%	15%	5%	45%

Joint Cross Service Groups

Civilian Personnel Offices


Criteria 2
0.200
Facility Condition
0.150
Facility Condition Code
0.150
Network Services
0.050
DISN Point of Presence
0.050
Criteria 3
0.300
Expandability
0.300
Vacant Square Feet
0.200
Buildable Land
0.100
Criteria 4
0.150
Estimated Economic Cost of Location
0.070
Locality Pay Factor
0.070
Operating Costs
0.080
Variable Base Operating Support Costs
0.080

Civilian Personnel Military Value Modeling Effort

1. **Scope.** The civilian personnel function military value (MV) modeling effort includes Regional Civilian Personnel Offices and Defense Agency Personnel Offices. The universe of potential receiving locations is limited to the location of current Personnel Offices.

2. **Assumptions.**

   a. Analysis will provide military value of performing the function at current locations.
   b. Analysis will reveal opportunities for organizational grouping.
   c. Analysis may reveal transformational opportunities.
   d. Communities where the function is currently performed embody a beneficial quality of life that will be sustained.

3. **Military Value Scoring Plan.**

<table>
<tr><th>Criterion/Attribute/Metric/Question</th><th>Rationale</th><th>Weight</th></tr>
<tr><td>Criterion 1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.</td><td>This criterion was weighted the highest for civilian personnel because customer service and AT/FP standards are important to truly succeed in their current and future mission capabilities as a total force.</td><td>35%</td></tr>
<tr><td>Attribute 1. Customer Service</td><td>Where possible we wanted to determine efficiency of an organization. We selected civilian fill time of jobs and service ratio for the civilian personnel offices. Both measures should be easily available and will provide us with a metric to base efficiency of an organization.</td><td>17%</td></tr>
<tr><td>Metric 1. Civilian Fill Time. Measured in days, where less is better.</td><td><table><tr><th>Range</th><th>Scoring Plan</th><th>Function</th></tr><tr><td>Min-max</td><td>Lowest value from data call = 1.0 – Highest value from data call = 0.0</td><td>Linear decreasing</td></tr></table>Civilian personnel offices are service organizations that are concerned with supporting their customers in an efficient manner. Measuring the amount of time (in days) that it takes to fill a civilian job is critical to measuring success of an organization. There is a possibility that we may co-locate or consolidate organizations and if that is the case then we need a measure to determine which civilian personnel offices are more efficient than others.</td><td>12%</td></tr>
<tr><td colspan="2">Question 1. For each Regional Civilian Personnel Office, Agency Personnel Office (including WHS): What is your organization’s average civilian position fill-time for fiscal years (FYs) 01-03? (Military Value Question)</td><td></td></tr>
<tr><td>Metric 2. Service Ratio. Number of Customers per Worker.</td><td><table><tr><th>Range</th><th>Scoring Plan</th><th>Function</th></tr><tr><td>Min-max</td><td>Lowest value from data call = 0.0 – Highest value from data = 1.0</td><td>Linear increasing</td></tr></table></td><td>5%</td></tr>
</table>

Criterion/Attribute/Metric/Question	Rationale	Weight
	DoD has a standard for the number of personnel employees to the number of population served. In FY 04 that standard is 1 to 88. All Services should be tracking their progress in reaching this goal. We feel this is a good measure of organizational effectiveness.	
Question 1. What is the size of the population serviced per personnelist? (Capacity Data Call Questions DoD #480 and #482)		
Attribute 2. Civilian Personnel Office Location		13%
Metric 1. Civilian Personnel Office. Function is binary. If a civilian personnel office currently exists on an installation, then a 1 or Yes is received; 0 or No, otherwise.	**Range**: 0-1; **Scoring Plan**: 1=Yes – 0=No; **Function**: Binary A civilian personnel office that is currently on an installation should receive considerably more credit than one that is currently in leased space.	13%
Question 1. For each Regional Civilian Personnel Office, Agency Personnel Office (including WHS): For each location, identify if the site is on an active DoD Owned Installation. (Military Value Question)		
Attribute 3. Survivability – Compliance with DoD Minimum Antiterrorist Standards for Buildings (UFC 4-010-01)		5%
Metric 1. Compliance with DoD Minimum Antiterrorist Standards for Buildings. Scoring: For each building in which an Activity is located, a series of questions will be asked to determine the extent to which that building does or does not meet the standards, leading to one compliance ranking for each building. An overall compliance ranking for the Activity will be determined by adjusting the scores to the proportion of total square feet. Questions will only be asked of leased installations; military installations are assumed to comply due to presence of controlled perimeters.	**Range**: 0-1; **Scoring Plan**: See Table; **Function**: Non-linear This attribute is important in determining the survivability of each location that houses a civilian personnel office. We wanted a way to weight the AT/FP standards particularly for people in leased space. Measuring a secure operational environment becomes more critical to ensure uninterrupted servicing if civilian personnel offices are consolidated into fewer locations. Each location occupied by an activity will be assessed for compliance with UFC 4-010-01; locations that do not meet the current standard will be given a lower MV. All questions weighted equally.	5%

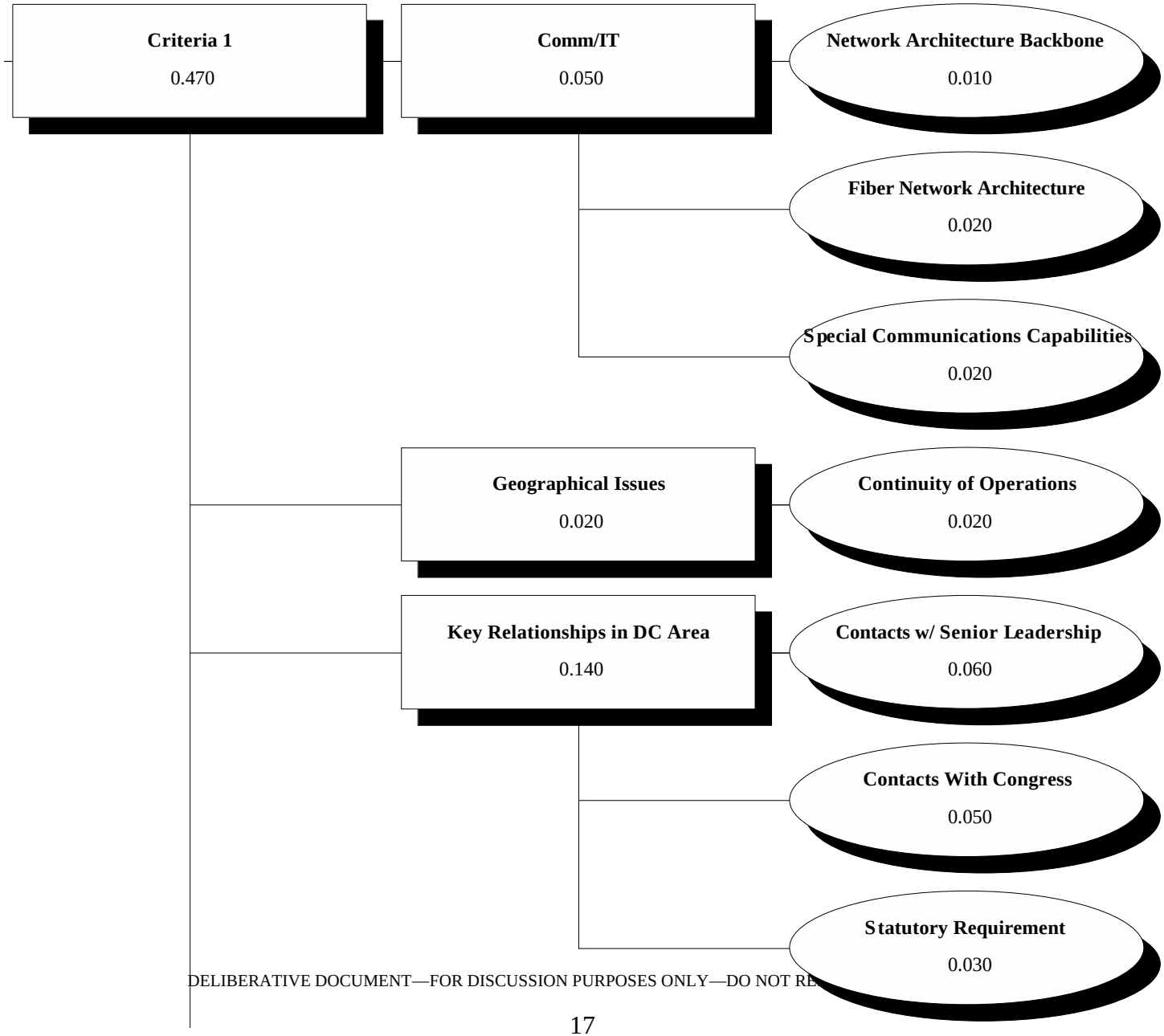
AT/FP Scoring Plan:				Value
Military Installation				1.0
Occupies less than (<) 25% of Building				0.8
Control Perimeter	Distance to Perimeter	Meets Distance Roads & Parking	Non-Controlled Undergnd Parking	Value
YES	YES	YES	N/A	1.0
YES	YES	NO	YES	0.5
YES	YES	NO	NO	0.75
YES	NO	YES	N/A	0.75
YES	NO	NO	YES	0.25
YES	NO	NO	NO	0.35
NO	N/A	YES	N/A	1.0
NO	N/A	NO	YES	0.0
NO	N/A	NO	NO	0.0

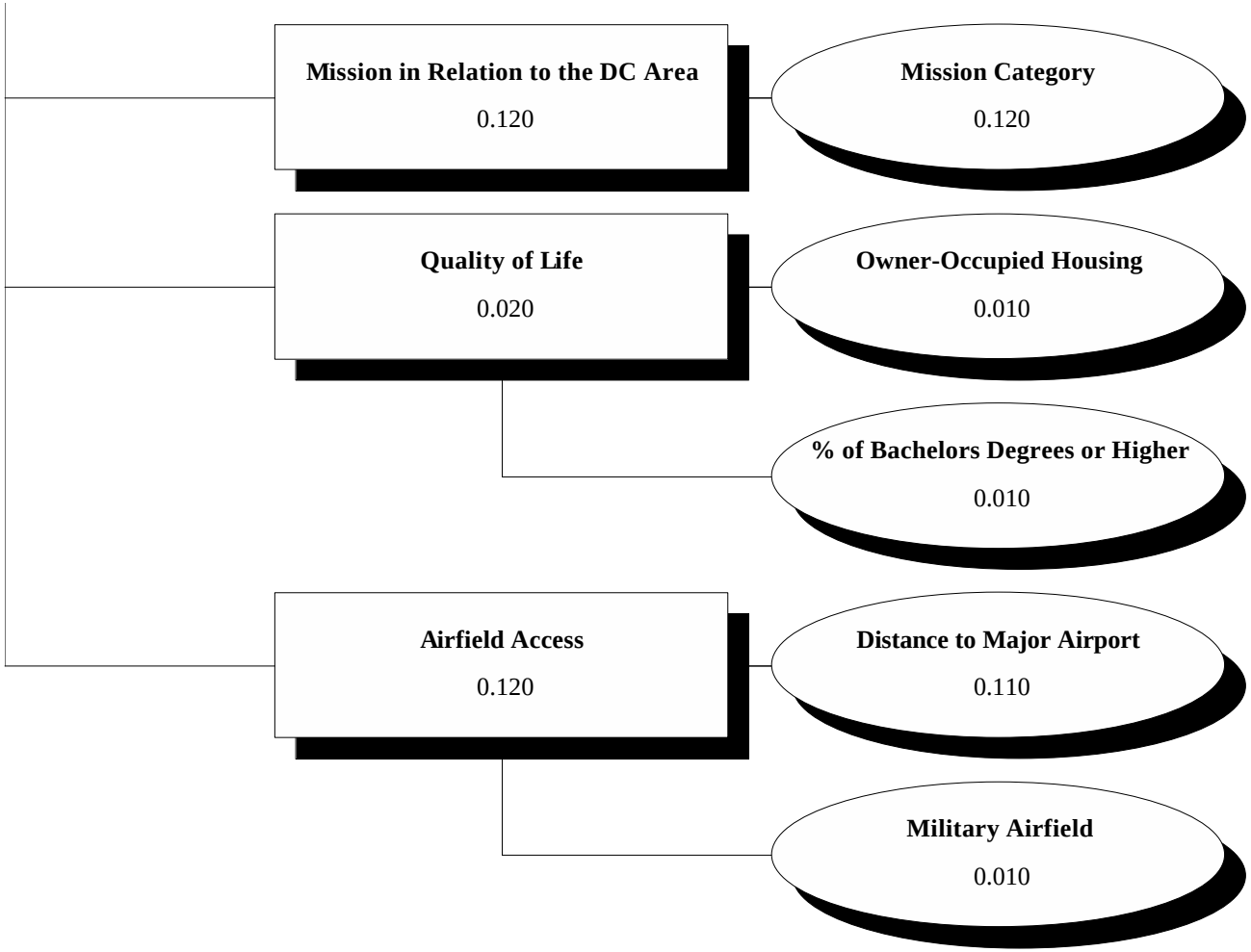
Criterion/Attribute/Metric/Question	Rationale	Weight
Question 1. . What percentage of the building's total square feet is leased to and/or occupied by DoD entities? (Military Value Question)		
Question 2. Is the building within a Controlled Perimeter? Y/N. (Military Value Question)		
Question 3. What is the distance in feet from the building to the Controlled Perimeter? (Military Value Question)		
Question 4. . What is the distance in feet from the building to the nearest Parking and Roadways? (Military Value Question)		
Question 5. Does the building have underground parking which is access controlled? If no underground parking, answer is NO (Military Value Question)		
Question 6. Does the building have underground parking which is not access controlled? If no underground parking, answer is NO (Military Value Question)		
Criterion 2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.	This criterion was ranked third to ensure adequate facilities exist to house a personnel office within each service that is capable of ensuring uninterrupted mission execution.	20%
Attribute 1. Facility Condition		15%
Metric 1. Facility Condition Code. Measured using the Average Facility Condition Code for Administrative Buildings.	**Range**: C1-C4 **Scoring Plan**: C1 = 1.0 C2 = 0.75 C3 = 0.25 C4 = 0.0 **Function**: Non-linear This metric is important to determine which buildings are in the best condition. While this is an important factor in deciding the best locations, facilities can always be improved. Assume lease space = 0.	15%
Question 1. What is the installation's facility condition code (C1-C4) for Administrative-type buildings? (Capacity Data Call Question DoD #11)		
Attribute 2. Network Services		5%
Metric 1. DISN Point of Presence (POP). Measure is Binary (Yes and No), where Yes = 1.	**Range**: 0-1 **Scoring Plan**: 1=Yes 0=No **Function**: Binary Location on a DISN Point of Presence (POP) is an important consideration with regard to DoD IT enterprise architecture. Installations with POP access gain the benefit of its potential network throughput and play heavily in meeting future IT requirements.	5%
Question 1. For each Regional Civilian Personnel Office, Agency Personnel Office (including WHS): Is your location on a DISN Point of Presence (POP)? (Military Value Question - Derived from Capacity Data Call Question DoD #326.). This CDC question identifies various types of DISN POPs that may reside within a facility. The type of POP is to be determined by HSA JCSG COMM/IT and its utility addressed during optimization by scoring plan owners.		
Criterion 3. The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.	Criterion 3 has the second greatest weight to account for personnel office expansion capability for co-location or consolidation to establish a foundation for future requirements in support of DoD.	30%
Attribute 1. Expandability	Expandability is an important factor when looking at future force requirements. It is critical that we access all finished square feet and build able land at current locations of all of the	30%

Criterion/Attribute/Metric/Question	Rationale	Weight
	civilian personnel offices.	
Metric 1. Vacant Square Feet. Blocks of contiguous vacant Administrative-type space over 10K GSF at an installation. Measured in blocks and more is better.	**Range**: Min - Max; **Scoring Plan**: Min = 0; Max = 1; **Function**: Linear increasing This is to assess if a current office has space in its existing Admin buildings to expand or if they are at capacity. This metric was weighted higher than buildable land since there may be less cost with moving to an existing facility rather than requiring new military construction (MILCON). If a location has expansion space, they will receive more credit since they have the ability to receive additional personnel. Lease space will not receive any credit.	20%
Question 1. How many blocks of contiguous vacant Administrative-type space over 10K GSF are located on the installation? (Capacity Data Call Question DoD #305)		
Metric 2. Buildable Land. At least one parcel greater than 5 acres.	**Range**: 0 - 1; **Scoring Plan**: 1= Yes; 0 = No; **Function**: Linear increasing Based on the assumption that a personnel facility could be built on a parcel of 5 or more acres and only one such office would be needed on the installation. This would give the opportunity to build a new building to possibly house a regional personnel office. To us this was a metric which was important, but also a potentially expensive undertaking. Lease space will not receive any credit.	10%
Question 1. Does the installation have at least one parcel of buildable land greater than 5 acres? (Capacity Data Call Question DoD #31)		
Criterion 4. The cost of operations and the manpower implications.	This criterion was given the lowest weight because other factors in ensuring adequate personnel servicing to support DoD are more important for mission accomplishment. Locality and facility operation costs enable an initial look at cost-effective potential receiving locations for scenario development	15%
Attribute 1. Estimated Economic Cost of Location		7%
Metric 1. Locality Pay Factor – percentage. Less is better.	**Range**: Min - Max; **Scoring Plan**: Min = 1; Max = 0; **Function**: Linear Decreasing We needed a way of measuring the cost of doing business at one location versus another. The civilian locality rate seemed to be the best since the majority of personnel working at the personnel offices are civilian employees. This unit of measure is obtainable from the Office of Personnel Management's web site. This is a metric we feel is important but should not over power and be the determining factor about a location unless everything else is equal.	7%
Question 1. For each Regional Civilian Personnel Office, Agency Personnel Office (including WHS): Identify the locality pay percentage rate for Calendar Year 2003 (Military Value Question)		
Attribute 2. Operating Costs		8%
Metric 1. Base Operating Support (BOS) Ratio. Amount of BOS non-payroll obligations per population supported.	**Range**: Min – Max; **Scoring Plan**: Min = 0; Max = 1 More is better.; **Function**: Linear increasing We want to capture the cost of doing business at a particular location. We felt that the base operating cost to supported population would be a good way to capture the utilities, and	8%

Criterion/Attribute/Metric/Question	Rationale	Weight
	other operating costs of the installation and match it to manpower implications. This metric should play a role on which facility locations are more cost efficient and thus have greater military value. Assume leased space = 0.	
Question 1. What are your BOS non-payroll obligations for your activity (Navy) or installation? (Military Value Question). Population supported data will be provided from the Military Value Question IM Scoring Plan Criterion 1, Attribute 3, Metric 1, Question 1.		

Major Administrative and Headquarters Activities

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Mission Category
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Quality of Life
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Owner-Occupied Housing
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% of Bachelors Degrees or Higher
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Distance to Major Airport
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Military Airfield
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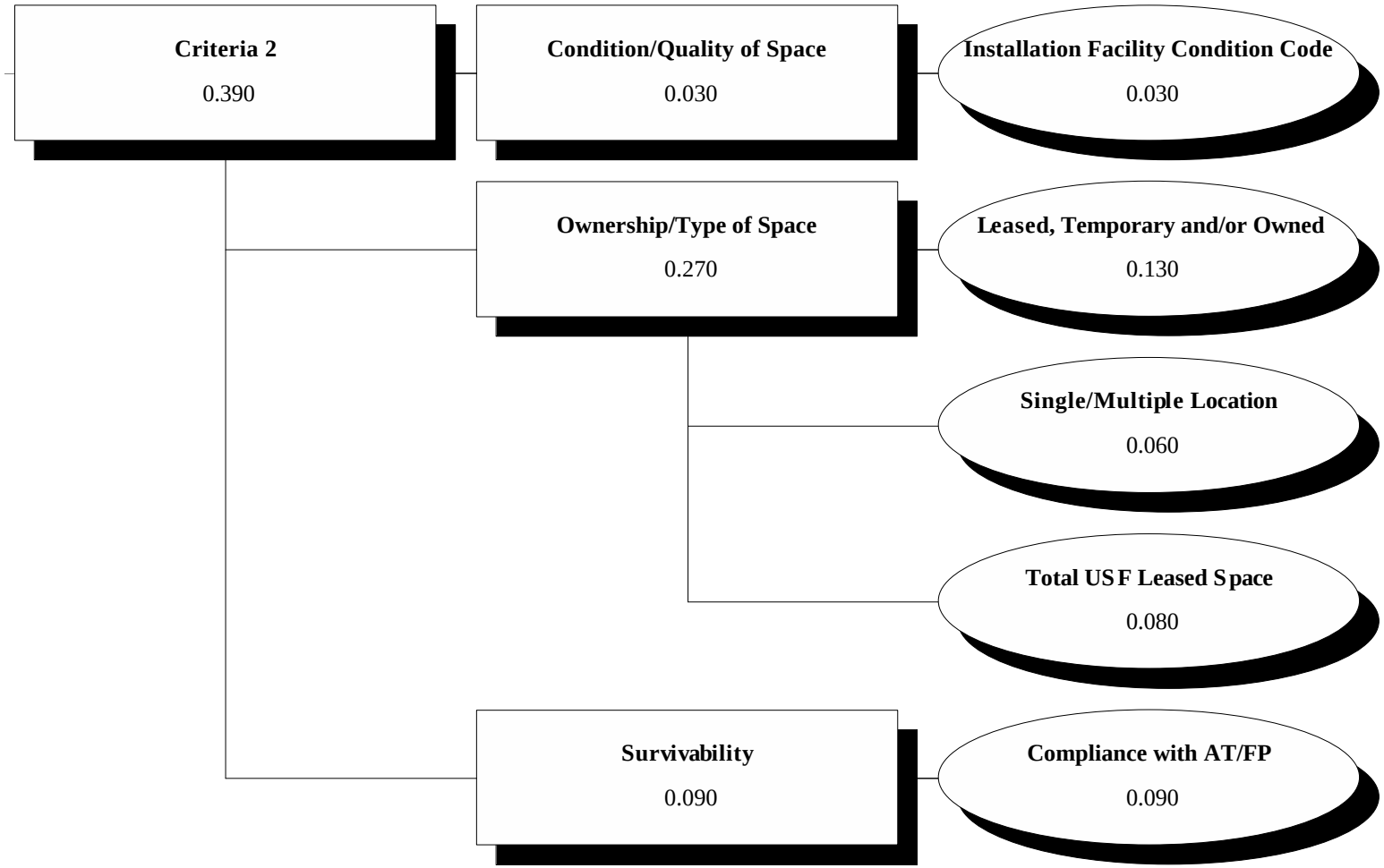
Criteria 2
0.390
Condition/Quality of Space
0.030
Installation Facility Condition Code
0.030
Ownership/Type of Space
0.270
Leased, Temporary and/or Owned
0.130
Single/Multiple Location
0.060
Total USF Leased Space
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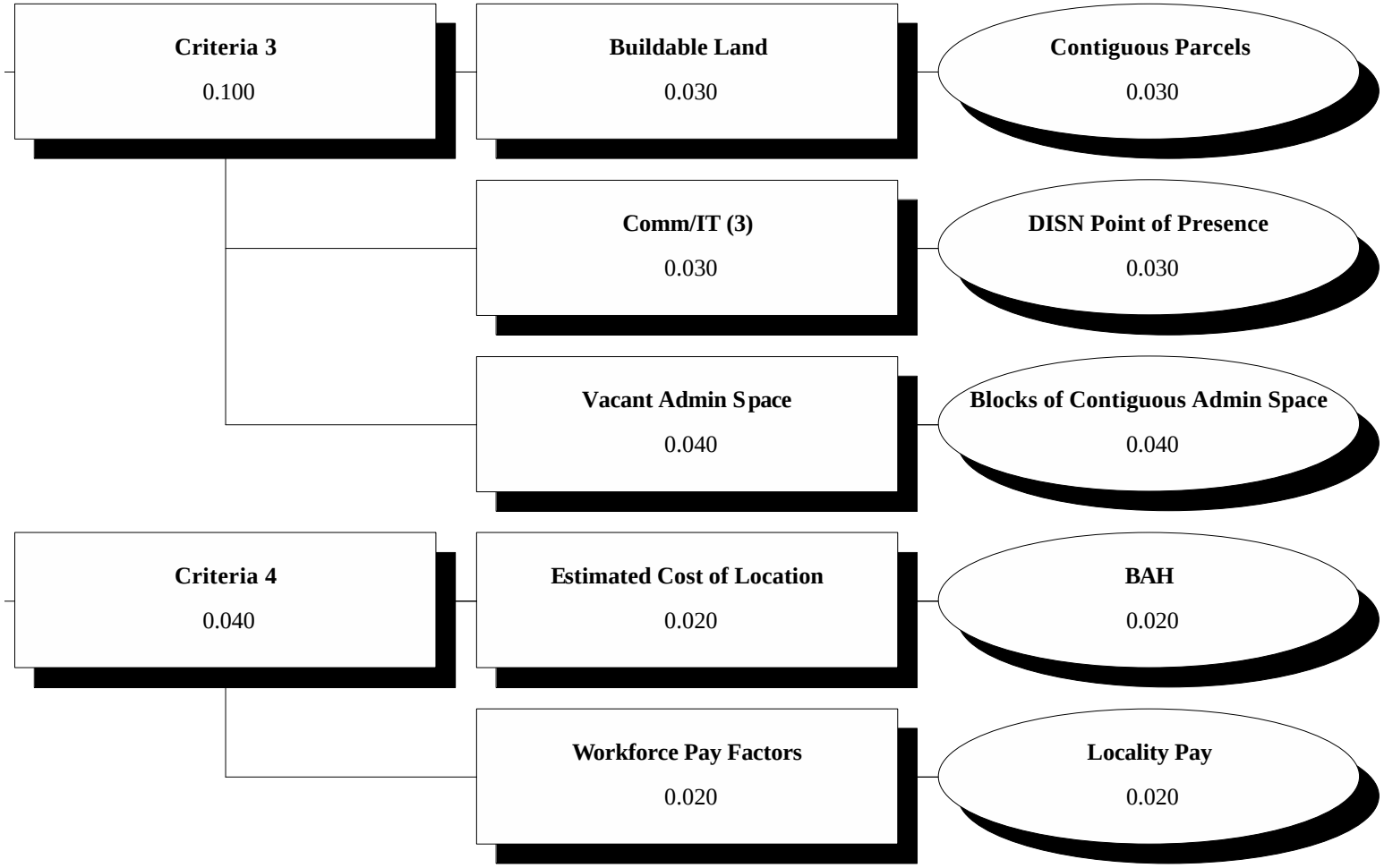
Survivability
0.090
Compliance with AT/FP
0.090


Criteria 3
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Buildable Land
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Contiguous Parcels
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Comm/IT (3)
0.030
DISN Point of Presence
0.030
Vacant Admin Space
0.040
Blocks of Contiguous Admin Space
0.040
Criteria 4
0.040
Estimated Cost of Location
0.020
BAH
0.020
Workforce Pay Factors
0.020
Locality Pay
0.020

Major Headquarters and Administrative Military Value Modeling Effort

1. **Scope.** This modeling effort will result in a priority ranking of Activities that will be considered for realignment both within and outside of the DC area. The focus inside the DC Area will be on the total DoD real estate footprint of Administrative space within a 100 mile radius of the Pentagon (leased and owned). Outside the DC Area, the focus will be on specified Administrative and C2 Headquarters including the Combatant Commands, their Service Component Commands and Supporting Activities, Reserve Component Commands, Recruiting Commands, and Reserve Force Management Organizations (leased and owned). The data being collected via the Capacity Data Call will be used to define the universe of Activities and Installations for consideration in the Military Value modeling process.

2. **Assumptions.** The assumptions for this analysis are as follows.

   a. All leased locations and temporary locations are ranked as less desirable than owned space.
   b. The concentration of a large quantity of Activities within the DC Area is viewed as a negative. As such, realignment outside of the DC Area for appropriately identified Activities is a positive outcome.
   c. AT/FP standards for security – Each leased building will be analyzed for compliance with AT/FP standards for buildings. A series of questions will yield one conclusion for each building that will be aggregated by Activity and used in this model. Buildings on installations are assumed to be contained within controlled perimeters and deemed to meet AT/FP standards.
   d. Higher military value scores indicate more suitable locations.
   e. Headquarters and administrative space for DoD Activities can be located in multiple buildings and in both leased and owned space. This is often the case within the DC Area. This modeling effort will capture an aggregated view of an Activity's locations, where applicable.
   f. Metrics in the MV model that are not suitable for both Activities and Installations are assigned a weight to account for these differences.
   g. Communications and Information Technology (COMM/IT) services are available to every installation in sufficient quantity in order to satisfy operational requirements.

3. Military Value Scoring Plan

Criterion/Attribute/Metric/Question	Rationale	Weight
Criterion 1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.	This criterion is assigned the highest weighting in the model. For administrative space, the ability to meet mission requirements and maintain operational readiness is crucial to the performance of DoD Activities and is weighted accordingly.	47%
Attribute 1. Comm/IT	Information dominance is a critical element of the DoD's transformation effort. Adequate COMM/IT services at an Installation are required to support the transformation. A ubiquitous network that provides the ability to command and control resources, analyze and disseminate intelligence, and implement appropriate actions from any defense facility in the world is required.	5%

Criterion/Attribute/Metric/Question	Rationale	Weight
Metric 1. Network Architecture Backbone. At the end of FY04, what percentage of your Installation's network backbone will be fiber optic cable? This question is designed for military installations only; leased installations receive no value, and Activities will not be asked to respond.	**Range**: Min – Max **Scoring Plan**: Lowest value = 0.0 – Highest value = 1.0 **Function**: Linear Increasing Fiber optic cable backbone networks provide Installations with greater capability than copper wire based networks. The higher percentage of fiber in these network architectures, the more valuable they are, as they more readily lend themselves to meeting current and future operational requirements and support DoD transition to Network Centric Enterprise Services (NCES).	1%
Question 1. What percentage of your Installation's network backbone will be fiber optic cable by the end of FY04 (based on planned spending in the FY04 President's budget)? (MVQ)		
Metric 2. Fiber Network Architecture**.** Percentage of your Installation's buildings that will be connected to the network via Fiber Optic Cable by the end of FY04. This question is designed for military installations only; leased installations receive no value, and Activities will not be asked to respond.	**Range**: Min – Max **Scoring Plan**: Lowest value = 0.0 – Highest value = 1.0 **Function**: Linear Increasing Buildings serviced by fiber optic cable networks provide Installations with greater capability than copper wire based networks. The more fiber these network architectures have, the more valuable they are, as they more readily lend themselves to meeting current and future operational requirements and support DoD transition to Network Centric Enterprise Services (NCES).	2%
Question 1. What percentage of your Installation's buildings will be connected to the network backbone via fiber optic cable by the end of FY04 (based on planned spending in the FY04 President's budget)? (MVQ)		
Metric 3. Special Communications Capabilities. Does your installation/facility have the following communications capabilities: Yes/No. These questions are designed for military installations only; leased installations receive no value, and Activities will not be asked to respond.	**Range**: 0 – 10 **Scoring Plan**: 1 = Yes; 0 = No for each question. Number of "Yes" answers will be aggregated to determine score for this metric. **Function**: Linear increasing Installations that have more means of communications readily available to them are more valuable than others.	2%
Question 1. Does your Installation have Defense Red Switch Network (DRSN) capability? (DoD CDC Question #25)		
Question 2. Does your Installation have Land Mobile Radio (LMR) capability? (DoD CDC Question #28)		
Question 3. Does your Installation have NIPRNET capability? (DoD CDC Question #319)		
Question 4. Does your Installation have SIPRNET capability? (DoD CDC Question #319)		
Question 5. Does your Installation provide any of the following commercial wireless services: cellular, pagers, messaging (e.g., Blackberry)? (MVQ)		
Question 6. Does your Installation provide Video Teleconferencing (VTC) services– e.g., DISN Video Global Service (DVGS)? (MVQ)		
Question 7. Does your Installation provide diverse routing of NIPRNET? (MVQ)		
Question 8. Does your Installation provide diverse routing of SIPRNET? (MVQ)		
Question 9. Does your Installation have a Satellite Earth Terminal? (MVQ)		
Question 10. Does your Installation have a Voice over Internet Protocol (VOIP) Telephone Switch? (MVQ)		
Attribute 2. Geographical Issues	This attribute takes into account the risk to an installation from potential natural disasters. The concern is that an installation's operating capacity could be severely impacted for a long	2%

Criterion/Attribute/Metric/Question	Rationale	Weight
	period of time, or permanently, in the wake of a major catastrophic event.	
Metric 1. Continuity of Operations. Number of times the county or other governmental jurisdiction (e.g., City of Alexandria, VA) in which the Installation is located has received a Presidential Declaration of Disaster since 1965 due to hurricane, flooding, tornado, wild fire, and/or earthquake. This question is designed for military installations only; leased installations receive no value, and Activities will not be asked to respond.	**Range**: Min – Max **Scoring Plan**: Lowest value = 1.0 – Highest value = 0.0 **Function**: Linear decreasing Installations with lower historic occurrence of the noted natural disasters will be viewed as having higher MV. This metric receives a relatively low weighting because it should affect a small number of locations and is not viewed as being as important as other measurements in ranking the MV of installations with regard to Criteria 1.	2%
Question 1. How many times has the county (or other governmental jurisdiction) in which your Installation is located received a Presidential Declaration of Disaster since 1965 due to hurricane, flooding, tornado, wild fire, and/or earthquake? Source: FEMA database. (MVQ)		
Attribute 3. Key Relationships in DC Area	This attribute is designed to assess the frequency of executive level in-person contacts that an Activity maintains with other executive level personnel in DoD and federal government entities in the DC Area, as well as with Congress. This attribute is used as a way to identify activities which should remain in their current areas.	14%
Metric 1. Contacts with Senior DoD Leadership and other senior federal government officials within the DC area: Number of times SES and Flag Officers had in-person meetings with Senior Executives of DoD Activities and other federal government entities in FY03. Higher number of meetings results in higher MV. Question is for the Activity level so assume that Military Installations get a score of 1.0, and leased installations get a score of 0.	**Range**: Min – Max **Scoring Plan**: Lowest value = 0.0 – Highest value = 1.0 **Function**: Linear increasing This metric measures the number of times that executive personnel in an Activity have regular in-person contacts with senior executives at DoD and other governmental entities.	6%
Question 1. During FY03, how many times did the SES and Flag Officers in your Activity hold in-person meetings with Senior Executives of DoD Activities and/or DC-based federal government entities (excluding Congress)? More than one defined individual from your Activity in any meeting should be counted as only ONE meeting. Senior executives of DoD Activities include all occupants of Private Space Category P-1 as listed in DODI 5305.5 (will be spelled out in amplification). Senior executives of other DC-based federal government entities are limited to the following: Secretaries, Under Secretaries, Principal Deputy Under Secretaries, and Assistant Secretaries. (MVQ)		
Metric 2. Contacts with Congress. Number of times SES and Flag Officers had in-person meetings with Members of Congress and/or their staff in FY03. Higher number of meetings results in higher MV. Question is for the Activity level so assume that Military Installations get a score of 1.0, and leased installations get a score of 0.	**Range**: Min – Max **Scoring Plan**: Lowest value = 0.0 – Highest value = 1.0 **Function**: Linear increasing This metric measures the number of times that executive personnel in an Activity conduct in-person meetings with Congress. It complements the Statutory Requirement metric below, and together these two metrics are assigned equal weight as Contacts with Senior Executives (Metric 1).	5%
Question 1. During FY03, how many times did the SES and Flag Officers in your Activity hold in-person meetings with Members of Congress and/or their staffs? More than one defined individual from your Activity in any meeting should be counted as only ONE meeting. (MVQ)		
Metric 3. Statutory Requirement for location. Question is for the Activity level so assume that Military Installations get a score of 1.0, and leased installations get a score of 0.	**Range**: 0-1 **Scoring Plan**: 1.0 = Yes; 0.0 = No **Function**: Binary This metric measures whether an Activity has a written statutory requirement for a specific	3%

Criterion/Attribute/Metric/Question	Rationale	Weight
	location—either near the DC area or elsewhere. A "Yes" response to either or both questions receives a score of 1.0. It complements the Contacts with Congress and Senior DoD leadership metrics.	
Question 1. Does your activity have a statutory requirement to be located within 100 miles of the Pentagon? Identify the nature of the requirement. (MVQ) **Question 2.** Does your activity have a statutory requirement specifying that you remain in your current location? Identify the nature of the requirement. (MVQ)		
Attribute 4. Mission in relation to the DC Area	See Metric 1 below	12%
Metric 1. Mission Category. This metric relates an overall categorization of mission to location, with emphasis on the mission's relationship to a location within the DC Area. There are four categories: (1) Security & Defense of DC Area; (2) Direct DC Area Administrative Support; (3) Other Mission; and, (4) Outside the DC Area. Leased installations will receive no value.	**Range**: 0-1 **Scoring Plan**: 0.0 = Other; 1.0 = Security & Def of DC Area, Direct Admin Spt of DC Area, and Outside of DC. **Function**: Binary Activities and military installations will be asked to classify their mission into one of four categories. The categories that provide local security/defense, support to local DoD and government entities, and have locations outside of the DC Area will be assigned maximum MV whereas all other Activities will receive no MV.	12%
Question 1. Indicate the type of mission/location characteristic that best describes your Activity (choose from the four choices noted above). Choose only one answer. (MVQ)		
Attribute 5. Quality of Life	The quality of life of personnel and employees has a direct impact on moral and ability to accomplish the mission.	2%
Metric 1. Owner-Occupied Housing – will use cost of housing metric as a measure of quality of life. This question is designed for military installations only; leased installations receive no value, and Activities will not be asked to respond.	**Range**: Min – Max **Scoring Plan**: Highest value = 0.0 – Lowest value = 1.0 **Function**: Linear Decreasing Lower housing costs are correlated with a higher quality of life for military families.	1%
Question 1. What is the median value of an owner-occupied housing unit in the local community? (MVQ – final format of question will be taken from JPAT for Criterion 7.)		
Metric 2. Percent of Bachelor's degree or higher. The US Census Bureau provides data on the percentage of Bachelor's degrees or higher for counties. The unit of measure is a percentage. This question is designed for military installations only; leased installations receive no value, and Activities will not be asked to respond.	**Range**: 0-100 **Scoring Plan**: Min =0, Max=1 **Function**: Linear Increasing The percentage of Bachelor's degrees or higher is a metric that serves as a quality of life proxy from multiple dynamics. The first is an indication of the importance that the local community places on postsecondary education. The other dynamic is a general indication of educational level of the local population with respect to hiring pool.	1%
Question 1. What is the weighted average (by population) percentage of holders of Bachelor's degrees or higher in the county in which the Installation is located and those counties contiguous to it? (Source: U.S. Census 2000 Data) (MVQ)		
Attribute 6. Airfield Access	Access to air transportation (especially to the DC Area for Activities on Installations that are not located there) is a key factor in meeting mission requirements and maintaining readiness. This attribute is given a high weight for Criteria 1 since this model will be used to recommend relocation options for Activities that may need to maintain a significant level of in-person contacts with other DoD entities with which they are not co-located.	12%

Criterion/Attribute/Metric/Question	Rationale	Weight
Metric 1. Distance to Major Airport. Closer to an airport is better. This question is designed for military installations only; leased installations receive no value, and Activities will not be asked to respond.	**Range**: Min – Max **Scoring Plan**: Lowest value = 1.0; values decrease after 25 miles, little value after 75 miles; Highest value = 0.0 **Function**: Inverted S-Shape Access to a major commercial airport facilitates periodic travel to/from Washington DC and other locations. (Note: This metric also serves as a proxy for location relative to metropolitan areas as well, indicating better access to workforce and a higher quality of life measure.)	11%
Question 1. What is the distance in miles from the installation's main gate to the commercial airport most commonly used for the Installation's TDYs? (MVQ)		
Metric 2. Military Airfield. Having an active military airfield for fixed wing aircraft is preferable. This question is designed for military installations only; leased installations receive no value, and Activities will not be asked to respond.	**Range**: 0-1 **Scoring Plan**: 1.0 = Yes; 0.0 = No **Function**: Binary An active military airfield may be the best alternative for rapid and/or routine military travel to wherever personnel may be required.	1%
Question 1. Does your Installation have an active military airfield for fixed wing aircraft? (CDC Question #558)		
Criterion 2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.	The attributes in this criterion will be used, primarily, to assess priority to relocate an Activity from its existing location(s). For each Activity, the type of space(s) it occupies along with the condition/quality of that space (including compliance with AT/FP) have a significant impact on the ability of the Activity to perform its mission and functions. This criterion is assigned the second highest weight overall in this model due to the high level of impact that good quality and well-located facilities have on operations.	39%
Attribute 1. Condition/Quality of Space	The quality and condition of existing space on an Installation is also an important factor in ranking Installations for MV, but is given a relatively low weighting in this model because lower quality space can generally be renovated or upgraded to improve building conditions. Installations with poor conditions in administrative space are given lower MV.	3%
Metric 1. Installation Facility Condition Code for all Administrative Space on Military Installations. This question is designed for military installations only; leased installations receive no value, and Activities will not be asked to respond.	**Range**: 0-1 **Scoring Plan**: C1 = 1.0; C2 = .75; C3 = .25; C4 = 0.0 **Function**: Non-linear See above.	3%
Question 1. What is the Overall Facility Condition Code for Administrative Space (Fac 6100 and 6200) on your Installation? (CDC Question #11 – responses will be translated to C ratings.)		
Attribute 2. Ownership/Type of Space	The HSA JCSG's Capacity Analysis Report states the assumption that "Security will be a prime driver for realignments within the DC Area with realignments from leased space to military installations contributing to enhanced security for DoD Activities." Further, existing leased space is generally more expensive in the long run. Therefore, the most important attribute in this model is to identify the type of space – leased, temporary, or owned – that an Activity occupies.	27%
Metric 1. Leased, Temporary and/or Owned. Temporary space will be defined as any owned space which has limited	**Range**: 0-1 **Scoring Plan**: 0.0 = leased; 0.25 = **Function**: Non-linear	13%

Criterion/Attribute/Metric/Question	Rationale	Weight
remaining useful life, e.g., Federal Office Building 2 (a.k.a., Navy Annex) which is scheduled to be closed, non-permanent buildings such as trailers or modular buildings, etc. An overall score for each Activity will be determined by valuing the proportion of total space by type. The higher the value, the higher the MV. Question is for the Activity level so assume military installations receive a score of 1.0, and leased installations receive a score of 0.0.	temporary; 1.0 = owned. The type of space – leased, temporary, or owned – is accorded the highest weight of any metric in Criteria 2. Locations in leased space are viewed as having a very high need for realignment. Temporary space is viewed as only slightly better than leased space and given a relatively high priority for realignment – presumably to permanent space.	
Question 1. For each building of administrative space occupied by your Activity, is the building owned or leased? (DoD CDC Question #303 identifies the inventory of owned facilities and the Activities (except Defense Agencies) that occupy the space. Questions #311 and #462 identify the inventory of leased space occupied by specific Activities. Questions #301 and #463 identify the inventory of owned space occupied by specified Defense Agencies.)		
Question 2. Identify buildings of administrative space occupied by your Activity that are temporary buildings? (New CDC Question)		
Metric 2. Single/Multiple Location. Activities with a single location will have higher MV. Measured as a percentage of total space located in an Activity's largest single location.. Question is for the Activity level so assume military installations receive a score of 1.0, and leased installations receive a score of 0.0.	**Range**: Min – 100% **Scoring Plan**: Lowest value = 0.0; Highest value = 1.0 **Function**: Linear increasing It is likely than an Activity that is currently located in one facility or has the majority of its space in one facility has appropriate administrative space to meet its current needs. As such, Activities with multiple locations will receive lower MV.	6%
Question 1. What is the percentage of your total administrative space in your largest single location? (DoD CDC Question #303 identifies the inventory of owned facilities and the Activities (except Defense Agencies) that occupy the space. Questions #311 and #462 identify the inventory of leased space occupied by specific Activities. Questions #301 and #463 identify the inventory of owned space occupied by specified Defense Agencies. Total space occupied by an Activity will be computed from this information and the largest location identified.)		
Metric 3. Total Square Feet of Leased Space and/or Temporary Space. Larger amounts of total leased and/or temporary space occupied by an Activity receives lower MV. Question is for the Activity level so assume military installations receive a score of 1.0, and leased installations receive a score of 0.0.	**Range**: Min – Max **Scoring Plan**: Lowest value = 1.0 – Highest value = 0.0 **Function**: Linear increasing This measure will be used to give higher realignment priority to Activities with larger absolute amounts of leased and temporary space.	8%
Question 1. How much leased and temporary space does your Activity occupy? (DoD CDC Questions #311 and #462 and Question 2 in Metric 1 directly above will provide the amounts of leased and temporary space that will be aggregated by Activity.)		
Attribute 3. Survivability– Compliance with DoD Minimum Antiterrorist Standards for Buildings (UFC 4-010-01)	Each location occupied by an Activity will be assessed for compliance with UFC 4-010-01; locations that do not meet the current standard will be given a lower MV.	9%
Metric 1. Standards for Buildings. Scoring: For each building in which an Activity is located, a series of questions will be asked to Compliance with DoD Minimum Antiterrorist determine the extent to which that building does or does not meet the standards, leading to one compliance ranking for each building. An overall compliance ranking for the Activity will be determined by adjusting the scores to the proportion of total square feet. Questions will only be asked of leased installations; military installations are assumed to comply due	**Range**: 0-1 **Scoring Plan**: See Table **Function**: Non-Linear See above.	

Criterion/Attribute/Metric/Question	Rationale	Weight
to presence of controlled perimeters.		

AT/FP Scoring Plan:				Value
Military Installation				1.0
Occupies less than (<) 25% of Building				0.8
Control Perimeter	Distance to Perimeter	Meets Distance Roads & Parking	Non-Controlled Undergnd Parking	Value
YES	YES	YES	N/A	1.0
YES	YES	NO	YES	0.5
YES	YES	NO	NO	0.75
YES	NO	YES	N/A	0.75
YES	NO	NO	YES	0.25
YES	NO	NO	NO	0.35
NO	N/A	YES	N/A	1.0
NO	N/A	NO	YES	0.0
NO	N/A	NO	NO	0.0

Question 1. What percentage of the building's total square feet is leased to and/or occupied by DoD entities?		
Question 2. Is the building within a Controlled Perimeter? Y/N.		
Question 3. What is the distance in feet from the building to the Controlled Perimeter?		
Question 4. What is the distance in feet from the building to the nearest Parking and Roadways?		
Question 5. Does the building have underground parking which is access controlled? (If no underground parking, answer No.)		
Question 6. Does the building have underground parking which is not access controlled? (If no underground parking, answer No.)		
Criterion 3. The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.	The availability of vacant administrative space and buildable land provide measures of an Installation's ability to accommodate future DoD needs. Further, existing Comm/IT capabilities provide an indication of an Installation's ability to accommodate growth.	10%
Attribute 1. Buildable Land	Buildable land can be used for development of new buildings and facilities to accommodate realignment of Activities onto installations. This attribute is given less weight than Vacant Administrative Space because it generally takes more time and more funds to develop new space.	3%
Metric 1. Contiguous parcels of land. More, larger blocks are best. Number of parcels will be multiplied by the following weighting scheme: <5 acres = .083; 5-10 acres =.167; 10-20 acres =.333; > 20 acres = .4167. The number of blocks multiplied by weights will be added. The Installation with the lowest score in the sample will receive value of 0.0; the highest will receive 1.0. Leased installations receive no value. Activities will not be asked to respond.		3%

Range	Scoring Plan	Function
Min – Max	Lowest value = 0.0 – Highest value = 1.0	Linear increasing

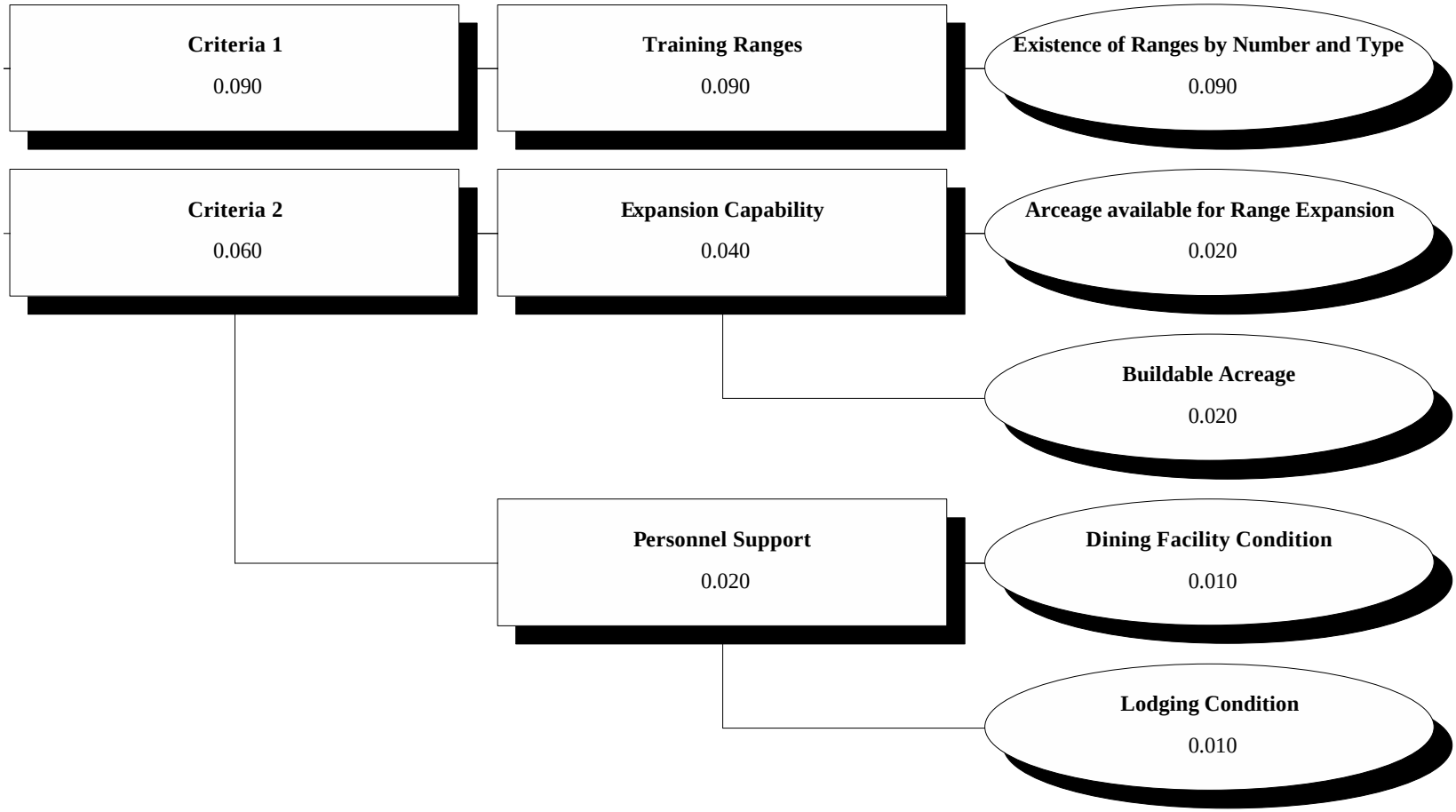
The amount and size of contiguous parcels on an installation is an important factor in assessing the quality of the reported vacant land as it provides an indication of the size of Activities that can be accommodated.

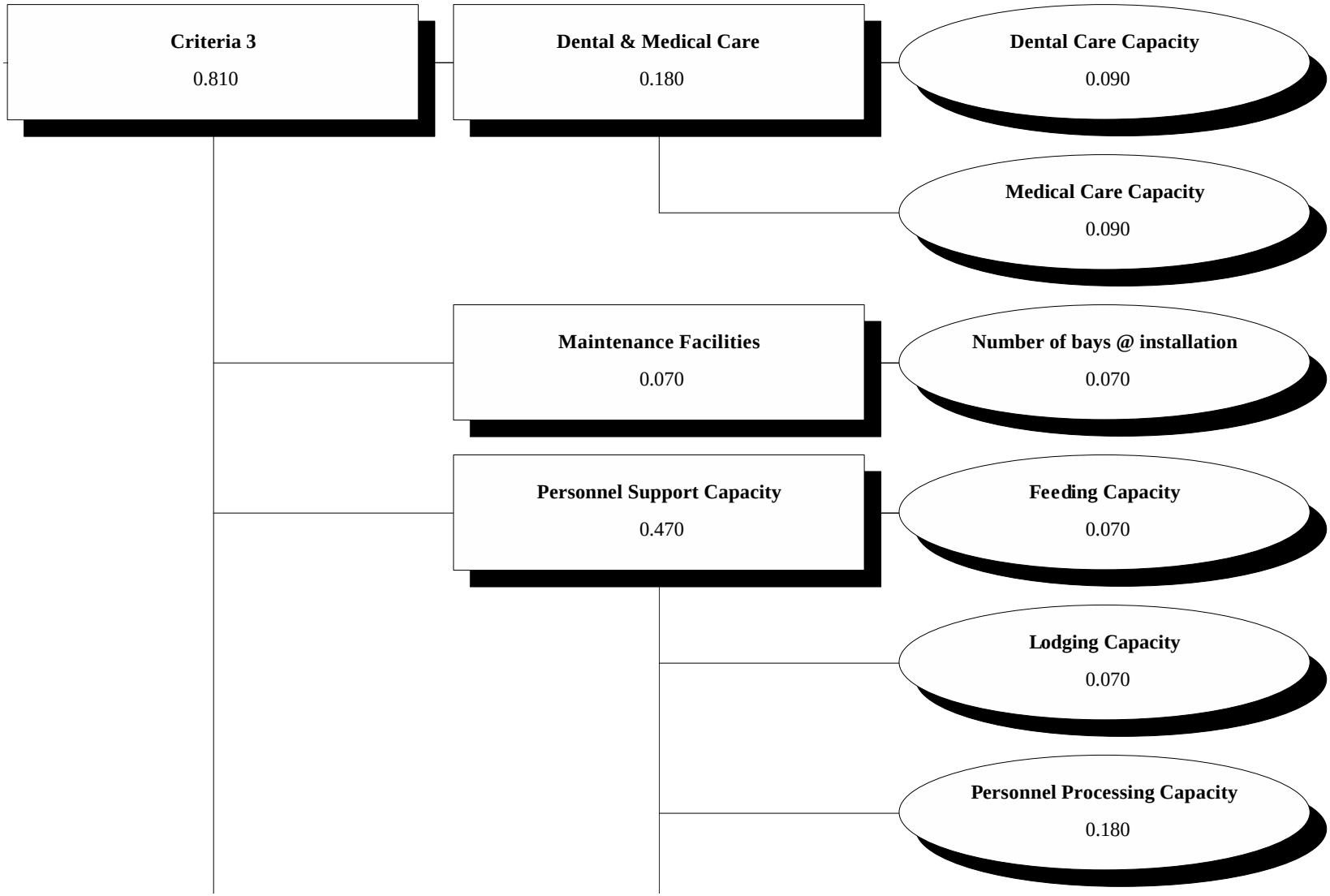
Question 1. How many blocks of buildable acres in defined size ranges for Administrative uses are located on your Installation? (DoD CDC Question #31 requests each Installation to provide the number of buildable parcels of land in the sizes indicated above.)	

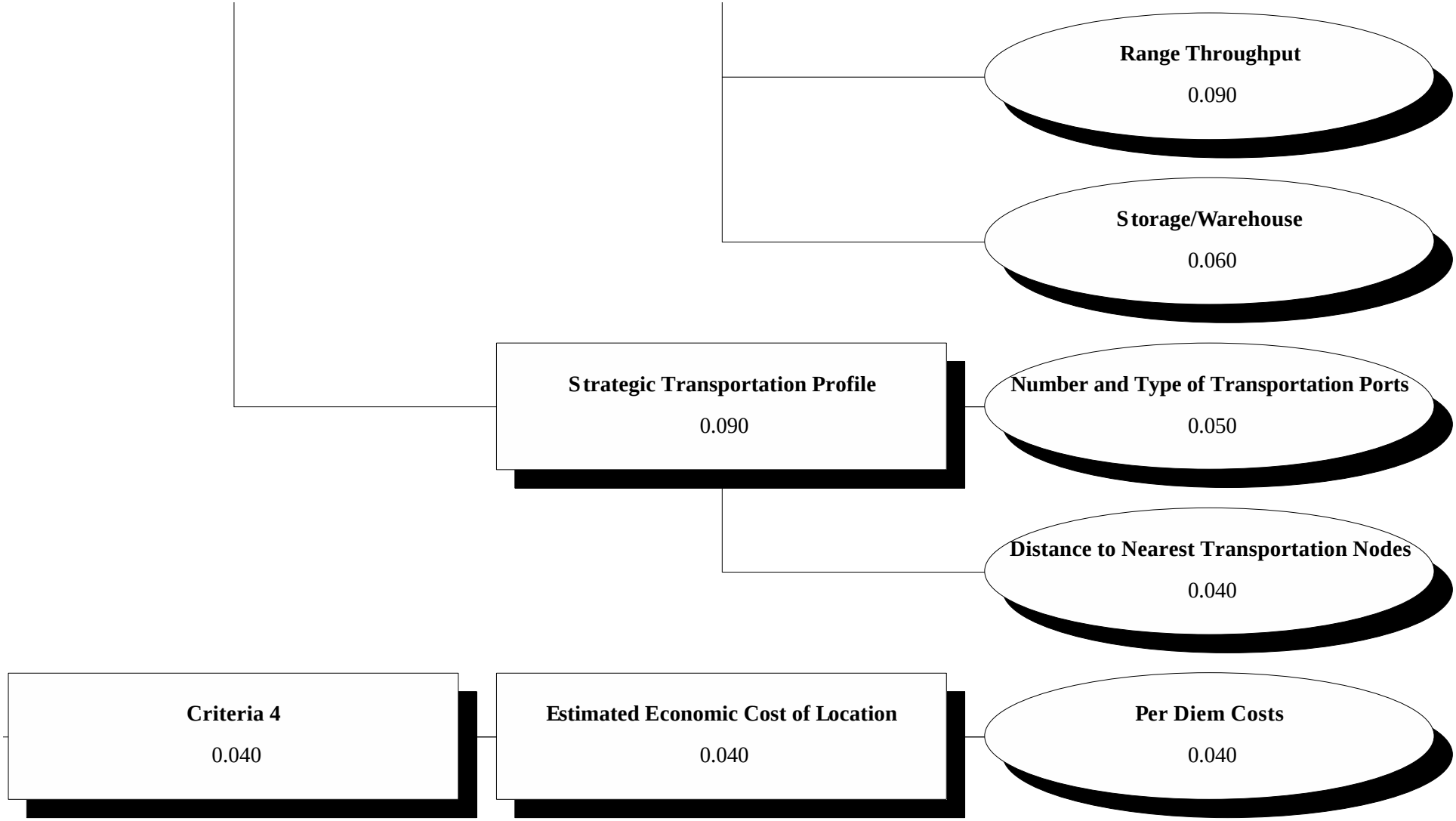
Criterion/Attribute/Metric/Question	Rationale	Weight
Attribute 2. Comm/IT	The future COMM/IT requirements for force projection installations will be more easily met by the presence of a major Defense Information Systems Network (DISN) Node. These nodes provide greater access to bandwidth at lower cost because they comprise the backbone of the network.	3%
Metric 1. DISN Point of Presence (POP). Measure whether Installation has a POP –Yes/No, where Yes is Good. This question is designed for military installations only; leased installations receive no value, and Activities will not be asked to respond.	**Range**: 0 – 1 **Scoring Plan**: 1= Yes, 0 = No **Function**: Binary DISN Points of Presence (POP) are critical to the DoD IT enterprise architecture. Installations hosting these POPs gain the benefit of their potential network throughput and play heavily in meeting future IT requirements.	3%
Question 1. Does the Installation have a DISN point of presence (POP)? (Derived from CDC question #326)		
Attribute 3. Vacant Administrative Space	Existing vacant administrative space that is available for occupancy is an important indicator of the ability of an Installation to accommodate realigning Activities. In general, vacant space can be occupied more quickly and for less cost than new facilities and is given a slightly higher weight than Buildable Land.	4%
Metric 1. Blocks of contiguous vacant space measured in gross square feet (gsf). More, larger blocks of contiguous space are best; Number of blocks will be multiplied by the following weighting scheme: 25,000-49,999 = 0.1; 50,000-99,999 = 0.4; 100,000 and higher = 0.5. The number of blocks multiplied by weights will be added. The Installation with the lowest score in the sample will receive value of 0.0; the highest will receive 1.0. Leased installations will receive no value. Activities will not be asked to respond.	**Range**: Min – Max **Scoring Plan**: Lowest value = 0.0 – Highest value = 1.0 **Function**: Linear increasing Existing vacant administrative space that is available for occupancy is an important indicator of the ability of an Installation to accommodate realigning Activities. In general, vacant space can be occupied more quickly and for less cost than new facilities and is given a slightly higher weight than Buildable Land.	4%
Question 1. How many blocks of contiguous, vacant, administrative space in defined size ranges are located on your Installation? (DoD CDC Question #305 requests each Installation to provide the number of blocks of contiguous, vacant administrative space in the sizes indicated above.)		
Criterion 4. The cost of operations and the manpower implications.	This criterion is assigned a low weight in this model since, while operating costs are never unimportant, it will have less impact on determining Installations suitable to accept relocations than more distinguishing factors.	4%
Attribute 1. Estimated Cost of Location	Lower overall operating costs for an Installation are assigned a higher MV.	2%
Metric 1. BAH: Using the comparative value of an O-4, 12-years service, married with child(ren). The unit of measure is dollar cost value. The lower the BAH the better. This question is designed for military installations only; leased installations receive no value, and Activities will not be asked to respond.	**Range**: Min – Max **Scoring Plan**: Highest value = 0.0 – Lowest value = 1.0 **Function**: Linear Decreasing This metric is a way to measure the cost of living in one location versus another. This will capture costs associated with military personnel.	2%
Question 1. What is your Installation's Basic Allowance for Housing (BAH) for a married O-4 with 12 years of service? Source: available via www.dtic.mil/perdiem/bah.html (MVQ)		
Attribute 2. Workforce Pay Factors	Lower costs for locality pay will suggest lower costs of doing business and, thus, a higher MV.	2%
Metric 1. Locality Pay (Percentage). Measured as a percentage, where less is better. This question is designed for military	**Range**: Min – Max **Scoring Plan**: Highest value = 0.0 – **Function**: Linear Decreasing	2%

Criterion/Attribute/Metric/Question	Rationale	Weight
installations only; leased installations receive no value, and Activities will not be asked to respond.	Lowest value = 1.0 This metric is a second way to measure the cost of doing business at one location versus another. This will capture costs associated with personnel.	
Question 1. For each Installation, identify the locality pay % rate for 2003? (MVQ)		

Mobilization




Criteria 3
0.810
Dental & Medical Care
0.180
Dental Care Capacity
0.090
Medical Care Capacity
0.090
Maintenance Facilities
0.070
Number of bays @ installation
0.070
Personnel Support Capacity
0.470
Feeding Capacity
0.070
Lodging Capacity
0.070
Personnel Processing Capacity
0.180


Range Throughput
0.090
Storage/Warehouse
0.060
Strategic Transportation Profile
0.090
Number and Type of Transportation Ports
0.050
Distance to Nearest Transportation Nodes
0.040
Criteria 4
0.040
Estimated Economic Cost of Location
0.040
Per Diem Costs
0.040

Mobilization Subgroup Military Value (MV) Modeling Effort

1. **Scope.** This military value (MV) modeling effort focuses upon Reserve Component (RC) mobilization functions and locations. The MV model assigns scores to shared RC mobilization requirements. It is intended to assist in the evaluation of existing mobilization sites and provide an analytical framework to identify potential Regional joint-service mobilization sites.

2. **Assumptions.** Analysis will provide military value related to conducting RC mobilization activities at current Mob locations.

   a. Analysis will reveal efficiencies of current mobilization sites.
   b. Analysis may reveal opportunities to create regional joint-mobilization sites.
   c. Analysis may reveal transformational opportunities to reorganize existing mobilization sites.
   d. Analysis will offer insight to transformational opportunities and new mobilization efficiencies.

3. **Military Value Scoring Plan.**

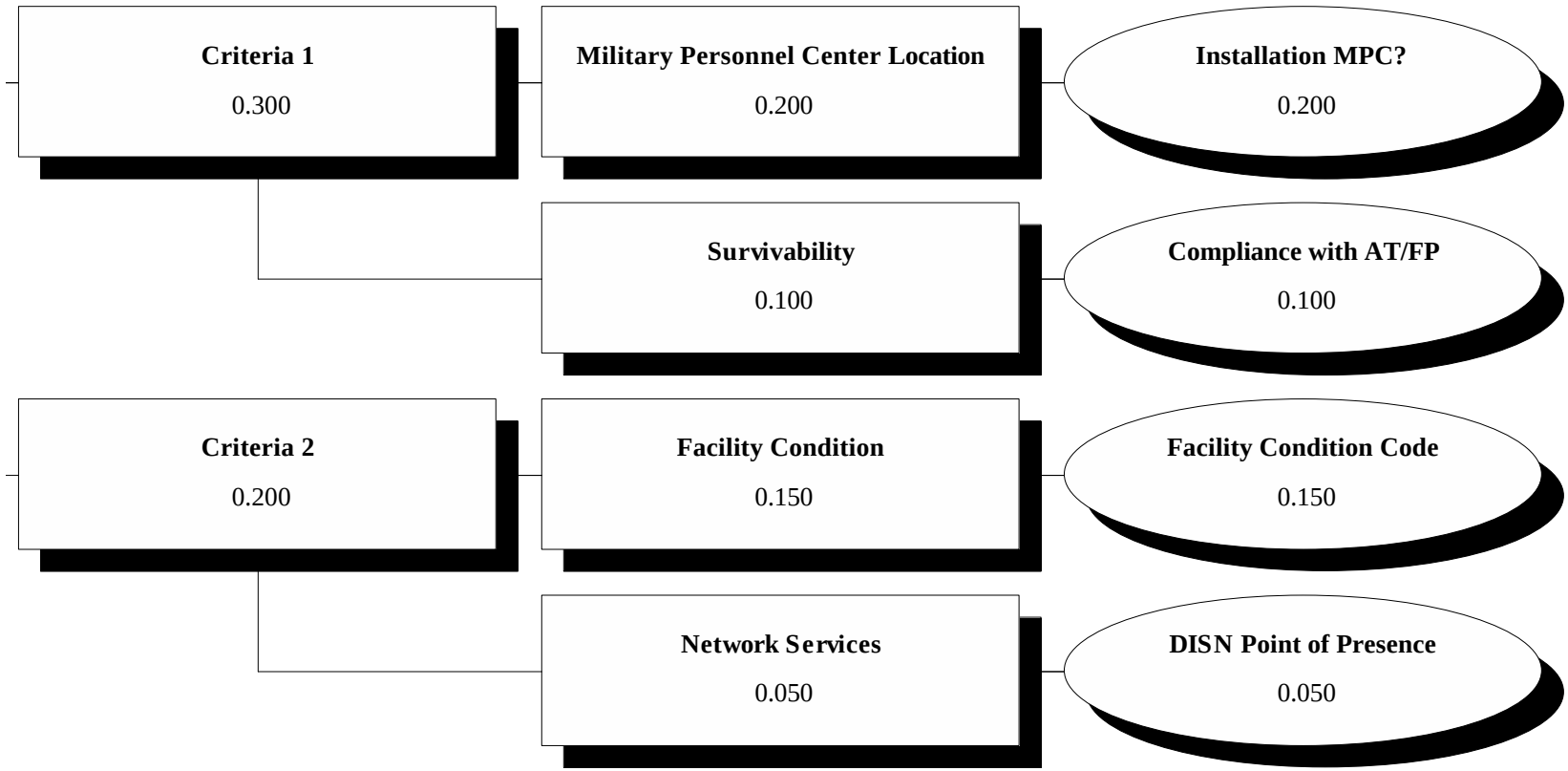
Criterion/Attribute/Metric/Question	Rationale	Weight
Criterion 1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.	Criterion 1 is the second most important because ranges due have a significant impact on war fighting, training, and readiness. Critical to mobilization preparedness and mobilization processing.	**9 %**
Attribute 1. Training Ranges		**9%**
Metric 1. Existence of ranges by number and type. Installations need to indicate if they have any of the types of training ranges from the list of range types provided by the Training Joint Cross Service Group (JCSG). Metric number one will assign one point for each type training range located on an installation.	**Range** / **Scoring Plan** / **Function** Min - Max / Lowest=0.0 Highest=1.0 / Linear Increasing IAW service mobilization policies and procedures, there are numerous range requirements critical to mobilization preparedness and mobilization processing. Also, there are numerous policies and stringent environmental laws controlling use and development of military ranges. Therefore, military ranges are difficult to replace or recreate and available land is a critically diminishing resource. Range availability is very important.	**9 %**
Question 1. Requests information about each installation training ranges to include: number of ranges, types of ranges, capacity of ranges. (Capacity Data Call, DOD CDC Question 153)		
Criterion 2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.	Criterion 2 is the third in ranking because it is important to Reserve Component Mobilization. It addresses the capacity to expand in size of ranges for training and expansion of dining and lodging facilities for mobilized reserve component members. Quality of existing facilities could have an effect on quality of life.	**6 %**
Attribute 1. Expansion Capability		**4 %**
Metric 1. Acreage Available for Range Expansion. Unit of measure is acres.	**Range** / **Scoring Plan** / **Function** Min - Max / Lowest=0.0 Highest=1.0 / Linear Increasing Without available acreage, it will be impossible to build and expand military ranges when/if	**2 %**

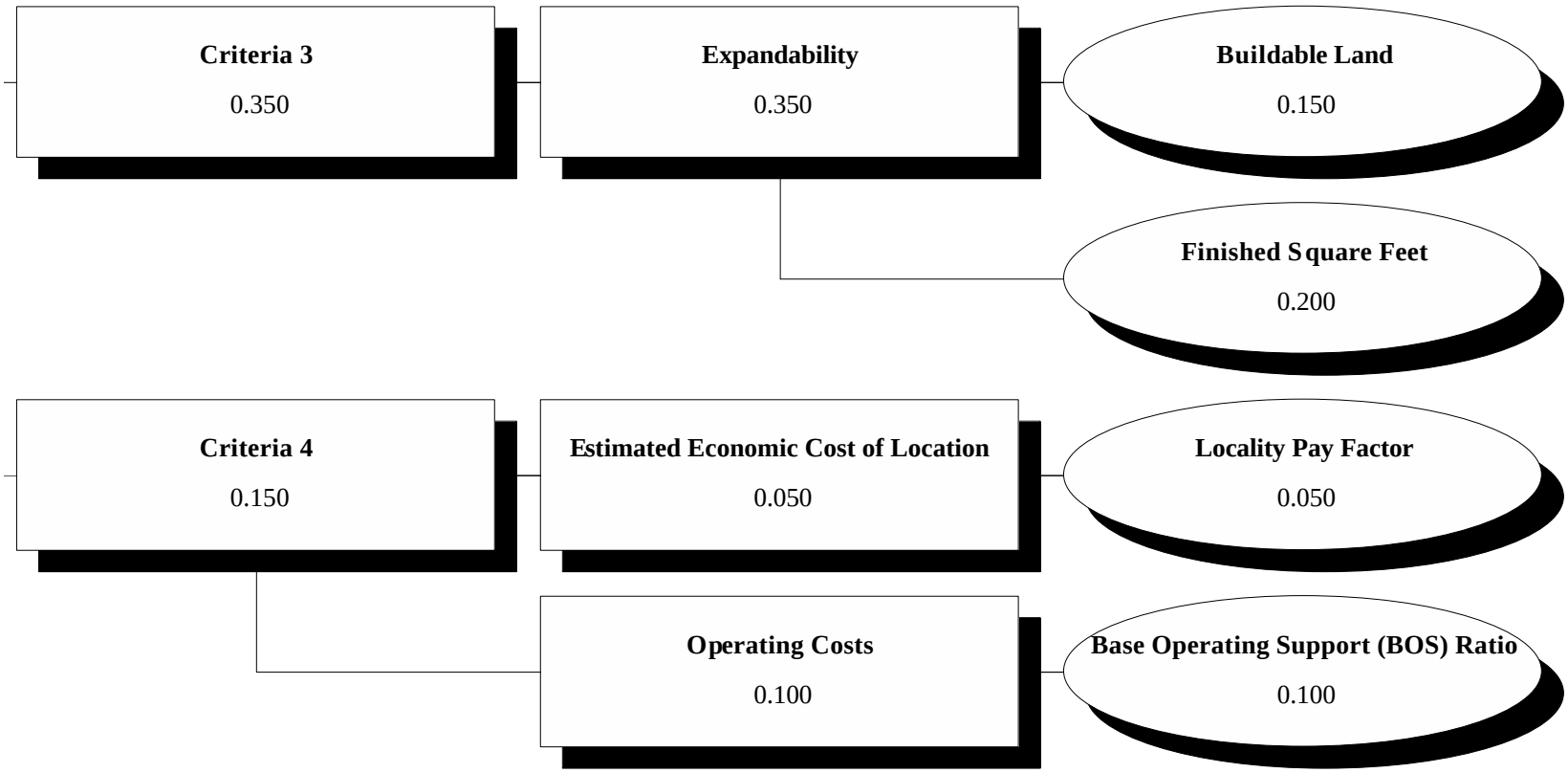
Criterion/Attribute/Metric/Question	Rationale	Weight
	necessary. It was determined that land is a critically diminishing resource and cannot be replaced without great cost. It is therefore very important.	
Question 1. Requests identification of acreage available to accommodate expansion of numerous types of ranges. (Capacity Data Call, DOD CDC Question 154)		
Metric 2. Buildable Acreage. Unit of measure in acres.	**Range**: Min - Max; **Scoring Plan**: Lowest=0.0 Highest=1.0; **Function**: Linear Increasing Available building acreage is very important. Expansion of mobilization site capacity may require more buildings (i.e., processing centers, additional housing, etc.). Building space is a diminishing resource and important.	**2 %**
Question 1. Requests buildable acreage and CDC DOD Question 31 requests buildable parcels data from installations. Installations will list each acre/parcel with its primary land use only. They will not include constrained land. (Capacity Data Call, CDC DOD Question 30)		
Attribute 2. Personnel Support		**2 %**
Metric 1. Dining Facility Condition. Average Facility Condition code (C1, C2, C3, and C4) of Dining Facilities.	**Range**: C1 – C4; **Scoring Plan**: C1=1.0;C2=.75;C3=.25;C4=0.0; **Function**: Inverted S-Shape Feeding Condition is important to estimate quality of facility and its long-term capabilities. Good condition is important for morale.	**1 %**
Question 1. List each military support dining facility on installation and indicate each building's overall condition using Facility Condition Codes C1 through C4. C1 is a high mark and C4 is a low. (Capacity Data Call, DOD CDC Question 11)		
Metric 2. Lodging Condition. Average Facility Condition code (C1, C2, C3, and C4) of Lodging Facilities.	**Range**: C1 – C4; **Scoring Plan**: C1=1.0;C2=.75;C3=.25;C4=0.0; **Function**: Inverted S-Shape Lodging Condition is important to estimate quality of facility and its long-term capabilities. Good Condition is very important for morale.	**1 %**
Question 1. Asks for complete table of all installation lodging facilities as of 30 Sep 03 to include "Facility #," "Facility Category Code," "Facility Type," and "Facility Condition Code. (Capacity Data Call, DOD CDC Question 307)		
Criterion 3. The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.	Criterion 3 is the number one in priority because it is directly related to mobilization and force deployment capabilities and flexibility. Capacity is an important consideration in contingency operations.	**81 %**
Attribute 1. Dental and Medical Care		**18 %**
Metric 1. Dental Care Capacity. Maximum personnel per day during contingency operations.	**Range**: Min - Max; **Scoring Plan**: Lowest=0.0 Highest=1.0; **Function**: Linear Increasing During Pre-mobilization and mobilization dental facilities are critical to ensure that the service members are cleared to be mobilized and deployed.	**9 %**
Question 1. Requests installation to identify RC designated dental facilities by building size, number and type of rooms and to identify dental examination areas, dental repair work areas by building, number of examination rooms, and maximum daily through-put. (Capacity Data Call, DOD CDC Questions 341 and 530)		
Metric 2. Medical Care Capacity. Maximum personnel per day during contingency operations.	**Range**: Min - Max; **Scoring Plan**: Lowest=0.0 Highest=1.0; **Function**: Linear Increasing During pre-mobilization and mobilization medical facilities are critical to ensure that the service members are physically cleared to be mobilized and deployed.	**9 %**

Criterion/Attribute/Metric/Question	Rationale	Weight
Question 1. Requests installation to identify RC designated medical facilities by building, size, number and type of rooms and to identify all medical facilities by number of rooms, primary care rooms, specialty clinic examination, and treatment and procedure rooms through-put. (Capacity Data Call, DOD CDC Questions 341 and 528)		
Attribute 2. Maintenance Facilities		**7 %**
Metric 1. Number of Bays at Installation. Total number of maintenance bays at installation.	**Range**: Min - Max; **Scoring Plan**: Lowest=0.0 Highest=1.0; **Function**: Linear Increasing During mobilization many units that have a variety of unit equipment and crew served equipment need facilities to check, make ready, and enhance their equipment.	**7 %**
Question 1. Request installations to identify all mobility maintenance facilities by facility type, Gross square feet, maximum floor loading by pounds per square inch, number of bays, and dimension of largest unobstructed entryway. (Capacity Data Call, CDC DOD Question 343)		
Attribute 3. Personnel Support Capacity		**47 %**
Metric 1. Feeding Capacity. Maximum feeding capacity during contingency operations. Unit of measure in servings per dining period.	**Range**: Min to Max; **Scoring Plan**: Lowest=0.0 Highest=1.0; **Function**: Linear Increasing Mobilization centers need the capability to feed a heavy surge of service members. Dining is a critical element necessary for good morale.	**7 %**
Question 1. Request installations to identify all dining facilities which are currently operational or could be put into operational status if required by name, status, square footage, seating capacity, and average noon meals served during fiscal year 2001 – 2003 (FY01-03). (Capacity Data Call, DOD CDC Question 340)		
Metric 2. Lodging Capacity. Maximum number of beds for contingency operations.	**Range**: Min - Max; **Scoring Plan**: Lowest=0.0 Highest=1.0; **Function**: Linear Increasing Mobilizations centers need the capability to feed and lodge a heavy surge of service members. Adequate lodging is a critical element necessary for good morale.	**7 %**
Question 1. Request the installation to identify designated billeting facilities for mobilized reserve component service members (RCSM) on the installation. To include the number of buildings, total square footage, and number of bedrooms. (Capacity Data Call, DOD CDC Question 339)		
Metric 3. Personnel Processing Capacity. Through-put in personnel per 24-hour period. During contingency operations.	**Range**: Min - Max; **Scoring Plan**: Lowest=0.0 Highest=1.0; **Function**: Linear Increasing Personnel processing is vital. Mobilization sites must have the capability to process a major influx of service members.	**18 %**
Question 1. Requests through-put data for mobilized individuals and CDC question 338 requests through-put data for units. (Capacity Data Call, DOD CDC Question 337)		
Metric 4. Range Through-put. Number of firing points for small arms (M-16 and 9MM).	**Range**: Min - Max; **Scoring Plan**: Lowest=0.0 Highest=1.0; **Function**: Linear Increasing Pre-deployment processing requires all personnel to be current and qualified.	**9 %**
Question 1. Request installations to identify available ranges and range availability, firing points available and largest units that can be trained. (Capacity Data Call, DOD CDC Questions 86 and 153)		
Metric 5. Storage/Warehouse. Measured in Square feet.	**Range**: Min - Max; **Scoring Plan**: Lowest=0.0 Highest=1.0; **Function**: Linear Increasing Capability to store individual equipment is vital. (Chemical suits, uniforms, etc.)	**6 %**
Question 1. Request the installations to identify supply or central issue facilities used for mobilization processing. (Capacity Data Call, DOD CDC		

Criterion/Attribute/Metric/Question	Rationale	Weight
Question 342)		
Attribute 4. Strategic Transportation Profile		**9 %**
Metric 1. Number and type of Transportation Ports. Number and type of Transportation Ports within a 100-Mile Radius of the installation.	**Range**: Min - Max; **Scoring Plan**: Lowest=0.0 Highest=1.0; **Function**: Linear Increasing Many mobilized units require the movement of their associated unit and crew served equipment to the area of operations. Ports are a key element to the deployment phase. Transportation nodes will each be given a weighting factor based on their type to include 2.0% for each Seaport, 2.0% for each Airport, 1.0% for each Rail head	**5 %**
Question 1. List all major transportation nodes within 100 miles of the installation to include (i.e., Deep Water Ports, Military/Civilian National/International Airports, and Rail Stations, will be defined in amplification of the question). (Military Value Question)		
Metric 2. Distance to Nearest Transportation Nodes. Distance to nearest strategic transportation nodes. Distance to nearest strategic transportation node by type: Seaport, Airport, and Rail head. Measured in miles.	**Range**: Min - Max; **Scoring Plan**: Lowest=1.0 Highest=0.0; **Function**: Inverted S-Shape Easy access to strategic transportation nodes to provide access to service members, associated equipment, and installation staff for rapid and efficient deployment. High value for low distances, after 20 miles the value drops, and little value after 75 miles. Seaport 1.50%, Airport 1.50%, Rail head 1.00%.	**4 %**
Question 1. List major transportation nodes, (i.e., Deep Water Ports, Military/Civilian National/International Airports, and Rail Stations, will be defined in amplification of the question) and distance from the installation NTE 100 miles. (Military Value Question)		
Criterion 4. The cost of operations and the manpower implications.	Criterion 4 is fourth in priority because cost of operations falls second to supporting the Combatant Commander.	**4 %**
Attribute 1. Estimated Economic Cost of Location		**4 %**
Metric 1. Per Diem Costs. Dollars/Day. HSA-JCSG MOB will gather per diem costs from Joint Travel Regulation.	**Range**: Min - Max; **Scoring Plan**: Lowest=1.0 Highest=0.0; **Function**: Linear Decreasing Per diem is a factor in the deployment and transportation cost. With many personnel converging on one location some may be placed off installation on the local economy. Per diem serves as an accurate tool for relative geographic costs.	**4 %**
Question 1. What is the per diem rate for the installation as indicated in the most current Joint Travel Regulation (37 USC 411 &1001). For those installations having a high season rate and a low rate, an average rate will be calculated and used. (Data obtained from JTR)		

Military Personnel Centers




Criteria 3
0.350
Expandability
0.350
Buildable Land
0.150
Finished Square Feet
0.200
Criteria 4
0.150
Estimated Economic Cost of Location
0.050
Locality Pay Factor
0.050
Operating Costs
0.100
Base Operating Support (BOS) Ratio
0.100

Military Personnel Center Military Value Modeling Effort

1. **Scope.** The personnel function military value (MV) modeling effort includes Active and Reserve Military Personnel Centers. The universe of potential receiving locations is limited to the location of current Military Personnel Centers.

2. **Assumptions.**

   a. Analysis will provide military value of performing the function at current location.
   b. Analysis will reveal opportunities for organizational grouping.
   c. Analysis may reveal transformational opportunities.
   d. Co-locating or consolidating Active and Reserve personnel centers is desirable to support Total Force criteria.
   e. Communities where function is currently performed embody a beneficial quality of life that will be sustained.

3. **Military Value Scoring Plan.**

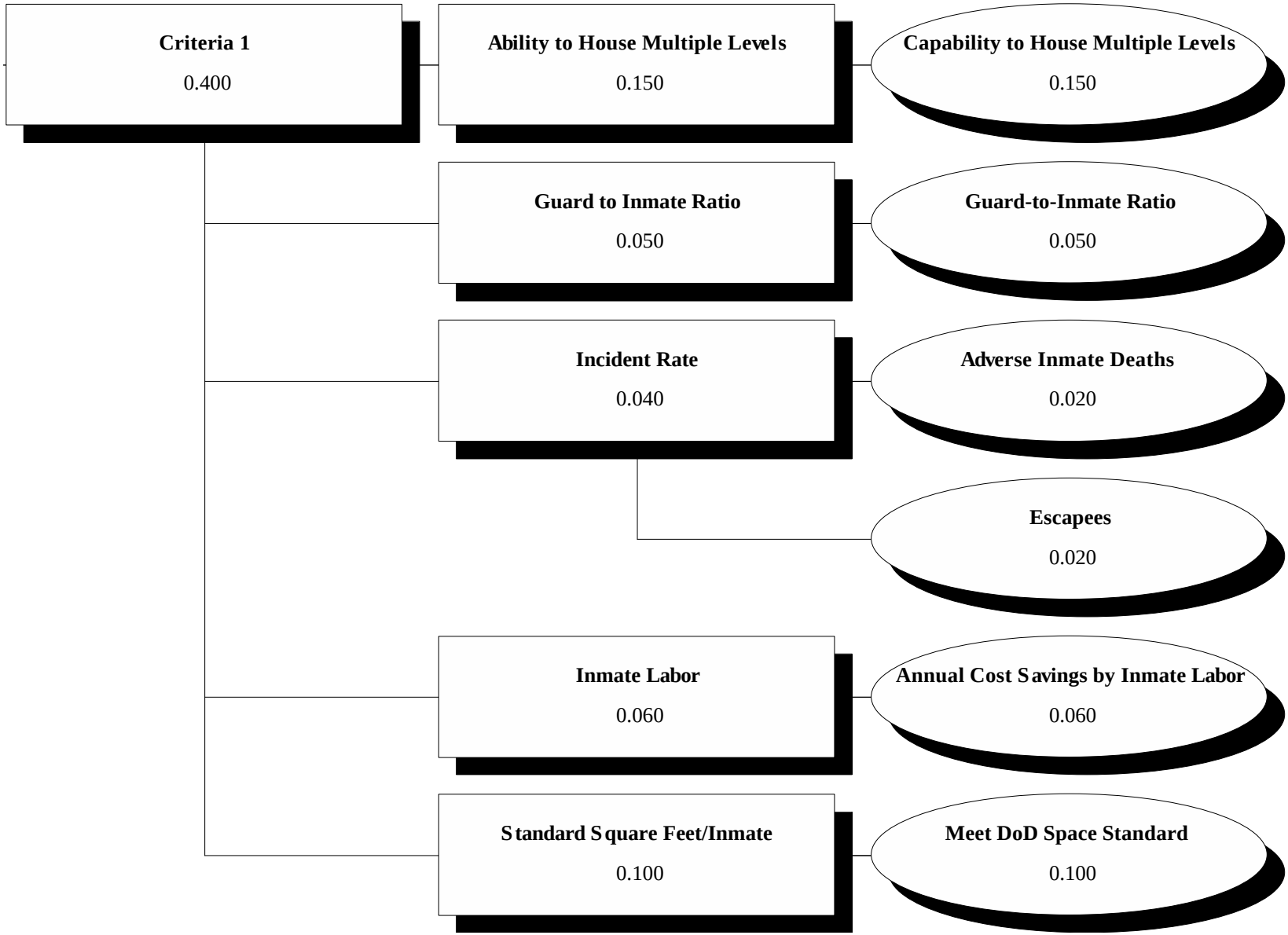
<table>
<tr><th>Criterion/Attribute/Metric/Question</th><th>Rationale</th><th>Weight</th></tr>
<tr><td>Criterion 1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.</td><td>This criterion was given the second highest weight, because of the overall goal to consolidate DoD activities on DoD installations, ensure the new standards for personnel force protection AT/FP, while maintaining a quality environment.</td><td>30%</td></tr>
<tr><td>Attribute 1. Military Personnel Center Location</td><td></td><td>20%</td></tr>
<tr><td>Metric 1. Installation Military Personnel Center (MPC). Is this Center located on an installation? Function is binary. If a military personnel center currently exists within the perimeter of the main/host installation, then a 1 or Yes is given; otherwise 0 or No. Leased space is given 0.</td><td><table><tr><th>Range</th><th>Scoring Plan</th><th>Function</th></tr><tr><td>0 - 1</td><td>1= Yes; 0 = No</td><td>Binary</td></tr></table>With the goal of placing facilities on installations, a military personnel center that is currently on an installation will receive credit and one currently in leased space, annex space away from the main/host installation, previously BRAC’d locations, and stand-alone locations will not receive credit.</td><td>20%</td></tr>
<tr><td colspan="2">Question 1. For each military personnel center as identified in the Amplification: Is the military personnel center’s primary facility within the perimeter of the main/host DoD installation? (Military Value Question)</td><td></td></tr>
<tr><td>Attribute 2. Survivability – Compliance with DoD Minimum Antiterrorist Standards for Buildings (UFC 4-010-01)</td><td></td><td>10%</td></tr>
<tr><td>Metric 1. Compliance with DoD Minimum Antiterrorist Standards for Buildings. Scoring: For each building in which an Activity is located, a series of questions will be asked to determine the extent to which that building does or does not meet the standards, leading to one compliance ranking for each building. An overall compliance ranking for the Activity will be determined by adjusting the scores to the proportion of total square feet. Questions will only</td><td><table><tr><th>Range</th><th>Scoring Plan</th><th>Function</th></tr><tr><td>0 - 1</td><td>See Table</td><td>Non-Linear</td></tr></table>Together with Attribute 1 above, this is considered an important AT/FP standard which gives credit to activities on DoD installations, but also allows some credit to activities that may be occupying leased space. Measuring a secure operational environment becomes more critical to ensure uninterrupted servicing if personnel centers are consolidated into a single location for each service. Each location occupied by an</td><td>10%</td></tr>
</table>

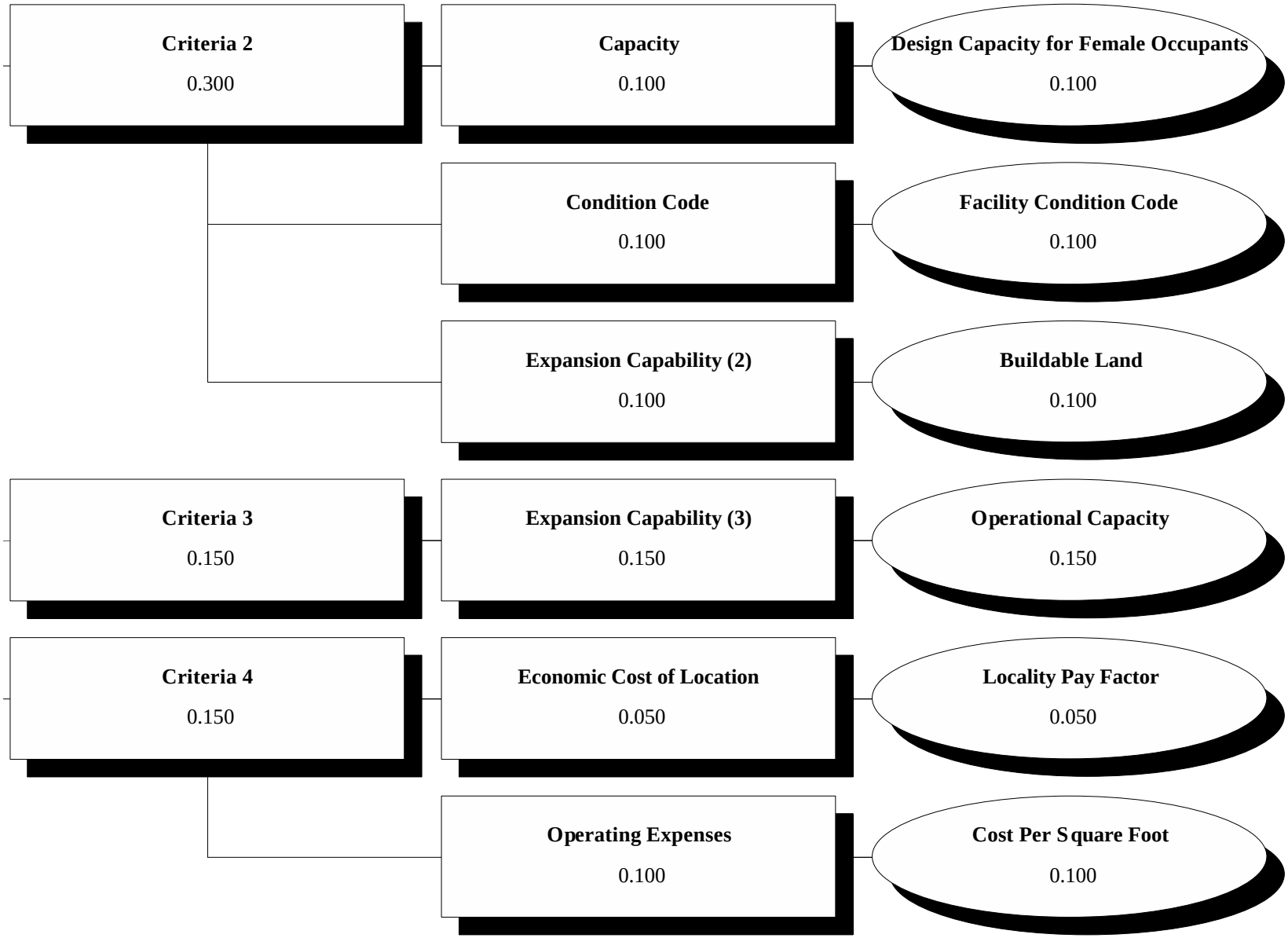
<table>
<tr><th>Criterion/Attribute/Metric/Question</th><th>Rationale</th><th>Weight</th></tr>
<tr><td>be asked of leased installations; military installations are assumed to comply due to presence of controlled perimeters.
<table>
<tr><td colspan="4">AT/FP Scoring Plan:</td><td>Value</td></tr>
<tr><td colspan="4">Military Installation</td><td>1.0</td></tr>
<tr><td colspan="4">Occupies less than (<) 25% of Building</td><td>0.8</td></tr>
<tr><td>Control Perimeter</td><td>Distance to Perimeter</td><td>Meets Distance Roads & Parking</td><td>Non-Controlled Undergnd Parking</td><td>Value</td></tr>
<tr><td>YES</td><td>YES</td><td>YES</td><td>N/A</td><td>1.0</td></tr>
<tr><td>YES</td><td>YES</td><td>NO</td><td>YES</td><td>0.5</td></tr>
<tr><td>YES</td><td>YES</td><td>NO</td><td>NO</td><td>0.75</td></tr>
<tr><td>YES</td><td>NO</td><td>YES</td><td>N/A</td><td>0.75</td></tr>
<tr><td>YES</td><td>NO</td><td>NO</td><td>YES</td><td>0.25</td></tr>
<tr><td>YES</td><td>NO</td><td>NO</td><td>NO</td><td>0.35</td></tr>
<tr><td>NO</td><td>N/A</td><td>YES</td><td>N/A</td><td>1.0</td></tr>
<tr><td>NO</td><td>N/A</td><td>NO</td><td>YES</td><td>0.0</td></tr>
<tr><td>NO</td><td>N/A</td><td>NO</td><td>NO</td><td>0.0</td></tr>
</table></td><td>activity will be assessed for compliance with UFC 4-010-01; locations that do not meet the current standard will be given a lower MV. All questions are weighted equally.</td><td></td></tr>
<tr><td colspan="2">Question 1. What percentage of the building’s total square feet is leased to and/or occupied by DoD entities?</td><td></td></tr>
<tr><td colspan="2">Question 2. Is the building within a Controlled Perimeter? Y/N.</td><td></td></tr>
<tr><td colspan="2">Question 3. What is the distance in feet from the building to the Controlled Perimeter?</td><td></td></tr>
<tr><td colspan="2">Question 4. What is the distance in feet from the building to the nearest Parking and Roadways?</td><td></td></tr>
<tr><td colspan="2">Question 5. Does the building have underground parking which is access controlled? If no underground parking, answer is No.</td><td></td></tr>
<tr><td colspan="2">Question 6. Does the building have underground parking which is not access controlled? If no underground parking, answer is No.</td><td></td></tr>
<tr><td>Criterion 2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.</td><td>This criterion was ranked third to ensure adequate facilities existed to house a centralized, single facility within each service that is capable of ensuring uninterrupted mission execution.</td><td>20%</td></tr>
<tr><td>Attribute 1. Facility Condition</td><td></td><td>15%</td></tr>
<tr><td>Metric 1. Facility Condition Code. Measured using the Average Facility Condition Code for Administrative Buildings. C-1 is better. Leased space is given 0.</td><td><table>
<tr><th>Range</th><th>Scoring Plan</th><th>Function</th></tr>
<tr><td>C1 – C4</td><td>C1 = 1.00; C2 = 0.75; C3 = 0.25; C4 = 0.00</td><td>Non-Linear</td></tr>
</table>This metric is important to determine which installation’s buildings are in the best condition. While an important factor in deciding best locations, facilities can always be improved.</td><td>15%</td></tr>
<tr><td colspan="2">Question 1. What is the installation’s facility condition code (C1-C4) for Administrative-type buildings? (Capacity Data Call Question DoD #11)</td><td></td></tr>
<tr><td>Attribute 2. Network Services</td><td></td><td>5%</td></tr>
</table>

Criterion/Attribute/Metric/Question	Rationale	Weight
Metric 1. DISN Point of Presence (POP). Function is Binary. If a military personnel center currently exists on a DISN POP, then a 1 or Yes is given; otherwise 0 or No.	**Range**: 0 – 1; **Scoring Plan**: 1 = Yes; 0 = No; **Function**: Binary Location on a DISN Point of Presence (POP) is an important consideration with regard to DoD IT enterprise architecture. Installations with POP gain the benefit of its potential network throughput and play heavily in meeting future IT requirements. If scenario development results in fewer Military Personnel Centers, DISN POP and band with are critical for DoD's efforts to establish a single personnel and pay system via DIMHRS.	5%
Question 1. For each military personnel center as identified in the Amplification: Is your location on a DISN Point of Presence (POP)? (Military Value Question - Derived from Capacity Data Call Question DoD #326) This CDC question identifies various types of DISN POPs that may reside within a facility. The type of POP is to be determined by HSA JCSG COMM/IT and its utility addressed during optimization by scoring plan owners.		
Criterion 3. The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.	Criterion 3 has the greatest weight to account for personnel center expansion capability for co-location to establish a foundation for future total force requirements in support of DoD "continuum of service" transformation efforts. This is weighted more than Criterion 1 because it is anticipated that new policies and automated systems such as DIMHRS will impact future mobilization and total force capabilities.	35%
Attribute 1. Expandability	Important factor when looking at future force requirements. It is critical to assess potentially available finished square feet and buildable land at current center locations.	35%
Metric 1. Finished Square Feet. Blocks of contiguous vacant Administrative-type space over 10K GSF at an installation. Measured in blocks and more is better. Leased space is given 0.	**Range**: Min - Max; **Scoring Plan**: Min = 0; Max = 1; **Function**: Linear Increasing This is to assess if a current center location has space in its existing Admin buildings to expand or if they are at capacity. This metric was weighted higher than buildable land since there may be less cost with moving to an existing facility rather than requiring new military construction (MILCON). If a location has expansion space, they will receive more credit since they have the ability to receive additional personnel.	20%
Question 1. How many blocks of contiguous vacant Administrative-type space over 10K GSF are located on the installation? (Capacity Data Call Question DoD #305)		
Metric 2. Buildable Land. At least one parcel greater than 5 acres. Function is Binary. If a military personnel center currently has at least one parcel of buildable land greater than 5 acres, then a 1 or Yes is given; otherwise 0 or No. Leased space is given 0.	**Range**: 0 - 1; **Scoring Plan**: 1= Yes; 0 = No; **Function**: Binary Based on the assumption that a personnel facility could be built on a parcel of 5 or more acres and only one such center would be needed on the installation. This would provide the opportunity to build a new building to possibly house an entire military personnel center or house a second facility for a personnel "complex." This metric is important, but also a potentially expensive undertaking, so received less weight than available finished space.	15%
Question 1. Does the installation have at least one parcel of buildable land greater than 5 acres? (Capacity Data Call Question DoD #31)		
Criterion 4. The cost of operations and the manpower implications.	This criterion was given the lowest weight because other factors in ensuring adequate personnel servicing to support DoD are more important for mission accomplishment. Locality and facility operation costs enable an initial look at cost-effective potential receiving locations for scenario development.	15%
Attribute 1. Estimated Economic Cost of Location		5%

Criterion/Attribute/Metric/Question	Rationale	Weight
Metric 1. Locality Pay. Lower is better.	**Range**: Min - Max **Scoring Plan**: Min = 1; Max = 0 **Function**: Linear Decreasing This is one measure of the cost of doing business at one location versus another. The civilian locality rate was selected since the majority of personnel working at most Military Personnel Centers are civilian employees. While this metric is important, it should not be the determining factor about a location unless everything else is equal.	5%
Question 1. For each military personnel center as identified in the Amplification: What is the locality pay percentage rate for Calendar Year 2003? (Military Value Question)		
Attribute 2. Operating Costs		10%
Metric 1. Base Operating Support (BOS) Ratio. Amount of BOS non-payroll obligations per population supported. More is better. Leased space is given 0.	**Range**: Min – Max **Scoring Plan**: Min = 0; Max = 1 **Function**: Linear Increasing This is one measure of the cost of doing business at a particular location. The BOS is a good way to capture local maintenance, utilities, and other operating costs of the installation and match it to manpower implications. This metric should play a role in determining which facility locations are more cost effective to operate thus have a greater military value. This is a way to measure fiscal efficiency.	10%
Question 1. For each military personnel center as identified in the Amplification: What are your BOS non-payroll obligations for your activity (Navy) or installation? (Military Value Question) Population supported data will be provided from the Military Value Question IM Scoring Plan Criterion 1, Attribute 3, Metric 1, Question 1.		

Correctional Facilities




Criteria 2
0.300
Capacity
0.100
Design Capacity for Female Occupants
0.100
Condition Code
0.100
Facility Condition Code
0.100
Expansion Capability (2)
0.100
Buildable Land
0.100
Criteria 3
0.150
Expansion Capability (3)
0.150
Operational Capacity
0.150
Criteria 4
0.150
Economic Cost of Location
0.050
Locality Pay Factor
0.050
Operating Expenses
0.100
Cost Per Square Foot
0.100

Corrections Military Value Modeling Effort

1. **Scope.** The corrections function military value (MV) modeling effort includes Level I – III correctional facilities within the Department of Defense (DoD).

2. **Assumptions.**

   a. Analysis will provide military value of performing the function at current location.
   b. Analysis may reveal transformational opportunities.
   c. Communities where function is currently performed embody a beneficial quality of life that will be sustained.

3. **Military Value Scoring Plan.**

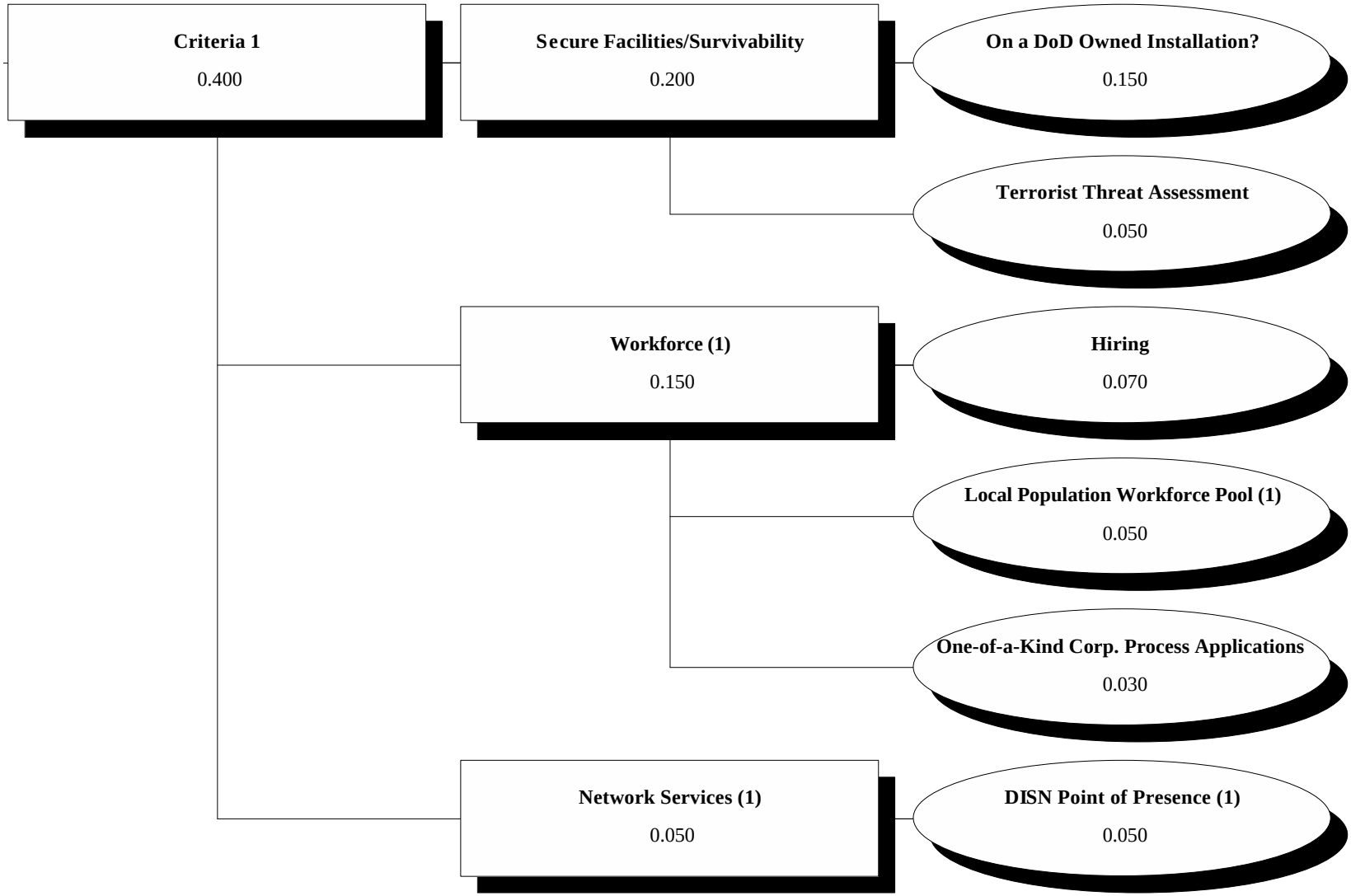
<table>
<tr><th>Criterion/Attribute/Metric/Question</th><th>Rationale</th><th>Weight</th></tr>
<tr><td>Criterion 1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.</td><td>This criterion provides the best measure for the efficient and effective execution of the corrections mission therefore it holds the highest weight. Correctional facilities are an integral component of the military justice system therefore, the capability to house multiple classification levels and meet DoD space standards are prudent. The utilization of inmate labor enhances and incident rate adversely affects operational readiness. Guard-to-inmate ratio provides a measure of manpower utilization and effectiveness. Although these metrics alone will not be the determining factor on a recommendation for correctional facilities they impact the mission capabilities of correctional facilities and are considered.</td><td>40%</td></tr>
<tr><td>Attribute 1. Ability to house multiple levels</td><td></td><td>15%</td></tr>
<tr><td>Metric 1. Capability to house multiple Levels. Measured by Classification Level I, II, or III, where Level III can house all levels of prisoners.</td><td><table><tr><th>Range</th><th>Scoring Plan</th><th>Function</th></tr><tr><td>Level I - III</td><td>Level III = 1.0
Level II = 0.5
Level I = 0.0</td><td>Linear Decreasing</td></tr></table>The ability of a correctional facility to house different levels of inmates provides greater flexibility for a facility. This was weighted highest since this would provide the flexibility required to move and/or consolidate prisons.</td><td>15%</td></tr>
<tr><td colspan="2">Question 1. What is the corrections facility’s ability to house multiple levels? (Capacity Data Call Question DoD #454)</td><td></td></tr>
<tr><td>Attribute 2. Inmate Labor</td><td></td><td>6%</td></tr>
<tr><td>Metric 1. Annual Cost Savings by Inmate Labor. Measured in dollars, where more is better.</td><td><table><tr><th>Range</th><th>Scoring Plan</th><th>Function</th></tr><tr><td>Min - Max</td><td>Max = 1.0; Min = 0.0</td><td>Linear Increasing</td></tr></table>Several correctional facilities use inmate labor to augment support functions on the installation/base, i.e. snow shoveling, grass mowing, etc. There is military value in</td><td>6%</td></tr>
</table>

Criterion/Attribute/Metric/Question	Rationale	Weight
	installations reducing BOS costs. Inmate labor also supports operational readiness for the DoD Force allowing military members to complete mission essential work. We weighted this less than 10% to be used as a deciding factor in the event all else is equal.	
Question 1. What are the annual cost savings for the installation achieved by utilizing inmate labor? (Military Value Question)		
Attribute 3. Standard of Square Feet (SF)/Inmate		10%
Metric 1. Meet DoD Space Standard. Function is Binary. If the facility meets the standards, then a 1 or Yes is received; 0 or No, otherwise.	**Range**: 0 - 1; **Scoring Plan**: 1= Yes; 0 = No; **Function**: Binary DoD to the greatest extent possible dictates that national accreditation standards issued by the American Correctional Association be followed in administering correctional facilities. It is important to know which facilities are meeting this standard.	10%
Question 1. Does the facility meet all American Correctional Association standards for SF per inmate? (Military Value Question)		
Attribute 4. Incident Rate		4%
Metric 1. Adverse Inmate deaths. Measured in number of personnel. Metric will be the sum of Question 1 + Question 2 + Question 3.	**Range**: Max - Min; **Scoring Plan**: Max = 0.0; Min = 1.0; **Function**: Linear Decreasing Incident rate impacts operational readiness of the Force by not having an effective prison system. This metric looks at the specific deaths for military value equally. Collectively we called it "Adverse Inmate Deaths." A death is a death no matter how it occurs, (accident, suicide, or by another person). Deaths at a correctional facility, exception "natural causes," are unacceptable. For military value and BRAC purposes this metric didn't weigh high. The decision to close/move a correctional facility would not be decided on the number of deaths however, it may be a deciding factor in the event all else is equal. All questions are rated equally.	2%
Question 1. What is the total number of inmate deaths by suicide as reported on the Annual Confinement Report, DD Form 2720, item 17.e.(4) for CY01-03? (Military Value Question)		
Question 2. What is the total number of inmate deaths by accidents as reported on the Annual Confinement Report, DD Form 2720, item 17.e.(5), for CY01 – 03? (Military Value Question)		
Question 3. What is the total number of inmate deaths by another person as reported on the Annual Confinement Report, DD Form 2720, item 17.e.(6), for CY01 – 03? (Military Value Question)		
Metric 2. Escapees. Measured in number of personnel escapes.	**Range**: Max - Min; **Scoring Plan**: Max = 0.0; Min = 1.0; **Function**: Linear Decreasing Escapes from a correctional facility may indicate a problem with security in the facility. The number of escapes per correctional facility will provide us with a measure of security at the facility. This metric was given a low weight because it was determined it isn't a critical factor in mission accomplishment and operational readiness.	2%
Question 1. What is the total number of inmate escapees as reported on the Annual Confinement Report, DD Form 2720, item 17.f.(1), for CY01 – 03? (Military Value Question)		
Attribute 5. Guard-to- Inmate Ratio		5%
Metric 1. Guard-to-Inmate Ratio. Measured as a percentage, where less is better.	**Range**: Min - Max; **Scoring Plan**: Max = 0.0; Min = 1.0; **Function**: Linear Decreasing This metric will indicate the manpower cost of operating a safe, secure and efficient	5%

Criterion/Attribute/Metric/Question	Rationale	Weight
	correctional system. The effective utilization of correctional/security staff is necessary for the safety of both the staff and inmates. Guard-to-ratio comparison will be compared by level. Continued movement towards state of the art technology may reduce manpower requirements. A more complete security posture of the facility is feasible when taken in conjunction with the incident rate metrics. The ratio will be determined based on Capacity Data Call Question DoD #452)	
Question 1. What is the number of correctional/security personnel (guards) in your correctional facility? (Military Value Question)		
Criterion 2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.	Correctional facilities are an integral component of the military justice system therefore; the capability to accommodate female inmates and house all inmates in facilities that meet the acceptable condition codes determines the capability of ensuring uninterrupted mission execution.	30**%**
Attribute 1. Capacity		10%
Metric 1. Design capacity for female occupants. Measured in number of female occupants, where more is better.	**Range** / **Scoring Plan** / **Function** Min - Max / Max = 1.0; Min = 0.0 / Linear Increasing A correctional facility designed to house female occupants is important and provides the flexibility required to move and/or consolidate. It was not weighted as high as design capacity for the different classification levels, however, it provides us flexibility.	10%
Question 1. If your facility was required to house female inmates, what is the maximum number of females your facility could house based on design capacity? (Military Value Question)		
Attribute 2. Condition Code		10%
Metric 1. Facility Condition Code. Measured by C-Code, where C1 is best. Average Facility Condition Code for Correctional Facilities (C1, C2, C3, or C4). Note C1 is better than C2 is better than C3 is better than C4.	**Range** / **Scoring Plan** / **Function** C1 – C4 / C1 = 1.0; C2 = .75 C3 = .25; C4 = 0.0 / Non-linear One metric was developed for Facility Condition, using current DoD facility condition codes. All services rate their buildings utilizing this standard. This metric is important to determine which correctional facilities are in the best condition.	10%
Question 1. What is the installation's facility condition code (C1-C4) for the correctional facility (DoD FAC 7312)? (Capacity Data Call Question DoD #11)		
Attribute 3. Expansion Capability		10%
Metric 1. Buildable Land. This metric is measured in acres by corrections facilities' code (FAC 7312), where more is better.	**Range** / **Scoring Plan** / **Function** Min - Max / Max = 1.0; Min = 0.0 / Linear Increasing Is land available adjacent to the existing facility to expand or build a new correctional facility? The assumption is that more land available is better. This provides an opportunity to expand or build a new correctional facility. Due to the higher costs involved in expanding or building a new facility this metric was weighted less than operational capacity expansion.	10%
Question 1. Does the installation have buildable land for expansion of corrections facilities (DoD FAC 7312) adjacent to the existing facility? If yes, how many acres? (Military Value Question)		
Criterion 3. The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving	Future force requirements may require expansion of the current DoD correctional program. The availability of excess capacity and land will provide justification to consolidate	15**%**

Criterion/Attribute/Metric/Question	Rationale	Weight
locations to support operations and training.	facilities, centralizing or streamlining operations which may generate overall cost savings for the DoD.	
Attribute 1. Expansion Capability	Expandability is an important factor when looking at future force requirements. It is critical that we have visibility of all finished square feet and buildable land at current correctional facilities.	15%
Metric 1. Operational Capacity. Available square footage of unused operational capacity. Measured in square feet.	**Range**: Min - Max; **Scoring Plan**: Max =1.0; Min = 0.0; **Function**: Linear Increasing It's desirable to know if a current correctional facility has existing space in its facility to house additional prisoners. Capacity question DoD #454 asks for current capacity and maximum operational capacity. From this we can ascertain unused capacity for expansion. This metric is weighted higher than buildable land. There may be less cost associated with expanding an existing facilities operation vice new military construction. (MILCON).	15%
Question 1. What is the maximum operational capacity of the corrections facility? (Capacity Data Call Question DoD #454)		
Criterion 4. The cost of operations and the manpower implications.	Cost will be incurred based on recommendations to consolidate, relocate, or build new. The current cost of operations is an indicator of facility effectiveness and efficiency. Locality pay and cost per square foot to operate are the metrics to discriminate facilities. The recommendation of remaining "status quo" is the only option that will not incur a cost.	15**%**
Attribute 1. Economic Cost of Location		5%
Metric 1. Locality Pay. Measured as a percentage, where less is better.	**Range**: 1.0 – 0.0; **Scoring Plan**: Highest value = 0.0 Lowest value call = 1.0; **Function**: Linear Decreasing A measurement to determine the economic cost of doing business was desired. Civilian locality rate was determined to be the best factor. This unit of measure will be provided by each correctional facility. This is an important metric however, it isn't weighted very high as to not become a determining factor concerning the cost of operations unless all other factors are equal.	5%
Question 1. Identify the civilian locality pay % rate for Calendar Year 2003. (Military Value Question)		
Attribute 2. Operating Expenses		10%
Metric 1. Cost per Square Foot. Measured in dollars, where less is better.	**Range**: Min - Max; **Scoring Plan**: Max = 0.0; Min = 1.0; **Function**: Linear Decreasing This metric captures the cost of doing business at a specific location. The cost per square foot of a correctional facility is an indicator that will capture operating cost, maintenance, utilities, etc. This metric may be a discriminator in determining which facility to maintain, consolidate or relocate. It measures fiscal efficiency.	10%
Question 1. Provide the correctional facility's operating cost for FY03. (Military Value Question)		

DFAS


Criteria 1
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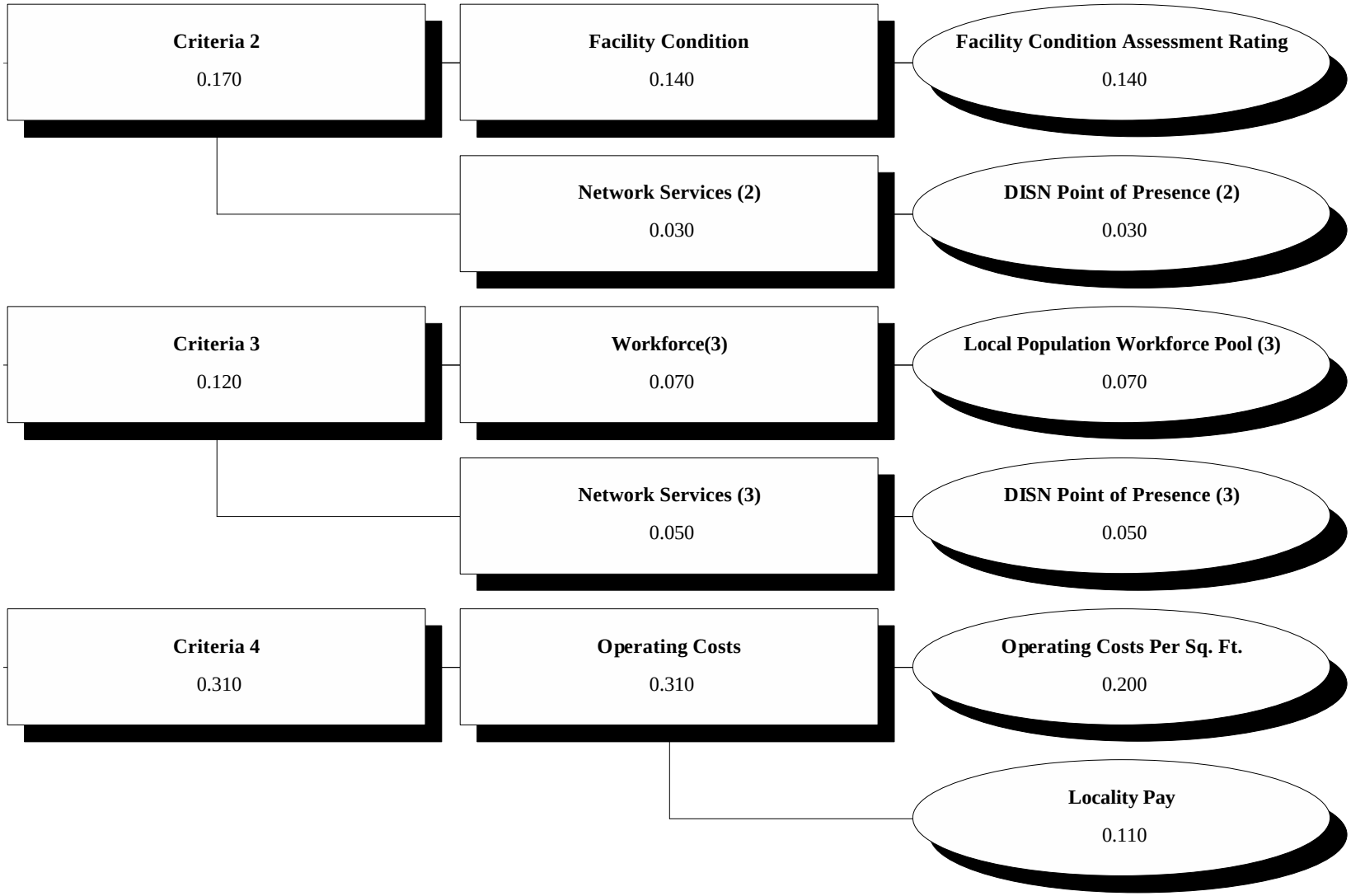
Secure Facilities/Survivability
0.200
On a DoD Owned Installation?
0.150
Terrorist Threat Assessment
0.050
Workforce (1)
0.150
Hiring
0.070
Local Population Workforce Pool (1)
0.050
One-of-a-Kind Corp. Process Applications
0.030
Network Services (1)
0.050
DISN Point of Presence (1)
0.050


Criteria 2
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Facility Condition
0.140
Facility Condition Assessment Rating
0.140
Network Services (2)
0.030
DISN Point of Presence (2)
0.030
Criteria 3
0.120
Workforce(3)
0.070
Local Population Workforce Pool (3)
0.070
Network Services (3)
0.050
DISN Point of Presence (3)
0.050
Criteria 4
0.310
Operating Costs
0.310
Operating Costs Per Sq. Ft.
0.200
Locality Pay
0.110

Defense Finance and Accounting Services (DFAS) Military Value Modeling Effort

1. **Scope.** This model will cover the Defense Financing and Accounting Service (DFAS) organization encompassing its 24 primary or corporate locations, known as DFAS Central and Field Sites, performing finance and accounting functions within the United States. The DFAS sites in Europe and Japan are not included in this effort. However, consideration will be given to workload realignments from Europe or Japan to the United States. As appropriate, this effort also includes F&A functions performed by Washington Headquarters Services (WHS) that are being transferred to DFAS and Defense Intelligence Agency (DIA) F&A functions under consideration for transfer to DFAS. Note: DFAS activities providing local finance and accounting (F&A) support to DoD organizations will be included in the Local F&A military value model.

2. **Assumptions.**
   a. Analysis will identify closure/realignment candidates. Major Administrative & HQ models may identify other candidates.
   b. Analysis will identify which functions (business lines) and corporate activities could combine.
   c. Analysis may reveal transformational opportunities.
   d. Locations with direct access to high-capacity Defense Information Systems Network (DISN) network services are more desirable than those without.
   e. Surrounding communities embody a beneficial quality of life that will be sustained.

3. **Military Value Scoring Plan.**

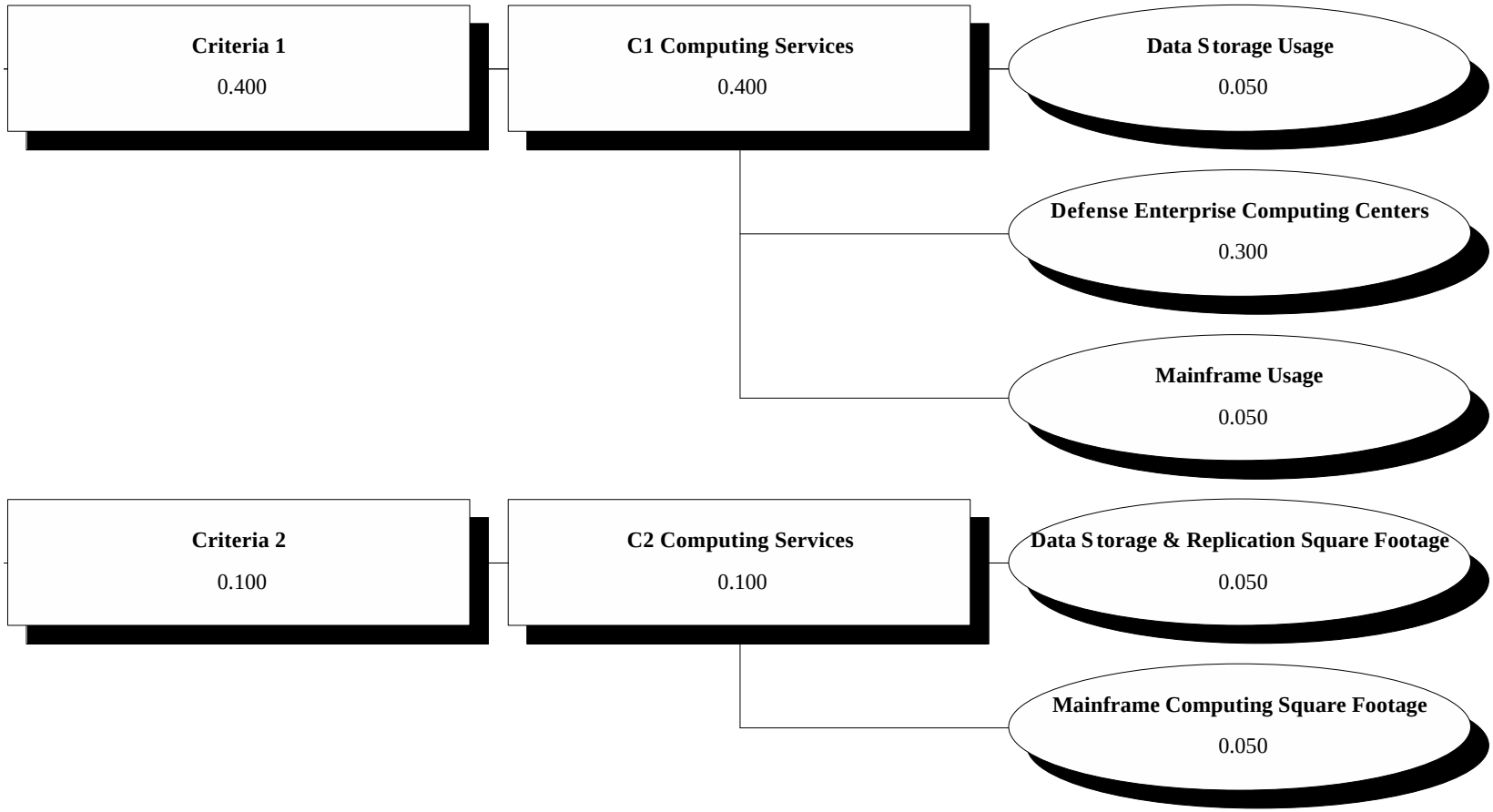
Criterion/Attribute/Metric/Question	Rationale			Weight
Criterion 1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.	This criterion was given the highest weight, because a secure (AT/FP) environment and a skilled workforce are deemed most important in ensuring uninterrupted service to the DoD.			40%
Attribute 1. Secure Facilities/Survivability	Attribute 1, given the highest ranking, relative to Attribute 2, because a secure facility is key to ensuring that DFAS work can be accomplished under any circumstance.			20%
Metric 1. On a DoD owned installation? Yes/No On a DoD owned installation is preferable.	**Range**	**Scoring Plan**	**Function**	15%
	0 - 1	1= Yes 0 = No	Binary	
	Metric 1 is ranked higher than Metric 2 because a facility located on an actively protected DoD installation is expected to provide the safest environment to accomplish the DFAS mission.			
Question 1. For DFAS Central and Field Sites Only. For each location, identify if the site is on a DoD owned installation. (See Amplification.) (Military Value Question)				
Metric 2. Terrorist Threat Assessment Rating (Low, Low/Moderate, Moderate, High). Rating has seven separate assessments. Each assessment will be ranked and the average	**Range**	**Scoring Plan**	**Function**	5%
	1-4	Low = 1; Low/Moderate = 2; Moderate = 3; High = 4.	Linear	

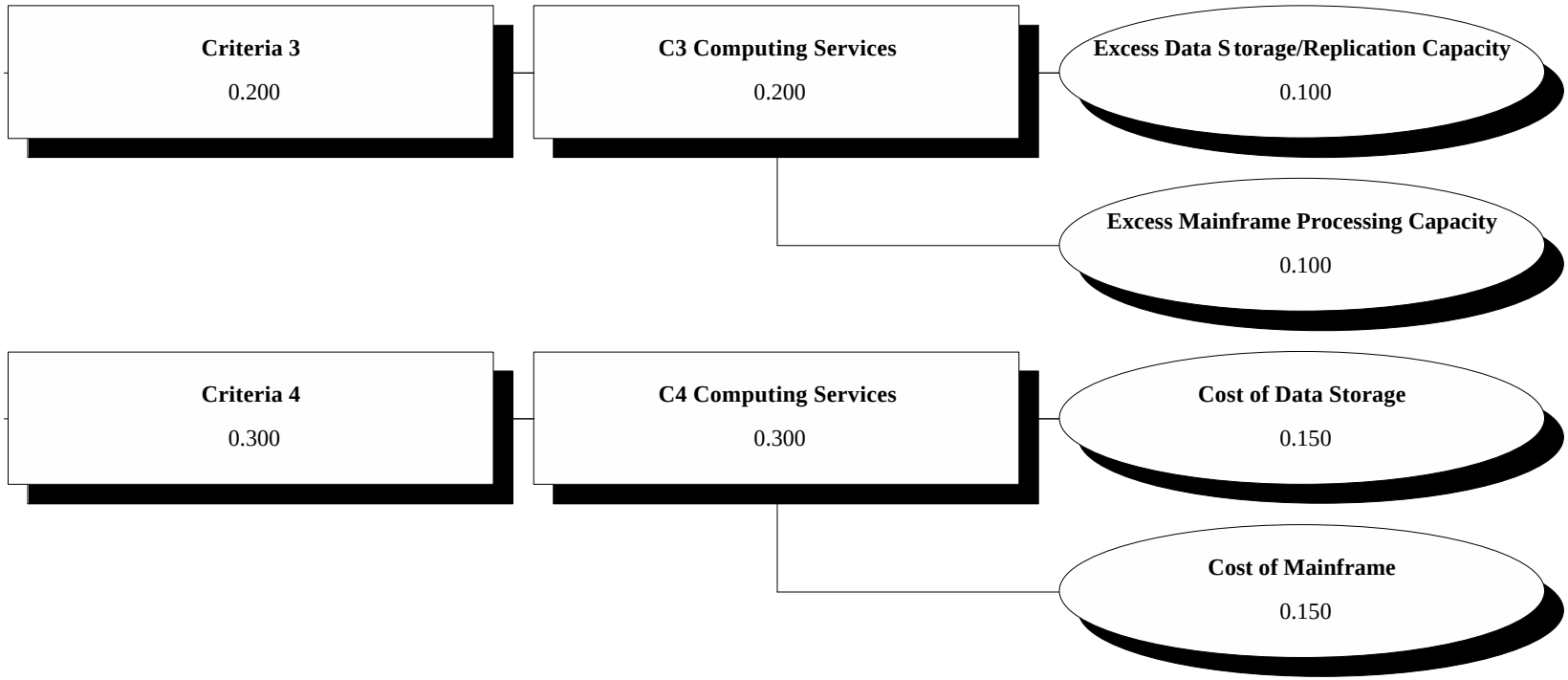
Criterion/Attribute/Metric/Question	Rationale	Weight
rank for the seven assessments will be the overall rating (Low=1; Low/Moderate=2; Moderate=3; High=4). Lower value is preferred.	Metric 2 is weighted less than Metric 1, because differentiating between on or off a DoD installation (Metric 1) is deemed the first and the more important step in defining a site's survivability. Metric 2 is used to further delineate the threat assessment of each DFAS facility.	
Question 1. For DFAS Central and Field Sites Only. For each location, identify the terrorist threat assessment rating (See Amplification) based on threat assessment intelligence and DSHARPP analysis for (a) personnel attacks, (b) conventional explosive attack, (c) arson, (d) hostage situation, (e) weapons of mass destruction, (f) theft, and (g) other. (Military Value Question)		
Attribute 2. Workforce	Attribute 2 is ranked second in weight because an adequate/skilled workforce pool is necessary to ensure DFAS's overall success in meeting DoD requirements.	15%
Metric 1. Hiring. Measured in days, average amount of time to fill vacancies from outside of DFAS. Less time to fill vacancy is better.	**Range**: min - max **Scoring Plan**: Highest value = 0.0 – Lowest value = 1.0 **Function**: Linear decreasing Metric 1 is weighted higher than Metric 2, because a basic element in accomplishing mission/workload is the availability of the correct mix of employees/skills to fill vacancies.	7%
Question 1. For DFAS Central and Field Sites Only. For each location, identify the average hiring time (number of days – See Amplification) for external fill actions for the GS 500 series positions. (Military Value Question)		
Metric 2. Local Population Workforce Pool. A larger available workforce pool is preferable; Range = If not listed on Dept. of Labor MSA/PMSA workforce listing – site receives a zero, after that sites will be ranked based on min to max.	**Range**: min – max **Scoring Plan**: Lowest value or non-listing = 0.0 – Highest value = 1.0 **Function**: Linear increasing Metric 2 is weighted lower than Metric 1 because this metric is intended to identify the local geographical area's ability to support employment requirements.	5%
Question 1. For DFAS Central and Field Sites Only. For each location, identify the total workforce pool as indicated in Dept of Labor Workforce Listing (See amplification). (Military Value Question/Source: Dept of Labor)		
Metric 3. One-of-a-Kind Corporate Process Application(s). Credit will be given for one or more one-of-a-kind corporate process applications; Yes = 1; No= 0. Note: One-of-a-kind Corporate Process Application is defined as a corporate process application, which resides at one and only one place. It is not a locally developed stand-alone support system.	**Range**: 0 – 1 **Scoring Plan**: 1= Yes 0 = No **Function**: Binary Metric 3 ranked below Metric 1 and 2 respectively, because this metric focuses on workforce considerations associated with one-of-a-kind corporate process applications. The specialized/ skilled workforce issue needs to be recognized in the ranking process and appropriately considered in any relocation decisions.	3%
Question 1. For DFAS Central and Field Sites Only. For each location and function, identify any one-of-a-kind corporate process applications. (Military Value Question)		
Attribute 3. Network Services	Attribute 3 is ranked third in priority order, because current Communications/Information Technology (COMM/IT) is presumed adequate for DFAS mission requirements. However, location on a Defense Information Systems Network (DISN) Point of Presence (POP) provides additional cost and application benefits.	5%
Metric 1. DISN Point of Presence (POP). Measure is Binary (Yes and No), where Yes = Good.	**Range**: 0 – 1 **Scoring Plan**: 1= Yes 0 = No **Function**: Binary Location on a DISN POP is an important consideration with regard to DoD IT enterprise architecture. Installations with direct POP access gain the benefit of its potential network throughput and play heavily in meeting future IT requirements.	5%

Criterion/Attribute/Metric/Question	Rationale	Weight
Question 1. Question: For DFAS Central and Field Sites Only. For each location, identify if your location is on the DISN POP. (Military Value Question - Derived from Capacity Data Call Question DoD #326.) This CDC question identifies various types of DISN POPs that may reside within a facility. The type of POP is to be determined by HSA JCSG COMM/IT and its utility addressed during optimization by scoring plan owners.		
Criterion 2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.	This criterion is weighed third after Criteria 1 and 4. The focus of this weight is the condition of facilities and a locations' ability to support DoD IT enterprise architecture.	17%
Attribute 1. Facility Condition	Attribute 1 is given the highest rating to recognize the importance of a facility's condition.	14%
Metric 1. Facility Condition Assessment Rating (Red, Amber, Green). A Green rating is preferable; Green=1; Amber=.6; Red=0.	**Range**: Green, Amber, Red **Scoring Plan**: Green=1, Amber=.6, Red=0 **Function**: Non-linear See above. (Note: DFAS uses three levels – Red, Yellow, and Green – which are tied to estimated cost ranges.)	14%
Question 1. For DFAS Central and Field Sites Only. For each location, identify the Facility Condition Assessment Rating based on DFAS FAC Codes – Red, Amber, and Green (See Amplification). (Military Value Question)		
Attribute 2. Network Services	Attribute 2 is ranked slightly lower in priority order, because current COMM/IT is presumed adequate for DFAS mission requirements. However, location on a Defense Information Systems Network (DISN) Point of Presence (POP) provides additional cost and future application benefits.	3%
Metric 1. DISN Point of Presence (POP). Measure is Binary (Yes and No), where Yes = Good.	**Range**: 0 – 1 **Scoring Plan**: 1= Yes 0 = No **Function**: Binary Location on a DISN POP is an important consideration with regard to DoD IT enterprise architecture. Installations with direct POP access gain the benefit of its potential network throughput and play heavily in meeting future IT requirements.	3%
Question 1. For DFAS Central and Field Sites Only. For each location, identify if your location is on the DISN POP. (Military Value Question - Derived from Capacity Data Call Question DoD #326.) This CDC question identifies various types of DISN POPs that may reside within a facility. The type of POP is to be determined by HSA JCSG COMM/IT and its utility addressed during optimization by scoring plan owners.		
Criterion 3. The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.	Criterion 3 is given the least weight, because inherently DFAS has the basic capability to support DoD mobilization and contingency requirements. Thus the greatest weight has been placed on criteria 1, 4 and 2 respectively. Criterion 3 is weighted slightly less than 2 because it is anticipated that an adequate/skilled workforce pool and new/improved automated systems and other IT tools under the auspices of the Business Modernization Management Program (BMMP) will positively affect the future state of DFAS in regard to their support of mobilization, contingency and future force requirements	12%
Attribute 1. Workforce	Attribute 1 is ranked highest in weight because an adequate/skilled workforce pool is necessary to ensure DFAS's overall success in meeting DoD requirements.	7%
Metric 1. Local Population Workforce Pool. A larger available workforce pool is preferable; Range = If not listed on Dept. of Labor MSA/PMSA workforce listing – site receives a zero, after that sites will be ranked based on min to max.	**Range**: min –max **Scoring Plan**: Lowest value or non-listing = 0.0 – Highest value = 1.0 **Function**: Linear increasing This metric is intended to identify the surrounding areas ability to provide a workforce with	7%

Criterion/Attribute/Metric/Question	Rationale	Weight
	basic skills necessary to accomplish DFAS mission. It is ranked slightly higher than Network Services because Network Services is duplicated under Criteria 1 and 2.	
Question 1. For DFAS Central and Field Sites Only. For each location, identify the total workforce pool as indicated in Dept of Labor Workforce Listing (See amplification). (Military Value Question/Source: Dept of Labor)		
Attribute 2. Network Services	Attribute 2 is ranked slightly lower in weight than Attribute 1, Workforce, because current COMM/IT is presumed adequate for DFAS mission requirements. However, location on a Defense Information Systems Network (DISN) Point of Presence (POP) provides additional cost and application benefits.	5%
Metric 1. DISN Point of Presence (POP). Measure is Binary (Yes and No), where Yes = Good.	**Range**: 0 – 1 **Scoring Plan**: 1= Yes 0 = No **Function**: Binary Location on a DISN POP is an important consideration with regard to DoD IT enterprise architecture. Installations with direct backbone access gain the benefit of its potential network throughput and play heavily in meeting future IT requirements.	5%
Question 1. For DFAS Central and Field Sites Only. For each location, identify if your location is on the DISN POP. (Military Value Question - Derived from Capacity Data Call Question DoD #326.) This CDC question identifies various types of DISN POPs that may reside within a facility. The type of POP is to be determined by HSA JCSG COMM/IT and its utility addressed during optimization by scoring plan owners.		
Criterion 4. The cost of operations and the manpower implications.	This criterion was given the second highest weight because one of the elements for DFAS's continued success is their ability to provide support to DoD at reasonable rates	31%
Attribute 1. Operating Costs	The weighting scheme for this attribute is designed with emphasis on operating costs.	31%
Metric 1. Operating Cost per square foot. A lower cost per square foot is better.	**Range**: min –max **Scoring Plan**: Highest value = 0.0 – Lowest value call = 1.0 **Function**: Linear decreasing Metric 1 is ranked higher than Metric 2 because it is felt that the most important cost driver, of the two, is the operating cost per square foot.	20%
Question 1. For DFAS Central and Field Sites Only. For each location, identify the operating cost per square foot (See Amplification). (Military Value Question)		
Metric 2. . Locality Pay. A lower percentage is better.	**Range**: 1.0 – 0.0 **Scoring Plan**: Highest value = 0.0 – Lowest value call = 1.0 **Function**: Linear decreasing Metric 2 is ranked lower than Metric 1 because it is felt that the most important cost driver of the two is the operating cost per square foot – followed by the local cost of living as provided by targeted locations.	11%
Question 1. For DFAS Central and Field Sites Only. For each location, identify the locality pay % rate for Calendar Year 2003. (Military Value Question)		

Computing Services




Criteria 3
0.200
C3 Computing Services
0.200
Excess Data Storage/Replication Capacity
0.100
Excess Mainframe Processing Capacity
0.100
Criteria 4
0.300
C4 Computing Services
0.300
Cost of Data Storage
0.150
Cost of Mainframe
0.150

(COMM/IT) Computing Services Military Value Model

1. **Scope.** The Communications & Information Technology Computing Services function military value (MV) modeling effort seeks out high-costs, stand-alone, excess-capacity mainframe processors and high-capacity data storage/replication systems. DMRD 918 mandated that the Defense Information Systems Agency (DISA) serve as the DoD service provider for these kinds of systems to ensure availability of service, security, and economy-of-scale operations. DMRD 918 directed MILDEP and Agency-level systems be integrated into DISA facilities called Defense Enterprise Computing Centers (DECC). This model seeks to identify systems not in compliance with the goal to reduce footprint that results in unnecessary duplication and redundancy within DoD. The universe of potential locations for review is limited to the continental U.S.

2. **Assumptions.**

   a. Analysis will provide military value of performing these functions at current locations
   b. Analysis may reveal transformational opportunities.
   c. Services and Agencies will be able to justify continued exemption from DMRD 918 to retain unique high-cost processing and storage support systems vice integration into Defense Enterprise Computing Centers (DECC), or commercial service providers.
   d. Systems used to support research and development may overlap within the areas under study by the Technology Joint Cross Service Group. Conflicts between recommendations will be resolved in favor of the Tech JCSG as long as they do not violate imperatives.

3. **Military Value Scoring Plan.**

<table>
<tr><th>Criterion/Attribute/Metric/Question</th><th>Rationale</th><th>Weight</th></tr>
<tr><td>Criterion 1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.</td><td>Knowledge-Centric organizations need access to all available information to support decision making. Separately storing and maintaining data and operating mainframes in isolation from the rest of the DoD restricts access to data that may be required but cannot be accessed because it is found in a stovepipe system. DMRD 918 directs that DISA be the DoD mainframe and data storage and replication service provider of choice to ensure availability, security, and economy of scale operations.</td><td>40%</td></tr>
<tr><td>Attribute 1. Computing Service (CS)</td><td></td><td>40%</td></tr>
<tr><td>Metric 1. Data Storage Usage. Data Storage Capacity Used. Answer in Terabytes (TB). Responses to CDC #318 provide maximum storage capacity in TB and TB in use. TB in use divided by TB capacity equal percentage. Function gives high value to n/a, .5 for fully utilized, and less as utilization drops.</td><td><table><tr><th>Range</th><th>Scoring Plan</th><th>Function</th></tr><tr><td>Min to Max</td><td>1 = No data storage;
0.5 = Fully utilized (80% or greater);
0 = lowest utilization in data set.</td><td>Non-linear</td></tr></table>The more data there is stored together, the lower the cost. The more Service/Agency activities there are that are storing information in isolation of other DoD activities, not only</td><td>5%</td></tr>
</table>

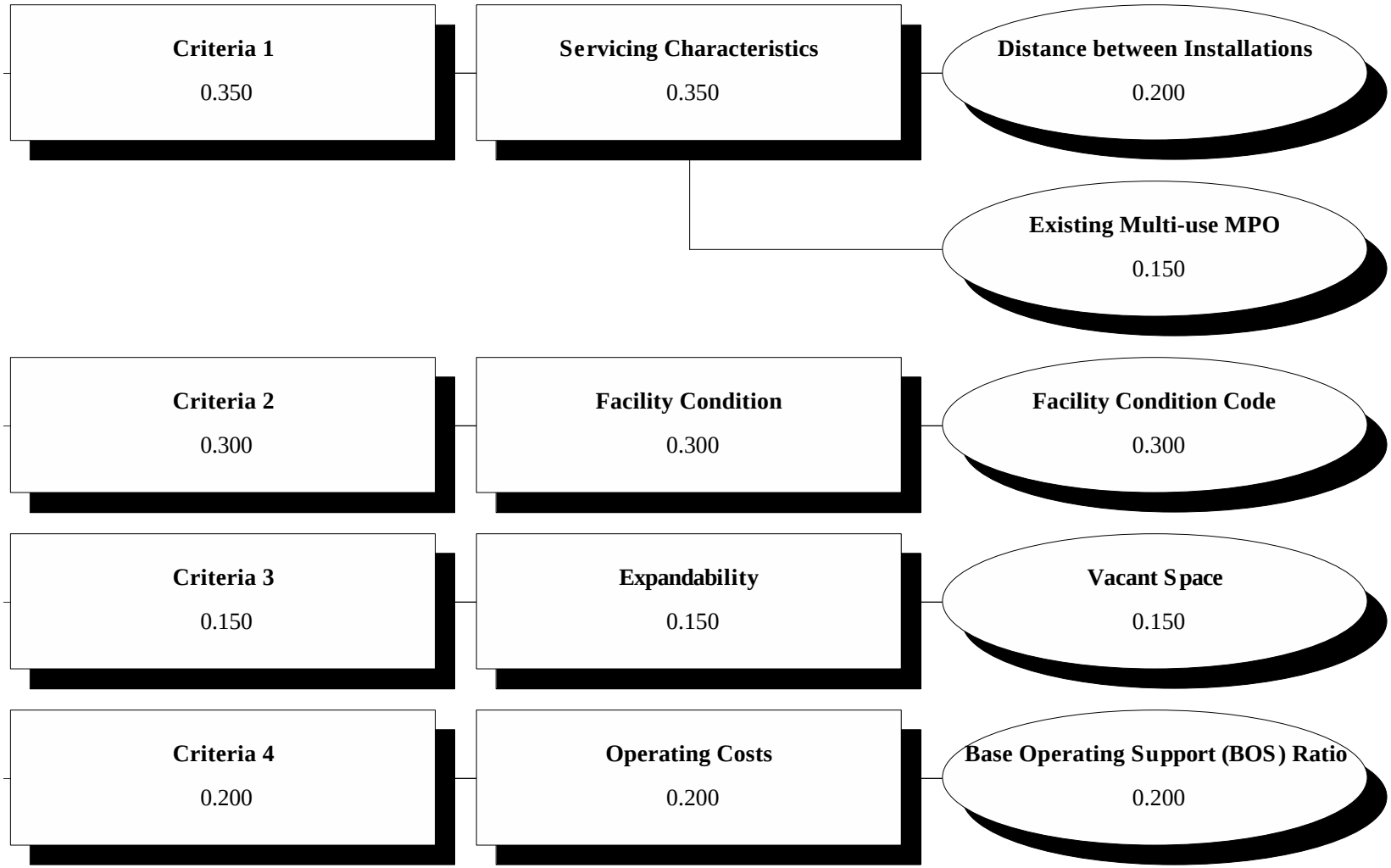
	drives up the cost per Terabytes (TB) stored, but the overall cost of TB stored at DoD facilities, due to the loss of economy of scale effects. Used to support transformation recommendation	
Question 1. What is the installation's/facility's data storage and replication capacity in Terabytes (TB)? Maximum Data Storage (Capacity Data Call Question #318)		
Question 2. How much of the of the installation's/facility's data storage and replication capacity in is in use or reserved for surge capacity in Terabytes (TB)? Maximum Data Storage (Capacity Data Call Question #318)		
Metric 2. Mainframe Usage. Average daily hours of Mainframe Capacity use from (FY00 to FY03) Avg. Hours of Daily Use Function (CDC #315) gives high value to n/a, .5 for fully utilized, and less as utilization drops.	**Range**: Min to Max **Scoring Plan**: 1 = No data storage; 0.5 = Fully utilized (80% or greater); 0 = lowest utilization in data set. **Function**: Non-linear The more mainframes there are operating in isolation, the greater the potential for excess capacity and higher operating costs. The more Service/Agency activities there are that perform this function in isolation of other DoD activities, the greater the total cost per hour of operation, the greater the overall cost of mainframes at DoD facilities, due to the loss of economy of scale effects. Used to support transformation recommendation.	5%
Question 1. What is the average daily hours of mainframe computing service provided by the installation/facility COMM/IT service provider over a 3 year period (FY00 to FY 03? (Capacity Data Call Question #315)		
Metric 3. Defense Enterprise Computing Centers (DECC). High value for being preferred DoD processing and data storage facility.	**Range**: 0 – 1 **Scoring Plan**: 1 = Yes; 0 = No **Function**: Binary In 1992 DMRD 918 directed all mainframe and high capacity data storage operations be consolidated into Defense Enterprise Computing Centers to support economy of scale operations, ensure availability of processing, and security of data. Since this DMRD consolidation there have been additional mainframes put into operation	30%
Question 1. Is your installation/facility mainframe or data storage/replication facility a Defense Enterprise Computing Center (DECC) or subordinate detachment operated by the Defense Information Systems Agency (DISA)? (Military Value Question)		
Criterion 2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.	Space used to support mainframe processors and high capacity data storage systems is expensive due to environmental controls, constant state power sources, and uninterrupted power sources. The more space used the more costly the operation.	10%
Attribute 1. Computing Services (CS)		10%
Metric 1. Mainframe Computing Square Footage (SF). Answer in square feet.	**Range**: Min to Max **Scoring Plan**: Max value = 0.0 – Min value = 1.0 **Function**: Linear increasing Space required to support mainframes has been drastically reduced in the last ten years. The facilities these systems were housed in remain the same due to the environmentally conditioned space required to sustain them. Consolidating this function reduces costly space to operate and maintain.	5%

Question 1. How many square feet of space are used to support mainframe operations? (New Capacity Data Question)		
Metric 2. Data Storage and Replication Square Footage (SF). Answer in square feet. Lower value is better.	**Range**: Min to Max **Scoring Plan**: Max value = 0.0 – Min value = 1.0 **Function**: Linear increasing Space required to support mainframes has been drastically reduced in the last ten years. The facilities these systems were housed in remain the same due to the environmentally conditioned space required to sustain them. Consolidating this function reduces costly space to operate and maintain.	5%
Question 1. How many Square Feet of space are used to support High Capacity Data Storage operations? (New Capacity Data Question)		
Criterion 3. The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.	Excess capacities in mainframe and high capacity data storage identify candidates for consolidation. Future information sharing requirements will serve as a forcing function.	20%
Attribute 1. Computing Services (CS)		20%
Metric 1. Excess Mainframe Processing Capacity Max Hours Available minus Avg. Daily Use minus Surge Capacity = Excess Capacity. Answer in Terabytes (TB) (CDC #315). Lower value is better.	**Range**: Min to Max **Scoring Plan**: Max value = 0.0 – Min value = 1.0 **Function**: Linear increasing This is a measure of excess capacity. High excess capacity locations are candidates for consolidation.	10%
Question 1. What is the installation's/facility's excess mainframe processing capacity? (Capacity Data Call Question #315)		
Metric 2. Excess Data Storage/Replication Capacity. Max Capacity in TB minus TB in Use minus TB Surge Capacity = Excess Capacity Answer in Terabytes (TB) (CDC #318). Lower value is better.	**Range**: Min to Max **Scoring Plan**: Max value = 0.0 – Min value = 1.0 **Function**: Linear increasing This is a measure of excess capacity. High excess capacity locations are candidates for consolidation.	10%
Question 1. What is the installation's/facility's excess data storage/replication capacity? (Capacity Data Call Question #318)		
Criterion 4. The cost of operations and the manpower implications.	High capacity computing and data storage support is extremely costly. Costs can be reduced through economies of scale achieved through consolidation of these products and services. Identifying these systems and recommending consolidation supports DoD guidance under DMRD 918 to consolidate at DISA to eliminate duplications of effort, reduce footprint and manpower costs in centralized DoD facilities.	30%
Attribute 1. Computing Services		30%
Metric 1. Cost of Data Storage. Average annual cost per Terabyte (TB) of storage/replication capacity. Function is linear. Annual O&M Budget for Data Storage/Replication Function divided by the number of TB in use = Avg. Cost per TB Stored/Replicated Answer in dollars.	**Range**: Min to Max **Scoring Plan**: Max value = 0.0 – Min value = 1.0 **Function**: Linear increasing This measure is designed for comparative purposes. The more data there is stored together, the lower the cost. The more Service/Agency activities there are that are performing this function in isolation of other DoD activities, the greater the cost per Terabytes (TB) stored and the greater the overall cost of TB stored at DoD facilities, due to the loss of economy of scale.	15%
Question 1. What is the average cost of data stored/replicated per terabyte over the last three years? (Military Value Question)		
Metric 2. Cost of Mainframe. Average cost per mainframe	**Range** **Scoring Plan** **Function**	15%

operational hour over last 3 years. Avg. Annual O&M Cost of Mainframe Operations (over last 3 years) divided by the Avg. Hours of Use (over last 3 years) = Avg. Cost per hour of operation. Answer in dollars.	Min to Max	Max value = 0.0 – Min value = 1.0	Linear increasing	
	This measure is designed for comparative purposes. The more mainframes there are operating in isolation, the greater the potential for excess capacity and the greater the operating costs. The more Service/Agency activities there are performing this in isolation of other DoD activities, the greater the cost per hour of operation, and the greater the overall cost of mainframes at DoD facilities, due to the loss of economy of scale.			
Question 1. What is the average cost per mainframe operational hour over last 3 years? (Military Value Question)				

Geographic Clusters

Military Personnel



Military Personnel Functions in Geo Clusters Military Value Modeling Effort

1. **Scope.** The personnel function military value (MV) modeling effort includes installation-level Active and Reserve military personnel offices within designated geographic clusters, as determined by Capacity Analysis.

2. **Assumptions.**

   a. Analysis will provide military value of performing the function at current locations.
   b. Analysis will reveal opportunities for organizational grouping.
   c. Analysis may reveal transformational opportunities.
   d. A maximum distance between installations will be established to support customer service/quality of life considerations.
   e. Installation-level military personnel functions reside on DoD installations (no leased space).
   f. Co-locating Active and Reserve personnel centers is desirable to support Total Force criteria.
   h. Within designated geographic clusters, locality pay is constant.
   i. Communities where function is currently performed embody a beneficial quality of life that will be sustained.

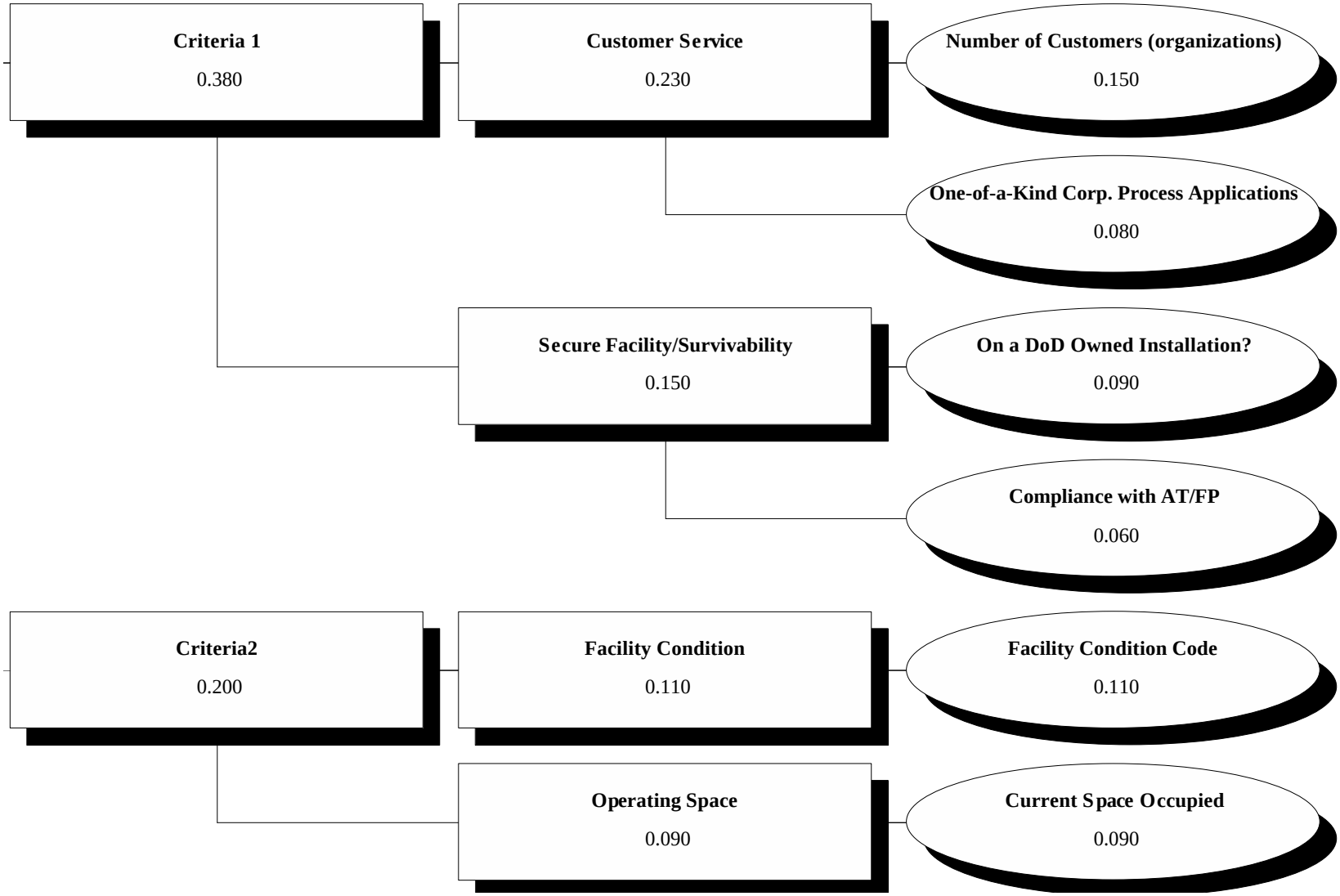
3. **Military Value Scoring Plan.**

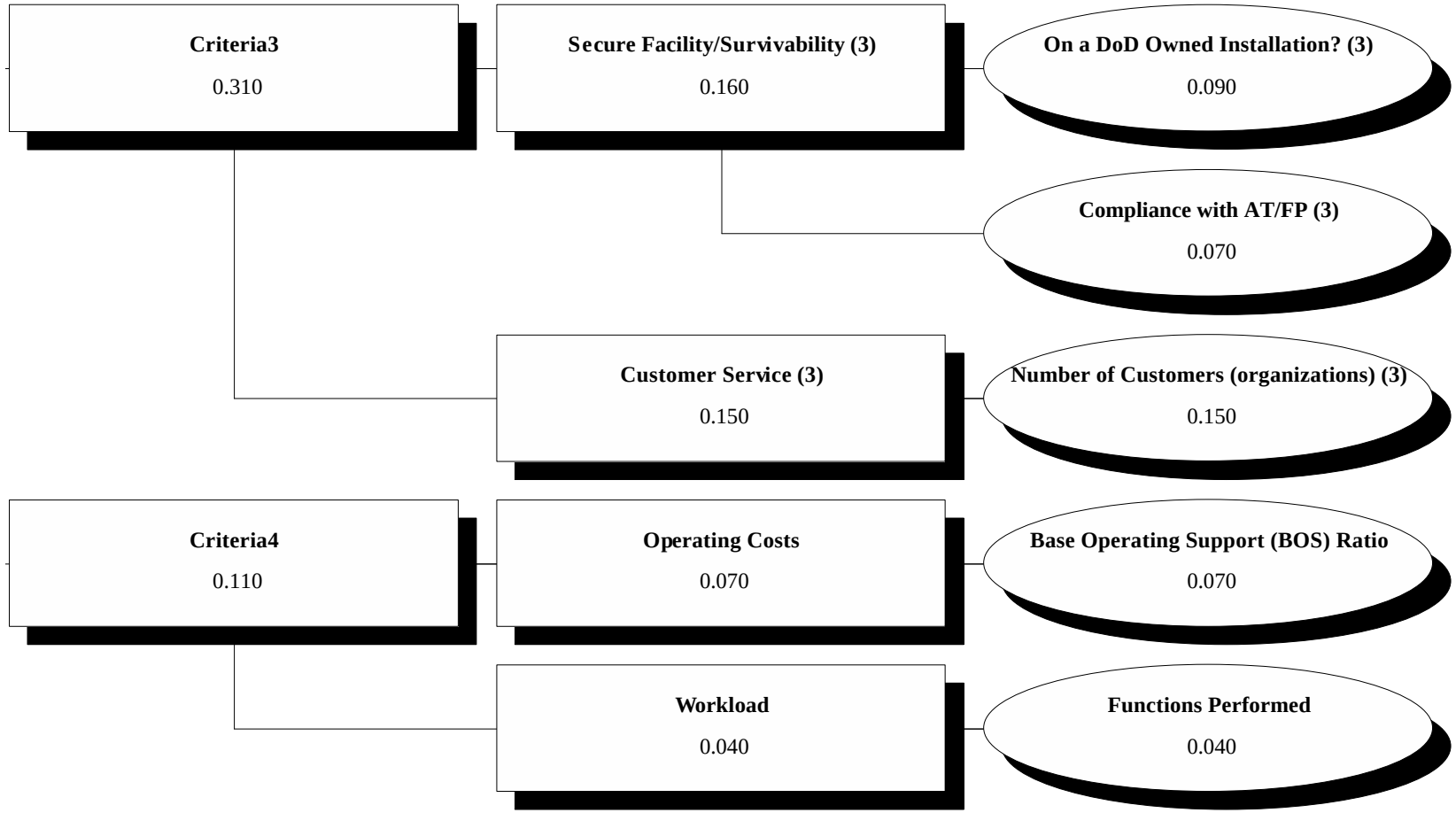
Criterion/Attribute/Metric/Question	Rationale	Weight
Criterion 1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.	Since each installation typically has a personnel office, the goal will be to analyze for co-location of a central HR facility. This criterion was given the highest weight to ensure "Many-to-One" customer servicing characteristics are taken into consideration in assessing receiving location determination.	35%
Attribute 1. Servicing Characteristics		20%
Metric 1. Average distance between installations. Refer to geographic cluster information. Measured in miles, where closer is better, but contiguous boundary is best. Military Value Question will be asked by Installation Management (IM) Sub-group and universe for potential co-location of military personnel functions will be further reduced to a 25 mile limit.	**Range** / **Scoring Plan** / **Function** 0 - Max / 0 = 1; Max = 0 / Linear Decreasing The metric applied to this attribute will be proximity (distance) to other installations within the geographic cluster. The intent of this metric is to determine and give greatest weight to the installation most central to all other installations in a geographic cluster. A distance limit of 25 miles is established to support more effective customer service and quality of life considerations for those who must travel to the facility for customer service. This is to remove from consideration those installations outside the established range.	20%
Question 1. What is the distance to each DoD installation within 100 miles of your installation? (Military Value Question)		
Metric 2. Existing multi-use military personnel facility. Binary, where the military personnel office is on the installation	**Range** / **Scoring Plan** / **Function** 0 - 1 / 1 = Yes; 0 = No / Binary	15%

Criterion/Attribute/Metric/Question	Rationale	Weight
currently houses personnel functions from 2 or more Components within the Service or from 2 or more Services.	With a goal of combining or co-locating military personnel functions at the installation level, an installation that has already established a facility where Active and Reserve Components within the Service or among 2 or more Services are co-located/combined would receive an increased military value rating.	
Question 1. Is your military personnel facility currently a multi-use personnel servicing facility? If yes, indicate host organization's name, each sharing Service and Component, and the sharing organization's name. For this question, Multi-use facility is defined as housing employees from 2 or more Components (e.g., Active and Reserve) or 2 or more Services (e.g., Army and Air Force) who perform personnel customer service activities for their respective component/service-assigned members. (Military Value Question)		
Criterion 2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.	This is the second highest criteria for the geo-cluster installation assessment since each installation already has an existing personnel facility and we would seek to determine the facility in the best condition to house a co-located servicing center.	30%
Attribute 1. Facility Condition		30%
Metric 1. Facility Condition Code. Measured using the Average Facility Condition Code for Administrative Buildings.	**Range**: C1 – C4 **Scoring Plan**: C1 = 1.00; C2 = 0.75; C3 = 0.25; C4 = 0.00 **Function**: Non-Linear This metric is important to determine which potential receiving facilities are in the best condition. While this is an important deciding factor for where an office may be located, facilities can always be improved, but at a cost.	30%
Question 1. What is the installation's facility condition code (C1 - C4) for Administrative-type buildings? (Capacity Data Call Question DoD #11)		
Criterion 3. The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.	Among the criteria at the installation level, this received the least weight based on the premise that the installation-level offices are smaller and more easily relocated into available Admin space and have already been operating in a mobilization environment for the last 2 years, so expansion for mobilization purposes is "built-in."	15%
Attribute 1. Expandability		15%
Metric 1. Vacant Space. All vacant administrative space at an installation. Measured in blocks and more is better.	**Range**: 0 - 1 **Scoring Plan**: Min = 0; Max = 1 **Function**: Linear Increasing This is to assess which installation has space in its existing Admin buildings to expand or if they are at capacity. If a location has expansion space, they will receive more credit since they have the ability to receive additional personnel. For installation level, this metric is a stand-alone (i.e., not including buildable land) since military personnel offices are already on each installation and there should be sufficient Admin type space to avoid building a new facility. Installation-level military personnel offices house smaller staffs, often with manning of approximately 20 - 40 personnel.	15%
Question 1. How many blocks of contiguous vacant Administrative-type space over 10K GSF are located on the installation? (Capacity Data Call Question DoD #305)		
Criterion 4. The cost of operations and the manpower implications.	This criteria was third in weight because facility operation costs are an efficiency measure to identify cost-effective potential receiving locations since the installations compared are within 25 miles of each other.	20%

<table>
<tr><th>Criterion/Attribute/Metric/Question</th><th>Rationale</th><th>Weight</th></tr>
<tr><td>Attribute 1. Operating Costs</td><td></td><td>20%</td></tr>
<tr><td>Metric 1. Base Operating Support (BOS) Ratio. Amount of BOS non-payroll obligations per population supported. More is better. Leased space is given 0.</td><td><table><tr><th>Range</th><th>Scoring Plan</th><th>Function</th></tr><tr><td>Min - Max</td><td>Min = 0; Max = 1</td><td>Linear Increasing</td></tr></table>This is one measure of the cost of doing business at a particular location. The BOS is a good way to capture local maintenance, utilities, and other operating costs of the installation and match it to manpower implications. This metric should play a role in determining which facility locations are more cost effective to operate thus have a greater military value.</td><td>20%</td></tr>
<tr><td colspan="2">Question 1. What are your BOS non-payroll obligations for your activity (Navy) or installation? (Military Value Question) Population supported data will be provided from the Military Value Question IM Scoring Plan Criterion 1, Attribute 3, Metric 1, Question 1</td><td></td></tr>
</table>

Finance and Accounting (F&A)




Criteria3
0.310
Secure Facility/Survivability (3)
0.160
On a DoD Owned Installation? (3)
0.090
Compliance with AT/FP (3)
0.070
Customer Service (3)
0.150
Number of Customers (organizations) (3)
0.150
Criteria4
0.110
Operating Costs
0.070
Base Operating Support (BOS) Ratio
0.070
Workload
0.040
Functions Performed
0.040

Local Finance and Accounting (F&A) Military Value Modeling Effort (Geographical Clusters)

1. **Scope.** The modeling effort covers activities performing finance and accounting functions for Department of Defense (DoD) organizations in the United States within designated geographic clusters, as determined by Capacity Analysis.

2. **Assumptions.**

a. Analysis will provide military value of performing the function at current locations. Note: Standardization/transformation guidelines, as well as business/customer acumen, will be the basis for realigning workload to DFAS.
b. Analysis will reveal opportunities for organizational grouping.
c. Analysis may reveal transformational opportunities.
d. Within designated geographic clusters, locality pay is constant.
e. Communities where function is currently performed embody a beneficial quality of life that will be sustained.

3. **Military Value Scoring Plan.**

<table>
<tr><th>Criterion/Attribute/Metric/Question</th><th>Rational</th><th>Weight</th></tr>
<tr><td>Criterion 1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.</td><td>This criterion was given the highest weight because the purpose of a local F&A entity is to ensure support for any local operational readiness requirements.
The weighting scheme for this criterion is designed with emphasis on customer service and a secure facility – without either consideration, proper support to operational needs, as identified in Criteria 1, may be jeopardized.</td><td>38%</td></tr>
<tr><td>Attribute 1. Customer Service</td><td>Customer Service is given the greatest weight – because serving the local mission customer is normally the purpose for having a local F&A entity.</td><td>23%</td></tr>
<tr><td>Metric 1. Number of customers (organizations).
More is better.</td><td><table><tr><th>Range</th><th>Scoring Plan</th><th>Function</th></tr><tr><td>min – max</td><td>Lowest value or non-listing = 0.0 – Highest value = 1.0</td><td>Linear increasing</td></tr></table>The number of customers (organizations) supported will identify the magnitude of local mission support requirements</td><td>15%</td></tr>
<tr><td colspan="2">Question 1. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, identify the number of customers (organizations) serviced.
For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) targeted location and</td><td></td></tr>
</table>

Criterion/Attribute/Metric/Question	Rational	Weight
function, identify the number of customers (organizations) serviced. (Military Value Question)		
Metric 2. One-of-a-Kind Customer/DFAS Corporate Process Applications Credit will be given for one or more one-of-a-kind corporate process applications; Yes = 1; No= 0.	**Range** / **Scoring Plan** / **Function** 0 - 1 / 1= Yes 0 = No / Binary The existence of one-of-a-kind corporate process application(s) required to support local customers will identify areas that may not lend themselves to relocation/consolidation.	8%
Question 1. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, identify one-of-a-kind corporate process applications. For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) targeted location and function, identify one-of-a-kind corporate process applications. (Military Value Question)		
Attribute 2. Secure Facility/Survivability	A secure facility is key to ensuring the local F&A work can be accomplished, under any circumstance. Thus it is given the next greatest weight, under Criteria 1, following Customer Service.	15%
Metric 1. On a DoD Owned Installation? On a DoD Owned installation is preferable; Yes=1; No=0.	**Range** / **Scoring Plan** / **Function** 0 - 1 / 1= Yes 0 = No / Binary Measurement of survivability is accomplished by identifying whether or not the facility housing the local F&A entity is located on a DoD owned installation.	9%
Question 1. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, identify if the activity is housed on a DoD owned installation. For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) targeted location and function, identify if the site is on a DoD owned installation. (Military Value Question)		
Metric 2. Compliance with DoD Minimum Antiterrorist Standards for Buildings. Scoring: For each building in which an Activity is located, a series of questions will be asked to determine the extent to which that building does or does not meet the standards, leading to one compliance ranking for each building. An overall compliance ranking for the Activity will be determined by adjusting the scores to the proportion of total square feet. Questions will only be asked of leased installations; military installations are assumed to comply due to presence of controlled perimeters.	**Range** / **Scoring Plan** / **Function** 0-1 / See Table / Non-Linear See above	6%

AT/FP Scoring Plan:				Value
Military Installation				1.0
Occupies less than (<) 25% of Building				0.8
Control Perimeter	Distance to Perimeter	Meets Distance Roads & Parking	Non-ControlledUndergnd Parking	Value
YES	YES	YES	N/A	1.0
YES	YES	NO	YES	0.5
YES	YES	NO	NO	0.75

Criterion/Attribute/Metric/Question	Rational	Weight

YES	NO	YES	N/A	0.75
YES	NO	NO	YES	0.25
YES	NO	NO	NO	0.35
NO	N/A	YES	N/A	1.0
NO	N/A	NO	YES	0.0
NO	N/A	NO	NO	0.0

Question 1. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, for a leased location, what % of the building's total square feet is leased to and/or occupied by DoD entities? For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) targeted location and function, for a leased location, what % of the building's total square feet is leased to and/or occupied by DoD entities? (Military Value Question)		
Question 2. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, for a leased location, is the building within a Controlled Perimeter? For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) location and function, for a leased location, is the building within a Controlled Perimeter? (Military Value Question)		
Question 3. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, for a leased location, what is the distance in feet from the building to the controlled perimeter? For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) targeted location and function, for a leased location, what is the distance in feet from the building to the controlled perimeter? (Military Value Question)		
Question 4. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, for a leased location, what is the distance in feet from the building to the nearest parking and/or roadways? For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) location and function, for a leased location, what is the distance in feet from the building to the nearest parking and/or roadways? (Military Value Question)		
Question 5. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, for a leased location, does the building have underground parking which is access controlled? If no underground parking, answer is NO. For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) location and function, for a leased location, does the building have underground parking which is access controlled? If no underground parking, answer is NO. (Military Value Question)		
Question 6. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, for a leased location, does the building have underground parking which is not access controlled? If no underground parking, answer is NO. For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) location and function, for a leased location, does the building have underground parking which is not access controlled? If no underground parking, answer is NO. (Military Value Question)		
Criterion 2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both	This criterion is given the next to lowest weight, after Criteria 1 and 3, because facility conditions and available operating space follows the more important elements of customer service and a secure (AT/FP) environment. The weighting scheme for Criterion 2 is designed with emphasis on the elements that	20%

Criterion/Attribute/Metric/Question	Rational	Weight
existing and potential receiving locations.	make up a facility's' current condition and ability to accept the combining of additional F&A function.	
Attribute 1. Facility Condition	The Facility Condition Attribute is given a slightly higher weight than the Operating Space Attribute because of working environment issues and one time/future cost issues.	11%
Metric 1. Facility Condition Code. Measured using the Average Facility Condition Code for Administrative Buildings.	**Range**: C1 – C4 **Scoring Plan**: C1 =1, C2 = 0.75, C3 = 0.25, C4 = 0.0 **Function**: Non-linear This metric is important to determine which buildings are in the best condition. While this is an important factor in deciding the best locations, facilities can always be improved.	11%
Question 1. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, what is the installation's facility condition code (C1-C4) for Administrative-type buildings? For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) targeted location and function, what is the installation's facility condition code (C1-C4) for Administrative-type buildings? (Capacity Data Call Question DoD #11)		
Attribute 2. Operating Space	The Operating Space Attribute is given a slightly lower weight than the Facility Condition Attribute because of the greater concern associated with the condition of building.	9%
Metric 1. Current Space Occupied (by square foot). More space is better; linear function.	**Range**: min – max **Scoring Plan**: Lowest value = 0.0 – Highest value = 1.0 **Function**: Linear increasing Value is given to organizations with larger amount of assigned space. Idea is that sites hosting larger organizations should receive credit as possible receiver of smaller functions/entities.	9%
Question 1. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, as of year end FY03, identify how much usable square feet is assigned (by your host) to perform mission workload. For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) targeted location and function, as of year end FY03, identify how much usable square feet is assigned (by your host) to perform your mission workload. (Military Value Question--Data will be obtained from 5 Jan 04 Capacity Data Call Responses.)		
Criterion 3. The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.	This criterion is given the second highest weight, because although the purpose of a local F&A entity is to provide support to local customers – the future aspects of this criterion are uncertain. The weighting scheme for this criterion is designed with emphasis on a secure facility and customer service – without either consideration, proper support to force requirements will not be achieved	31%
Attribute 1. Secure Facility/Survivability	A secure facility is key to ensuring the local F&A work can be accomplished under any circumstance. Thus it is given the greatest weight, under Criteria 3	16%
Metric 1. On a DoD owned Installation? On a DoD owned installation is preferable; Yes=1; No=0; binary function.	**Range**: 0 – 1 **Scoring Plan**: 1= Yes 0 = No **Function**: Binary Measurement of survivability is accomplished by identifying whether or not the facility housing the local F&A entity is located on a DoD owned installation rationale goes here.	9%

Criterion/Attribute/Metric/Question	Rational	Weight
Question 1. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, identify if the activity is housed on a DoD owned installation. For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) targeted location and function, identify if the site is on a DoD owned installation. (Military Value Question)		
Metric 2. Compliance with DoD Minimum Antiterrorist Standards for Buildings. Scoring: For each building in which an Activity is located, a series of questions will be asked to determine the extent to which that building does or does not meet the standards, leading to one compliance ranking for each building. An overall compliance ranking for the Activity will be determined by adjusting the scores to the proportion of total square feet. Questions will only be asked of leased installations; military installations are assumed to comply due to presence of controlled perimeters.	**Range** / **Scoring Plan** / **Function** 0 – 1 / See Table / Non-Linear See above	7%

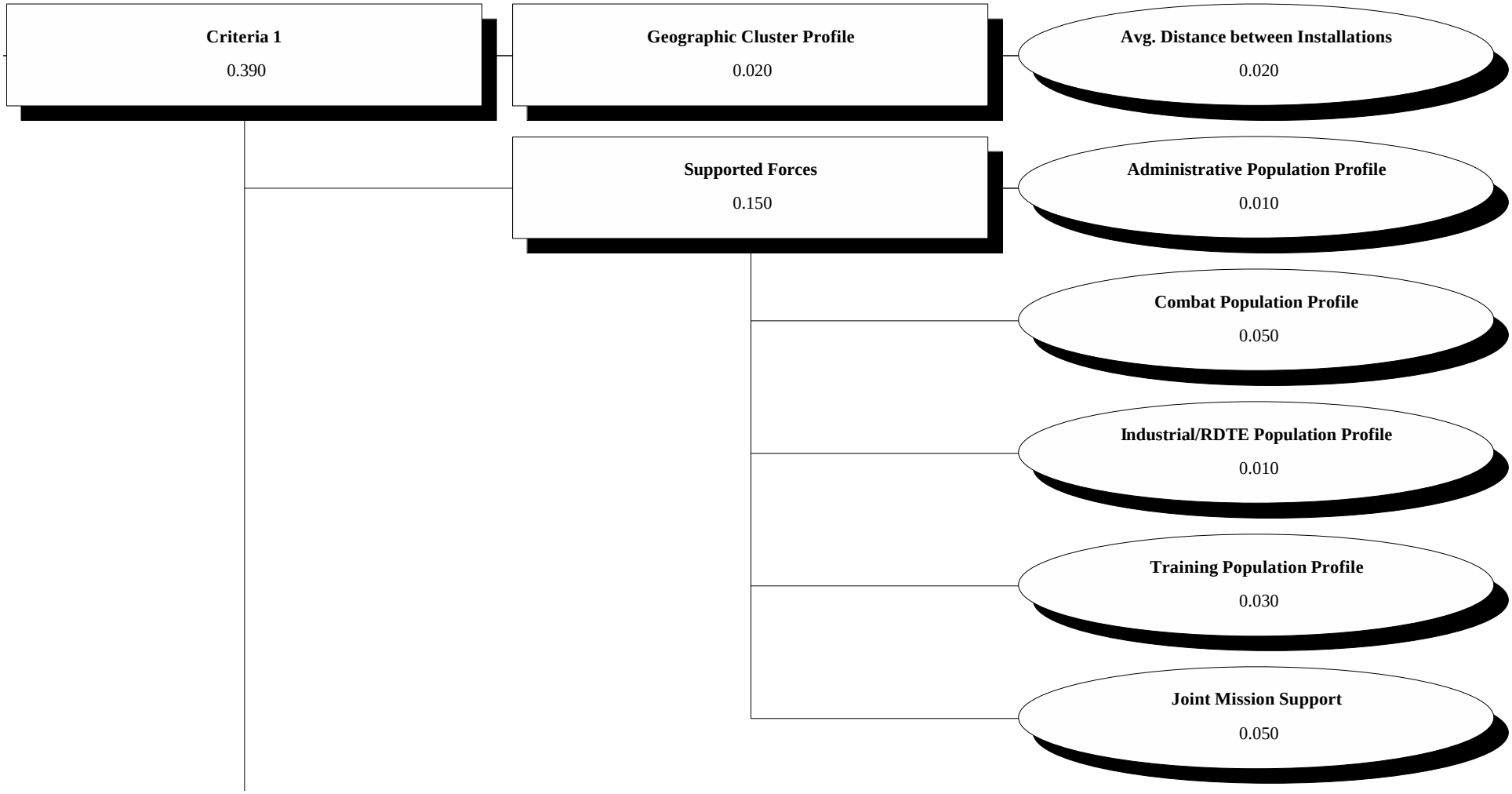
AT/FP Scoring Plan:				Value
Military Installation				1.0
Occupies less than (<) 25% of Building				0.8
Control Perimeter	Distance to Perimeter	Meets Distance Roads & Parking	Non-ControlledUndergnd Parking	Value
YES	YES	YES	N/A	1.0
YES	YES	NO	YES	0.5
YES	YES	NO	NO	0.75
YES	NO	YES	N/A	0.75
YES	NO	NO	YES	0.25
YES	NO	NO	NO	0.35
NO	N/A	YES	N/A	1.0
NO	N/A	NO	YES	0.0
NO	N/A	NO	NO	0.0

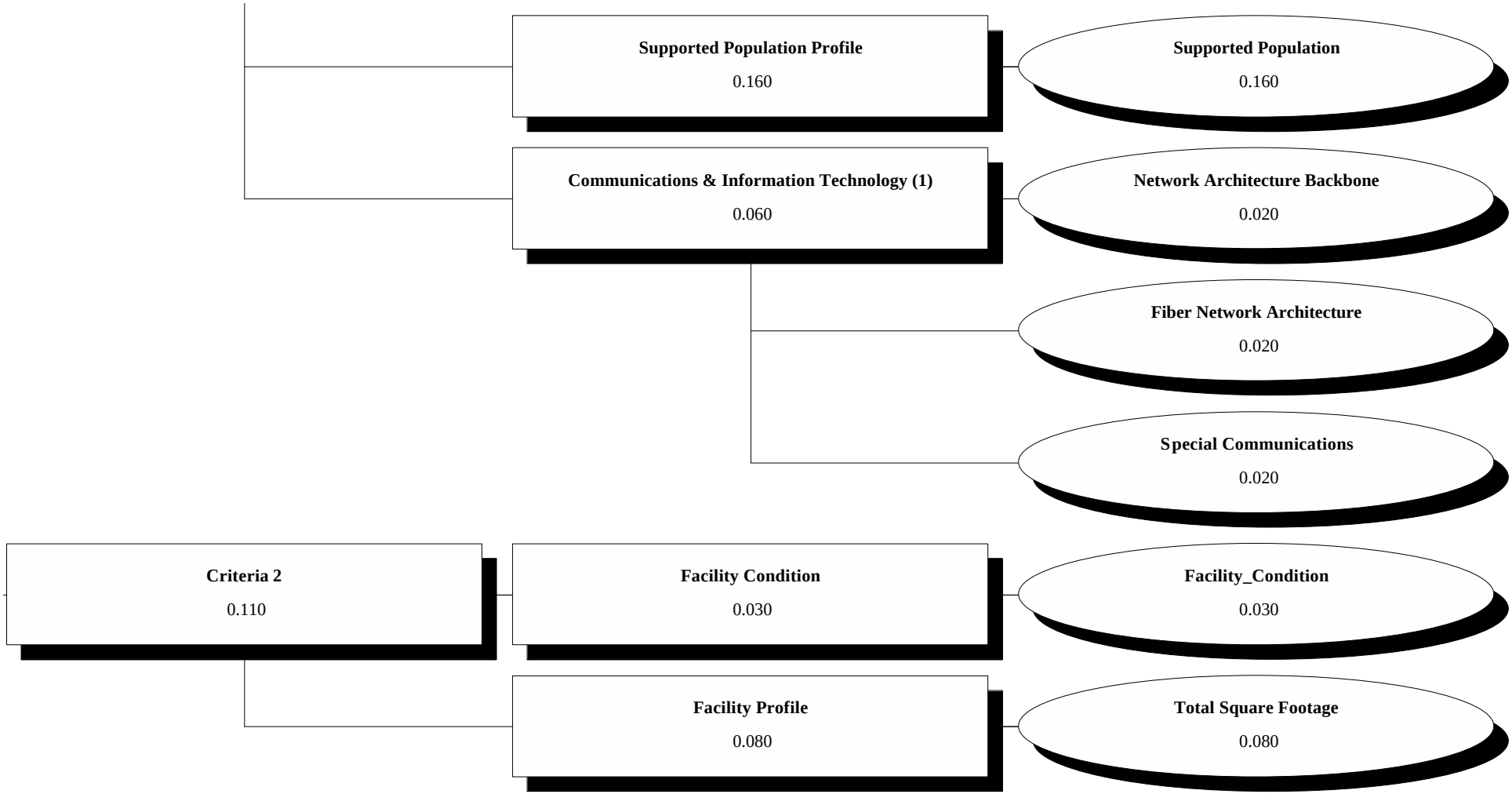
Question 1. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, for a leased location, what % of the building's total square feet is leased to and/or occupied by DoD entities? For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) targeted location and function, for a leased location, what % of the building's total square feet is leased to and/or occupied by DoD entities? (Military Value Question)		
Question 2. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, for a leased location, is the building within a Controlled Perimeter? For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) location and function, for a leased location, is the building within a Controlled Perimeter? (Military Value Question)		

Criterion/Attribute/Metric/Question	Rational	Weight
Question 3. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, for a leased location, what is the distance in feet from the building to the controlled perimeter? For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) targeted location and function, for a leased location, what is the distance in feet from the building to the controlled perimeter? (Military Value Question)		
Question 4. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, for a leased location, what is the distance in feet from the building to the nearest parking and/or roadways? For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) location and function, for a leased location, what is the distance in feet from the building to the nearest parking and/or roadways? (Military Value Question)		
Question 5. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, for a leased location, does the building have underground parking which is access controlled? If no underground parking, answer is NO. For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) location and function, for a leased location, does the building have underground parking which is access controlled? If no underground parking, answer is NO. (Military Value Question)		
Question 6. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, for a leased location, does the building have underground parking which is not access controlled? If no underground parking, answer is NO. For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) location and function, for a leased location, does the building have underground parking which is not access controlled? If no underground parking, answer is NO. (Military Value Question)		
Attribute 2. Customer Service	Customer Service is given a slightly lower weight than Attribute 1 – because a secure facility is deemed more important.	15%
Metric 1. Number of customers (organizations). More is better.	**Range**: min – max **Scoring Plan**: Lowest value or non-listing = 0.0 – Highest value = 1.0 **Function**: Linear increasing The number of customers (organizations) supported will identify the magnitude of local mission support requirements	15%
Question 1. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, identify the number of customers/organizations serviced. For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) targeted location and function, identify the number of customers/organizations serviced. (Military Value Question)		
Criterion 4. The cost of operations and the manpower implications.	This criterion was weighted the lowest, because a local F&A entity is deemed a requirement and generally tends to be a small entity. Thus the operational costs and manpower implications are considered lower when compared to supporting the customer's mission requirements.	11%
Attribute 1. Operating Costs		7%
Metric 1. Base Operating Support (BOS) Ratio. Amount of BOS non-payroll obligations per population supported.	**Range**: Max - Min **Scoring Plan**: Max = 1; Min = 0 **Function**: Linear increasing	7%

Criterion/Attribute/Metric/Question	Rational	Weight
	More is better. We want to capture the cost of doing business at a particular location. We felt that the base operating cost to supported population would be a good way to capture the utilities, and other operating costs of the installation and match it to manpower implications. This metric should play a role on which facility locations are more cost efficient and thus have greater military value. Assume leased space = 0.	
Question 1. What are your BOS non-payroll obligations for your activity (Navy) or installation? (Military Value Question). Population supported data will be provided from the Military Value Question IM Scoring Plan Criterion 1, Attribute 3, Metric 1, Question 1.)		
Attribute 2. Workload		4%
Metric 1. Functions Performed More is preferable.	**Range**: min – max **Scoring Plan**: Lowest value or non-listing = 0.0 – Highest value = 1.0 **Function**: Linear increasing The number of functions performed will identify the magnitude of local mission support requirements.	4%
Question 1. (Note: One question written for two different audiences.) For each finance and accounting activity by targeted location and function, identify which Finance & Accounting functions are performed. For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) targeted location and function, identify which Finance & Accounting functions are performed. (Military Value Question--Data will be obtained from 5 Jan 04 Capacity Data Call responses.)		

Installation Management (IM)




Supported Population Profile
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Supported Population
0.160
Communications & Information Technology (1)
0.060
Network Architecture Backbone
0.020
Fiber Network Architecture
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Special Communications
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Criteria 2
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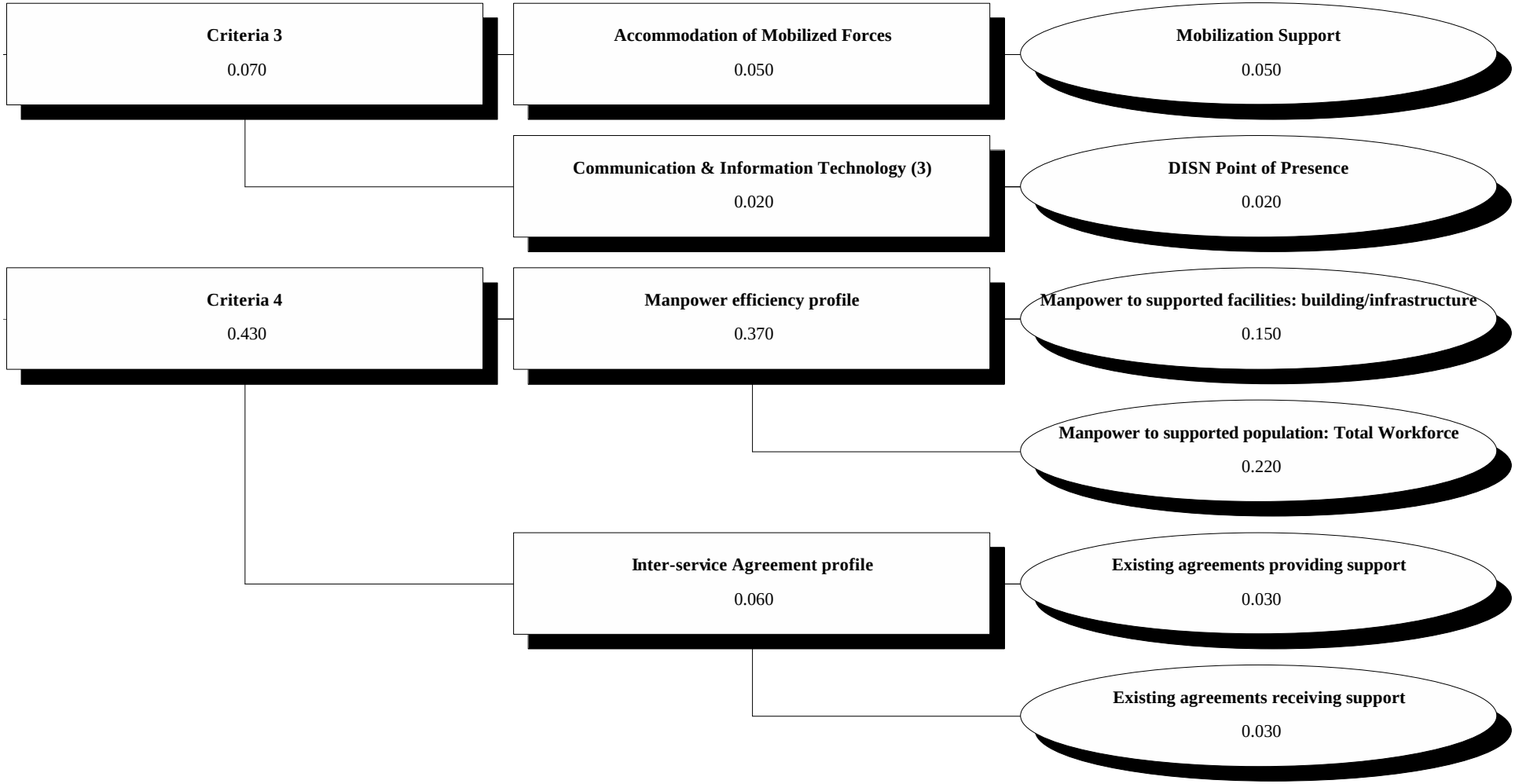
Facility Condition
0.030
Facility_Condition
0.030
Facility Profile
0.080
Total Square Footage
0.080


Criteria 3
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Accommodation of Mobilized Forces
0.050
Mobilization Support
0.050
Communication & Information Technology (3)
0.020
DISN Point of Presence
0.020
Criteria 4
0.430
Manpower efficiency profile
0.370
Manpower to supported facilities: building/infrastructure
0.150
Manpower to supported population: Total Workforce
0.220
Inter-service Agreement profile
0.060
Existing agreements providing support
0.030
Existing agreements receiving support
0.030

Installation Management Military Value Modeling Effort

1. **Scope.** The Installation Management modeling effort includes installations within designated geographic clusters as determined by Capacity analysis. The military value model will be a critical part of the process for developing recommendations/scenarios for consolidating management and support functions; consolidating excess installation management facilities; and designating overall MILDEP responsibility for installation management. Attributes and metrics are designed to establish which installations are the best candidates to accept additional installation management responsibilities and/or accept additional installation management personnel and facility related functions. Greatest efficiency, geographical predominance, capability, and expertise, in that order, are the primary factors for establishing the attributes and metrics to support this assessment.

2. **Assumptions.**

   a. Analysis will provide military value of performing functions at current locations.
   b. Analysis will reveal opportunities for organizational grouping.
   c. Analysis may reveal transformational opportunities.
   d. The installation support mission for operational forces is the most complex and important followed by training, industrial/research, development, test, and evaluation (RDTE) and last, host to administrative activities.
   f. Communities where functions are performed embody a beneficial quality of life.

3. **Military Value Scoring Plan.**

Criterion/Attribute/Metric/Question	Rationale	Weight
Criterion 1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.	This criterion focuses on capabilities, expertise and geographical predominance with respect to providing installation support functions. This criterion received the second highest weighting based on factors of predominance, capabilities and expertise.	39%
Attribute 1. Geographic Cluster Profile		2%
Metric 1. Average distance between Installations. Measured in miles, where closer is better, but contiguous boundary is best.	**Range**: Min –Max **Scoring Plan**: Lowest value from data call = 1.0 – Highest value from data call =0.0 **Function**: Linear decreasing The metric applied to this attribute will be proximity (distance) to other installations within the geographic cluster. The intent of this metric is to determine and give greatest weight to the installation most central to all other installations in a geographic cluster.	2%
Question 1. What is the distance to each DOD installation within 100 miles of your installation? (Military Value Question)		
Attribute 2. Supported Forces	Assess current missions with respect to capacity and importance. This attribute makes an assumption that support of a warfighting mission is most important, followed by training, industrial/RDTE and last, host to administrative activities.	15%
Metric 1. Administrative Activities Population Profile.	**Range** / **Scoring Plan** / **Function**	10%

Criterion/Attribute/Metric/Question	Rationale			Weight
Number of administrative personnel on installation. More is better.	1,000 – 50,000	1,000 = 0 and 50,000 = 1.0	Linear increasing	
	Assesses the primary mission support role of the installation based on type and size of activities supported as measured by personnel assigned to the various types of organizations indicated.			
Question 1. What is the number of active duty (to include active RC/NG), civilian and contractor personnel assigned to all Administrative activities hosted by the installation? (Military Value Question)				
Metric 2. Combat Unit Population Profile. Number of tactical/combat personnel on installation. More is better.	**Range**	**Scoring Plan**	**Function**	5%
	1,000 – 50,000	1,000 = 0 and 50,000 = 1.0	Linear increasing	
	Assesses the primary mission support role of the installation based on type and size of activities supported as measured by personnel assigned to the various types of organizations indicated.			
Question 1. What is the number of active duty (to include active RC/NG), civilian and contractor personnel assigned to all operational activities hosted by the installation? (Military Value Question)				
Metric 3. Industrial/RDTE Activities Population Profile. Number of industrial/RDTE personnel on installation. More is better.	**Range**	**Scoring Plan**	**Function**	1%
	1,000 – 50,000	1,000 = 0 and 50,000 = 1.0	Linear increasing	
	Assesses the primary mission support role of the installation based on type and size of activities supported as measured by personnel assigned to the various types of organizations indicated			
Question 1. What is the number of active duty (to include active RC/NG), civilian and contractor personnel assigned to all Industrial and RDTE activities hosted by the installation? (Military Value Question)				
Metric 4. Training Activities Population Profile. Number of institutional training personnel on installation. More is better.	**Range**	**Scoring Plan**	**Function**	3%
	1,000 – 50,000	1,000 = 0 and 50,000 = 1.0	Linear increasing	
	Assesses the primary mission support role of the installation based on type and size of activities supported as measured by personnel assigned to the various types of organizations indicated.			
Question 1. What is the number of active duty (to include active RC/NG), civilian and contractor personnel assigned to all institutional training activities hosted by the installation? (Military Value Question)				
Metric 5. Joint Mission Support. Number of authorized personnel assigned to the installation from all joint/other service organizations/activities hosted by the installation. More is better. Function is S-shaped increasing. Positive increase begins at 100 and begins to decrease at 1,500. Additional value is negligible after 1,500 to max (3,000).	**Range**	**Scoring Plan**	**Function**	5%
	0 – 3,000	0.0 = 1.0; positive increase	S-Shaped	
	Assess the extent of Base Support provided to other services and joint organizations on a fulltime basis. The more extensive the support provided the greater the value based on existing capabilities and experience to support other services and joint organizations.			
Question 1. How many authorized personnel, to include active duty (including active RC/NG), civilian and contractor, are assigned to joint organizations and other services (not Joint) activities which are hosted by your installation? (Military Value Question)				
Attribute 3. Supported Population Profile				16%
Metric 1. Supported Population. Number of personnel supported by the installation. More is better.	**Range**	**Scoring Plan**	**Function**	16%
	Min – Max	Lowest value from data call	Linear increasing	

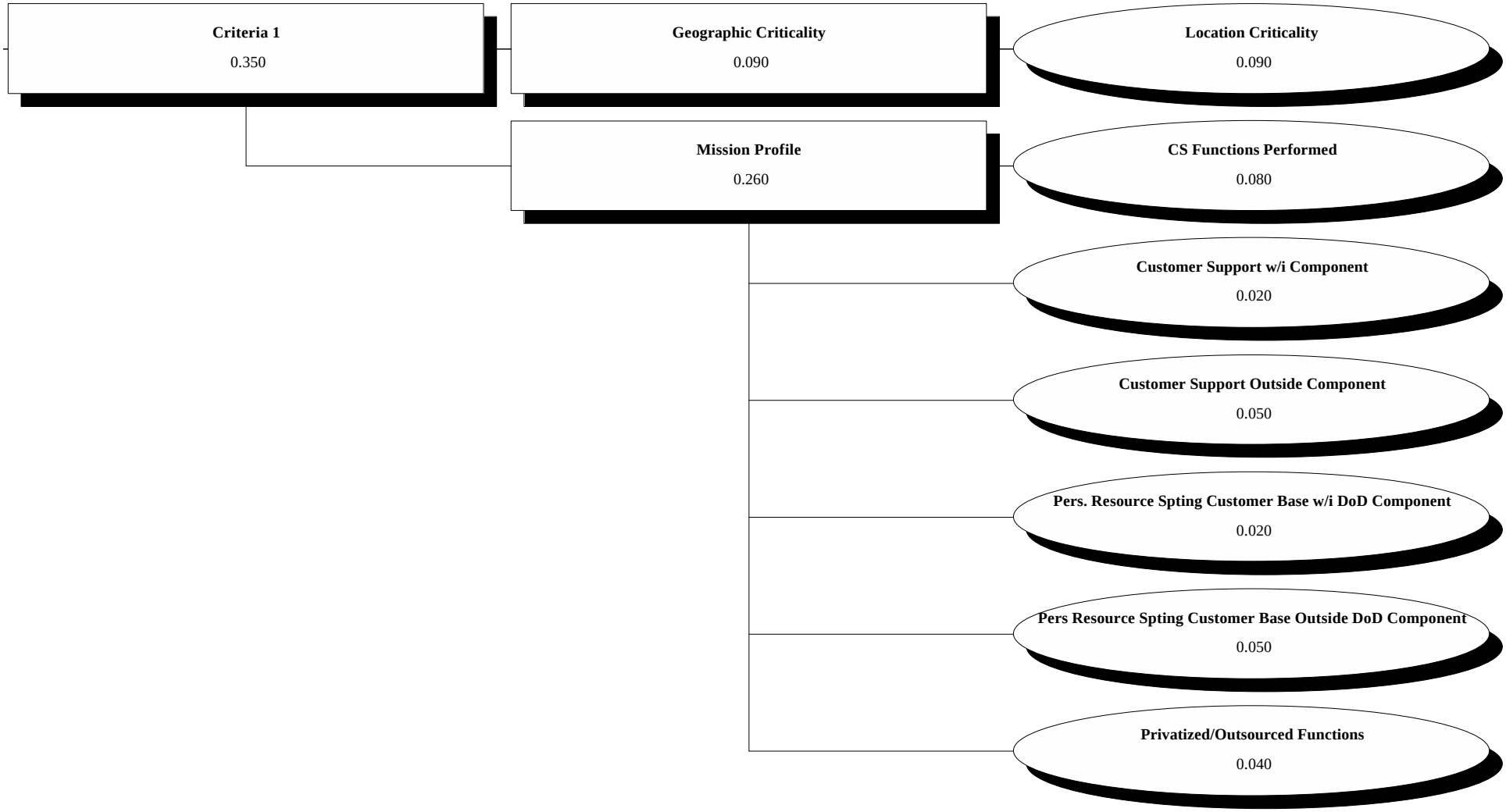
Criterion/Attribute/Metric/Question	Rationale	Weight
	= 0.0; Highest value from data call = 1.0 Assesses the support requirement for the installation programs and services based on overall active duty, civilian, contractor, and dependent population. The greater the population, the greater the value based on predominance and capability of the service.	
Question 1. Provide the total number of personnel supported by the installation, to include military members (active duty, full time guard, and reserves), civilians, contractors, and family members assigned to the installation. (Military Value Question)		
Attribute 4. Communications & Information Technology (COMM//IT)	Information dominance is a critical element of the DoD's transformation effort. Adequate COMM/IT services at an Installation are required to support the transformation. A ubiquitous network that provides the ability to command and control resources, analyze and disseminate intelligence, and implement appropriate actions from any defense facility in the world is required.	6%
Metric 1. Network Architecture Backbone. Percentage of your installation network backbone that is fiber. Linear function, range is 0 to 1.	**Range**: Min – Max **Scoring Plan**: Lowest value from data call = 0.0; Highest value from data call = 1.0 **Function**: Linear increasing Fiber optic cable backbone networks provide Installations with greater capability than copper wire based networks. The more fiber these network architectures are comprised of the more valuable they are, as they more readily lend themselves to meeting current and future operational requirements and support DoD transition to Network Centric Enterprise Services (NCES).	2%
Question 1. What percentage of your Installation's network backbone will be fiber optic cable by the end of FY04 (based on planned spending in the FY04 President's budget)? (Military Value Question)		
Metric 2. Fiber Network Architecture**.** Percentage of Installation's buildings that require network connection that will be connected to the network via Fiber Optic Cable by end of FY04. Divide response to Question 1 below by response to Question 2 to compute.	**Range**: Min – Max **Scoring Plan**: Lowest value from data call = 0.0; Highest value from data call = 1.0 **Function**: Linear increasing Buildings serviced by fiber optic cable networks provide Installations with greater capability than copper wire based networks. The more fiber these network architectures are comprised of the more valuable they are, as they more readily lend themselves to meeting current and future operational requirements and support DoD transition to Network Centric Enterprise Services (NCES).	2%
Question 1. What percentage of your buildings will be connected to the network backbone via Fiber Optic Cable at the end of FY04? (based on planned spending in the FY04 President's budget). (Military Value Question)		
Metric 3. Special Communications Capabilities. Measures selected special communications capabilities of the installation. More is better. Yes/No.	**Range**: 0 – 10 **Scoring Plan**: 1 = Yes 0 = No; for each question. Number of "Yes" answers will be aggregated to determine score for this **Function**: Binary	2%

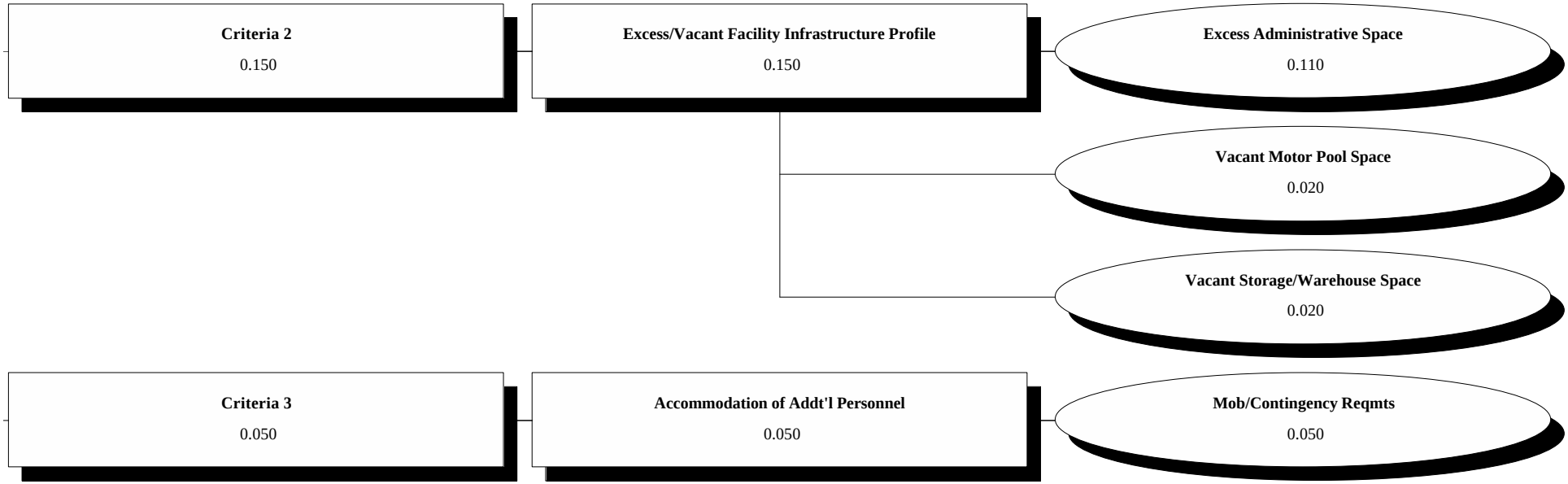
Criterion/Attribute/Metric/Question	Rationale	Weight
	metric. Installations that have more means of communications readily available to them are more valuable.	
Question 1. Does your Installation have Defense Red Switch Network (DRSN) capability? (DoD CDC Question #25)		
Question 2. Does your Installation have Land Mobile Radio (LMR) capability? (DoD CDC Question #28)		
Question 3. Does your Installation have NIPRNET capability? (DoD CDC Question #319)		
Question 4. Does your Installation have SIPRNET capability? (DoD CDC Question #319)		
Question 5. Does your Installation provide any of the following commercial wireless services: cellular, pagers, messaging e.g., Blackberry)? (Military Value Question)		
Question 6. Does your Installation provide Video Teleconferencing (VTC) services – e.g.,. DISN Video Global Service (DVGS)? (Military Value Question)		
Question 7. Does your Installation provide diverse routing of NIPRNET? (Military Value Question)		
Question 8. Does your Installation provide diverse routing of SIPRNET? (Military Value Question)		
Question 9. Does your Installation have a Satellite Earth Terminal? (Military Value Question)		
Question 10. Does your Installation have a Voice over Internet Protocol (VOIP) Telephone Switch? (Military Value Question)		
Criterion 2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.	This criterion received the third highest weighting. Unlike the other criteria, the metrics used in this criterion focus on capacity and condition which is considered a lesser factor in the military value model.	11%
Attribute 1. Facility Condition		3%
Metric 1. Facility Condition. Overall installation facility status based on condition code.	**Range**: 0-1 **Scoring Plan**: C1=1.0, C2=.75, C3=.25, C4=0.0 **Function**: Non-linear This metric assesses overall installation facility condition.	3%
Question 1. What is the installation's overall facility condition code rating? (Military Value Question)		
Attribute 2. Facility Profile		8%
Metric 1. Total Square Footage. Total gross Square Footage of all installation facilities.	**Range**: Min – Max **Scoring Plan**: Lowest value from data call = 0.0 – Highest value from data call = 1.0 **Function**: Linear increasing Assesses total square footage of installation facilities as a means to determine service predominance in a geographical cluster.	8%
Question 1. What is the square footage of all space on the installation? (Military Value Question)		
Criterion 3. The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.	The availability of vacant administrative space and buildable land provides measures of an Installation's ability to accommodate future DoD needs. While viewed as important measures of an Installation's capability to handle future expansion, this Criterion is given relatively low weight in order not to overweight available space issues in the optimization phase.	7%

Criterion/Attribute/Metric/Question	Rationale	Weight
Attribute 1. Accommodation of Mobilized Forces		5%
Metric 1. Mobilization Support. Mobilization Requirement. Does the installation currently have a mobilization requirement? (Yes/No) Function is Binary. If answer is yes, then obtain military value score from Mobilization Group model; otherwise input = 0. For MV, the best mobilization score will equal 1.0.	**Range**: 0.0 – Maximum Mobilization Score **Scoring Plan**: 0 = No; If Yes, then value > 0 to 1.0, Maximum Mobilization Score = 1.0. **Function**: Binary Assesses the installation management staff's experience in supporting mobilization. Greater mobilization experience would support expanding responsibilities based on existing capabilities.	5%
Question 1. Does the installation currently have a mobilization requirement? If answer is yes, then obtain military value from Mobilization Group model. (DoD CDC Question #336)		
Attribute 2. Communications & Information Technology (COMM/IT)	The future COMM/IT requirements will be more easily met by the presence of a major Defense Information Systems Network (DISN) Node. These nodes provide greater access to bandwidth at lower cost because they comprise the backbone of the network.	2%
Metric 1. DISN Point of Presence (POP). Measure is Binary (Yes and No), where Yes = Good.	**Range**: 0 – 1 **Scoring Plan**: 1= No 0 = Yes **Function**: Binary DISN Points of Presence (POP) are critical to the DoD IT enterprise architecture. Installations hosting these POP gain the benefit of their potential network throughput and play heavily in meeting future IT requirements.	2%
Question 1. Does the installation have a DISN point of presence (POP)? (Military Value Question - Derived from CDC Question #326.) This CDC question identifies various types of DISN POPs that may reside within a facility. The type of POP is to be determined by HSA JCSG COMM/IT and its utility addressed during optimization by scoring plan owners.		
Criterion 4. The cost of operations and the manpower implications.	This criterion was given the greatest weighting. Demonstrated ability to provide programs and services for the installation with greatest efficiency is the major factor in recommendations/decisions to add responsibilities to the installation management mission.	43%
Attribute 1. Manpower efficiency profile	This establishes a general comparison of workforce efficiency within geographic clusters to assist in targeting potential savings through centralization/consolidation.	37%
Metric 1. Manpower to supported facilities: Total building/infrastructure. Measured in Square Feet. Ratio of square feet/person.	**Range**: Min – Max **Scoring Plan**: Lowest value from data call = 0.0; Highest value from data call = 1.0 **Function**: Linear increasing Assesses the efficiency of the installation's major functional support mission. The higher the ratio of supported facilities to personnel, the greater the value.	15%
Question 1. What is the ratio of the total amount of space in square feet in all buildings maintained by the Public Works Directorate (government and contractor support) at this installation compared to the size of the Public Works staff? (Military Value Question derived from Military Value Question from Criterion 2, Attribute 2, Metric 1 and CDC Question #330) This CDC question collects the size of the Public Works Staff.		
Metric 2. Manpower to supported population: Ratio of supported (total workforce) to supporters (IM personnel support).	**Range**: Min – Max **Scoring Plan**: Lowest value from data call = 0.0; Highest value from **Function**: Linear increasing	22%

Criterion/Attribute/Metric/Question	Rationale	Weight
	data call = 1.0 Assesses the efficiency of the collective missions of the installation workforce compared to the supported population. The greater the ratio of personnel supported, the greater the value.	
Question 1. What is the ratio of the installations total workforce of military, civilian and contractor compared to the size of the installation management support staff of military, civilian, and contractor? (Military Value Question derived from Military Value Question from Criterion 1, Attribute 3, Metric 1 and CDC Question #330) This CDC question collects the size of the installation management staff.		
Attribute 2. Inter-service Support Agreement (ISSA) Profile	This establishes a value for both the support an installation provides to other services/agencies and receives from other services/agencies.	6%
Metric 1. Existing Agreements Providing Support. Measured in dollars. What is the value (in dollars) for services provided through ISSAs.	**Range**: Min –Max **Scoring Plan**: Lowest value from data call = 0.0; Highest value from data call = 1.0 **Function**: Linear increasing Assesses the value of support provided by the installation to other services/agencies. The greater the value of service being provided supports expanding responsibilities.	3%
Question 1. What is the value (in dollars) for services provided through ISSAs for the functional areas listed: Public Works, Resource Management, Contracting, Transportation, Supply, Maintenance, Airfield Operations, Personal & Family Services and MWR, Law Enforcement, Fire and Emergency Services, Communications, Plans, Training and Security, Installation Support Offices (Public Affairs Office (PAO), Safety, Internal Review (IR), Legal, etc)? (Military Value Question)		
Metric 2. Existing Agreements Receiving Support. Measured in dollars. What is the value (dollars) for services received through ISSAs	**Range**: Min –Max **Scoring Plan**: Lowest value from data call = 1.0 – Highest value from data call = 0.0 **Function**: Linear decreasing This metric assesses the value of support being received from others services. The greater the outside support currently being received does not support taking on expanded responsibilities; therefore, less support being received has greater value.	3%
Question 1. What is the value (dollars) for services received through ISSAs for the functional areas listed: Public Works, Resource Management, Contracting, Transportation, Supply, Maintenance, Airfield Operations, Personal & Family Services and MWR, Law Enforcement, Fire and Emergency Services, Communications, Plans, Training and Security, Installation Support Offices (Public Affairs Office (PAO), Safety, Internal Review (IR), Legal, etc)? (Military Value Question)		

Headquarters Support Activities




Criteria 2
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Excess/Vacant Facility Infrastructure Profile
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Excess Administrative Space
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Vacant Motor Pool Space
0.020
Vacant Storage/Warehouse Space
0.020
Criteria 3
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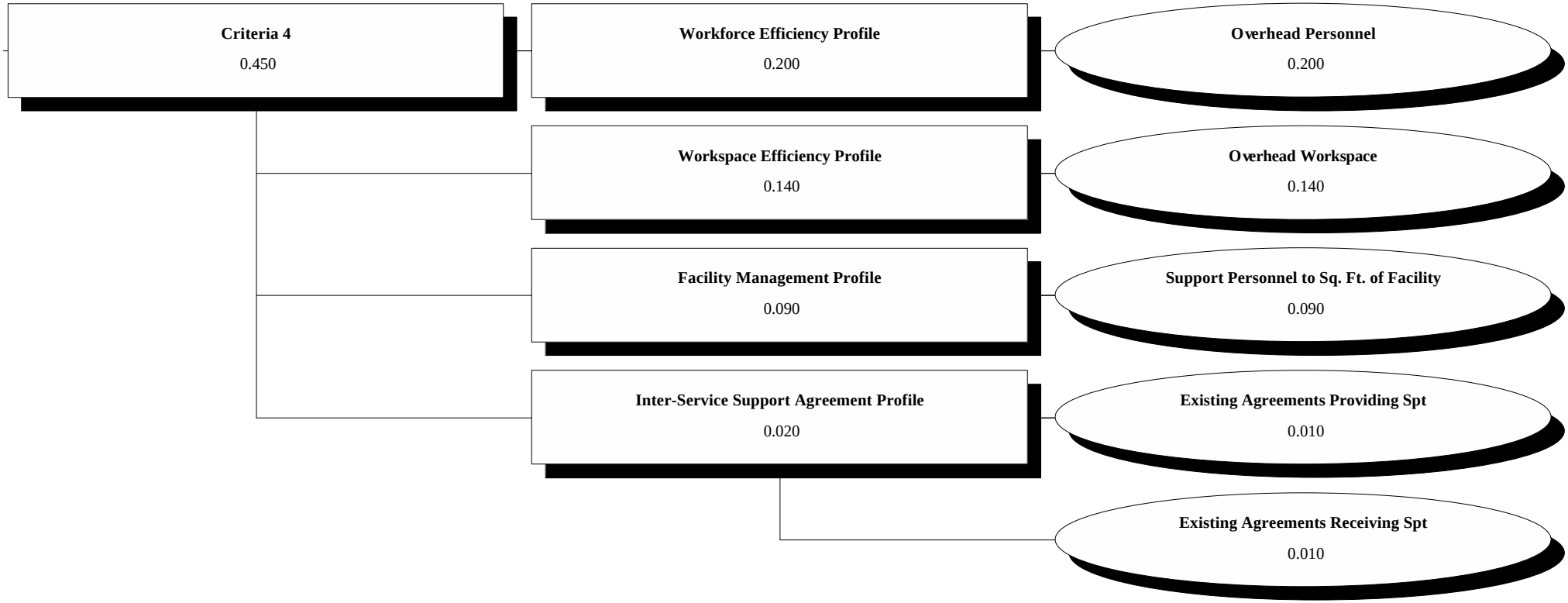
Accommodation of Addt'l Personnel
0.050
Mob/Contingency Reqmts
0.050


Criteria 4
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Workforce Efficiency Profile
0.200
Overhead Personnel
0.200
Workspace Efficiency Profile
0.140
Overhead Workspace
0.140
Facility Management Profile
0.090
Support Personnel to Sq. Ft. of Facility
0.090
Inter-Service Support Agreement Profile
0.020
Existing Agreements Providing Spt
0.010
Existing Agreements Receiving Spt
0.010

Headquarters Support Activities Military Value Modeling Effort

1. **Scope.** This model covers activities that perform one or more of the following 14 common headquarters, administrative, and business-related (Common Support (CS)) functions (Acquisition and Contracting, Administration, Audiovisual Services, Cost Analysis, Environmental Services and Safety, Executive Dining Facilities, Facilities Management, Financial Management Services, Health & Wellness, Inspections & Evaluation, Operations Analysis, Security, Supply & Support Services, and Transportation) within a defined geographic cluster, as well as the following organizations identified in the DC area (Military District of Washington, Naval District of Washington, Marine Corps-National Capital Region, 11th Wing, and Washington Headquarters Services). This model is not intended to encompass the review of any CS functions that may be performed at the installation level. The responders to these questions would consist of Major Headquarters Activities (MHA) (if applicable), those organizations that provide direct support to MHA, and any other organizations above the installation level that provide these CS functions (e.g., Direct Reporting Units, Staff Support Activities, Field Activities, Field Operating Activities, Military Department Agencies, etc.) on a metropolitan, regional, Service, or Departmental-wide basis. This MV modeling effort will involve a comparative analysis of activities operating within a defined geographic cluster with the objective of identifying those activities that would be prime candidates for taking on responsibility for providing CS services on a joint basis. In keeping with the intent of the model, the attributes and metrics are designed to establish which activities are the best candidates to accept additional CS responsibilities and personnel. Efficiency, capability, expertise, and geographical criticality are the primary factors for establishing the attributes and metrics to support this assessment.

2. **Assumptions.** The assumptions for this analysis are as follows.

   a. Analysis will provide the military value of organizations engaged in CS above the installation level from current location(s).
   b. The capacity and functional analysis will result in a list of which organizations and agencies have CS functions that may be co-located, consolidated, or streamlined.
   c. Demonstrated ability to provide CS services with greatest efficiency is the major factor in recommendations/decisions to add responsibilities to a supporting organization's mission.
   d. Due to the very large number of measures of effectiveness (or quality of performance) for each sub function, and the lack of any generic measures applicable to all, it was not possible to address this in this model. This is a recognized limitation. However, the assumption is that the executive agent will be empowered to improve quality of operations and business practices during implementation.

e. Comparative costs of operations across DoD Components for specific functions are difficult to ascertain. Accordingly, generic efficiency factors have been employed as suitable performance measures.

3. Military Value Scoring Plan.

Criterion/Attribute/Metric/Question	Rationale	Weight
Criterion 1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.	This criterion focuses on capabilities, expertise, and geographical criticality with respect to providing common support functions. It was given the second highest weighting behind criterion 4, cost and manpower implications.	35.0%
Attribute 1. Geographical Criticality	This attribute recognizes that for many CS functions the location of the provider to the customer is of primary importance, for example, in such areas as facility and personal protective services.	9%
Metric 1. Location Criticality. Two questions supporting this metric.	**Range**: 3 levels (No, Yes/not same, Yes/same) **Scoring Plan**: 1.0 = No; 0.0 = Yes; >1/2 hr=1.0. ½-1 hr=0.5, <1 hr=0.0 **Function**: Linear The intent of the metric is to determine the need for geographic proximity to customer base and to give greatest weight to the activity that does not need to be near its customer base, or that is within ½ hr to its customer base.	9%
Question 1. Is the activity's location mission critical? If yes, answer the second question. (Weight = equal) (Military Value Question) **Question 2.** Is commute time less than ½ hr, ½ to 1 hr, or more than 1 hr? (Military Value Question)		
Attribute 2. Mission Profile	Intent is to assess current missions with respect to overall capacity and importance. This attribute makes an assumption that the greater magnitude of CS functions performed, privatized functions, customer base beyond that of one MILDEP are most important factors in determining the suitability of a facility to support additional functions.	26%
Metric 1. CS Functions Performed.	**Range**: 1-14 **Scoring Plan**: 0.0 = 1 function; 1.0 = 14 functions. **Function**: Linear increasing The intent of this metric is to determine and give greatest credit to those activities that perform the most CS functions. The assumption is that those organizations that have the most experience providing a multitude of CS are in the best position to take on additional CS responsibilities.	8%
Question 1. How many of the 14 CS functions are performed by your organization?		
Metric 2. Customer Support W/I Component	**Range**: Min – Max **Scoring Plan**: Lowest value = 0.0 – Highest value = 1.0 **Function**: Linear increasing The intent of this metric is to determine the number of customers that are supported within a DoD Component (e.g., Army, Navy, etc.). The assumption is that those organizations that have greatest experience serving a multitude of customers are in the best position to take on responsibility for serving additional customers.	2%

Criterion/Attribute/Metric/Question	Rationale	Weight
Question 1. What are the numbers of customers within your component that receive CS services from your organization? (Military Value Question)		
Metric 3. Customer Support Outside Component.	**Range**: Min – Max **Scoring Plan**: Lowest value = 0.0 – Highest value = 1.0 **Function**: Linear increasing The intent of this metric is to determine the numbers of customers that are supported outside the DoD Component. The assumption is that those organizations that have greatest experience serving a multitude of customers are in the best position to take on responsibility for serving additional customers. Since the objective is to create joint organizations, those with the experience servicing joint organizations will receive greater credit than those organizations whose experience is limited to one DoD Component.	5%
Question 1. What are the numbers of customers outside your component that receive CS services from your organization? (Military Value Question)		
Metric 4. Personnel Resources Supporting Customer Base within the DoD component. Percentages of personnel resources.	**Range**: Min – Max **Scoring Plan**: Lowest value = 1.0 – Highest value = 0.0 **Function**: Linear decreasing The intent of this metric is to determine the percentages of personnel resources devoted to multiple customers within the component. The assumption is that the greater the personal resources devoted to servicing multiple customers the greater the experience level and capacity to take on additional responsibility in this area. This will be ascertained by determining the percentage of resources devoted to the largest customer and then subtracting this from 100%	2%
Question 1. What are the percentages of personnel resources devoted to the largest customer within the component? (Military Value Question)		
Metric 5. Personnel Resources Supporting Customer Base outside the DoD component. Percentages of personnel resources.	**Range**: Min – Max **Scoring Plan**: Lowest value = 1.0 – Highest value = 0.0 **Function**: Linear decreasing The intent of this metric is to determine the percentages of personnel resources devoted to multiple customers outside the services. The assumption is that the greater the personal resources devoted to servicing outside customers the greater the experience level and capacity to take on additional responsibility in this area. Since the objective is to create joint organizations, those organizations with the largest percentage of personnel resources devoted to support of joint organizations will receive greater credit than those organizations whose personnel resources are limited to support of one component. This will be ascertained by determining the percentage of resources devoted to the largest customer and then subtracting this from 100%	5%
Question 1. What are the percentages of personnel resources devoted to the largest customer outside the DoD component? (Military Value Question)		
Metric 6. Privatized/Outsourced Functions.	**Range**: 0-14 **Scoring Plan**: 0.0 = 0 functions privatized/outsourced; 1.0 = 6 or more functions privatized/outsourced **Function**: Linear increasing The intent of this metric is to determine which organizations have the most experience in	4%

Criterion/Attribute/Metric/Question	Rationale	Weight
	privatizing/outsourcing CS functions. The assumption is that the organizations with the most experience in privatizing/outsourcing CS functions would be in the best position to privatize/outsource functions on a joint basis.	
Question 1. How many of the CS functions have been privatized/outsourced (partially or in their entirety)? (Military Value Question)		
Criterion 2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.	This criterion received next to the lowest weighting. Unlike the other criteria, the metrics used in this criterion focus on capacity which is considered a lesser factor in the military value model. However, this criterion still retains some importance because of its focus on potential for footprint reductions.	15%
Attribute 1. Excess/Vacant Facility Infrastructure Profile	This attribute assesses the capacity of the activity to provide for the additional requirements of administrative, transportation, and storage/warehouse space. The assumption is that, all other factors being equal, the activity that has the greatest capacity to absorb additional requirements is more desirable than one where consolidation would necessitate construction.	15%
Metric 1. Excess Administrative Space. Amount of excess administrative space (DoD FAC code 6100) in square feet.	**Range**: Min – Max **Scoring Plan**: Lowest value = 0.0 – Highest value = 1.0 **Function**: Linear increasing This metric assesses excess administrative space. The more excess administrative space an activity has, the greater the opportunity for an activity to accommodate consolidation of other activities' staffs/managements functions.	11%
Question 1. What is the excess square footage of all administrative space (DOD FAC 6100) occupied by the activity? (DOD CDC Question 446 and the new CDC question will provide information on USF and personnel authorized. This information, along with standardized allocation of work space, will allow for determination of excess space.		
Metric 2. Vacant Motor Pool Space. This will be measured in terms of additional sedans that can be accommodated.	**Range**: Min – Max **Scoring Plan**: Lowest value = 0.0 – Highest value = 1.0 **Function**: Linear increasing This metric assesses vacant motor pool space in terms of additional sedans that could be parked at facility. Since it pertains to only one CS function, it receives the least amount of weight of the above attribute.	2%
Question 1. How many additional sedans can be parked at your facility? (New CDC Question)		
Metric 3. Vacant Storage/Warehouse Space. Amount of vacant storage/warehouse space in square feet.	**Range**: Min – Max **Scoring Plan**: Lowest value = 0.0 – Highest value = 1.0 **Function**: Linear increasing This metric assesses vacant storage/warehouse space in support of such CS functions as Administration (document/publication storage) and Supply and Support Services. Since most of the CS functions probably do not require storage/warehouse space, a lesser weight is attributed to this metric.	2%
Question 1. What is the vacant square footage of all storage space? (New CDC Question) **Question 2.** What is the vacant square footage of all warehouse space? (New CDC Question)		
Criterion 3. The ability to accommodate contingency, mobilization, and	This criterion was given the least weight because the CS functions, while important, are a	5.0%

Criterion/Attribute/Metric/Question	Rationale	Weight
future total force requirements at both existing and potential receiving locations to support operations and training.	minor factor in supporting this criterion which is geared more towards surge requirements involving large troop movements. Secondly, contingency and mobilization requirements have minimal impact on long-term requirements for administrative space.	
Attribute 1. Accommodation of Additional Personnel	Greater value is given to an organization that has plans to accommodate additional personnel and is prepared for the impact on the current workforce and workspace requirements.	5.0%
Metric 1. Mobilization/Contingency Requirements. 1st Question: If no, = 0, If yes, go to question 2.	**Range**: 0-1 **Scoring Plan**: 0.0 = No; 0.5 = Yes if less than 10%; 1.0 = Yes if more than 10%. **Function**: Binary This assesses the organization's experience in supporting mobilization/contingency operations. Greater experience would support expanding responsibilities based on existing capabilities.	5.0%
Question 1. Does the organization have a mobilization/contingency plan that requires an increase in staff? If yes, go to question 2/3. (Military Value Question) (equal question weights) **Question 2.** Is the increase in personnel less than 10% above authorized strength levels? If yes = 0.5. (Military Value Question) (equal question weights) **Question 3.** Is the increase in personnel more than 10% of authorized strength levels? If yes = 1.0. (Military Value Question) (equal question weights)		
Criterion 4. The cost of operations and the manpower implications.	This criterion was given the greatest weighting. Demonstrated ability to provide common support services with greatest efficiency is the major factor in recommendations/decisions to add responsibilities to a supporting organization's mission.	45.0%
Attribute 1. Workforce Efficiency Profile	The intent of this attribute is to assess the workforce efficiency of an organization in providing CS services to its customers. Efficiency is measured as the ratio of personnel performing overhead functions (supervisory personnel) to total support personnel. This establishes a general comparison of workforce efficiency to assist in targeting potential savings through consolidation.	20%
Metric 1. Overhead Personnel. Ratio of supervisory personnel to total support personnel.	**Range**: Min – Max **Scoring Plan**: Lowest value = 1.0 – Highest value = 0.0 **Function**: Linear decreasing See above	20%
Question 1. What is the ratio of supervisory personnel to total authorized personnel performing the 14 CS functions? (Military Value Question)		
Attribute 2. Workspace Efficiency Profile	The intent of this attribute is to assess the workspace efficiency of an organization in providing CS services to its customers. Efficiency is measured as the ratio of workspace occupied by personnel performing overhead functions (supervisory personnel) to total space occupied by personnel providing the 14 CS functions. This establishes a general comparison of workspace efficiency within geographic clusters to assist in targeting potential savings through consolidation.	14%
Metric 1. Overhead Workspace. Ratio of workspace of supervisory personnel to total space occupied by support personnel.	**Range**: Min – Max **Scoring Plan**: Lowest value = 1.0 – Highest value = 0.0 **Function**: Linear decreasing See above	14%
Question 1. What is the ratio of workspace occupied by supervisory personnel to total space occupied by authorized personnel performing the 14 CS		

Criterion/Attribute/Metric/Question	Rationale	Weight
functions? (Military Value Question)		
Attribute 3. Facilities Management Profile	While this CS function is only one among 14, it usually consumes the largest percentage of personnel resources. Accordingly, it is considered an important factor, along with workforce and workspace efficiency, in evaluating the overall efficiency of a CS organization**.**	9%
Metric 1. Support Personnel to Sq Ft of Facility	**Range**: Min – Max **Scoring Plan**: Lowest value = 0.0 – Highest value = 1.0 **Function**: Linear increasing This metric measures the efficiency of the facilities management function to support space occupied by assigned tenants. Efficiency is measured as the ratio of square feet supported to the number of personnel providing the support. Note: The definition of the facilities management function is different from what was contained in CDC Question 446.	9%
Question 1. How many personnel within your activity perform this function? (Military Value Question) **Question 2.** What is the total number of USF of leased facilities & Pentagon Reservation for which your activity provides this function? (Military Value Question) **Question 3.** What is the total number of GSF of owned space for which your activity provides this function? (Military Value Question)		
Attribute 4. Inter-Service Support Agreement (ISSA) Profile	This establishes a value for both the support a CS organization provides to and receives from other DoD Components.	2%
Metric 1. Existing Agreements Providing Support. Measured in dollars.	**Range**: Min – Max **Scoring Plan**: Lowest value = 0.0 – Highest value = 1.0 **Function**: Linear increasing This metric assesses the value of support provided by the CS organization to other DoD Components. The greater the value of service being provided supports expanding responsibilities.	1%
Question 1. What is the value (dollars) for services provided through ISSAs for the 14 CS functions? (Military Value Question)		
Metric 2. Existing Agreements Receiving Support. Measured in dollars.	**Range**: Min – Max **Scoring Plan**: Lowest value = 1.0 – Highest value = 0.0 **Function**: Linear decreasing This metric assesses the value of support being received from other DoD Components. The greater the outside support currently being received does not support taking on expanded responsibilities and, therefore, less support being received has greater value.	1%
Question 1. What is the value (dollars) for services received through ISSAs for the 14 CS functions? (Military Value Question)		

Section 3: Data Call

3a. Military Value Data Call Questions

1. For each Regional Civilian Personnel Office, Agency Personnel Office (including WHS): What is your organization's average civilian position fill-time for fiscal years (FYs) 01-03? (Refer to Civilian Personnel Scoring Plan, Criterion 1, Attribute 1, Metric 1; Question 1.)

Organization Name	Fill-Time FY 01	Fill-Time FY 02	Fill-Time FY 03

2. For each Regional Civilian Personnel Office, Agency Personnel Office (including WHS), DFAS Central and Field Sites, and Finance and Accounting Activities: For each location, identify if the site is on a DoD-owned Installation. (Refer to: Civilian Personnel Scoring Plan, Criterion 1, Attribute 2, Metric 1, Question 1; DFAS Scoring Plan, Criterion 1, Attribute 1, Metric 1; and Finance and Accounting Scoring Plan, Criterion 1, Attribute 2, Metric 1 and Criterion 3, Attribute 1, Metric 1.)

Name Of Organization	Town & State	Zip Code	On DoD-Owned Installation (Yes/No)

3. For each DFAS Site; for each Civilian Personnel Office; for Each Military Personnel Center; for military installations targeted by Major Admin and HQs; for each Correctional Facility: For each location, identify the locality pay % rate for Calendar Year 2003. (Refer to Civilian Personnel Offices Scoring Plan, Criterion 4, Attribute 1, Metric 1, Question 1; Major Admin and HQ Activities Scoring Plan, Criterion 4, Attribute 2, Metric 1; Military Personnel Centers Criterion 4, Attribute 1, Metric 1, Question 1; Corrections Scoring Plan Criterion 4, Attribute 1, Metric 1; and DFAS Scoring Plan, Criterion 4, Attribute 1, Metric 2.)

Name of Organization	Zip Code	Locality Pay %

4. What are your BOS non-payroll obligations for your activity (Navy) or installation? (Refer to Civilian Personnel Scoring Plan, Criterion 4, Attribute 2, Metric 1, Question 1; Military Personnel Centers Scoring Plan, Criterion 4, Attribute 2, Metric 1, Question 1; Geo Military Personnel Offices Scoring Plan, Criterion 4, Attribute 1, Metric 1, Question 1; and Local Finance and Accounting Scoring Plan, Criterion 4, Attribute 1, Metric 1, Question 1.)

Name Of Organization	BOS Obligations for FY 03

5. What percentage of your Installation's network backbone will be fiber optic cable by the end of FY04? (Based on planned spending in the FY04 President's budget.) (Refer to: Major Admin & HQ Activities Scoring Plan, Criterion 1, Attribute 1, Metric 1; Installation Management Scoring Plan, Criterion 1, Attribute 4, Metric 1, Question 1.)

Total # Feet in Network Backbone	Total # Feet Fiber Optic Cable in Backbone	% Fiber Optic Cable in Backbone at end FY04

6. What percentage of your Installation's buildings will be connected to the network backbone via Fiber Optic Cable by the end of FY04? (Based on planned spending in the FY04 President's budget.) (Refer to: Major Admin & HQ Activities Scoring Plan, Criterion 1 Attribute 1, Metric 2; Installation Management Scoring Plan Criterion 1, Attribute 4, Metric 2, Question 1.)

Buildings Requiring Network Connectivity	Number of Buildings Connected Via Fiber	Percentage of Buildings Connected Via Fiber

7. Identify which of the following communications capabilities are currently available at your base/installation/activity in the matrix below: (Refer to: Major Admin & HQ Activities Scoring Plan, Criterion 1, Attribute 1, Metric 3; Installation Management Scoring Plan, Criterion 1, Attribute 4, Metric 3, Questions 5 – 10.)
   a. Commercial wireless services:
      i. Cellular Telephone
      ii. Pagers (Voice and or Text)
      iii. (3) Wireless Messaging (e.g., Blackberry)?
   b. Video Teleconferencing (VTC) services – i.e., DISN Video Service- Global (DVS-G)?
   c. Diverse routing of NIPRNET?
   d. Diverse routing of SIPRNET?
   e. A non-tactical Satellite Earth Terminal (STEP, Teleport, NCTAMS, etc.)?

f. A Voice Over Internet Protocol (VOIP) Telephone Switch?

Communications & Information Technology Capabilities (Partial List)	**"X" if Available**
Commercial wireless services: cellular, pagers, messaging e.g., Blackberry)?	
Cellular Telephone	
Pagers (Voice or Text)	
Wireless Messaging (e.g. Blackberry)	
Video Teleconferencing (VTC) services – e.g. DISN Video Service-Global (DVS-G)?	
Diverse routing of NIPRNET?	
Diverse routing of SIPRNET?	
Satellite Earth Terminal? (STEP, Teleport, NCTAMS, etc.)	
Voice over Internet Protocol (VOIP) Telephone Switch?	

8. How many times has the county (or other governmental jurisdiction) in which your Installation is located received a Presidential Declaration of Disaster since 1965 due to hurricane, flooding, tornado, wild fire and/or earthquake? (FEMA data source – will not be included in IQT) (Refer to: Major Admin & HQ Activities Scoring Plan, Criterion 1, Attribute 2, Metric 1.)

9. During FY03, how many times did the SES and Flag/General Officers in your Activity hold in-person meetings with Senior Executives (see Amplification Section) of DoD Activities located within the DC Area (within 100 miles of Pentagon) and/or with non-DoD, DC Area-based federal government entities (excluding Congress)? Report total number of meetings. (Refer to: Major Admin & HQ Activities Scoring Plan, Criterion 1, Attribute 3, Metric 1.)

Total # of In-Person Meetings with Sr. Execs Located Within DC Area during FY03	

10. During FY03, how many times did the SES and Flag/General Officers in your Activity hold in-person meetings in the DC Area with members of Congress and/or their staffs? Report total number of meetings. (Refer to: Major Admin & HQ Activities Scoring Plan, Criterion1, Attribute 3, Metric 2.)

Total # of In-Person Meetings with Congress/Staff during FY03	

11. Does your Activity have a statutory requirement to be located anywhere within the DC Area? If yes, identify the specific statute and nature of the requirement. (Refer to: Major Admin & HQ Activities Scoring Plan, Criterion 1, Attribute 3, Metric 3.)

Required to be located within 100 miles of Pentagon? Yes/No	**If YES, cite specific statute establishing requirement. If NO, enter "N/A."**	**If YES, briefly describe specific location requirement. If NO, enter "N/A."**

12. Does your Activity have a statutory requirement requiring you to remain in your current location? If yes, identify the specific statute and nature of the requirement. (Refer to: Major Admin & HQ Activities Scoring Plan, Criterion 1, Attribute 3, Metric 3.)

Required to remain at your current location? (Yes/No)	**If YES, cite specific statute establishing requirement. If NO, enter "N/A".**	**If YES, briefly describe specific location requirement. If NO, enter N/A.**

13. Indicate the type of mission/location characteristic that best describes your Activity's primary mission, using the definitions provided in the amplification section. Choose only one from the following list and enter the corresponding number. (Refer to: Major Admin & HQ Activities Scoring Plan, Criterion 1, Attribute 4, Metric 1.)

Mission/Location Characteristic	**"X" Appropriate Characteristic**
Security and Defense of the DC Area	
Direct DC Area Administrative Support	
Other Mission (if HQ currently located within DC Area)	
Outside the DC Area	

14. What is the weighted average (by population) percentage of holders of Bachelor's degrees or higher in the county in which the Installation is located and those counties contiguous to it? (Source is 2000 Census data; question will not be included in IQT) (Refer to: Major Admin & HQ Activities Scoring Plan, Criterion 1, Attribute 5, Metric 2.)

15. What is the distance in miles from your Installation's main gate to the commercial airport most frequently used for the Installation's TDYs? (Refer to: Major Admin & HQ Activities Scoring Plan, Criterion 1, Attribute 6, Metric 1.)

Distance in miles from main gate to commercial airport	

16. For each leased installation that you listed in Data Call #1 Question #310, answer the following questions using the table provided, with the building names and numbers matching exactly to information provided in Data Call #1 Question #310. (Refer to: Major Admin & HQ Activities Scoring Plan, Criterion 2, Attribute 3, Metric 1; Civilian Personnel Scoring Plan, Criterion 1, Attribute 3, Metric 1, Questions 1-6; Military Personnel Centers Scoring Plan, Criterion 1, Attribute 2, Metric 1, Questions 1-6.) Respondents should include each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) by targeted location and function (3 Functions – Accounting, Military Pay, and Travel Pay) for a leased location and for each finance and accounting activity by targeted location and functions (11 Functions – Management/Oversight for F&A, Accounting, Security Assistance Accounting, Non-Appropriated Funds Accounting, Disbursing, Military Pay, Civilian Pay, Military Retired and Annuitant Pay, Travel Pay, Vendor Pay, Contract Pay), for a leased location. (Refer to Finance and Accounting Scoring Plan, Criterion 1, Attribute 2, Metric 2; Criterion 3, Attribute 1, Metric 2)

    a. What % of the building's total square feet is leased to and/or occupied by DoD entities?
    b. Is the building within a Controlled Perimeter?
    c. What is the distance in feet to the controlled perimeter?
    d. What is the distance in feet to the nearest Parking and/or Roadways?
    e. Does the building have underground parking which is access controlled? (If no underground parking, answer no)
    f. Does the building have underground parking which is not access controlled? (If no underground parking, answer no)

Organization	**Town/State**	**Zip Code**	**% DoD Leased or Occupied**	**Within Controlled Perimeter (Yes/No)**	**Distance to Perimeter**	**Distance to Parking or Roadway**	**Access Controlled Parking (Yes/No)**	**Access Uncontrolled Parking (Yes/No)**

17. What is your Installation's Basic Allowance for Housing (BAH) for a married O-4 with 12 years of service? (Will not be included in IQT.) (Refer to Major Admin & HQ Activities Scoring Plan, Criterion 4, Attribute 1, Metric 1.)

18. List all transportation nodes within 100 miles of the installation and give the distance from your installation's main gate to that node. (Refer to Mobilization Scoring Plan, Criterion 3, Attribute 4, Metrics 1 and 2.)

Transportation	**Distance (Miles)**	**Number of Ports/Rail Nodes**
Deep Water Port		
Airport		
Rail Station		

19. For each Military Personnel Center identified in the amplification: Is the Military Personnel Center's primary facility within the perimeter of a main/host DoD installation? Yes/No Answer. (Refer to Military Personnel Centers, Criterion 1, Attribute 1, Metric 1, Question 1.)

20. What are the annual cost savings for the installation achieved by utilizing inmate labor? (Refer to Corrections Scoring Plan, Criterion 1, Attribute 2, Metric 1, Question 1.)

	Dollar $ Amount
Products	
Services	
Total	

21. Does the facility meet all American Correctional Association standards for SF per inmate? (Refer to Corrections Scoring Plan, Criterion 1, Attribute 3, Metric 1, Question 1.)

	Yes	**No**
Meets ACA SF Standards		

22. Inmate deaths from other than natural causes:
    a. What is the total number of inmate deaths by suicide as reported on the Annual Confinement Report, DD Form 2720, item 17.e.(4), for CY01-03? (Refer to Corrections Scoring Plan, Criterion 1, Attribute 4, Metric 1, Question 1.)
    b. What is the total number of inmate deaths by accidents as reported on the Annual Confinement Report, DD Form 2720, item 17.e.(5), for CY01-03? (Refer to Corrections Scoring Plan, Criterion 1, Attribute 4, Metric 1, Question 2.)
    c. What is the total number of inmate deaths by another person as reported on the Annual Confinement Report, DD Form 2720, item 17.e.(6), for CY01-03? (Refer to Corrections Scoring Plan, Criterion 1, Attribute 4, Metric 1, Question 3.)

Deaths By	CY01	CY02	CY03
Suicide			
Accident			
Another person			

23. What is the total number of inmate escapees as reported on the Annual Confinement Report, DD Form 2720, item 17.f.(1), for CY01-03? (Refer to Corrections Scoring Plan, Criterion 1, Attribute 4, Metric 2, Question 1.)

	CY01	CY02	CY03
Escapees			

24. What is the number of correctional/security personnel (guards) in your correctional facility? (Refer to Corrections Scoring Plan, Criterion 1, Attribute 5, Metric 1, Question 1.)

Function	Military Officer	Military Enlisted	DoD Civilian	On Board Contractor	Total Personnel
Correctional/Security Personnel (Guards)					

25. If your facility was required to house female inmates, what is the maximum number of females your facility could house based on design capacity and steady state of the male inmate population? (Refer to Corrections Scoring Plan, Criterion 2, Attribute 1, Metric 1, Question 1.)

Cells (Female)	Single	Double	Multiple/Open Bay
Level I			
Level II			
Level III			

26. Does the installation have buildable land for expansion of corrections facilities (DoD FAC 7312) adjacent to the existing facility? If yes, how many acres? (Refer to Corrections Scoring Plan, Criterion 2, Attribute 3, Metric 1, Question 1.)

	Yes	No	Number of Acres (If Yes)
Buildable Land			

27. For DFAS Central and Field Sites Only. For each location, identify the terrorist threat assessment rating based on threat assessment intelligence and DSHARPP analysis for (a) personnel attacks, (b) conventional explosive attack, (c) arson, (d) hostage situation, (e) weapons of mass destruction, (f) theft, and (g) other. (Refer to DFAS Scoring Plan, Criterion 1, Attribute 1, Metric 2)

Name Of Organization	Zip Code	Personnel Attacks	Conventional Explosive Attack	Arson	Hostage Situation	Weapons Of Mass Destruction	Theft	Other

28. For DFAS Central and Field Sites Only. For each location, identify the average hiring time (number of days – See Amplification) for external fill actions for the GS 500 series positions. (Refer to DFAS Scoring Plan, Criterion 1, Attribute 2, Metric 1)

Name Of Organization	Zip Code	Average Hiring Time (# Of Days)

29. For DFAS Central and Field Sites Only. For each location, identify the total workforce pool as indicated in Dept of Labor Workforce Listing. (Refer to DFAS Scoring Plan, Criterion 1, Attribute 2, Metric 2; Criterion 3, Attribute 1, Metric 1)

30. For DFAS and for each Finance and Accounting Activity by targeted location and functions: For each location, identify any one-of-a-kind corporate process applications for a specific function. (Each function will be a separate question in the IQT, maximum of 30, i.e., 11 Finance & Accounting Functions and 19 DFAS Corporate Functions.) (Refer to: DFAS Scoring Plan, Criterion 1, Attribute 2, Metric 3; and Finance and Accounting Scoring Plan, Criterion 1, Attribute 1, Metric 2)

Name Of Organization	Town & State	Zip Code	One-Of-A-Kind Corporate Process Applications

31. For DFAS Central and Field Sites Only. For each location, identify the Facility Condition Assessment Rating based on DFAS FAC Codes – Red, Amber, and Green. (Refer to DFAS Scoring Plan, Criterion 2, Attribute 1, Metric 1.)

Name Of Organization	Town & State	Zip Code	DFAS FAC Code Red	DFAS FAC Code Amber	DFAS FAC Code Green

32. For DFAS Central and Field Sites Only. For each location, identify the operating cost per square foot. (Refer to DFAS Scoring Plan, Criterion 4, Attribute 1, Metric 1.)

Name Of Organization	Town & State	Zip Code	Operating Cost Per Sq Ft

33. Is your installation/facility mainframe or data storage/replication facility a Defense Enterprise Computing Center (DECC) or subordinate detachment operated by the Defense Information Systems Agency (DISA)? (Refer to Computing Services Scoring Plan, Criterion 1 Attribute 1 Metric 3.)

34. What is the average annual cost per Terabyte (TB) to store/replicate data? (Refer to Computing Services Scoring Plan Criterion 4 Attribute 1, Metric 1.)

Average Labor Cost	Average Operations & Maintenance Cost	Total O&M and Labor Cost Average	Average TB Storage/Replication Capacity	Average Annual Cost per TB of Storage/ Replication Capacity

35. What is the average annual cost per mainframe operating hour over the last 3 years (FY00-FY03)? (Refer to Computing Services Scoring Plan, Criterion 4, Attribute 1, Metric 2.)

Average Labor Cost	Average Operations & Maintenance Cost	Total O&M and Labor Costs	Total Average Annual Operating Hours	Average Cost per Mainframe Operational Hour

36. For each specified geographic cluster installation local military personnel office: Is your military personnel facility currently a multi-use personnel servicing facility? If yes, indicate host organization's name, each sharing service and component, and the sharing organization's name. (For this question, Multi-use facility is defined as housing employees from 2 or more components (e.g., Active and Reserve) or 2 or more services (e.g., Army and Air Force) who perform personnel customer service activities for their respective component/service-assigned members. (Refer to Geo Military Personnel Offices Scoring Plan Criterion 1, Attribute 1, Metric 2; Question 1.)

Host Organization Name	Sharing Service/Component	Sharing Organization Name

37. (Note: One question written for two different audiences. Each function will be a separate question in the IQT, maximum of 14.) For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) by targeted location and functions (3 Functions – Accounting, Military Pay, and Travel Pay), identify the number of customers (organizations) serviced. For each finance and accounting activity by targeted location and functions (11 Functions – Management/Oversight for F&A, Accounting, Security Assistance Accounting, Non-Appropriated Funds Accounting, Disbursing, Military Pay, Civilian Pay, Military Retired and Annuitant Pay, Travel Pay, Vendor Pay, and Contract Pay), identify the number of customers (organizations) serviced. (Refer to Finance and Accounting Scoring Plan, Criterion 1, Attribute 1, Metric 1; Criterion 3, Attribute 2, Metric 1)

Name Of Organization	Town & State	Zip Code	Number Of Customers (Organizations) Serviced

38. What is the distance to each DoD installation within 100 miles of your installation? (Refer to Installation Management Scoring Plan, Criterion 1, Attribute 1, Metric 1, Question 1.)

Installation Name	Distance (Miles)

39. What is the number of authorized active duty (to include active RC/NG), civilian and on-board contractor personnel assigned to all administrative activities hosted by your installation? (Refer to Installation Management Scoring Plan, Criterion 1, Attribute 2, Metric 1, Question 1.)

Military	DoD Civilians	On-Board Contractors	Total

40. What is the number of authorized active duty (to include active RC/NG), civilian and on-board contractor personnel assigned to all operational activities hosted by your installation? (Refer to Installation Management Scoring Plan, Criterion 1, Attribute 2, Metric 2, Question 1.)

Military	DoD Civilians	On-Board Contractors	Total

41. What is the number of authorized active duty (to include active RC/NG), civilian and on-board contractor personnel assigned to all RDT & E activities hosted by your installation? (Refer to Installation Management Scoring Plan, Criterion 1, Attribute 2, Metric 3, Question 1.)

Military	DoD Civilians	On-Board Contractors	Total

42. What is the number of authorized active duty (to include active RC/NG), civilian and on-board contractor personnel assigned to all institutional training activities hosted by your installation? (Refer to Installation Management Scoring Plan, Criterion 1, Attribute 2, Metric 4, Question 1.)

Military	DoD Civilians	On-Board Contractors	Total

43. How many authorized personnel, to include active duty (including active RC/NG), civilian and contractor personnel are assigned to joint organizations and other services (not Joint) which are hosted by your installation? (Refer to Installation Management Scoring Plan Criterion 1, Attribute 2, Metric 5, Question 1.)

Military	DoD Civilian	Contractor	Total

44. What is the total number of personnel supported by the installation, to include authorized military members (active duty, full time guard and reserve), civilians, on-board contractors, and family members? (Refer to: Installation Management Scoring Plan, Criterion 1, Attribute 3, Metric 1, Question 1; and Civilian Personnel Scoring Plan, Criterion 4, Attribute 2, Metric 1, Question 1; and Finance & Accounting Scoring Plan Criterion 4, Attribute 1, Metric 1, Question 1.)

Military	DoD Civilians	On-Board Contractors	Family Members	Total

45. What is the installation's overall facility condition code rating? (Refer to Installation Management Scoring Plan, Criterion 2, Attribute 1, Metric 1, Question 1.)

Operations & Training	Mobility	Maintenance & Production	RDT&E	Supply	Medical	Admin	Community & Housing	Utilities & Grounds

46. What is the square footage of all facilities on the installation (C1-C4)? (Refer to Installation Management Scoring Plan, Criterion 2, Attribute 2, Metric 1, Question 1.)

47. What is the ratio of the total amount of space in square feet in all buildings maintained by the Public Works/Civil Engineer (government and contractor) at the installation compared to the size of the public works/civil engineer staff? (Refer to Installation Management Scoring Plan, Criterion 4, Attribute 1, Metric 1, Question 1.)

48. What is the ratio of the installation's total workforce of military, civilian and contractor compared to the size of the installation management support staff of military, civilian, and contractor? (Refer to Installation Management Scoring Plan, Criterion 4, Attribute 1, Metric 2, Question 1.)

49. What is the value (use FY03 executed dollars) for services provided by the installation through ISSAs for the functional areas listed: Public Works, Resource Management, Contracting, Transportation, Supply, Maintenance, Airfield Operations, Personal and Family Services, MWR, Law Enforcement, Fire and Emergency Services, Communications, Training Support, Physical Security, Installation Support (Public Affairs, Safety, Internal Review, Legal etc) (Refer to Installation Management Scoring Plan, Criterion 4, Attribute 2, Metric 1, Question 1.)

Functional Area	**ISSA Services Provided ($000)**
Public Works	
Resource Management	
Contracting	
Transportation	
Supply	
Maintenance	
Airfield Operations	
Personal and Family Services	
MWR	
Law Enforcement	
Fire and Emergency Services	
Communications	
Training Support	
Physical Security	
Installation Support (Public Affairs, Safety, Internal Review, Legal, etc.)	

50. What is the value (use FY03 executed dollars) for services received by the installation through ISSAs for the functional areas listed: Public Works, Resource Management, Contracting, Transportation, Supply, Maintenance, Airfield Operations, Personal & Family Services, MWR, Law Enforcement, Fire and Emergency Services, Communications, Training Support, Physical Security, Installation Support (Public Affairs, Safety, Internal Review, Legal etc) (Refer to Installation Management Scoring Plan, Criterion 4, Attribute 2, Metric 2, Question 2.)

Functional Area	**ISSA Services Received ($000)**
Public Works	
Resource Management	
Contracting	
Transportation	
Supply	
Maintenance	
Airfield Operations	
Personal and Family Services	
MWR	
Law Enforcement	
Fire and Emergency Services	
Communications	
Training Support	
Physical Security	
Installation Support (Public Affairs, Safety, Internal Review, Legal, etc.)	

51. For the 14 Common Support functions listed below, answer the following questions using the table provided (Refer to Headquarters Support Activities Scoring Plan, Criterion 1, Attribute 1, Metric 1, Question 1-2):

    a. Is your activity's current location, with respect to the distance to the majority of your customers, critical to the performance of your mission? (Y/N) (Or, could the function be performed adequately at a location that was not in close proximity to your customer base?) (An example of a function that would require close proximity to its customer base would be a taxi service.)
    b. If the location is mission critical, then is the normal commute time during business hours from your location to the majority of your customers less than ½ hour, ½ hour to 1 hour, or more than one hour?

Common HQ, Administrative and Business-Related (Common Support) Functions	**Location Mission Critical (Y/N)**	**Commute Time Less Than ½ hour**	**Commute Time ½ hour to 1 hour**	**Commute time More Than 1 hour**
Acquisition & Contracting				
Administration				
Audiovisual Services				
Cost Analysis				
Environmental Services & Safety				
Executive Dining Facilities				
Facilities Management				
Financial Management Services				
Health & Wellness				
Inspections & Evaluation				
Operations Analysis				
Security				
Supply & Support Services				
Transportation				

52. For the 14 Common Support functions listed below, how many are performed by your activity? (Answer YES/NO using the table provided.) (Refer to Headquarters Support Activities Scoring Plan,Criterion 1, Attribute 2, Metric 1, Question 1):

Common HQ, Administrative and Business-Related Common Support Functions	**Answer YES/NO if you provide these functions**
Acquisition & Contracting	
Administration	
Audiovisual Services	
Cost Analysis	
Environmental Services & Safety	
Executive Dining Facilities	
Facilities Management	
Financial Management Services	
Health & Wellness	
Inspections & Evaluation	
Operations Analysis	
Security	
Supply & Support Services	
Transportation	

53. For the 14 Common Support functions listed below, answer the following questions using the table provided: (Refer to Headquarters Support Activities Scoring Plan,Criterion 1, Attribute 2, Metrics 2 – 6, Questions 2 – 6):

a. WITHIN your DoD Component, how many customers (organizations) (see amplification) receive Common Support services from your activity?
b. OUTSIDE your DoD Component, how many customers (organizations) receive Common Support services from your activity?
c. What are the percentages of personnel resources in your activity devoted to providing Common Support services to the largest customer (organization) WITHIN your component?
d. What are the percentages of personnel resources in your activity devoted to providing Common Support services to your largest customer (organization) OUTSIDE your component?

e. Have the following Common Support functions been privatized/outsourced (partially or in their entirety)? (YES/NO)

Common HQ, Administrative and Business-Related Common Support Functions	**Within your Component #of Customers**	**Outside your Component #of Customers**	**% of Personnel Supporting Within**	**% of Personnel Supporting Outside**	**Privatized/ Outsourced Functions (YES/NO)**
Acquisition & Contracting					
Administration					
Audiovisual Services					
Cost Analysis					
Environmental Services & Safety					
Executive Dining Facilities					
Facilities Management					
Financial Management Services					
Health & Wellness					
Inspections & Evaluation					
Operations Analysis					
Security					
Supply & Support Services					
Transportation					

54. For the 14 Common Support functions listed below, answer the following questions using the table provided (Refer to Headquarters Support Activities Scoring Plan,Criterion 4, Attribute 1 , Metrics 3 and 4, Questions 1 and 2):

    a. What is the value (dollars, in thousands) for Common Support services PROVIDED by your activity to DoD Components through Inter Service Support Agreements (ISSAs)?
    b. What is the value (dollars, in thousands) for Common Support services RECEIVED by your activity from DoD Components through Inter Service Support Agreements (ISSAs)?

Common HQ, Administrative and Business-Related Common Support Functions	**ISSA's Support PROVIDED ($ 000)**	**ISSA's Support RECEIVED ($ 000)**
Acquisition & Contracting		
Administration		
Audiovisual Services		
Cost Analysis		
Environmental Services & Safety		
Executive Dining Facilities		
Facilities Management		
Financial Management Services		
Health & Wellness		
Inspections & Evaluation		
Operations Analysis		
Security		
Supply & Support Services		
Transportation		

55. For the 14 Common Support functions listed below, answer the following questions using the table provided (Refer to Headquarters Support Activities Scoring Plan,Criterion 3, Attribute 1, Metric 1, Questions 1 – 3):

    a. Does your activity have a mobilization/contingency plan that requires an increase in your staff to respond to an emergency situation? (Yes/No) If yes, go to question b and c.
    b. Is the required increase in personnel less than 10% above your authorized strength level? Or,
    c. Is the required increase in personnel more than 10% of your authorized strength level?

Common HQ, Administrative and Business-Related Common Support Functions	**Mobilization / Contingency Plan (Y/N)**	**Increase in Personnel Less Than 10% (Y/N)**	**Increase in Personnel More Than 10% (Y/N)**
Acquisition & Contracting			
Administration			
Audiovisual Services			
Cost Analysis			
Environmental Services & Safety			
Executive Dining Facilities			
Facilities Management			
Financial Management Services			
Health & Wellness			
Inspections & Evaluation			
Operations Analysis			
Security			
Supply & Support Services			
Transportation			

56. For the 14 Common Support functions listed below, answer the following questions using the table provided (Refer to Headquarters Support Activities Scoring Plan,Criterion 4, Attributes 3 and 4 , Metrics 1 and 2, Questions 1 and 2):

    a. What is the ratio of supervisory personnel to total authorized personnel who are performing the following Common Support functions?
    b. What is the ratio of workspace (Usable Square Feet (USF)) occupied by supervisory personnel to total space (USF) occupied by authorized personnel performing the following Common Support functions?

Common HQ, Administrative and Business-Related Common Support Functions	**Ratio of Supervisory Personnel to total Personnel**	**Ratio of Supervisory SF to total SF**
Acquisition & Contracting		
Administration		
Audiovisual Services		
Cost Analysis		
Environmental Services & Safety		
Executive Dining Facilities		
Facilities Management		
Financial Management Services		
Health & Wellness		
Inspections & Evaluation		
Operations Analysis		
Security		
Supply & Support Services		
Transportation		

57. For the Facilities Management Function (see amplification for definition unique to these questions) answer the following questions using the table provided (Refer to Headquarters Support Activities Scoring Plan,Criterion 4, Attribute 1 , Metric 1, Questions 1 – 3):

    a. How many AUTHORIZED personnel (FTEs for on-board contractors) within your activity perform this function?

b. What is the total number of Usable Square Feet (USF) of leased facilities and the Pentagon Reservation for which your activity provides facilities management services?
c. What is the total number of Gross Square Feet (GSF) of owned space for which your activity provides facilities management services?

Function	Military Officers (Pers)	Military Enlisted (Pers)	DoD Civilians (Pers)	On-Board Contractors (FTEs)(Pers)	USF (SF)	GSF (SF)
Facilities Management						

58. Provide the correctional facility's operational costs as defined for FY03. (Refer to Correction's Scoring Plan, Criterion 4, Attribute 2, Metric 1, Question 1)

Operational Costs	Dollars ($)
Civilian Pay	
Building & Ground Maintenance	
Staff Travel and Prisoner Transport	
Training (Staff)	
Rehabilitative and Recreational Programs (Prisoner)	
Total	

59. What is the median value of an owner-occupied housing unit in the local community? (Final format of question and source will be determined by JPAT for Criterion 7.) (Refer to Major Admin & HQ Activities Scoring Plan, Criterion 1, Attribute 5, Metric 1.)

3b. Capacity Data Call Questions (Data Call #1) Supporting Military Value Scoring Plans

1. CDC Question #480: What is the size of the population serviced per personnelist? For each, Regional Civilian Personnel Office, and Agency Personnel Office (incl WHS), answer this question for each multiple choice value in the function column to provide the number of authorized military and civilian and actual contractors, as of September 30, 2003, performing both core personnel and administrative support for civilian personnel functions. For each column, the sum total of core personnel and administrative support must equal 100% of your specified authorizations/resources. (Refer to Civilian Personnel Offices Scoring Plan, Criterion 1, Attribute 1, Metric 2, Question 1.)

Organization Name (Text)	Function (Text)[1]	Military Officers (W1 and Higher) (Pers)	Military Enlisted Personnel (Pers)	DoD Civilians (Pers)	On-Board Contractors (FTEs) (Pers)	Total Personnel (Pers)

2. CDC Question #482: For each, Regional Civilian Personnel Office, and Agency Personnel Office (incl WHS), answer this question for each multiple choice value in the throughput column to provide civilian population serviced, total civilian customer transactions, and automated customer transactions for civilian personnel activities during each fiscal year. (Refer to Civilian Personnel Offices Scoring Plan, Criterion 1, Attribute 1, Metric 2, Question 1.)

Organization Name (Text)	Throughput (Text)[2]	FY01 (Count)	FY02 (Count)	FY03 (Count)

[1] Choose a value from this list: Core Personnel Function, Administrative Support Function
[2] Choose a value from this list: Civilian Population Serviced, Total Civilian Customer Transactions, Number of Civilian Automated Phone/Internet Trans.

3. CDC Question #326: Is your location on a DISN Point of Presence (POP)? For Base/Installation/Facility-level Comm/IT service providers, how many total Gross Square Feet (GSF) and Usable Square Feet (USF) of building space supports DoD DISN capabilities and/or Service unique facilities? This CDC question identifies various types of DISN POPs that may reside within a facility. The type of POP is to be determined by HSA JCSG COMM/IT and its utility addressed during optimization by scoring plan owners. (Refer to: Civilian Personnel Centers Scoring Plan, Criterion 2, Attribute 2, Metric 1, Question 1; Major Admin and HQ Activities Scoring Plan, Criterion 3, Attribute 2, Metric 1; Military Personnel Centers, Criterion 2, Attribute 2, Metric 1; DFAS Scoring Plan, Criterion 1, Attribute 3, Metric 1; Criterion 2, Attribute 2, Metric 1; and Criterion 3, Attribute 2, Metric 1; and Installation Management Scoring Plan, Criterion 3, Attribute 2, Metric 1, Question 1.)

Building space SF	**DISN and Service Systems Space (SF)**
Gross SF of building space:	
Usable SF of building space:	

4. CDC Question #305: How many blocks of contiguous vacant Administrative-type space over 10K GSF are located on the installation? This question should be answered by all owned installations, excluding the Pentagon Reservation. If you are an owned installation, how many blocks of contiguous, vacant, administrative space beginning at 10,000 and above GSF (as shown in the table below) are located on your Installation? (Refer to: Civilian Personnel Centers Scoring Plan, Criterion 3, Attribute 1, Metric 1, Question 1; Major Admin and HQ Activities Scoring Plan, Criterion 3, Attribute 3, Metric 1; Military Personnel Centers Criterion 3, Attribute 1, Metric 1; and Geo Military Personnel Offices Scoring Plan Criterion 2, Attribute 1, Metric 1, Question 1.)

GSF block ranges at your Installation	**Vacant GSF Block Ranges At Your Installation (Count)**
10K - 24,999	
25K - 49,999	
50K - 99,999	
100K and up	

5. CDC Question #31: Complete the following table for all land owned/controlled by the base according to the land uses listed. Controlled includes land/property used by DoD under lease, license, permit, etc. in excess of 10 years. DO NOT include easements as either owned or controlled. Include the main installation, ranges, auxiliary fields, and all outlying sites. Designate ranges, auxiliary fields, and outlying sites separately by name and real property nomenclature (as appropriate). List each parcel with its primary land use only and do not include any parcel in more than one land use. Do not include developed land defined as those areas which are built-up; i.e. consist of facilities and pavements. Do not include constrained land defined as those areas encompassing wetlands, flood plains, contaminated sites, RCRA/CERCLA contaminate sites, endangered species habitats, ESQD arcs, radiation safety zones, antenna field of view (or line of sight)

clear zones, Anti-Terrorism/Force Protection (AT/FP) setbacks and APZs. (Refer to: Civilian Personnel Centers Scoring Plan Criterion 3, Attribute 1, Metric 2; Major Admin and HQ Activities Scoring Plan, Criterion 3, Attribute 1, Metric 1; and Military Personnel Centers Criterion 3, Attribute 1, Metric 2.)

Site Name/Real Property Nomenclature (Text)	Land Use Category (Text)	No. Parcels (Count)	No. Parcels <= 5 Acres (Count)	No. Parcels >5 and <=10 Acres (Count)	No. Parcels >10 and <=15 Acres (Count)	No. Parcels >15 and <=20 Acres (Count)	No. Parcels >20 Acres (Count)	Largest, Single, Contiguous Parcel (Acres)

6. CDC Question #558: Provide the following information for each airfield you own or control. (Refer to Major Admin and HQ Activities Scoring Plan, Criterion 1, Attribute 6, Metric 2.)

Airfield Identifier (4-character ICAO Identifier) (Text)	Latitude (Text)	Longitude (Text)	Main or Auxiliary Field	If auxiliary field, distance from main field (NM)	Normal Operating Hours (general work week) (Text)	VFR only (Yes/No)	Restrictions due to obstructions, local conditions/agreements (Text)	Hot Refueling Available (Yes/No)

Airfield Identifier (4-character ICAO Identifier) (Text)	Type of aircraft able to utilize (Text)	Number of refueling positions (Count)

7. CDC Question #303: For EACH building of owned, administrative space that is located on your installation, excluding the Pentagon Reservation, complete the following table by occupant per building. Include each occupant's name/UIC or department equivalent and which building(s) they occupy (building number, name, address), as well as the GSF (Gross Square Feet) and personnel breakdown (authorized and on-board/detailees) per occupant per building. Provide the projected number of ADDITIONAL personnel and space needed to meet any surge requirements. NOTE - there can and should be multiple entries for the SAME building IF it contains more than one occupant. Space/buildings occupied by DoD Defense Agencies should NOT be included, but all other DoD space should be reported. In the final column answer this yes/no questions: If additional personnel ARE required under operational and/or contingency plans to perform administrative functions, do you have sufficient administrative space to accommodate the surge? (Refer to Major Admin and HQ Activities Scoring Plan, Criterion 2, Attribute 2, Metric 1, and Criterion 2, Attribute 2, Metrics 2 and 3.)

Occupant UIC/dept equivalent (Text)	Occupant Name (Text)	Building Number (if known) (Text)[3]	Building Name (Text)	GSF per Bldg per Occupant (SF)	Actual Street Address (Text)	City (Text)	State (Text)	Zip Code (Text)

Occupant UIC/dept equivalent (Text)	Military Executive (O7 and above) (Pers)	Military Management (O4-O6) (Pers)	Military Other Officers (Pers)	Military Enlisted Personnel (Pers)	Total Military Personnel (including Full time Reserves (Pers)	Civilian Executive (SES positions) (Pers)	Civilian Management (GS 12-15) (Pers)	Civilian Other Staff (Pers)

Occupant UIC/dept equivalent (Text)	Total Civilian Personnel (Pers)	On-Board Contractors FTE (Pers)	Other Personal/Detailees (Pers)	Grand Total Personnel by occupant (Pers)	Additional Personnel needed per bldg for surge (Pers)	Additional SF needed per surge (SF)

8. CDC Question #311: (Excludes Defense Agencies) For EACH building of leased, administrative space that you occupy outside the DC Area: what is the building's number, name, address, DoD Host and USF (Usable Square Feet) assigned to you by your host? And what is the authorized personnel breakdown and on-board contractors/detailees per building? (Refer to: Major Admin and HQ Activities Scoring Plan, Criterion 2, Attribute 2, Metric 1, Question 1 and Criterion 2, Attribute 2, Metric 3, Question 1.)

[3] Source: if known

Requested Information	Answers
Building Number (if known) (Text)	
Building Name (Text)	
Actual Street Address (Text)	
City (Text)	
State (Text)	
Zip Code (Text)	
Your DoD Host (if applicable) (Text)	
USF Assigned to You by DoD Host per bldg (SF)	
Military Officers (W1 and Higher) (Pers)	
Military Enlisted Personnel (Pers)	
DoD Civilians (Pers)	
On-Board Contractors FTE (Pers)	
Other Personnel and/or Detailees (Pers)	
Total Personnel per Bldg (Pers)	
Total USF (add all building USF totals together, one answer) (SF)	

9. CDC Question #462: (Excludes Defense Agencies.) For EACH building of leased, administrative space that you occupy within the DC Area: what is the building's number (if known from internal database), name, address, DoD Host and USF (Usable Square Feet) assigned to you by your host? And what is the authorized personnel breakdown (authorized and on-board contractors/detailees) per building? Be sure to add up the number of total personnel in the table. (Refer to: Major Admin and HQ Activities Scoring Plan, Criterion 2 Attribute 2, Metric 1, Question 1 and Criterion 2 Attribute 2, Metric 3, Question 1.)

Building Number (if known) (Text)	**Building Name (Text)**	**Actual Street Address (Text)**	**City (Text)**	**State (Text)**	**Zip Code (Text)**	**Your DoD Host (Text)**	**USF Assigned to You by Host (SF)**	**Military Executive (O7 and above) (Pers)**

Building Number (if known) (Text)	Military Management (O4-O6) (Pers)	Military Other Officers (Pers)	Military Enlisted Personnel (Pers)	Total Military Personnel (Pers)	Civilian Executive (SES positions) (Pers)	Civilian Management (GS 12-15) (Pers)	Civilian Other Staff (Pers)	Total Civilian Personnel (Pers)

Building Number (if known) (Text)	On-Board Contractors (Pers)	Other Personnel/Detailees (Pers)	Grand Total # Personnel (Pers)

10. CDC Question #301: (For specified Defense Agencies) For EACH building of owned, administrative space that you occupy outside the DC Area: what is the building's number, name, address, DoD Host (Installation) and GSF (Gross Square Feet) assigned to you by your host? And what is the authorized personnel breakdown (authorized and on-board contractors/detailees) per building? (Refer to: Major Admin and HQ Activities Scoring Plan, Criterion 2, Attribute 2, Metric 1 Question 1.)

Building Number (if known) (Text)	Building Name (Text)	Actual Street Address (Text)	City (Text)	State (Text)	Zip Code (Text)	Your DoD Host (i.e. Installation) (Text)	GSF Assigned to You by Host (SF)	Military Officer (W1 and higher) (Pers)

Building Number (if known) (Text)	Military Enlisted Personnel (Pers)	DoD Civilians (Pers)	On-Board Contractors (FTEs) (Pers)	Other Personnel and/or Detailees (Pers)	Total Personnel per Bldg (Pers)

11. CDC Question #463: (For specified Defense Agencies.) For EACH building of owned, administrative space that you occupy within the DC Area, excluding the Pentagon Reservation: what is the building's number, name, address, DoD Host (Installation) and GSF (Gross Square Feet) assigned to you by your host? And what is the personnel breakdown (authorized and on-board contractors/detailees) per building? (Refer to: Major Admin and HQ Activities Scoring Plan, Criterion 2 Attribute 2, Metric 1, Question 1.)

Building Number (if known) (Text)	Building Name (Text)	Actual Street Address (Text)	City (Text)	State (Text)	Zip Code (Text)	Your DoD Host (Installation) (Text)	GSF Assigned to You by Host (SF)	Military Executive (O7 and above) (Pers)

Building Number (if known) (Text)	Military Management (O4-O6) (Pers)	Military Other Officers (Pers)	Military Enlisted Personnel (Pers)	Total Military Personnel (Pers)	Civilian Executive (SES positions) (Pers)	Civilian Management (GS 12-15) (Pers)	Civilian Other Staff (Pers)	Total Civilian Personnel (Pers)

Building Number (if known) (Text)	On-Board Contractors FTE (Pers)	Other Personal/Detailees (Pers)	Grand Total # Personnel (Pers)

12. CDC Question #336: Does the installation have a mobilization requirement? (Refer to Installation Management Scoring Plan, Criterion 3, Attribute 1, Metric 1, Question 1).

Installation Name	Mobilization Requirement (Yes/No)

13. CDC Question #153: If your activity/installation (e.g., base) manages/controls any ground ranges used for training, complete the following table. (Refer to Mobilization Scoring Plan, Criterion 1, Attribute 1, Metric 1.)

Live Fire Training Categories	**List Ranges by Category (Text)**	**Number of Ranges by Category (Text)**	**Capacity - Total Firing Points/Lanes (Text)**	**Capacity - Largest Unit that can Train (Text)**	**Automated - (Computer target control & scoring) (Yes/No)**	**Instrumented (Cameras, AAR, Battlefield effects simulation, etc.) (Yes/No)**	**Service Facility Category Codes Considered (Text)**
Small Arms Up to 7.62mm							
Small Arms Ranges, Heavy Machinegun (.50 cal and Above)							
Static Ranges - Ground Launched Missiles and Rockets							
Stationary ranges - Armored Vehicle Gunnery - Crew							
Stationary ranges - Armored Vehicle Gunnery - Unit							
Explosives and Demolitions Ranges							
Hand Grenade Ranges - Live							
Hand Grenade Ranges - Inert							
Combined Arms Live Fire Areas (CALFEX)							

14. CDC Question #154: Additional Live Fire Capacity – Does the activity/installation (e.g. base) have the land capacity to accommodate firing of the listed weapon systems? (Refer to Mobilization Scoring Plan, Criterion 2, Attribute 1, Metric 1.)

60mm Mortar (Yes/No)	81mm Mortar (Yes/No)	105mm Howitzer (Yes/No)	107mm Mortar (Yes/No)	155mm Howitzer (Yes/No)	Multiple Launched Rocket System (MLRS) (Yes/No)	SMAW (Yes/No)	AT-4 (Yes/No)	Javelin AT Missile (Yes/No)

TOW AT Missile (Yes/No)	2.75" Rocket (Yes/No)	Hellfire Missile (Yes/No)	20mm Helicopter Mounted Cannon (Yes/No)	30mm Helicopter Cannon (Yes/No)	105mm Tank Main Gun (Yes/No)	120mm Tank Main Gun (Yes/No)	25mm Ground Mounted Cannon (Yes/No)

30mm Ground Mounted Cannon (Yes/No)	MK19 40mm Grenade Launcher (Yes/No)	50 Cal MG or Rifle (Yes/No)	7.62mm MG or Rifle (Yes/No)	5.56mm MG or Rifle (Yes/No)	Patriot ADA Missile (Yes/No)	Stinger ADA Missile (Yes/No)	120mm Mortar (Yes/No)

15. CDC Question #30: Complete the following table for all land owned/controlled by the base according to the land uses listed. Controlled includes land/property used by DoD under lease, license, permit, etc in excess of 10 years. DO NOT include easements as either owned or controlled. Include the main installation, ranges, auxiliary fields, and all outlying sites. Designate ranges, auxiliary fields, and outlying sites separately by name and real property nomenclature (as appropriate). List each acre with its primary land use only and do not include any acre in more than one land use. Do not include developed land defined as those areas which are built-up; i.e. consist of facilities and pavements. Do not include constrained land defined as those areas encompassing wetlands, flood plains, contaminated sites, RCRA/CERCLA contaminate sites, endangered species habitats, ESQD arcs, radiation safety zones, antenna field of view (or line of sight) clear zones, AT/FP setbacks and APZs. (Refer to Mobilization Scoring Plan, Criterion 2, Attribute 2, Metric 2.)

Site Name/Real Property Nomenclature (Text)	Total Number of Parcels (Count)	Administrative Total Buildable Acres (Acres)	Airfield Operations Total Buildable Acres (Acres)	Barracks Total Buildable Acres (Acres)	Community Total Buildable Acres (Acres)	Family Housing Total Buildable Acres (Acres)	Industrial Total Buildable Acres (Acres)	Medical Total Buildable Acres (Acres)

Site Name/Real Property Nomenclature (Text)	Outdoor Recreation Total Buildable Acres (Acres)	Training Areas/Ranges Total Buildable Acres (Acres)	Waterfront Operations Total Buildable Acres (Acres)	Undetermined Use Total Buildable Acres (Acres)

16. CDC Question #11: Verify and complete the data in the table for all facilities and associated infrastructure associated with the following DoD FACs: 6100, 6101, 6102, 6103, 6104, 6200, 7220, and 7312,. (Refer to: Major Admin and HQ Activities Scoring Plan, Criterion 2 Attribute 1, Metric 1, Question 1 (DoD FAC 6100-6104 and 6200); Civilian Personnel Centers Scoring Plan, Criterion 2, Attribute 1, Metric 1, Question 1; Military Personnel Centers Scoring Plan, Criterion 2, Attribute 1, Metric 1, Question 1; Installation Military Personnel Scoring Plan, Criterion 2, Attribute 1, Metric 1, Question 1 (DoD FAC 6100-6104); Mobilization Scoring Plan, Criterion 2, Attribute 2, Metric 1 Question 1 (DoD FAC 7220); Corrections Scoring Plan, Criterion 2, Attribute 2, Metric 1, Question 1 (DoD FAC 7312); and Finance and Accounting Scoring Plan, Criterion 2, Attribute 1, Metric 1 Question 1. (DoD FAC 6100 thru 6104).

Sorting Field	Facility #	Service Facility Cat Code	Facility Type	Service Facility Condition Code	USAF Real Property Interest Code	USAF Command Tenant Code	USAF Inventory Code	Quantity

Sorting Field	Total Size (GSF)	Identified for disposal under previous BRAC round?	Occupancy Status[4]	If used for RDTE&A functions, occupancy on September 30, 2003?	If used for RDTE&A function, max possible occupancy on September 30, 2003	Jointly Occupied?	On Installation?

17. CDC Question #307: Lodging Facilities – Complete the table for all lodging facilities as of 30 Sep 03. These include all facilities associated with the following DoD FACs: 7212, 7214, 7241, 7250, 7251 and 7441. (Refer to Mobilization Scoring Plan, Criterion 2, Attribute 2, Metric 2.)

Sorting	Facility	Facility	Facility	USAF Real	Identified for disposal	Leased	Total # of	USAF

[4] Choose a value from this list: V, O, Medical Center, Hospital, Ambulatory Surgery, Primary Care/Health Clinic (Satellite), Primary Care/Health Clinic (Stand Alone), Dental Clinic, Medical Logistics/Warehouse and Distribution, Veterinary Clinic, Medical Education, Clinical Investigations, Armed Service Whole Blood Processing Lab, Administrative, Other (please specify)

Field (Text)	# (#)	Cat Code (#)	Condition Code (#)	Property Interest Code (Text)	under previous BRAC round? (Yes/No)	space (USF) (SF)	Rooms (#)	Inventory Code (Text)

Sorting Field (Text)	USAF Command Tenant Code (Text)	Occupancy Status (V/O) (Text)

18. CDC Question #341: Mobilization – Processing – If the installation has designated medical facilities for mobilized reserve component service members (RCSM), complete the following table. (Refer to Mobilization Scoring Plan, Criterion 3, Attribute 1, Metrics 1 and 2.)

Processing	Number of Buildings (Count)	GSF Available Space (GSF)	# Examination Rooms (Count)	Max Daily Thru-Put (Count)
Medical Examination Areas				
Medical In-Patient Care				
Dental Examination Areas				
Dental Repair Work				

19. CDC Question #530: Dental Care – For your permanently established medical/dental facilities, what is the number of general and specialty dental treatment rooms (DTRs) currently in use? What is the number of general and specialty DTRs not currently in use? (Refer to Mobilization Scoring Plan, Criterion 3, Attribute 1, Metric 1.)

Medical/Dental facility rooms	General (DTR)	Specialty (DTR)
# of DTRs in use		
# of DTRs not in use		
Total # of DTRs		

20. CDC Question #528: Medical Ambulatory Care – For your permanently established medical/dental facilities, provide the number of exam rooms by type (primary care clinic vs. specialty clinic). Provide the number of exam rooms that are not currently being used for patient care. (Refer to Mobilization Scoring Plan, Criterion 3, Attribute 1, Metric 2.)

Medical/Dental facility rooms	Primary Care Clinic Exam Rooms (Exam Rms)	Specialty Clinic Exam Rooms (Exam Rms)	Specialty Clinic Treatment and Procedure (Exam Rms)
Exam rooms in use			
Exam Rooms not in use			
Total #			

21. CDC Question #343: Mobilization – Processing – Identify all installation mobility maintenance facilities below. (i.e. vehicle maintenance, Ground Equipment Maintenance). (Refer to Mobilization Scoring Plan, Criterion 3, Attribute 2, Metric 1.)

Facility Type (Text)	Facility Dimension (GSF)	Maximum Floor Loading (lbs/SF) (PSF)	Number of bays (Count)	Dimension of Largest Unobstructed Entryway (Ft)

22. CDC Question #340: Dining Facilities – Complete the following table for all dining facilities which are currently operational or could be put into operational status if required. (Refer to Mobilization Scoring Plan, Criterion 3, Attribute 3, Metric 1.)

Dining Facility Name and/or Number (Text)	Current Status of Dining Facility (List)[5]	Square Footage Available (SF)	Designed Seating Capacity of Facility (Count)	Days required to activate mothballed facility (Day)	Average # Noon Meals Served FY 03 (Count)	Average # Noon Meals Served FY 02 (Count)	Average # Noon Meals Served FY 01 (Count)

[5] Choose a value from this list: Currently in Operation, Contingency (mothballed)

23. CDC Question #339: Mobilization – Designated Billeting – If there are designated billeting facilities for mobilized reserve component service members (RCSM) on the installation, complete the chart below. (Refer to Mobilization Scoring Plan, Criterion 3, Attribute 3, Metric 2.)

Installation Billeting Facility	Total Square Footage (GSF)	Number of Bedrooms (Count)	Number of Beds (Count)
Transient Housing Space			
Barracks Space			
Non-Traditional Billets Space (e.g., Tentage, Gyms) Available			
Total			

24. CDC Question #337: Mobilization – Capability – What is the installation's capability to receive and process non-unit personnel being mobilized and/or deployed? (Refer to Mobilization Scoring Plan, Criterion 3, Attribute 3, Metric 3.)

Category	Number of individuals designated to mobilize at the installation (Pers)	Total daily throughput of individuals being processed (Pers)
IMAs		
IRRs		
DoD Civilians		
Non-DoD Civilians		

25. CDC Question #338: Mobilization – Overview – What is the installation's capability to receive and process units being mobilized and deployed? List number of units, total authorized personnel and type of units. (Refer to Mobilization Scoring Plan, Criterion 3, Attribute 3, Metric 3.)

Total number of units (Units)	Total number of personnel (Pers)	Types of unit (Text)

26. CDC Question #86: Testing Areas (Use) – If your installation own/operates any training or test ranges, identify the dimensions and Net Area Available (area not restricted) of those ranges as applicable. (Refer to Mobilization Scoring Plan, Criterion 3, Attribute 3, Metric 4.)

Name of range/ Location	Size of Land Range (acres)	Land Range - Longest Linear Dimension (Km)	Land Range - Net Area Available (Acres)	Sea Range - Total Area (Sq NM)	Sea Range - Longest Linear Dimension (NM)	Sea Range - Net Area Available (Km)	Air Range - Total Area (Cubic NM)	Air Range - Net Area Available (Cubic NM)

Name of range/Location (-)	Space Range - Total Area (Cubic NM) (Cu NM)	Space Range - Net Area Available (Cu NM)

27. CDC Question #342: Mobilization – Processing If the installation has a Supply or Central Issue Facility (CIF) for mobilization processing, complete the table below indicating the amount of space used to receive, store, and issue individual equipment. (Refer to Mobilization Scoring Plan, Criterion 3, Attribute 3, Metric 5.)

Facility	Number of buildings (Count)	GSF available space (GSF)	Max Thru-Put in 12 hr day (Count)
Operational facilities			
Number of warehouses not used but available for CIF operations			

28. CDC Question #453: What is the corrections facility's ability to house multiple levels? (Refer to Corrections Scoring Plan, Criterion 1, Attribute 1, Metric 1.)

Number of Beds	Single Occupancy Male (Count)	Single Occupancy Female (Count)	Double Occupancy Male (Count)	Double Occupancy Female (Count)	Multiple Occupancy/ Open Bays Male (Count)	Multiple Occupancy/ Open Bays Female (Count)	Total number of beds (Count)
Level I							
Level II							

Level III							

29. CDC Question #454: What is the maximum operational capacity of the corrections facility? (Refer to Corrections Scoring Plan, Criterion 3, Attribute 1, Metric 1.)

Facility Type	**General Population Design Capacity (Count)**	**Segregated Population Design Capacity (Count)**	**General Population Current Operational Capacity (Count)**	**Segregated Population Current Operational Capacity (Count)**	**General Population Maximum Operational Capacity (Count)**	**Segregated Population Maximum Operational Capacity (Count)**
Level I						
Level II						
Level III						

30. CDC Question #315: How many hours of mainframe computing service is provided by the base/installation/facility/activity COMM/IT service-provider? Question is used in the scoring plan to identify presence of mainframe processors and any excess capacity. (Refer to Computing Services Scoring Plan, Criterion 1, Attribute 1, Metric 2.)

Service Provider	**Max Hours of Availability Per Day (Max 24 hrs per Mainframe X Number of Mainframes) (Hours)**	**Average Daily Hours of Use (Hours)**	**Daily Surge Requirement (Hours)**

31. CDC Question #318: What are the data storage/replication capacities in Terabytes (TB) being provided by the base/installation/ facility/activity COMM/IT service-provider? Question used in the scoring plan to identify presence of storage capacity and any excess capacity. (Refer to Computing Services Scoring Plan, Criterion 1 Attribute 1 Metric 1.)

System Supported	**Maximum Data Storage (DS) Capacity in Terabytes (TB)**	**Capacity in Use (TB)**	**Surge Requirement (TB)**

32. CDC Questions #357-364 and #386-388: These CDC questions request finance and accounting locations by specific functions (11) to provide the number of usable square feet assigned by their host location. (Refer to Finance and Accounting Scoring Plan, Criterion 2, Attribute 2, Metric 1) (NOTE: One question written for two different audiences.)
    a. For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) targeted location and function, as of year end FY03, identify how much usable square feet is assigned (by your host) to perform mission workload.
    b. For each finance and accounting activity by targeted location and function, as of year end FY03, identify how much usable square feet is assigned (by your host) to perform mission workload.
    c. Each function (Management/Oversight for F&A, Accounting, Security Assistance Accounting, Non-Appropriated Funds Accounting, Disbursing, Military Pay, Civilian Pay, Military Retired and Annuitant Pay, Travel Pay, Vendor Pay, and Contract Pay) has a separate question. A variable grid table as shown below was used for each function.

Building Number (if known) (Text)	**Building Name (Text)**	**Manning Document Identifier/Unit Identification Code (UIC) (Code)**	**Department of Defense Activity Code (DoDAC) (Code)**	**Name of Organization (Text)**	**Street Address (Actual) (Text)**	**Town & State (Text)**	**Zip Code (Text)**	**Usable Square Feet Assigned (SF)**

33. CDC Questions #347-388 and #393: These CDC questions request identification of location by building number, building name, name of organization, manning document identifier/unit identifier code, Department of Defense Activity Code, street address, town and state, and zip code. (Refer to Finance & Accounting Scoring Plan, Criterion 4, Attribute 2, Metric 1) (NOTE: One question written for two different audiences.)
    a. For each DFAS Defense Military Pay Offices (DMPO) and Mission Support Accountant/Managerial Systems Accountant (MSA) targeted location and function, identify which Finance & Accounting functions are performed.
    b. For each finance and accounting activity by targeted location and function, identify which Finance & Accounting functions are performed.
    c. Each function (Management/Oversight for F&A, Accounting, Security Assistance Accounting, Non-Appropriated Funds Accounting, Disbursing, Military Pay, Civilian Pay, Military Retired and Annuitant Pay, Travel Pay, Vendor Pay, and Contract Pay) has a separate question aimed at a specific type of transaction for that function. A variable grid table similar to the one below was used for each function.

Building Number (if known) (Text)	**Building Name (Text)**	**Manning Document Identifier/Unit Identification Code (UIC) (Code)**	**Department of Defense Activity Code (DoDAC) (Code)**	**Name of Organization (Text)**	**Street Address (Actual) (Text)**	**Town & State (Text)**	**Zip Code (Text)**	**FYXX Total Number of XXX Transactions (Count)**	**FYXX Total $ Amount**

34. CDC Question #25: Does your installation have Defense Red Switch Network (DRSN) capability? (Refer to: Installation Management Scoring Plan, Criterion 1 Attribute 4 Metric 3; and Major Admin and HQ Activities Scoring Plan, Criterion 1 Attribute 1 Metric 3.)

35. CDC Question #28: Does your installation have Land Mobile Radio (LMR) capability? (Refer to Installation Management Scoring Plan, Criterion 1, Attribute 4, Metric 3, Question 2.)

36. CDC Question #319: Does your installation have NIPRNET and/or SIPRNET capability? Subscriber number indicates a positive response. (Refer to: Installation Management Scoring Plan, Criterion 1, Attribute 4, Metric 3, Questions 3 and 4; and Major Admin and HQ Activities Scoring Plan, Criterion 1, Attribute 1 Metric 3.)

Network Capacity	**Maximum Designed Subscriber Capacity (Count)**	**Current Subscribers Connected to Network (Count)**
Unclassified Network (NIPRNET)		
Classified Network (SIPRNET)		

37. CDC Question #330: Provide the number of personnel by designated category authorized for each major installation management function listed. (Refer to Installation Management Scoring Plan, Criterion 4, Attribute 1, Metric 1, Question 1, and Criterion 4, Attribute 1, Metric 2, Question 1.)

Installation/Base Management Function	Military Officer (Full-time AC/RC) (Pers)	Military Enlisted (Full-time AC/RC) (Pers)	DoD Civilian (Pers)	Contractors On-Board (Pers)	Administrative/Office Workspace Allocated (SF)	Personnel Occupying Administrative/Office Workspace (Pers)
Public Works						
Resource Management (less F&AO)						
Contracting						
Transportation						
Supply						
Maintenance						
Airfield Operations						
Personal and Family Services and MWR						
Law Enforcement, Fire & Emergency Services						
Plans, Training and Security						
Installation Support Offices (Public Affairs, Safety, Internal Review, Legal etc.)						

38. How many additional sedans, beyond your authorized fleet size, could be parked overnight at your transportation motor pool facility? (Refer to Headquarters Support Activities Scoring Plan, Criterion 2, Attribute 1, Metric 2, Question 1.)

39. What is the vacant usable square footage (USF) of all the storage and warehouse space within your activity where common headquarters, administrative, and business-related (Common Support (CS)) functions are performed, as categorized in the following table? (Refer to Headquarters Support Activities Scoring Plan, Criterion 2, Attribute 1, Metric 3, Question 1.)

Common HQ, Administrative and Business-Related (Common Support CS)) Functions	**Storage Space USF (SF)**	**Warehouse Space USF (SF)**
Acquisition & Contracting		
Administration		
Audiovisual Services		
Cost Analysis		
Environmental Services & Safety		
Executive Dining Facilities		
Facilities Management		
Financial Management Services		
Health & Wellness		
Inspections & Evaluation		
Operations Analysis		
Security		
Supply & Support Services		
Transportation		

3c. New Capacity Data Call Questions (Data Call #2)

1. (Excludes Defense Agencies) For each building of owned, administrative space that is located on your installation that you listed in Data Call #1 Question #303, provide a list of any of those buildings which can be defined as "temporary." The Building Number and Building Name fields should contain responses that correspond exactly with information provided in reply to Data Call #1 Question #303. (Refer to Major Admin and HQ Activities Scoring Plan, Criterion 2, Attribute 2, Metrics 1 and 3.)

Building Number (If Known)	Building Name	Temporary Building Type

2. (For specified Defense Agencies) For each building of owned, administrative space that you occupy, as listed in Data Call #1 Questions #301 and 463, provide a list of any of those buildings which can be defined as "temporary." The Building Number, Building Name, and DoD Host Installation fields should contain responses that correspond exactly with information provided in reply to Data Call #1 Questions #301 and #463. (Refer to Major Admin and HQ Activities Scoring Plan, Criterion 2, Attribute 2, Metrics 1 and 3.)

Building Number (If Known)	Building Name	Your DoD Host Installation	Temporary Building Type

3. (Excludes Defense Agencies) The intent of this question is to capture any administrative space on your installation that was not reported in Data Call #1 Question #303 because the space is considered temporary and/or the physical facilities (i.e. trailers or modular buildings) are secured via a lease arrangement. For each building of temporary administrative space that is located on your installation AND that you DID NOT list in Data Call #1 Question #303, if any, provide a list of each such building and supply information regarding each occupant in each building as outlined in the accompanying table. Buildings occupied by DoD Defense Agencies should NOT be included, but all other DoD space should be reported. (Refer to Major Admin and HQ Activities Scoring Plan, Criterion 2, Attribute 2, Metrics 1 and 3.)

Occupant UIC/Dept Equivalent	Occupant Name	Building Number (If Known)[6]	Building Name	GSF per Bldg per Occupant	Actual Street Address	City	State	Zip Code

Occupant UIC/Dept Equivalent	Total Authorized Military Personnel (including Full time Reserves

Occupant UIC/Dept Equivalent	Total Authorized Civilian Personnel	On-Board Contractors FTE	Other Personal/Detailees	Grand Total Personnel by Occupant	Additional Personnel Needed per Bldg for Surge	Additional SF Needed per Surge

4. (For specified Defense Agencies) The intent of this question is to capture any administrative space that you occupy on military installations which was not reported in Data Call #1 Questions #301 and #463 because the space is considered temporary and/or the physical facilities (i.e. trailers or modular buildings) are secured via a lease arrangement (by you or your host installation). For each building of temporary administrative space that you occupy AND that you DID NOT list in Data Call #1 Questions #301 and #463, if any, provide a list of each such building and supply information regarding each occupant in each building as outlined in the accompanying table.

Building Number (if known) (Text)	Building Name (Text)	Actual Street Address (Text)	City (Text)	State (Text)	Zip Code (Text)	Your DoD Host (i.e. Installation) (Text)	GSF Assigned to You by Host (SF)	Authorized Military Officer (W1 and higher) (Pers)

Building Number (if known) (Text)	Authorized Military Enlisted Personnel (Pers)	Authorized DoD Civilians (Pers)	On-Board Contractors (FTEs) (Pers)	Other Personnel and/or Detailees (Pers)	Total Personnel per Bldg (Pers)

[6] Source: if known

5. Identify by Service, the number of Reservists and/or, National Guard service-members that were mobilized and/or demobilized at your installation. Complete the chart below.

Service:	**FY02**	**FY03**	**FY04**
IRRs Mobilized			
IMAs Mobilized			
Unit Personnel Mobilized			
Total Mobilized			
Total Demobilized			
Average number of days per person To mobilize, process and deploy			
Average number of days per person to demobilize			

6. Based on the installation's full compliment of permanent party active component personnel and existing permanent facilities, what is the maximum number of mobilized reserve component personnel that the installation can receive, lodge, feed, and train at peak loading capacity?

Installation ID	**Maximum Number of Mobilized Reservists**	**Number of Permanent Party Active Component Personnel**	**Total**

7. Does your corrections facility have space that is currently unused or not designated for surge requirements? If yes, indicate amount of SF.

	Yes	**No**	**Amount of Square Feet (If Yes)**
Unused Square Feet			

8. What year was your corrections facility built or last renovated? What is the dollar amount of the latest renovation or new construction?

Renovation/New Construction Cost	**Year**	**$ Amount (If Yes)**
Constructed		
Renovated		
Total		

9. How many square feet of space is used to support mainframe operations? (Refer to Computing Services Scoring Plan, Criterion 3 Attribute 1 Metric 1.)

10. How many square feet of space is used to support High Capacity Data Storage operations? Used to identify potential footprint savings. (Refer to Computing Services Scoring Plan, Criterion 1 Attribute 1 Metric 2.)

11. What are the number of AUTHORIZED personnel (FTEs for on-board contractors) and the associated USF (usable square feet) within your activity that perform common headquarters, administrative, and business-related (Common Support (CS)) functions, as categorized in the following table?

Common HQ, Administrative and Business-Related (Common Support CS)) Functions	Military Officers (Pers)	Military Enlisted (Pers)	DoD Civilians (Pers)	On-Board Contractors (FTEs) (Pers)	USF (SF)
Acquisition & Contracting					
Administration					
Audiovisual Services					
Cost Analysis					
Environmental Services & Safety					
Executive Dining Facilities					
Facilities Management					
Financial Management Services					
Health & Wellness					
Inspections & Evaluation					
Operations Analysis					
Security					
Supply & Support Services					
Transportation					

Section 4: Issues Impacting Analysis

1. None

DRAFT

MEMORANDUM FOR CHAIRMAN, INDUSTRIAL JOINT CROSS-SERVICE GROUP

SUBJECT: Industrial Joint Cross-Service Group (Industrial JCSG) Report on Military Value Analysis

The Infrastructure Steering Group (ISG) has reviewed the Industrial JCSG Military Value report submitted to it on March 25, 2004. The ISG appreciates the dedicated effort and military judgment that your members, as the experts in the field, put into revising this report in response to our initial comments. As part of the process to review issues raised by the Military Departments, the ISG tasked the BRAC Deputy Assistant Secretaries (DASs) to develop recommendations for resolving issues with the military value reports. The BRAC DASs met to review the issues pertaining to your JCSG. Representatives from the Industrial JCSG participated in the discussion with the DASs to ensure the issues were well understood and potential solutions were implementable and reasonable. Subject to incorporation of the comments expressed herein, the ISG approves your report as the basis for your military value analysis.

The ISG is concerned that evaluating military value for 57 separate commodities does not adequately reflect the value of multi-function depots. While no change in the military value report is required, the Industrial JCSG's plan for its scenario development process must explain how any synergies of multi-function activities will be considered.

The ISG is concerned about the weight assigned to the proximity to customer metric because it could inappropriately penalize the Army. The ISG understands that the IJCSG has agreed to decrease the overall weight of this metric from 10 to 8 percent. Incorporation of this change into your report will address the ISG's concern.

In its report the Industrial JCSG proposes to use out-year spending data as an indicator of workload, capacity and condition of infrastructure. The use of out-year dollars is not appropriate for assessing the military value of facilities where your functions are currently being performed. Therefore, please revise your report to use only FY04 data to assess the facilities current capabilities, and by extension, its military value. For questions that involve capacity, projects that have been authorized and appropriated through FY04 can be included, even though the resulting capacity will be phased in through FY09 as projects are completed.

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On page 49 of your report you ask for "the FY09 space (in thousands of Square Feet – KSF) by building type and condition code (C-1 through C-4)". Please either revise the report to explain how an installation can determine the condition of a facility in the future or delete the question.

After incorporation of the directed revisions above, please provide a final copy of your Military Value Analysis report to the OSD BRAC Office. If you have any questions regarding these comments, please contact Peter Potochney, Director, Base Realignment and Closure, at 614-5356.

Michael W. Wynne
Acting USD (Acquisition, Technology & Logistics)
Chairman, Infrastructure Steering Group

cc: Infrastructure Steering Group Members
MilDep BRAC DASs

DRAFT

THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

ACQUISITION,
TECHNOLOGY
AND LOGISTICS

DCN 2631

MAR 25 2004

MEMORANDUM FOR ACTING UNDER SECRETARY OF DEFENSE (ACQUISITION, TECHNOLOGY AND LOGISTICS)

SUBJECT: Industrial Joint Cross Service Group (IJCSG) Military Value Analysis

The Military Value Analysis Report of the Industrial Joint Cross Service Group is attached. It was revised based upon the comments and suggestions contained in the Infrastructure Steering Group (ISG) memorandum of March 8, 2004. This document is the basis for the meeting currently scheduled for April 2, 2004.

Major revisions resulting from ISG comments include:

- Improved rationale for weighting and questions throughout
- All scores now normalized and linear
- Armament and Munitions 100 point scale
- Questions utilizing data from capacity data call clearly identified
- Macro sensitivity analyses completed
- Environmental "headroom" addressed where necessary
- Ammunition distribution system addressed

Regarding common measurement of skilled workforce, and common cost measures, each of the sub-groups made an assessment of their area's skill needs and the report was tailored accordingly. During the scenario phase, the Services will normalize costs for evaluative purposes using the approved DoD Cost Comparability Handbook definitions of measurement.

Some data call questions will require additional amplification prior to release, such as: the identification of specific data sources, or clarification of the activities that are to respond.

Michael W. Wynne
Chairman, Industrial Joint Cross
Service Group

Attachment:
As stated

cc: IJCSG Members

Industrial Joint Cross Service Group

Military Value Analysis Report

March 25, 2004

Section 1: Introduction

The Industrial Joint Cross Service Group (IJCSG) is tasked with designing attributes, metrics, a quantitative scoring plan, and data call questions to assess the military value of DoD industrial facilities within the framework provided by the Draft Selection Criteria for Closing and Realigning Military Installations Inside the United States. The intent is to apply the responses to the data call to all organic and government owned contract operated installations and facilities performing industrial functions for the Department of Defense.

As was the case with the capacity analysis, the disparate nature of the functions being analyzed by the IJCSG does not lend itself to a "one size fits all" analytic approach. Three sub-groups were established based upon the three main industrial activities to be analyzed by the IJCSG, Maintenance, Munitions and Armaments, and Ship Overhaul and Repair. Each of the subgroups is headed by a principal member of the IJSCG, who is also a subject matter expert. Each of those subgroups, in turn, are composed of subject matter experts from each Service, the joint staff and supported, as necessary, by contract personnel.

Section 2: Military Value Approach and Scoring Plan

Each of the sub groups developed an identification of the work being performed and listed as functions and sub-functions. Measurable characteristics, or attributes, were then developed for each function and keyed to the Draft Selection Criteria for Closing and Realigning Military Installations Inside the United States. A numerical approach, or metrics, for measuring attributes were then developed along with specific data call questions. Each step has a weighted value based on a 0-100 point scale.

The functions and subordinate functions identified by the IJCSG sub groups are necessary to assess military value is as follows:

- Maintenance
    - Depot Level
    - Combat Support/ Intermediate Levels

- Munitions and Armament (Industrial Base for Manufacturing, Production)
    - Munitions Production, Maintenance, Storage and Demilitarization
    - Armaments
- Ship Repair
    - Depot Level
    - Intermediate Level

The attributes, metrics, questions, rationale and score plan for each of the three sub groups are detailed as follows:

MUNITIONS AND ARMAMENTS

The IJCSG Subgroup, Munitions and Armaments, is responsible for assessment of the entire life cycle of munitions and the production of armaments within the government owned industrial base. This group evaluated the military value of installations based on these key functions.

- Munitions Production
- Munitions Maintenance
- Munitions Storage
- Munitions Demilitarization
- Armaments Production

Criterion 1 assesses the capability and capacity to maintain munitions and armaments readiness from a Joint perspective. This means having munitions and armaments available in the right place at the right time. To do that, you must have the appropriate skill base and facilities necessary to produce, maintain, store, distribute and demilitarize those commodities.
This Criterion addresses operational readiness requirements as identified in the Services budgets. Across all functions, the need for capability and capacity in support of readiness weighted this criterion high.

Criterion 2 assesses the availability and condition of the industrial base's infrastructure. What is the industrial bases ability to support mission requirements and maintain the readiness status identified in Criterion 1? This Criterion's assessment of the condition of the facilities and the facilities potential for expansion becomes a significant factor when considering relocation or realignment of functions. The Criterion 2 ranks 3rd among the four criteria because the condition of a facility is not as important as the capability to produce the capacity required to sustain military strategy.

Criterion 3 assesses the ability to surge in support of requirements for emergencies. If we can size our base to respond to Criterion 3, we know we can respond to Criterion 1. Because of this factor, this criterion is weighted highest across all functions.

Criterion 4 assesses fixed costs, number of employees (both contractor and government), and size of payroll. There is no way to compare costs from one facility to the other (because of variances between government owned and government operated and government owned and contractor operated; bomb production versus small caliber production, etc). Because of this

factor, the cost data was weighted low and will support decisions during relocation/realignment scenarios.

Consistently though out the analysis, Criterion 3 (addressing surge capability) ranked number 1, Criterion 1 (addressing readiness) ranked number 2, Criterion 2 (addressing condition and expansion capability of the facility) ranked number 3, and Criterion 4 (addressing cost) ranked number 4.

Scoring Mathematics:

The majority of the questions are normalized using either the maximum or minimum score across a commodity group. The following is how this scoring will be determined:

Method 1: *Highest Number is Desired.* For questions stating, "The highest number for each commodity group receives 100 points. The remaining numbers will be scored by linear normalization to the highest number". We will use the following calculation.

The score (S_i) for commodity group *i* for the question is $S_i = \frac{x_i}{x_{\max}}$, where x_i = the number for a commodity group *i* and $x_{\max}$ is the maximum score among all same commodity groups reporting. This approach will be adjusted accordingly if averages of the numbers are used to determine the score.

Method 2: *Lowest Number is Desired.* For questions stating, "The lowest number for each commodity group receives all points. The remaining numbers will be scored by normalization to the lowest number.", we will use the following calculation.

The score (S_i) for commodity group *i* for the question is $S_i = \frac{x_{\min}}{x_i}$, where x_i is the scored item for site *i* and $x_{\min}$ is the minimum score among all commodity groups reporting. This approach will be adjusted accordingly if averages of the numbers are used to determine the score.

Method 3: *Other Scoring.* Any other scoring approaches used are explained after each question.

FUNCTION: MUNITIONS PROCESSES

(35%) CRITERIA #1 – The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training and readiness.

(60%) Attribute: Capability

(100%) Metric: Munitions Production Processes

1. (33.3%) Question: Which of these munitions explosive processes did you perform within the last two (2) years? (Use Table 1)

Table 1: Munitions Explosive Processes	**Last 2 Yrs**
1. Explosive and/or propellant cold cast cure to include vacuum casting and/or injecting capability.	
2. Melt pour, to include metal parts pre-conditioning and post pour controlled cooling.	
3. Precision explosive pressing, to include explosive billet machining and sufficient tonnage and press daylight clearance for missiles.	
4. Extrusion of explosives and propellants.	
5. Kinetic energy munitions precision weigh and fill of propellant.	
6. Loaded components and initiating devices (primers, delays, relays, detonators) to include drying, blending, and handling equipment for initiating equipment that precludes direct personnel exposure.	
7. Infrared decoy flare pressing and/or extrusion.	
8. Smoke munitions mixing and pressing.	
9. Nitration of cotton linters or wood pulp.	
10. Nitration of hexamine.	
11. Manufacture of nitrate Esters.	

Rationale: Responses to this question will identify critical munitions production processes and highlight sources of duplication, multi-functional capability, and the availability or absence of a skilled work force. Table 1 provides the information needed to respond to the munitions explosive processes.

Scoring: The facility receives credit when they check the box that they performed the process within the last two years. The facility that performs the most processes will score 100%. The remaining points will be scored using Method 1.

2. (33.3%) Question: Which munitions metal parts processes did you perform within the last two (2) years? (Use Table 2)

Table 2: Munitions Metal Parts	**Last 2 Yrs**
1. Deep draw steel cartridge cases.	
2. Grenade cargo metal parts.	
3. Projectile forging, heat treat, and machining.	
4. High frag projectile metal parts to include large caliber forging (1000 ton presses), heat treat, ultrasonic and machining.	

Rationale: Responses to this question will identify critical munitions production processes and highlight sources of duplication, multi-functional capability, and the availability or absence of a skilled work force. Table 2 provides the information needed to respond to the munitions metal parts processes question.

Scoring: The facility receives credit when they check the box indicating that they performed the process within the last two years. The facility that performs the most processes will score 100%. The remaining points will be scored using Method 1.

3. (33.3%) Question: Which munitions load, assemble, and pack (LAP) processes did you perform within the last two (2) years? (Use Table 3)

Table 3: Munitions Load, Assemble, and Pack (LAP)	**Last 2 Yrs**
1. Navy gun ammo	
2. Mortar ammo	
3. Mines and Obstacle Clearing Charges	
4. Artillery ammo	
5. Tank ammo	
6. Missile warhead	
7. Medium caliber ammo	
8. Demolition	
9. Rockets	
10. Small caliber ammo	
11. Bomb body	
12. Grenades	
13. Missiles	
14. Torpedo	
15. CAD/PAD	
16. Propelling Charges	
17. Kinetic energy munitions	
18. Flares	

Rationale: Responses to this question will identify critical munitions production processes and highlight sources of duplication, multi-functional capability, and the availability or absence of a skilled work force. Table 3 provides the information needed to respond to the munitions LAP processes question.

Scoring: The facility receives credit when they check the box indicating that they performed the process within the last two years. The facility performing the most processes will score 100%. The remaining points will be scored using Method 1.

(40%) Attribute: Capacity

(100%) Metric: Munitions Production Capacity

(100%) Question: What is your maximum munitions production capacity?

Rationale: This question will use data gathered in the capacity analysis data call question #521. The analysis will use output to identify sites suitable for relocation, reduction, or realignment of workload.

Scoring: Using the list of commodities identified in the capacity analysis data call question #521, the analysis will array the commodities into categories (i.e. small caliber, medium caliber, large caliber, bomb, missile, torpedo, energetics, mines, rockets, pyro/demo, and CAD/PAD). Comparisons will occur among facilities within the same category (i.e. facility X, Y, and Z all producing medium caliber munitions) and a separate analysis will be performed on Components and LAP. Within categories, facilities receiving the most credits will score 100%. The remaining points will be scored using Method 1.

(15%) CRITERIA #2 – The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.

(30%) Attribute: Facility Conditions

(100%) Metric: Condition of Facilities

(100%) Question: For the facilities identified in Table 4, enter floor areas in thousand square feet (KSF) and provide occupancy status (vacant or occupied) and number of buildings in green/adequate/1 (GA1), amber/substandard/2 (AS2) or red/inadequate/3 (RI3).

Table 4: Condition of Munitions Production Facilities

FAC	Definition	Area (KSF)	V/O	# in green/adequate/1	# in amber/substandard/2	# in red/inadequate/3
1492	Explosives holding/transfer area					
1493	Explosives railway holding yard					
1494	Explosives handling/transfer area					
1497	Explosive ordnance disposal area					
2121	Missile maintenance/assembly building					
2125	Missile maintenance/assembly					

Table 4: Condition of Munitions Production Facilities						
FAC	**Definition**	**Area (KSF)**	**V/O**	**# in green/adequate/1**	**# in amber/substandard/2**	**# in red/inadequate/3**
	building, depot					
2221	Missile production plant					
2251	Weapon production plant					
2252	Weapon production facility					
2261	Ammunition production plant					
2262	Ammunition production facility					
4211	Ammunition storage, depot and arsenal					
4221	Ammunition storage, installation					
8923	Vehicle scales					

Rationale: Responses to this question will provide a measure of the condition of the facilities that may be used in relocation.

Scoring: The scoring for each facility is the percentage of their total mission essential buildings in green/adequate/1 condition. The analysis will array all facilities in percentage order. Facilities receiving the most points will score 100%. Scoring as identified below:

$$x_1 = \frac{\text{\# of bldg in GA1}}{\text{Sum (\#GA1 + \#AS2 + \#RI3)}}$$

The score for the facility is: $Si = \frac{x_1}{x_{max}}$

(70%) Attribute: Expansion Capability

(40%) Metric: Buildable Acreage

(100%) Question: What are the total buildable acres at your facility?

Rationale: Looking at the number of buildable acreage will allow us to assess expansion capability. The analysis will use data from the Capacity Analysis datacall question #198 for total unconstrained acres.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(60%) Metric: Unutilized Plant Capacity (UPC)

(100%) Question: In number of square feet, what is your UPC/unassigned munitions manufacturing space?

Rationale: UPC square footage will tell us how much space is available for immediate utilization, or utilization with minimal resources.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(45%) CRITERIA #3 – The availability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations to support operations and training.

(40%) Attribute: Capability

(100%) Metric: Munitions Production Processes

1. (33.3%) Question: Which munitions explosive processes did you perform within the last two (2) years? (Use Table 1)

Table 1: Munitions Explosive Processes	**Last 2 Yrs**
1. Explosive and/or propellant cold cast cure to include vacuum casting and/or injecting capability.	
2. Melt pour, to include metal parts pre-conditioning and post pour controlled cooling.	
3. Precision explosive pressing, to include explosive billet machining and sufficient tonnage and press daylight clearance for missiles.	
4. Extrusion of explosives and propellants.	
5. Kinetic energy munitions precision weigh and fill of propellant.	
6. Loaded components and initiating devices (primers, delays, relays, detonators) to include drying, blending, and handling equipment for initiating equipment that precludes direct personnel exposure.	
7. Infrared decoy flare pressing and/or extrusion.	
8. Smoke munitions mixing and pressing.	
9. Nitration of cotton linters or wood pulp.	
10. Nitration of hexamine.	
11. Manufacture of nitrate Esters.	

Rationale: Responses to this question will identify critical munitions production processes and highlight sources of duplication, multi-functional capability, and the availability or absence of a skilled work force. Table 1 provides the information needed to respond to the munitions explosive processes question.

Scoring: The facility receives credit when they check the box indicating that they performed the process within the last two years. The facility that performs the most processes will score 100%. The remaining points will be scored using Method 1.

2. (33.3%) Question: Which munitions metal parts processes did you perform within the last two (2) years? (Use Table 2)

Table 2: Munitions Metal Parts	**Last 2 Yrs**
1. Deep draw steel cartridge cases	
2. Grenade cargo metal parts	
3. Projectile forging, heat treat, and machining	
4. High frag projectile metal parts to include large caliber forging (1000 ton presses), heat treat, ultrasonic and machining.	

Rationale: Responses to this question will identify critical munitions production processes and highlight sources of duplication, multi-functional capability, and the availability or absence of a skilled work force. Table 2 provides the information needed to respond to the munitions metal parts processes question.

Scoring: The facility receives credit when they check the box indicating that they performed the process within the last two years. The facility performing the most processes will score 100%. The remaining points will be scored using Method 1 .

3. (33.3%) Question: Which munitions Load, Assemble, and Pack (LAP) processes did you perform within the last two (2) years? (Use Table 3)

Table 3: Munitions Load, Assemble, and Pack (LAP)	**Last 2 Yrs**
1. Navy gun ammo	
2. Mortar ammo	
3. Mine and Obstacle Clearing Charges	
4. Artillery ammo	
5. Tank ammo	
6. Missile warhead	
7. Medium caliber ammo	
8. Demolition	
9. Rockets	
10. Small caliber ammo	

11. Bomb body	
12. Grenades	
13. Missiles	
14. Torpedo	
15. CAD/PAD	
16. Propelling Charges	
17. Kinetic energy munitions	
18. Flares	

Rationale: Responses to this question will identify critical munitions production processes and highlight sources of duplication, multi-functional capability, and the availability or absence of a skilled work force. Table 3 provides the information needed to respond to the munitions LAP processes question.

Scoring: The facility receives credit when they check the box indicating that they performed the process within the last two years. The facility performing the most processes will score 100%. The remaining points will be scored using Method 1.

(60%) Attribute: Capacity

(100%) Metric: Munitions Production Capacity

(100%) Question: What is your maximum munitions production capacity?

Rationale: This question will use data gathered in the capacity analysis datacall question #521. The analysis will use output to identify sites suitable for relocation, reduction, or realignment of workload.

Scoring: Using the list of commodities identified in the capacity analysis data call question #521, the analysis will array the commodities into categories (e.g. small caliber, medium caliber, large caliber, bomb, missile, torpedo, energetics, mines, rockets, pyro/demo, and CAD/PAD). Comparisons will occur among facilities within the same category (i.e. facility X, Y, and Z all producing medium caliber munitions) and a separate analysis will be performed on Components and LAP. Within categories, facilities receiving the most credits will score 100%. The remaining points will be scored using Method 1.

(5%) CRITERIA #4 – The cost of operations and manpower implications.

(80%) Attribute: Fixed Cost

(100%) Metric: Cost Required to Open the Doors

(100%) Question: What are the costs required for your munitions manufacturing facility to open the doors? (Include equipment maintenance, facilities maintenance, utilities, installation management, environmental compliance,

environmental conservation, fire protection, safety, law enforcement, security guards, pest control, and snow/ice removal costs only.)

Rationale: Fixed costs will vary based on the size of the installation and the number of employees. As the analysis moves into the scenario phase and MVA looks at possible installation relocation, this information becomes a source for identification of installations with highest overhead.

Scoring: The facility with the lowest cost will score 100%. The remaining points will be scored using Method 2.

(20%) Attribute: Labor

(100%) Metric: Number of Employees and Size of Payroll

1. (50%) Question: What are the number of civilian government employees and size of payroll?

Rationale: The number of employees and size of payroll will help determine the cost of relocation and impacts to the local community.

Scoring: The facility with the lowest average salary will receive 100%.
The remaining points will be scored using Method 2.

2. (50%) Question: What are the number of contractor employees and size of payroll?

Rationale: The number of employees and size of payroll will help determine the cost of relocation and impacts to the local community.

Scoring: The facility with the lowest average salary will score 100%.
The remaining points will be scored using Method 2.

FUNCTION: MUNITIONS MAINTENANCE

(25%) Criteria #1 – The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training and readiness.

(60%) Attribute: Capability

(100%) Metric: Processes for Munitions Maintenance

(100%) Question: Have you inspected, tested and performed maintenance and repair for the munitions items listed in Table 5 in the last two (2) years?

Table 5: Munitions Maintenance Commodities			
	Last 2 Yrs		**Last 2 Yrs**
1. Sea Sparrow Missile		19. Patriot	
2. AMRAAM		20. MLRS	
3. Harpoon Missile		21. 76mm Naval Gun Ammunition	
4. HARM Missile		22. 5" Navy Gun Propelling Charges	
5. Hellfire Missile		23. 5" Navy Gun Projectiles	
6. Maverick Missile		24. Naval Mines	
7. Penguin Missile		25. Air Launched Cruise Missile (ALCM)	
8. Phoenix Missile		26. Conventional Air Launched Cruise Missile (CALCM)	
9. Rolling Airframe Missile		27. Advanced Cruise Missile (ACM)	
10. Sidewinder Missile		28. Air to Air Cruise Missile (ATACM)	
11. Sidearm Missile		29. Other Air-to-Ground Missiles/Components	
12. Shrike Missile		30. Other Guided Munitions	
13. Hawk Surface-to-Air Missile		31. Unguided Munitions	
14. Walleye Missile		32. Cluster Munitions	
15. SLAM-ER Missile		33. AIM-9X Missile	
16. Tomahawk Missile		34. AIM-7 Sparrow Missile	
17. Torpedoes		35. Standard Missile	
18. Other Air Intercept Missile/Components			

Rationale: This metric measures an installation's flexibility to perform maintenance on a variety of munitions.

Scoring: The facility receives credit when they check the box indicating that they performed the process within the last two years. The facility performing the most processes will score 100%. The remaining points will be scored using Method 1.

(40%) Attribute: Capacity

(100%) Metric: Capacity for Munitions Maintenance

(100%) Question: What is your maximum munitions maintenance capacity?

Rationale: This question will use data gathered in the capacity analysis datacall question #520. The analysis will use output to identify sites suitable for relocation, reduction, or realignment of workload.

Scoring: Using the commodities identified in capacity analysis datacall question #520, the analysis will array the commodities into categories (i.e. missile, torpedo, etc). Comparisons will occur among facilities within the same category (i.e. facility X, Y, and Z all producing missiles). Within categories, facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(20%) CRITERIA #2 – The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.

(30%) Attribute: Facility Conditions

(100%) Metric: Condition of Facilities

(100%) Question: For the facilities identified in Table 6, enter floor areas in thousand square feet (KSF) and provide occupancy status (vacant or occupied) and number of buildings in green/adequate/1 (GA1), amber/substandard/2 (AS2) or red/inadequate/3 (RI3).

Table 6: Condition of Munitions Maintenance Facilities

FAC	Definition	Area (KSF)	V/O	# in green/adequate/1	# in amber/substandard/2	# in red/inadequate/3
1492	Explosives holding/transfer area					
1493	Explosives railway holding yard					
1494	Explosives handling/transfer area					
1497	Explosive ordnance disposal area					
2121	Missile maintenance/assembly building					
2125	Missile maintenance/assembly building, depot					
2221	Missile production plant					
2251	Weapon production					

Table 6: Condition of Munitions Maintenance Facilities						
FAC	**Definition**	**Area (KSF)**	**V/O**	**# in green/adequate/1**	**# in amber/substandard/2**	**# in red/inadequate/3**
	plant					
2252	Weapon production facility					
2261	Ammunition production plant					
2262	Ammunition production facility					
4211	Ammunition storage, depot and arsenal					
4221	Ammunition storage, installation					
8923	Vehicle scales					

Rationale: Responses to this question will provide a measure of the condition of the facilities that may be used in relocation.

Scoring: The scoring for each facility is the percentage of their total mission essential buildings in green/adequate/1 condition. The analysis will array all facilities in percentage order. Facilities receiving the most points will score 100%. Scoring as identified below:

$$x_1 = \frac{\text{\# of bldg in GA1}}{\text{Sum (\#GA1 + \#AS2 + \#RI3)}}$$

The score for the facility is: $Si = \frac{x_1}{x_{max}}$

(70%) Attribute: Expansion Capability

(40%) Metric: Buildable Acreage

(100%) Question: What are the total buildable acres at your facility?

Rationale: Looking at the number of buildable acreage will allow us to assess expansion capability. Data will come from Capacity Data Call question #198 for total unconstrained acres.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(60%) Metric: Unutilized Plant Capacity (UPC)

(100%) Question: In number of square feet, what is your UPC/unassigned maintenance space?

Rationale: UPC square footage will tell us how much space is available for immediate utilization, or utilization with minimal resources.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(50%) Criteria #3 – The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations to support operations and training.

(40%) Attribute: Capability

(100%) Metric: Processes for Munitions Maintenance

(100%) Question: Have you inspected, tested and performed maintenance and repair for the munitions items listed in Table 5 in the last two (2) years?

Table 5: Munitions Maintenance Commodities

	Last 2 Yrs		**Last 2 Yrs**
1. Sea Sparrow Missile		19. Patriot	
2. AMRAAM		20. MLRS	
3. Harpoon Missile		21. 76mm Naval Gun Ammunition	
4. HARM Missile		22. 5” Navy Gun Propelling Charges	
5. Hellfire Missile		23. 5” Navy Gun Projectiles	
6. Maverick Missile		24. Naval Mines	
7. Penguin Missile		25. Air Launched Cruise Missile (ALCM)	
8. Phoenix Missile		26. Conventional Air Launched Cruise Missile (CALCM)	
9. Rolling Airframe Missile		27. Advanced Cruise Missile (ACM)	
10. Sidewinder Missile		28. Air to Air Cruise Missile (ATACM)	
11. Sidearm Missile		29. Other Air-to-Ground Missiles/Components	
12. Shrike Missile		30. Other Guided Munitions	
13. Hawk Surface-to-Air		31. Unguided Munitions	

Missile			
14. Walleye Missile		32. Cluster Munitions	
15. SLAM-ER Missile		33. AIM-9X Missile	
16. Tomahawk Missile		34. AIM-7 Sparrow Missile	
17. Torpedoes		35. Standard Missile	
18. Other Air Intercept Missile/Components			

Rationale: This metric measures an installation's flexibility to perform maintenance on a variety of munitions.

Scoring: The facility receives credit when they check the box indicating that they performed the process within the last two years. The facility performing the most processes will score 100%. The remaining points will be scored using Method 1.

(60%) Attribute: Capacity

(100%) Metric: Capacity for Munitions Maintenance

(100%) Question: What is your maximum munitions maintenance capacity?

Rationale: This question will use data gathered in the capacity analysis datacall question #520. This analysis will use output to identify sites suitable for relocation, reduction, or realignment of workload.

Scoring: Using the commodities identified in capacity analysis datacall question #520, the analysis will array the commodities into categories (i.e. missiles, torpedo, etc). Comparisons will occur among facilities within the same category (i.e. facility X, Y, and Z all producing missiles). Within categories, facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(5%) CRITERIA #4 – The cost of operations and manpower implications.

(80%) Attribute: Fixed Cost

(100%) Metric: Cost Required to Open the Doors

(100%) Question: What are the costs required for your munitions maintenance facility to open the doors? (Include equipment maintenance, facilities maintenance, utilities, installation management, environmental compliance, environmental conservation, fire protection, safety, law enforcement, security guards, pest control, and snow/ice removal costs only.)

Rationale: Fixed costs will vary based on the size of the installation and the number of employees. As the analysis moves into the scenario phase and MVA

looks at possible installation relocation, this information becomes a source for identification of installations with highest overhead.

Scoring: The facility with the lowest cost will score 100%. The remaining points will be scored using Method 2.

(20%) Attribute: Labor

(100%) Metric: Number of Employees and Size of Payroll

1. (50%) Question: What are the number of civilian government employees and size of payroll?

Rationale: The number of employees and size of payroll will help determine the cost of relocation and impacts to the local community.

Scoring: The facility with the lowest average salary will score 100%.
The remaining points will be scored using Method 2.

2. (50%) Question: What are the number of contractor employees and size of payroll?

Rationale: The number of employees and size of payroll will help determine the cost of relocation and impacts to the local community.

Scoring: The facility with the lowest average salary will score 100%.
The remaining points will be scored using Method 2.

FUNCTION: STORAGE AND DISTRIBUTION

(25%) CRITERIA #1 – The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.

(100%) Attribute: Capacity

(30%) Metric: Storage Capacity

(100%) Question: In square feet, what is your munitions storage capacity?

Rationale: Response to this question will identify the installation's ability to store munitions for current and future military operations. The greater the capacity, the more likely the installation is able to support all military operations and sustain overall readiness. This question will use data gathered in the Capacity Analysis datacall question #517 "Maximum Net Storage Capacity".

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(70%) Metric: Distribution Capacity

1. (50%) Question: What is the MAXIMUM number of Twenty-foot Equivalent Units (TEU) containers of munitions you can outload per day?

Rationale: Container outloading capacity reveals the installation's ability to retrieve large quantities of munitions from storage, containerize the loads, load rail cars and/or trucks, and move the munitions off the installation.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

2. **(15%) Question:** What is the MAXIMUM number of short tons (STONS) you can outload per day?

Rationale: This metric measures the installation's ability to move STONS from storage locations and process the STONS for movement off the installation by rail and/or truck.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(3). **(35%) Question:** Following receipt of a requirement from a customer, what is the transit time to get munitions to the nearest land (road and rail), air, and seaport distribution hub?

Rationale: This metric measures response time to customer's request for movement of munitions. The data will show how quickly a storage facility is able to move munitions.

Scoring: Each facility will respond with answers for land, air, and seaport. The facility moving munitions within the shortest amount of time will score 100%. Using this methodology, scoring will generate a value for all three modes of transportation (land, air, and seaport). After establishment of a score for each mode of transportation, the final score for the facility will become an average of the three scores and the final score with the shortest amount of time will score 100%. The remaining points will be scored using Method 2.

(20%) CRITERIA #2 – The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.

(30%) Attribute: Facility Conditions

(100%) Metric: Condition of Facilities

(100%) Question: For the facilities identified in Table 7, enter floor areas in thousand square feet (KSF) and provide occupancy status (vacant or occupied) and number of buildings in green/adequate/1 (GA1), amber/substandard/2 (AS2) or red/inadequate/3 (RS3).

Table 7: Condition of Munitions Storage Facilities

FAC	Definition	Area (KSF)	V/O	# in green/adequate/1	# in amber/substandard/2	# in red/inadequate/3
1492	Explosives holding/transfer area					
1493	Explosives railway holding yard					
1494	Explosives handling/transfer area					
1497	Explosive ordnance disposal area					
4211	Ammunition storage, depot and arsenal					
4221	Ammunition storage, installation					
8923	Vehicle scales					

Rationale: Responses to this question will provide a measure of the condition of the facilities that may be used in relocation.

Scoring: The scoring for each facility is the percentage of their total mission essential buildings in green/adequate/1 condition. The analysis will array all facilities in percentage order. Facilities receiving the most points will score 100%. Scoring as identified below:

$$x_1 = \frac{\text{\# of bldg in GA1}}{\text{Sum (\#GA1 + \#AS2 + \#RI3)}}$$

The score for the facility is: $Si = \frac{x_1}{x_{max}}$

(70%) Attribute: Expansion Capability

(50%) Metric: Buildable Acreage

(100%) Question: What are the total buildable acres at your facility?

Rationale: Looking at the number of buildable acreage will allow us to assess expansion capability. Scoring will use data from question #198 of the Capacity Data Call "Total Unconstrained Acres".

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(50%) Metric: Unutilized Plant Capacity (UPC)

(100%) Question: In number of square feet, what is your UPC/unassigned munitions storage space?

Rationale: UPC square footage will tell us how much space is available for immediate utilization, or utilization with minimal resources.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(50%) CRITERIA 3: - The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations to support operations and training.

(100%) Attribute: Capacity

(30%) Metric: Storage Capacity

(100%) Question: In square feet, what is your munitions storage capacity?

Rationale: Response to this question will identify the installation's ability to store munitions for current and future military operations. The greater the capacity, the more likely the installation is able to support all military operations and sustain overall readiness. This question will use data gathered in the Capacity Analysis datacall question #517 "Maximum Net Storage Capacity".

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(70%) Metric: Distribution Capacity

1. (50%) Question: What is the MAXIMUM number of Twenty-foot Equivalent Units (TEU) containers of munitions you can outload per day?

Rationale: Container outloading capacity reveals the installation's ability to retrieve large quantities of munitions from storage, containerize the loads, load rail cars and/or trucks, and move the munitions off the installation.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

2. (15%) Question: What is the MAXIMUM number of short tons (STONS) you can outload per day?

Rationale: Metrics measures the installation's ability to move STONS from storage locations and process the STONS for movement off the installation by rail and/or truck.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(3). **(35%) Question:** Following receipt of a requirement from a customer, what is the transit time to get munitions to the nearest land (road and rail), air, and seaport distribution hub?

Rationale: This metric measures response time to customer's request for movement of munitions. The data will show how quickly a storage facility is able to move munitions.

Scoring: Each facility will respond with answers for land, air, and seaport. The facility moving munitions within the shortest amount of time will score 100%. Using this methodology, scoring will generate a value for all three modes of transportation (land, air, and seaport). After establishment of a score for each mode of transportation, the final score for the facility will become an average of the three scores and the final score with the shortest amount of time will score 100%. The remaining points will be scored using Method 2.

Rationale: This metric measures response time to customer's request for movement of munitions. The data will show how quickly a storage facility is able to move munitions from the points of distribution to the nearest seaport.

Scoring: Facilities moving munitions from the point of distribution to the seaport in the shortest amount of time will score 100%. The remaining points will be scored using Method 2.

(5%) CRITERIA #4 – The cost of operations and manpower implications.

(80%) Attribute: Fixed Cost

(100%) Metric: Cost Required to Open the Doors

(100%) Question: What are the costs required for your munitions storage facilities to open the doors? (Include equipment maintenance, facilities maintenance, utilities, installation management, environmental compliance, environmental conservation, fire protection, safety, law enforcement, security guards, pest control, and snow/ice removal costs only.)

Rationale: Fixed costs will vary based on the size of the installation and the number of employees. As the analysis moves into the scenario phase and MVA looks at possible installation relocation, this information becomes a source for identification of installations with highest overhead.

Scoring: The facility with the lowest cost will score 100%. The remaining points will be scored using Method 2.

(20%) Attribute: Labor

(100%) Metric: Number of Employees and Size of Payroll

1. (50%) Question: What are the number of civilian government employees and size of payroll?

Rationale: The number of employees and size of payroll will help determine the cost of relocation and impacts to the local community.

Scoring: The facility with the lowest average salary will score 100%.
The remaining points will be scored using Method 2.

2. (50%) Question: What are the number of contractor employees and size of payroll?

Rationale: The number of employees and size of payroll will help determine the cost of relocation and impacts to the local community.

Scoring: The facility with the lowest average salary will score 100%.
The remaining points will be scored using Method 2.

FUNCTION: DEMILITARIZATION

25%) Criteria #1 – The current and future mission capabilities and the impact on operational readiness of Department of Defenses total force, including the impact on joint warfighting, training and readiness.

(60%) Attribute: Capability

(100%) Metric: Processes for Demilitarization

(100%) Question: What demilitarization processes did you perform within the last two (2) years? (Use Table 8)

Table 8: Demilitarization Processes

MIDAS CLASSES	METHOD OF DEMIL				
	OBOD	Meltout	Washout	Incinerate	Reclamation
CD: Dyes					
CP: White Phosphorus					
CR: Riot Control					
CS: Smokes, HC, Colored, FS, RP					
DU: Depleted Uranium					
FI: Incendiary, Thermite					
FP: Pyrotechnics					
HA: High Explosive (HE) Components, Chrg Devices					
HB: HE Bombs					
HC: HE Cartridges					
HD:HE "D"					
HE: Bulk HE					
HG:HE Grenades					
HH: HE Depth Chrg, Under Water Munitions					
HI: HE ICM/BU and Submunitions					
HM: Missles					
HP: He Projectiles and Warheads					
HR: He Rockets					
HT: Torpedoes					
HX: Demolition Material					
HZ: HE Land Mines					
I: Inert					
LR: Large Rocket Motor					
N: No Family					
PB: Bulk Propellant and Black Powder					
PC: Propellant Munitions and Components					
PD: Propellant Munitions and					
SA: Small Caliber Ammunition					
SC: Incinerable Munitions and Components					
SF: Fuzes					

TM: tactical Missles					

Rationale: The metric will identify the demilitarization flexibility of an installation.

Scoring: The facility receives credit when they check the box indicating that they performed the process within the last two years. Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(40%) Attribute: Capacity

(100%) Metric: Demilitarization

(100%) Question: What is your maximum demilitarization capacity?

Rationale: This question will use data gathered in the capacity analysis datacall question #519. This analysis will use output to identify sites suitable for relocation, reduction, or realignment of workload.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(20%) CRITERIA #2 – The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.

(30%) Attribute: Facility Conditions

(100%) Metric: Condition of Facility

(100%) Question: For the facilities identified in Table 9, enter floor areas in thousand square feet (KSF) and provide occupancy status (vacant or occupied) and number of buildings in green/adequate/1 (GA1), amber/substandard/2 (AS2) or red/inadequate/3 (RI3).

Table 9: Condition of Demilitarization Facilties

FAC	Definition	Area (KSF)	V/O	# in green/adequate/1	# in amber/substandard/2	# in red/inadequate/3
1492	Explosives holding/transfer area					
1493	Explosives railway holding yard					

Table 9: Condition of Demilitarization Facilties						
FAC	**Definition**	**Area (KSF)**	**V/O**	**# in green/adequate/1**	**# in amber/substandard/2**	**# in red/inadequate/3**
1494	Explosives handling/transfer area					
1497	Explosive ordnance disposal area					
2264	Ammunition demilitarization plant					
2265	Ammunition demilitarization facility					
4211	Ammunition storage, depot and arsenal					
4221	Ammunition storage, installation					
8923	Vehicle scales					

Rationale: This question will use data gathered in the capacity analysis datacall question #519. This analysis will use output to identify sites suitable for relocation, reduction, or realignment of workload.

Scoring: The scoring for each facility is the percentage of their total mission essential buildings in green/adequate/1 condition. The analysis will array all facilities in percentage order. Facilities receiving the most points will score 100%. Scoring as identified below:

$$x_1 = \frac{\text{\# of bldg in GA1}}{\text{Sum (\#GA1 + \#AS2 + \#RI3)}}$$

The score for the facility is: $Si = \frac{x_1}{x_{max}}$

(70%) Attribute: Expansion Capability

(40%) Metric: Buildable Acreage

(100%) Question: What are the total buildable acres at your facility?

Rationale: Looking at the size of buildable acreage will allow us to assess expansion capability. Will use data collected from question #198 ("Unconstrained Total Acres") of the Capacity Data Call.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(60%) Metric: Unutilized Plant Capacity (UPC)

(100%) Question: In number of square feet, what is your UPC/unassigned demilitarization space?

Rationale: UPC square footage will tell us how much space is available for immediate utilization, or utilization with minimal resources.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(50%) Criteria #3 – The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations to support operations and training.

(40%) Attribute: Capability

(100%) Metric: Processes for Demilitarization

(100%) Question: What demilitarization processes did you perform within the last two (2) years? (Use Table 8)

Table 8: Demilitarization Processes

MIDAS CLASSES	METHOD OF DEMIL				
	OBOD	Meltout	Washout	Incinerate	Reclamation
CD: Dyes					
CP: White Phosphorus					
CR: Riot Control					
CS: Smokes, HC, Colored, FS, RP					
DU: Depleted Uranium					
FI: Incendiary, Thermite					
FP: Pyrotechnics					
HA: High Explosive (HE) Components, Chrg Devices					
HB: HE Bombs					
HC: HE Cartridges					
HD:HE "D"					
HE: Bulk HE					
HG:HE Grenades					
HH: HE Depth Chrg, Under Water Munitions					

HI: HE ICM/BU and Submunitions					
HM: Missles					
HP: He Projectiles and Warheads					
HR: He Rockets					
HT: Torpedoes					
HX: Demolition Material					
HZ: HE Land Mines					
I: Inert					
LR: Large Rocket Motor					
N: No Family					
PB: Bulk Propellant and Black Powder					
PC: Propellant Munitions and Components					
PD: Propellant Munitions and					
SA: Small Caliber Ammunition					
SC: Incinerable Munitions and Components					
SF: Fuzes					
TM: tactical Missles					

Rationale: The metric will identify the demilitarization flexibility of an installation.

Scoring: The facility receives credit when they check the box indicating that they performed the process within the last two years. Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(60%) Attribute: Capacity

(100%) Metric: Demilitarization

(100%) Question: What is your maximum demilitarization capacity?

Rationale: This question will use data gathered in the capacity analysis datacall question #519. This analysis will use output to identify sites suitable for relocation, reduction, or realignment of workload.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(5%) CRITERIA #4 – The cost of operations and manpower implications.

(80%) Attribute: Fixed Cost

(100%) Metric: Cost Required to Open the Doors

(100%) Question: What are the costs required for your munitions demilitarization facility to open the doors? (Include equipment maintenance, facilities maintenance, utilities, installation management, environmental compliance, environmental conservation, fire protection, safety, law enforcement, security guards, pest control, and snow/ice removal costs only.)

Rationale: Fixed costs will vary from one place to another based on the size of the installation and the number of employees. As the analysis moves into the scenario phase and MVA looks at possible installation relocation, this information becomes a source for identification of installations with highest overhead.

Scoring: The facility with the lowest cost will score 100%. The remaining points will be scored using Method 2.

(20%) Attribute: Labor

(100%) Metric: Number of Employees and Size of Payroll

1. (50%) Question: What are the number of civilian government employees and size of payroll?

Rationale: The number of employees and size of payroll will help determine the cost of relocation and impacts to the local community.

Scoring: The facility with the lowest average salary will score 100%.
The remaining points will be scored using Method 2.

2. (50%) Question: What are the number of contractor employees and size of payroll?

Rationale: The number of employees and size of payroll will help determine the cost of relocation and impacts to the local community.

Scoring: The facility with the lowest average salary will score 100%.
The remaining points will be scored using Method 2.

FUNCTION: ARMAMENTS PRODUCTION

(45%) Criteria #1 – The current and future mission capabilities and the impact on operational readiness of Department of Defense's total force, including the impact on joint warfighting, training and readiness.

(60%) Attribute: Capability

(100%) Metric: Processes for Armaments Production

(100%) Question: What armaments manufacturing processes did you perform in the last two (2) years? (Table 10)

Table 10: Armaments Manufacturing Processes	**Last 2 Yrs**
1. All-angle simulation of vehicle mounted recoils/mounts	
2. Automated guided deep-hole boring (30' length min.)	
3. Chrome plating, internal (30' length min.)	
4. Computer Numerical Controlled (CNC) powder chamber grinding (30' length min.)	
5. Continuous heat-treat of large cylinders (30' length min.)	
6. Swage and autofrettage of large cylinders	
7. 7-axis machining	
8. Rotary forge of large cylinders (30' length min.)	
9. Computer assisted bore inspection and laser dimensional control	
10. Foundry (armor steel, ferrous, and non ferrous)	
11. Large structures/vehicles machining (x-y axis travel 10 ft per min)	
12. Simulation proof testing and gymnastication (cannon breech and mortar barrel assemblies	
13. Simulation proof testing and gymnastication (gun mounts and recoils up to 155mm	

Rationale: Responses to this question will identify critical armaments production processes and highlight sources of duplication, multi-functional capability, and the availability or absence of a skilled work force. Table 10 provides the information needed to respond to the armaments processes.

Scoring: The facility receives credit when they check the box indicating that they performed the process within the last two years. Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(40%) Attribute: Capacity

(100%) Metric: Capacity for Armaments Production

(100%) Question: Which armaments products did you produce in the last two (2) years? Use "Other" (element number 11 in the table) if you produce a product that is not readily available in the commercial sector and not listed in the table. List one. (Use table 11.)

Table 11: Armaments Capacity	Last 2 Yrs
1. Artillery and tank cannon	
2. Artillery, towed and self-propelled repair/spare parts (carriage)	
3. Gun mounts (medium and large caliber)	
4. Mortars	
5. Recoil mechanisms	
6. Small arms gages	
7. Armored combat vehicles	
8. Aircraft Armament systems	
9. Gun Systems and related components	
10. Other Guided/Unguided Missile Armament Components	
11. Other	

Rationale: This metric identifies armaments processes that are not available in the private sector.

Scoring: The facility receives credit when they check the box indicating that they performed the process within the last two years. Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(15%) CRITERIA #2 – The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval or air forces throughout a diversity of climate and terrain areas and staging areas for use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.

(30%) Attribute: Facility Conditions

(100%) Metric: Condition of Facilities

(100%) Question: For the facilities identified in Table 12, enter floor areas in thousand square feet (KSF) and provide occupancy status (vacant or occupied) and number of buildings in green/adequate/1 (GA1), amber/substandard/2 (AS2) or red/inadequate/3 (RI3).

Table 12: Condition of Armaments Manufacturing Facilities						
FAC	**Definition**	**Area (KSF)**	**V/O**	**# in green/adequate/1**	**# in amber/substandard/2**	**# in red/inadequate/3**
2146	Launch vehicle test facility					
2151	Weapon maintenance facility					
2152	Weapon maintenance					

Table 12: Condition of Armaments Manufacturing Facilities						
FAC	**Definition**	**Area (KSF)**	**V/O**	**# in green/adequate/1**	**# in amber/substandard/2**	**# in red/inadequate/3**
	shop, depot					
2154	Weapon maintenance facility, depot					
2241	Tank production plant					
2242	Tank/automotive production facility					
2251	Weapon production plant					
2252	Weapon production facility					
3904	Propulsion engine test cell					

Rationale: Responses to this question will provide a measure of the condition of the facilities that may be used in relocation.

Scoring: The scoring for each facility is the percentage of their total mission essential buildings in green/adequate/1 condition. The analysis will array all facilities in percentage order. Facilities receiving the most points will score 100%. Scoring as identified below:

$$x_1 = \frac{\text{\# of bldg in GA1}}{\text{Sum (\#GA1 + \#AS2 + \#RI3)}}$$

The score for the facility is: $Si = \frac{x_1}{x_{max}}$

(70%) Attribute: Expansion Capability

(40%) Metric: Buildable Acreage

(100%) Question: What are the total buildable acres at your facility?

Rationale: Looking at the number of buildable acreage will allow us to assess expansion capability. The scoring willl use data from question #198 "Unconstrained Total Acres" of the Capacity Data Call.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(60%) Metric: Unutilized Plant Capacity (UPC)

(100%) Question: In number of square feet, what is your UPC/unassigned armaments manufacturing space?

Rationale: UPC square footage will tell us how much space is available for immediate utilization, or utilization with minimal resources.

Scoring: Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(35%) Criteria #3 – The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations to support operations and training.

(40%) Attribute: Capability

(100%) Metric: Processes for Armaments Production

(100%) Question: Which armaments manufacturing processes did you perform in the last two (2) years? (Use Table 10)

Table 10: Armaments Manufacturing Processes	**Last 2 Yrs**
1. All-angle simulation of vehicle mounted recoils/mounts	
2. Automated guided deep-hole boring (30' length min.)	
3. Chrome plating, internal (30' length min.)	
4. Computer Numerical Controlled (CNC) powder chamber grinding (30' length min.)	
5. Continuous heat-treat of large cylinders (30' length min.)	
6. Swage and autofrettage of large cylinders	
7. 7-axis machining	
8. Rotary forge of large cylinders (30' length min.)	
9. Computer assisted bore inspection and laser dimensional control	
10. Foundry (armor steel, ferrous, and non ferrous)	
11. Large structures/vehicles machining (x-y axis travel 10 ft per min)	
12. Simulation proof testing and gymnastication (cannon breech and mortar barrel assemblies	
13. Simulation proof testing and gymnastication (gun mounts and recoils up to 155mm	

Rationale: Responses to this question will identify critical armaments production processes and highlight sources of duplication, multi-functional capability, and the availability or absence of a skilled work force. Table 10 provides the information needed to respond to the armaments processes.

Scoring: The facility receives credit when they check the box indicating that they performed the process within the last two years. Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(60%) Attribute: Capacity

(100%) Metric: Capacity for Armaments Production

(100%) Question: Which armaments products did you produce in the last two (2) years? Use "Other" (element number 11 in the table) if you produce a product that is not readily available in the commercial sector and not listed in the table. List one. (Use Table 11)

Table 11: Armaments Capacity	**Last 2 Yrs**
1. Artillery and tank cannon	
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3. Gun mounts for artillery (medium and large caliber)	
4. Mortars	
5. Recoil mechanisms	
6. Small arms gages	
7. Armored combat vehicles	
8. Aircraft Armament systems	
9. Gun Systems and related components	
10. Other Guided/Unguided Missile Armament Components	
11. Other	

Rationale: This metric identifies armaments processes that are not available in the private sector.

Scoring: The facility receives credit when they check the box indicating that they performed the process within the last two years. Facilities receiving the most points will score 100%. The remaining points will be scored using Method 1.

(5%) CRITERIA #4 - Cost of Operations and Manpower Implications

(80%) Attribute: Fixed Cost

(100%) Metric: Cost Required to Open the Doors

(100%) Question: What are the costs required for your armaments manufacturing facility to open the doors? (Include equipment maintenance, facilities maintenance, utilities, installation management, environmental compliance, environmental conservation, fire protection, safety, law enforcement, security guards, pest control, and snow/ice removal costs only.)

Rationale: Fixed costs will vary from one place to another based on the size of the installation and the number of employees. As the analysis moves into the scenario phase and MVA looks at possible installation relocation, this information becomes a source for identification of installations with highest overhead.

Scoring: The facility with the lowest cost will score 100%. The remaining points will be scored using Method 1.

(20%) Attribute: Labor

(100%) Metric: Number of Employees and Size of Payroll

1. (50%) Question: What are the number of civilian government employees and size of payroll?

Rationale: The number of employees and size of payroll will help determine the cost of relocation and impacts to the local community.

Scoring: The facility with the lowest average salary will score 100%.
The remaining points will be scored using Method 1.

2. (50%) Question: What are the number of contractor employees and size of payroll?

Rationale: The number of employees and size of payroll will help determine the cost of relocation and impacts to the local community.

Scoring: The facility with the lowest average salary will score 100%.
The remaining points will be scored using Method 1.

SUMMARY: The DoD goal for BRAC 2005 is to "reconfigure the current infrastructure into one with operational capacity that maximizes both war fighting capability and efficiency" (Donald Rumsfeld, 15 Nov 2002). A major facet of completing this analysis is to use the established selection criteria (Criteria 1 – 4 (Military Value), Criteria 5 (return on investment), and Criteria 6 – 8 (Impacts) to evaluate each installation. The application of the first four criteria is a major portion of the decision making process, and is given primary consideration. This MVA analysis assesses the military value of the government-owned industrial base and identifies the processes that will allow the IJCSG to assess capacity, capability, skills of the workforce, and the condition of the infrastructure for munitions' and armaments' key functions of munitions production, munitions maintenance, munitions storage and distribution, munitions

demilitarization, and armaments production. The approach to the analysis established a scoring plan that includes weights for the four military value criteria, the attributes, metrics and questions and local weights for each question. Once the IJCSG completes data collection, the results (based on today's information), will establish a military value baseline for each installation and will remain constant. The analytical approach will identify a set of sites for retention that maximize retained military value while preserving the capacity required to meet the forces needs. The focus of this analysis is to preserve the appropriate mix of installations that will provide the capacity and capability needed to support the strategic focus of DoD. The outcome will identify munitions and armaments locations with critical processes, skilled workforces, flexibility, sources for relocation of workload, and opportunities for JOINT transformation. The data gathered will allow the IJCSG to rank installations based on military value and focus the IJCSG in the right direction for the scenario phase (sites we need to retain or close). Munitions IS a JOINT endeavor and the synergy of the JOINT IJCSG during the scenario phase will allow reductions, realignment and relocation to occur while maintaining support to the warfighters in both peacetime and surging for war.

MAINTENANCE

DoD needs to maintain an organic capability to accomplish adequate depot and combat field support maintenance in order to provide operational and combat ready weapon systems and technologies required by the Joint Chiefs of Staff contingency scenarios. This organic maintenance capability must be sized to ensure support for the projected requirement increases associated with involvement in major contingencies (surge capability) and to provide maintenance capabilities where organic resources have been identified as the last source of repair. Therefore, it is essential for DoD to maintain an organic core logistics capability. This organic core capability must provide the organic depot infrastructure with technology, facilities, equipment, and a highly qualified workforce to support future unforeseen requirements.

Both the depot and combat field support/intermediate maintenance functions must provide maintenance support across a diverse and wide array of weapon systems within DoD. We considered various scoring approaches and the Maintenance Subgroup will assess military value for both depot maintenance and combat field support/intermediate maintenance functions at the commodity group level. The maintenance commodity group level approach to military value ensures that all of the maintenance work performed at both depot and combat field support/intermediate maintenance activities is considered. Each commodity group is the same as defined in the Industrial JCSG BRAC Capacity Analysis Report.

Assessing military value at the commodity level will allow evaluations of common capabilities across all of the Services. For example, locations that provide combat vehicle maintenance and fighter aircraft maintenance will be evaluated as separate groups. All weapon systems/equipment are integral to the joint warfighting effort. Therefore, comparing military value between different commodities is not relevant. For example, military value for combat vehicle maintenance cannot be determined as being more or less important than military value for fighter aircraft maintenance. Determining military value at the commodity level maximizes jointness and enhances efficiencies and effectiveness. The installation/activity roll up or consolidation to determine military value keeps the efforts of BRAC at the service level and detracts from the goal of increasing jointness.

Combat field support/intermediate maintenance capabilities are integrally linked to the location of the operational forces. Military value for intermediate maintenance cannot be fully determined without understanding the services' operational basing locations.
For depot maintenance and combat field support/intermediate maintenance, the Maintenance Subgroup used the DoD military value approach that requires the four selection criteria be weighted to total 100 points. Selection criteria have appropriate attributes developed and these attributes, within each selection criteria, have been weighted for a total of 100 points. Each of these attributes has appropriate metrics developed and the metrics, within each attribute, are weighted for a total of 100 points. The last step in the approach was to develop questions for each of the metrics. These questions, within each metric, were weighted for a total of 100 points.

The Maintenance Subgroup followed this approach, for depot maintenance and combat field support/intermediate maintenance, to weight each selection criteria, attribute, metric, and question. Below are the factors and rationale used to develop and determine the attributes, metrics, questions, and the relative weighting.

- Relative importance with respect to the other elements being considered.
- Ability to collect the data.
- Is the data objective?
- Is the data measurable and will it be a direct measurement or be a surrogate measurement?
- Is the data auditable?
- Is the data reliable?
- Is the data consistent across all Services?
- Is the question a discriminator?
- Professional knowledge and judgment.

Military Value Determination Approach

The Maintenance Subgroup used the following approach to measure military value at the commodity group level:

- Developed attributes for each DoD BRAC criteria
- Developed metrics to measure each attribute
- Developed questions for each metric
- Determined weighting and scoring plan
- Performed a review and a validation of approach
    - Conducted joint service General Officer/SES level "Red Team" review of the attributes, metrics, and questions
    - Performed a "Beta" test of the scoring and weighting approach after the "Red Team" analysis
    - Reviewed all comments and made adjustments

Scoring Mathematics:

The majority of the questions are normalized using either the maximum or minimum score across a commodity group. The following is how this scoring will be determined:

- *Highest Number is Desired*. For questions stating, "The highest number for each commodity group receives maximum points. The remaining numbers will be scored by linear normalization to the highest number.", we will use the following calculation.

  The score (S_i) for commodity group *i* for the question is $S_i = \frac{x_i}{x_{\max}}$, where x_i = the number for a commodity group *i* and $x_{\max}$ is the maximum score among all same commodity groups reporting. This approach will be adjusted accordingly if averages of the numbers are used to determine the score.

- *Lowest Number is Desired.* For questions stating, "The lowest number for each commodity group receives maximum points. The remaining numbers will be scored by normalization to the lowest number.", we will use the following calculation.

  The score (S_i) for commodity group *i* for the question is $S_i = \frac{x_{\min}}{x_i}$, where x_i is the scored item for site *i* and $x_{\min}$ is the minimum score among all commodity groups

reporting. This approach will be adjusted accordingly if averages of the numbers are used to determine the score.

- *Other Scoring*. Any other scoring approaches used are explained after each question.

FUNCTION: Depot Maintenance

(39%) CRITERIA #1 – The current and future mission requirements and impact on operational readiness of the Department of Defense's total force, including impacts on joint warfighting, training and readiness.

(46%) Attribute: Maintenance Capability

(60%) Metric: Workforce and Skills

1. (35%) Question: For FY 03-FY05, for each commodity group performed, identify the Direct Labor Hours (DLHs) your depot maintenance activity produces.

Rationale: Determines the average DLHs for the commodity group. This measures the depth of the workforce. Because of the differences between the Services, DLHs is the best indicator of relative size.

Scoring: The highest average, for each commodity group, receives maximum points. The remaining averages will be scored by linear normalization to the highest average.

2. (65%) Question: For each commodity group performed, identify and list all of the different direct labor occupational series and number of personnel for each occupational series at your activity for FY03 through FY05. Do not include the different grades within an occupational series.

Rationale: Determines the average number of occupational skills for the commodity group. Identifies the diversity, flexibility and breadth of the workforce.

Scoring: The highest average number of occupation series, for each commodity group, receives maximum points. The remaining numbers will be scored by linear normalization to the highest number.

(25%) Metric: Equipment

1. (100%) Question: For your activity, what is the replacement value for the capital purchases program and what is the capital purchases program investment,

in dollars for FY01 through FY05? Identify other contributed capital assets, in dollars for FY01 through FY05.

Rationale: Shows level of investment in capital equipment.

Scoring: Divide the 5-year investment average by the 5-year equipment replacement value average to get a percentage. The highest percentage receives maximum points. The remaining percentages will be scored by linear normalization to the highest percentage. Points will be applied to all commodity groups produced at that activity.

(15%) Metric: Last Source/Directed Workload

1. (100%) Question: For each commodity group performed, what is the total number of DLHs produced that are identified as Last Source or Directed workload for FY03 through FY05?

Rationale: Identifies the workload that must be performed organically and is difficult and/or more costly to reestablish this capability elsewhere.

Scoring: Determine the average of each category and sum them.

(50%) An activity accomplishing any Last Source or Directed workload will receive maximum points.

(50%) The highest sum will receive maximum points. The remaining sums will be scored by linear normalization to the highest sum.

(31%) Attribute: Interservice and Commercial Partnerships

(67%) Metric: Interservice Workload

1. (100%) Question: For each commodity group performed, identify the total number of DLHs performed for FY03 through FY05 and the total number of Interservice DLHs performed and for what Service (Army, Navy, Air Force, Marine Corps).

Rationale: Shows the ability of a depot to support more that one Service's work, enhancing joint operational readiness.

Scoring: Determine the average for all of the years.

Determine the percentage:
Each Service's Installation Interservice Commodity DLHs divided by Service's Installation Total DLHs for that particular commodity = Interservice DLHs as % of Commodity DLHs

For a Single Service Interservice DLHs ≥ 5% of Individual Commodity DLHs = 1/3 points
For Two Services Interservice DLHs ≥ 10% of Individual Commodity DLHs = 2/3 points
For Three Services Interservice DLHs ≥ 15% of Individual Commodity DLHs = Maximum points

(33%) Metric: Commercial Partnerships

1. (100%) Question: For each commodity group performed, does your depot maintenance activity have public-private partnership(s) that provide organic or commercial direct labor hours? The source is the most current OSD report on Public-Private Partnerships for Depot-Level Maintenance.

Rationale: Shows ability of a depot maintenance activity to capitalize on a commercial sector's capabilities and resources, enhancing joint operational readiness.

Scoring: Yes or No answer. Yes answer receives all the points.

(20%) Attribute: Proximity Considerations

3. (100%) Metric: Integrated Activities

1. (63%) Question: For each commodity group performed, list the operational units (Minimum - Squadron/Battalion) or Distribution Centers located on your installation that receive or provide support.

Rationale: Shows ability of a depot maintenance activity to provide immediate/flexible support to customers, enhancing operational readiness.

Scoring: The highest number of operational units/Distribution Centers for each commodity will receive maximum points. The remaining numbers will be scored by linear normalization to the highest number.

2. (37%) Question: For each commodity group performed, is there a co-located intermediate level maintenance activity with the depot activity that can receive or provide support for that commodity?

Rationale: Shows ability of a depot maintenance activity to provide immediate/flexible support to customers, enhancing operational readiness.

Scoring: Yes or No answer. Yes answer receives all the points.

(3%) Attribute: Quality

(100%) Metric: Quality of Work Performed

1. (100%) Question: For each commodity group performed, how many defects were reported and what are the direct labor hours (defects/Total Hours) for FY01 through FY03?

Rationale: A lower number of defects indicate that a higher quality product is being produced/delivered to the operating forces.

Scoring: Take the sum of all the defects divided by the sum of all of the hours for each commodity group. The lowest average receives maximum points. The remaining averages will be scored by normalization to the lowest average.

(30%) CRITERIA #2 – The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain, and staging areas for use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.

(10%) Attribute: Expansion Potential

(100%) Metric: Buildable Acres

1. (33%) Question: On your installation, are there buildable acres appropriately zoned for maintenance, as of the FY04 Appropriation Act?

Rationale: Establishes the expansion potential by commodity group.

Scoring: Yes or No answer for having buildable acres. Yes answer receives all the points. All commodity groups performed will receive this score.

2. (67%) Question: For each commodity group performed, how many acres are unrestricted and appropriately zoned for maintenance use as of the FY04 Appropriation Act?

Rationale: Establishes unrestricted expansion potential by commodity group. The size of unrestricted buildable acres is important as it shows an installation's potential to be a receiving location.

Scoring: The highest number of acres, for each commodity group, receives maximum points. The remaining numbers will be scored by linear normalization to the highest number.

(60%) Attribute: Facilities

(100%) Metric: Size, Type and Condition of Buildings

1. (100%) Question: For each commodity group performed, based on the FY04 Appropriation Act, identify the FY04 space (in thousand of Square Feet - KSF) by building type and condition code (C-1 through C-4) for all maintenance facility activity codes (FAC) and service category code numbers (CCN).

Rationale: Building condition and size, by type, are important in evaluating military value because they are the only fixed assets that affect the ability to perform the depot maintenance mission. The question identifies the size and condition of the buildings being used for each commodity group for FY04.

Scoring: **(77%)** The percent of the total weighted size (by condition) divided by total size. (Weighted size condition codes: C-1 = 100% of SF, C-2 = 90% of SF, C-3 = 70% of SF, C-4 = 50% of SF). The highest percentage, for each commodity group, receives maximum points. The remaining percentages will be scored by linear normalization to the highest percentage.

(23%) Highest weighted size. The highest number of condition-weighted square footage, for each commodity group, receives maximum points. The remaining numbers will be scored by linear normalization to the highest number.

(30%) Attribute: Maintenance Operation/Environmental Restrictions

(50%) Metric: Operational Restrictions

1. (33%) Question: For each commodity group performed, is maintenance or operational testing constrained by electromagnetic radiation and/or emissions, or are waivers required, as of end of 1st quarter FY04? Indicate which commodity groups are affected by answering yes. List and describe each restriction or waiver and expiration date.

Rationale: Waivers and restrictions to maintenance or operational testing impede performance.

Scoring: Yes or No answer. No answer receives all the points. Permanent waivers will not be considered restrictions.

2. (33%) Question: For each commodity group performed, do noise restrictions or noise abatement procedures, or are waivers required, as of end of 1st quarter FY04, constrain maintenance or operational testing? Indicate which commodity groups are affected by answering yes. List and describe each restriction or waiver and expiration date.

Rationale: Waivers and restrictions to maintenance or operational testing impede performance.

Scoring: Yes or No answer. No answer receives all the points. Permanent waivers will not be considered restrictions.

3. (33%) Question: For each commodity group performed, are there restrictions, other than electromagnetic radiation and/or emissions, noise restrictions/abatement procedures, or are waivers required, as of end of 1st quarter FY04,that restrict/constrain maintenance or operational testing? If there are other restrictions/constraints, indicate which commodity groups are affected by answering yes. List and describe each restriction or waiver and expiration date.

Rationale: Waivers and restrictions to maintenance or operational testing impede performance.

Scoring: Yes or No answer. No answer receives all the points. Permanent waivers will not be considered restrictions.

(50%) Metric: Environmental Capacity

1. (50%) Question: For each commodity group performed, during the performance of maintenance or operational testing, which commodity groups produce air emissions. (Note: emissions are identified in the table of DoD question #211). Answer Yes/No. List and describe any waivers due to expire between FY04 and FY09.

Rationale: Headroom can be determined from capacity DoD question #211. More emissions headroom is desired and shows capacity to expand.

Scoring: There are 8 emissions, each worth 1/8 of the total points. If the answer is yes and headroom is available, the commodity gets maximum points. If the answer is yes and there is no headroom, the commodity gets no points. If the answer is no, the commodity gets maximum points. DoD question #211 determines headroom.

2. (50%) Question: For each commodity group performed, during the performance of maintenance or operational testing, which commodity groups produce industrial wastewater? Answer Yes/No. List and describe any waivers due to expire between FY04 and FY09.

Rationale: Headroom can be determined from DoD question #282. Headroom is the difference between permitted daily capacity and peak outflow. More wastewater headroom is desired and shows capacity to expand.

Scoring: If the answer is yes and headroom is available, the commodity gets maximum points. If the answer is yes and there is no headroom, the commodity gets no points. If the answer is no, the commodity gets maximum points. DoD question #282 determines headroom

(21%) CRITERIA #3 – The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential of receiving locations to support operations and training.

(33%) Attribute: Maintenance Capability

(100%) Metric: Workforce and Skills

1. (40%) Question: For each commodity group performed, list all of the different direct labor occupational series at your activity projected for FY09. Do not include the different grades within an occupational series.

Rationale: Determines the number of occupational skills for the commodity group. Identifies the diversity, flexibility and breadth of the workforce.

Scoring: The highest number of occupation series, for each commodity group, receives maximum points. The remaining numbers will be scored by linear normalization to the highest number.

2. (30%) Question: Identify, by name, any accredited trade schools/colleges/ universities, within 50 miles distance from your activity, which provide training or trained personnel to support future maintenance workforce requirements; note any formal agreements**.**

Rationale: Size of adult secondary educational base provides potential opportunities to support sustainment of the technical workforce.

Scoring: The scoring will be broken into two parts, the highest sum in each section receives maximum points. The remaining sums will be scored by linear normalization to the highest sum. The two scores for each activity will be added and the resultant score will be applied to all commodity groups being performed at that activity.

(**50%)** Half of the points will be based on the total sum of the number of accredited trade schools/colleges/universities.

(50%) Half of the points will be based on the number of accredited trade schools/colleges/universities that have formal agreements.

3. (30%) Question: For each maintenance activity, what is the name of and distance to the nearest Metropolitan Statistical Area (MSA), and what is the total employment listed within the MSA for the following two Major Standard Occupational Classification (SOC) Groups: 49-0000 Installation, Maintenance, and Repair Occupations and selected 51-0000 Production Occupations?

Rationale: Identifies proximity and size of employment base needed to support surge and reconstitution efforts. A closer and larger skill base is desired.

Scoring: The highest score will receive maximum points. The remaining numbers will be scored by linear normalization to the highest number. The score will be applied to all commodity groups being performed at that activity. The following scoring method will be used:

Score = Max Weight * [Distance Score] * [“Relative” Size Skill Base Score]

Where: “Max Weight” is the maximum points assigned to this question.

“Distance Score” is between 0 to 1 measured in the following chart:

Distance Score	**Distance to MSA**
1	Less than or equal to 50 Miles
.5	Between 51 to 75 Miles
.25	Between 76 to 100 Miles
0	Greater than 100 Miles

“Relative” Size Skill Base Score is 0 to 1 measured in the following chart using the listed ratio.

Relative Skill Base Score	**Size of the Market (49-0000 + 51-0000)** **----------** **Size of the Workforce**
1	If Ratio is greater than 10
.75	If Ratio is between 7.5 to 10
.5	If Ratio is between 2.5 to 7.5
.25	If Ratio is between 1.0 to 2.5
0	If Ratio is less than 1

(48%) Attribute: Surge/Reconstitution

(60%) Metric: Maximum Capacity

1. (67%) Question: For each commodity group performed, what is the Maximum Capacity and the Total Capacity for each of the years FY03, FY04, FY05, and FY09?

Rationale: The higher Maximum Capacity Index, expressed as a percentage, is desired. The higher the percentage of change indicates more flexibility to accommodate contingency, mobilization, and future Total Force requirements. This measurement also shows the potential to receive additional maintenance operations for this commodity group. Using a percentage to measure an activity's potential maximum capacity change is not biased to the activity size.

Scoring: Data is available from DoD # 503 and #501. Determine the average index for the identified fiscal years by taking the sum of Maximum Capacity for FY03, FY04, FY05, and FY09 and divide by the sum of the Total Capacity for FY03, FY04, FY05, and FY09. The highest percentage will receive maximum points. The remaining percentages will be scored by linear normalization to the highest percentage.

2. (33%) Question: For each commodity group performed, what is the Maximum Capacity for the years FY03, FY04, FY05, and FY09? Data is available from DoD #501.

Rationale: Higher Maximum Capacity indicates more flexibility to accommodate contingency, mobilization, and future Total Force requirements. This measurement also shows the potential to receive additional maintenance operations for this commodity group. It approximates the ability to meet unknown requirements above current surge.

Scoring: The highest sum will receive maximum points. The remaining sums will be scored by linear normalization to the highest number.

(40%) Metric: Available Capacity

1. (75%) Question: For each commodity group performed, what is the Total Capacity and the Required Capacity for each of the years FY03, FY04, FY05, and FY09?

Rationale: Higher Available Capacity is desired. Higher Available Capacity indicates more flexibility to accommodate contingency, mobilization, and future Total Force requirements. This measurement also shows the potential to receive additional maintenance operations for this commodity group. Available Capacity is capacity that already exists.

Scoring: Data is available from DoD # 501 and #502. Determine the Available Capacity Index percentage by taking the sum of Available Capacity for FY03, FY04, FY05, and FY09 divided by the sum of the Total Capacity for FY03, FY04, FY05, and FY09. Available Capacity = Total Capacity - Required Capacity. The highest percentage will receive maximum points. The remaining percentages will be scored by linear normalization to the highest percentage.

2. (25%) Question: For each commodity group performed, what is the Available Capacity for the years FY03, FY04, FY05, and FY09? The higher Available Capacity is desired.

Rationale: Higher Available Capacity indicates more flexibility to accommodate contingency, mobilization, and future Total Force requirements. This measurement also shows the potential to receive additional maintenance operations for this commodity group. Available Capacity is capacity that already exists.

Scoring: Data is available from DoD # 501 and #502. Available Capacity = Total Capacity - Required Capacity. Determine the sum of Available Capacity for FY03, FY04, FY05, and FY09. The highest score will receive maximum points. The remaining numbers will be scored by linear normalization to the highest number.

(19%) Attribute: Facilities and Transportation Infrastructure

(75%) Metric: Available Building Space

1. (100%) Question: For each commodity group performed, based on the FY04 Appropriation Act, identify the FY09 space (in thousand of Square Feet - KSF) by building type and condition code (C-1 through C-4) all maintenance facility activity codes (FAC) and service category code numbers (CCN). Include the total number of square feet of building space by commodity that is planned/projected to be made available for reconfiguration due to changes in workload mix, retirement of a weapons system, or completion of a MILCON project within your maintenance activity.

Rationale: Using the Total Weighted Size provides an indication of overall condition relative to size. Taking the difference will account for any additional space made available for reconfiguration due to changes in workload mix, retirement of a weapons system, or completion of a MILCON project within your maintenance activity. The greater difference between FY09 and FY04 Total Weighted Size indicates more total potential capacity to accommodate contingency, mobilization, and future Total Force requirements, and the potential to receive additional maintenance operations.

Scoring: Determine the Total Weighted Size the FY09 space in all conditions (Total Weighted Size is calculated using the total square feet by condition code multiplied by the following weights: C-1 = 100% of SF, C-2 = 90% of SF, C-3 = 70% of SF, C-4 = 50% of SF. The weighted square feet of each condition is totaled together.). Determine the Weight difference between the FY09 Total Weighted Size and the FY04 Total Weighted Size (determined in Criteria 2,

Attribute; Facilities). The highest number will receive maximum points. The remaining numbers will be scored by linear normalization to the highest number.

(25%) Metric: Transportation Modes

1. (100%) Question: List your installation's access to strategic transportation modes (e.g., RAIL- rail spur on installation, HIGHWAY- State or Federal interstate highways adjacent to installation, AIR- airports on installation, WATER - water terminal on installation). List the type of transportation modes found.

Rationale: Access to strategic transportation modes offers increased flexibility to support contingencies, mobilization and requirements of the Future Total Force, and the potential to receive additional maintenance operations.

Scoring: Yes or No question for each access point. The Yes answers will be added and the highest sum will receive maximum points. The remaining sums will be scored by linear normalization to the highest sum. The score will be applied to all commodity groups being performed at that activity.

(10%) CRITERIA #4. The cost of operations and the manpower implications.

(45%) Attribute: Direct Labor Costs

(100%) Metric: Direct Labor Costs per Production Hour

1. (100%) Question: For each commodity group performed, what is your organization's cost per produced hour (Total Direct Labor Costs/Total Hours Produced) for FY01 through FY03.

Rationale: An economic indicator of the value received from your direct labor workforce. [Reference DoD Cost Comparability Handbook, Chapter 6].

Scoring: The lowest average number will receive maximum points. The remaining numbers will be scored by normalization to the lowest number.

(45%) Attribute: Other Costs

(100%) Metric: All Other Costs for Production Hour

1. (100%) Question: For each commodity group performed, what are your organization's other production costs (All other cost (minus direct and indirect materiel) /Total Hours) for FY01 through FY03.

Rationale: An economic indicator of the value received from other costs. [Reference DoD Cost Comparability Handbook, Chapter 6].

Scoring: The lowest average number will receive maximum points. The remaining numbers will be scored by normalization to the lowest number.

(10%) Attribute: Workforce and Skills

(100%) Metric: Stability

1. (100%) Question: What is your direct labor attrition rate for FY00 through FY03?

Rationale: A lower attrition rate demonstrates more stability in the workforce.

Scoring: Determine the average attrition rate using FY00 through FY03. The lowest average will receive maximum points. The remaining averages will be scored by normalization to the lowest average. The score will be applied to all commodity groups being performed at that activity.

FUNCTION: Combat Field Support/Intermediate Maintenance

(50%) CRITERIA #1 – The current and future mission requirements and impact on operational readiness of the Department of Defense's total force, including impacts on joint warfighting, training and readiness.

(30%) Attribute: Maintenance Capability

(100%) Metric: Workforce and Skills

1. (50%) Question: For each commodity group performed, list the total number of assigned personnel onboard and the total number of Direct Labor Hours (DLHs) for FY01-FY03.

Rationale: Provides a measure of output by commodity. By commodity group, take the average total production hours for FY01-FY03 divided by the average total number of assigned personnel onboard for FY01-FY03 to determine the number of people per hour.

Scoring: Determine the number of DLHs per assigned personnel onboard. The highest number for each commodity receives maximum points. The remaining numbers will be scored by a linear normalization to the highest number.

2. (50%) Question: For each commodity group performed, what is the total number of DLHs produced for each year FY01 to FY03?

Rationale: Used to determine the depth of the workforce. Because of the differences between the Services, DLHs is the best indicator of relative size.

Scoring Plan: The highest sum for each commodity group receives maximum points. The remaining sums will be scored by a linear normalization to the highest sum.

(5%) Attribute: Interservice

(100%) Metric: Interservice

1. (100%) Question: For each commodity group performed, identify the total number of DLHs performed for FY01 through FY03 and the total number of Interservice DLHs performed and for what Service.

Rationale: Shows ability to support more than one Service's work, enhancing joint operational readiness.

Scoring:

(67%) Determine the percentage:
Each Service's Installation Interservice Commodity DLHs divided by Total Service's Installation DLHs for that particular commodity = Interservice DLHs as % of Commodity DLHs

For a Single Service Interservice DLHs $\geq$ 2% of Individual Commodity DLHs = 1/3 points
For Two Services Interservice DLHs $\geq$ 4% of Individual Commodity DLHs = 2/3 points
For Three Services Interservice DLHs $\geq$ 6% of Individual Commodity DLHs = Maximum points

(33%) The highest average total hours will receive maximum points. The remaining averages will be scored by linear normalization to the highest average.

(65%) Attribute: Proximity Considerations

(85%) Metric: Proximity with DoD Customers

1. (100%) Question: For each commodity group performed, list the DoD customers (Minimum size- Squadron/Battalion) that are located on or within 50 miles of your activity and the number of DLHs for each customer for FY01-FY03.

Rationale: To identify the proximity of DoD customers to the intermediate level maintenance activity. The closer the maintenance activity is to the user provides better support to enhance readiness/mission effectiveness.

Scoring: (50%) Determine the total number of DoD customers for each commodity group that are located on or within 50 miles of your activity. The highest sum receives maximum points. The remaining sums will be scored by a linear normalization to the highest sum.

(50%) Determine the total hours performed for the DoD Customers for each commodity group. The highest sum for each commodity receives maximum points. The remaining sums will be scored by a linear normalization to the highest sum.

(15%) Metric: Proximity to Depot

1. (100%) Question: For each commodity group performed, is your intermediate maintenance activity located on or within 50 miles of a depot that accomplishes like commodity work?

Rationale: To capitalize on shared resources between the intermediate and depot activities to facilitate readiness.

Scoring: Yes or No answer. Yes answer receives all the points

(30%) CRITERIA #2 – The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain, and staging areas for use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.

(10%) Attribute: Expansion Potential

(100%) Metric: Buildable Acres

1. (33%) Question: On your installation, are there buildable acres appropriately zoned for maintenance, as of the FY04 Appropriation Act?

Rationale: Establishes the expansion potential by commodity group.

Scoring: Yes or No answer for having buildable acres. Yes answer receives all the points. All commodity groups performed will receive this score.

2. (67%) Question: For each commodity group performed, how many acres are unrestricted and appropriately zoned for maintenance use as of the FY04 Appropriation Act?

Rationale: Establishes unrestricted expansion potential by commodity group. The size of unrestricted buildable acres is important as it shows an installation's potential to be a receiving location.

Scoring: The highest number of acres, for each commodity group, receives maximum points. The remaining numbers will be scored by linear normalization to the highest number.

(60%) Attribute: Facilities

(100%) Metric: Size, Type and Condition of Facilities

1. (100%) Question: For each commodity group performed, based on the FY04 Appropriation Act, identify the FY04 space (in thousand of Square Feet - KSF) by building type and condition code (C-1 through C-4) for all maintenance facility activity codes (FAC) and service category code numbers (CCN).

Rationale: Building condition and size, by type, are important in evaluating military value because they are the only fixed assets that affect the ability to perform the combat field support/intermediate maintenance mission. The question identifies the size and condition of the buildings being used for each commodity group for FY04.

Scoring: **(77%)** The percent of the total weighted size (by condition) divided by total size. (Weighted size condition codes: C-1 = 100% of SF, C-2 = 90% of SF, C-3 = 70% of SF, C-4 = 50% of SF). The highest percentage, for each commodity group, receives maximum points. The remaining percentages will be scored by linear normalization to the highest percentage.

(23%) Highest weighted size. The highest number of condition-weighted square footage, for each commodity group, receives maximum points. The remaining numbers will be scored by linear normalization to the highest number.

(30%) Attribute: Maintenance Operation/Environmental Restrictions

(50%) Metric: Operational Restrictions

1. (33%) Question: For each commodity group performed, is maintenance or operational testing constrained by electromagnetic radiation and/or emissions, or are waivers required, as of end of 1st quarter FY04? Indicate which commodity groups are affected by answering yes. List and describe each restriction or waiver and expiration date.

Rationale: Waivers and restrictions to maintenance or operational testing impede performance.

Scoring: Yes or No answer. No answer receives all the points. Permanent waivers will not be considered restrictions.

2. (33%) Question: For each commodity group performed, do noise restrictions or noise abatement procedures, or are waivers required, as of end of 1st quarter FY04, constrain maintenance or operational testing? Indicate which commodity groups are affected by answering yes. List and describe each restriction or waiver and expiration date.

Rationale: Waivers and restrictions to maintenance or operational testing impede performance.

Scoring: Yes or No answer. No answer receives all the points. Permanent waivers will not be considered restrictions.

3. (33%) Question: For each commodity group performed, are there restrictions, other than electromagnetic radiation and/or emissions, noise restrictions/abatement procedures, or are waivers required, as of end of 1st quarter FY04,that restrict/constrain maintenance or operational testing? If there are other restrictions/constraints, indicate which commodity groups are affected by answering yes. List and describe each restriction or waiver and expiration date.

Rationale: Waivers and restrictions to maintenance or operational testing impede performance.

Scoring: Yes or No answer. No answer receives all the points. Permanent waivers will not be considered restrictions.

(50%) Metric: Environmental Capacity

1. (50%) Question: For each commodity group performed, during the performance of maintenance or operational testing, which commodity groups produce air emissions. (Note: emissions are identified in Table of DoD question #211). Answer Yes/No. List and describe any waivers due to expire between FY04 and FY09.

Rationale: Headroom can be determined from capacity DoD question #211. More emissions headroom is desired and shows capacity to expand.

Scoring: There are 8 emissions, each worth 1/8 total points. If the answer is yes and headroom is available, the commodity gets maximum points. If the answer is yes and there is no headroom, the commodity gets no points. If the answer is no, the commodity gets maximum points. DoD question #211 determines headroom.

2. (50%) Question: For each commodity group performed, during the performance of maintenance or operational testing, which commodity groups produce industrial wastewater? Answer Yes/No. List and describe any waivers due to expire between FY04 and FY09.

Rationale: Headroom can be determined from DoD question #282. Headroom is the difference between permitted daily capacity and peak outflow. More wastewater headroom is desired and shows capacity to expand.

Scoring: If the answer is yes and headroom is available, the commodity gets maximum points. If the answer is yes and there is no headroom, the commodity gets no points. If the answer is no, the commodity gets maximum points. DoD question #282 determines headroom

(15%) CRITERIA #3 – The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential of receiving locations to support operations and training.

(40%) Attribute: Maintenance Capability

(100%) Metric: Workforce and Skills

1. (70%) Question: For each commodity group performed, what is the number of intermediate maintenance personnel assigned and what are the total non-deployable intermediate maintenance personnel assigned for FY01, FY02, and FY03?

Rationale: This question indicates the depth of the workforce by commodity group.

Scoring: Determine the percentage of the intermediate maintenance personnel, for each commodity group, as compared to the total intermediate maintenance manpower assigned. The highest percentage receives maximum points. The remaining percentages will be scored by linear normalization to the highest percentage.

2. (15%) Question: Identify, by name, any accredited trade schools/colleges/ universities, within 50 miles distance from your activity, which provide training or trained personnel to support future maintenance workforce requirements; note any formal agreements**.**

Rationale: Size of adult secondary educational base provides potential opportunities to support sustainment of the technical workforce.

Scoring: The scoring will be broken into two parts, the highest sum in each section receives maximum points. The remaining sums will be scored by linear

normalization to the highest sum. The two scores for each activity will be added and the resultant score will be applied to all commodity groups being performed at that activity.

(50%) Half of the points will be based on the total sum of the number of accredited trade schools/colleges/universities.

(50%) Half of the points will be based on the number of accredited trade schools/colleges/universities that have formal agreements.

3. (15%) Question: For each maintenance activity, what is the name of and distance to the nearest Metropolitan Statistical Area (MSA), and what is the total employment listed within the MSA for the following two Major Standard Occupational Classification (SOC) Groups: 49-0000 Installation, Maintenance, and Repair Occupations and selected 51-0000 Production Occupations?

Rationale: Identifies proximity and size of employment base needed to support surge and reconstitution efforts. Closer and larger skill base is desired.

Scoring: The highest score will receive all of the points. The remaining numbers will be scored by linear normalization to the highest number. The score will be applied to all commodity groups being performed at that activity. The following method will be used:

Score = Max Weight * [Distance Score] * [“Relative” Size Skill Base Score]

Where: “Max Weight” is the maximum points assigned to this question.

“Distance Score” is between 0 to 1 measured in the following chart:

Distance Score	**Distance to MSA**
1	Less than or equal to 50 Miles
.5	Between 51 to 75 Miles
.25	Between 76 to 100 Miles
0	Greater than 100 Miles

“Relative” Size Skill Base Score is 0 to 1 measured in the following chart using the listed ratio.

Relative Skill Base Score	**Size of the Market (49-0000 + 51-0000)** **----------** **Size of the Workforce**
1	If Ratio is greater than 10
.75	If Ratio is between 7.5 to 10

.5	If Ratio is between 2.5 to 7.5
.25	If Ratio is between 1.0 to 2.5
0	If Ratio is less than 1

(60%) Attribute: Proximity Considerations

(70%) Metric: Proximity to DoD Customers

1. (100%) Question: For each commodity group performed, list the DoD customers (Minimum size - Squadron/Battalion) that are located on or within 50 miles of your activity and the number of DLHs for each customer for FY03.

Rationale: Proximity of customers to the intermediate level activity enhances mission readiness and effectiveness.

Scoring: The more total direct labor hours, by commodity, in support of activities within 50 miles has the higher value. The highest number of DLHs, for each commodity, receives maximum points. The remaining sums will be scored by linear normalization to the highest sum.

(30%) Metric: Proximity to Depot.

1. (100%) Question: For each commodity group performed, is your intermediate maintenance activity located on or within 50 miles of a depot that accomplishes like commodity work?

Rationale: To capitalize on shared resources between the intermediate and depot activities to facilitate readiness.

Scoring: A Yes or No answer. Yes answer receives all the points.

(5%) CRITERIA #4. The cost of operations and the manpower implications.

(100%) Attribute: Output per Manpower

(100%) Metric: Output per Manpower

1. (100%) Question: For each commodity group performed, list the average total number of assigned personnel onboard and the average total number of man hours for FY01-FY03.

Rationale: An economic indicator of the value received from your labor workforce.

Scoring: The index, by commodity group performed, is determined by taking the sum of the total production hours for FY01-FY03 divided by the sum of the total number of assigned personnel onboard for FY01-FY03. The highest index for each commodity receives maximum points. The remaining indices will be scored by a linear normalization to the highest index.

SHIP OVERHAUL AND REPAIR

The Ship Overhaul and Repair Subgroup determined there were two subordinate functions for analysis, depot level and intermediate level. Because these subordinate functions for ship repair are similar, but require different levels of skills, resources, and mission, some identical attributes, metrics and questions are used in each subordinate function.

For the capacity analysis, commodities were prescribed for data collection. That approach allows comparison of capabilities and capacities with non-ship maintenance activities. For the military value analysis, data will be collected for functions at the activity level. This is less burdensome for the activities and yields sufficient data for an accurate ship overhaul and repair military value analysis.

The attributes and metrics for each criterion were carefully selected and weighted to give appropriate value, but not excessive value to any one criterion, attribute, metric or question. A macro sensitivity analysis was performed to validate this approach.

The Department of Defense military value approach was applied, which requires the Selection Criteria #1 through #4 total weight be 100 points or percent. The attributes, metrics and questions under each criterion likewise each total 100%. This approach allows a simple "roll-up" of percent military value by function and activity. Consistent with this approach, the scoring for each question gives 100% or full value to the best question response score with linearly corresponding scores for the other activity responses; that is, $S_i = \frac{x_i}{x_{\max}}$. When the best score is the minimum, the relationship is $S_i = \frac{x_{\min}}{x_i}$.

A total of 23 questions are included for Data Call #2. Four additional questions will be scored using data captured by Data Call #1. These 27 questions are listed in Section 3 of this report.

FUNCTION: Depot

The weights of the four criteria are nearly equal. Criteria 3 is weighted the highest, because we value the ability to meet long-term adaptability, mobilization and contingency requirements. Criteria 1, 2, and 3 were weighted slightly higher than Criteria 4, as mission-effectiveness is paramount. Criteria 1 reflects the current capabilities, which are likely to remain valued in the foreseeable future. Criteria 2 on facilities is equally weighed with the ability to meet needs because Criteria 1 and 2 together represent the in-place features of the shipyards.

(25%) CRITERIA #1 - The current and future mission capabilities and the impact on operational readiness of Department of Defense's total force, including the impact on joint warfighting, training and readiness.

(25%) Attribute: Proximity Considerations

Rationale: Proximity to the Fleet, other government installations and private sector maintenance capabilities enables more effective and efficient support. Environmental constraints are included because geographic considerations such as proximity to urban areas contribute to limitations on industrial operations and ability to provide Fleet support.

(35%) Metric: Proximity to Ship Home Ports

(100%) Question: For ship maintenance activities, how many fleet units are home-ported at your installation and within 50 mi. Identify those ship classes receiving maintenance from your activity; identify the number of each type of maintenance event?

Note: Number of ship class receiving maintenance is the number served regardless of homeport. Installations should measure the distance to other installations using http://dtod1.mtmc.army.mil/. Distances should be one-way. Do not include ships accounted for in the homeport column in the within 50 mi column.

See Section 3 Ship Overhaul and Repair Question 1 for table.

Rationale: We value proximity to ship homeports because sites nearer the customer provide better repair resources. In particular ships near the ship maintenance activities have better access to technical expertise and equipment capabilities to correct equipment problems. Close location allows quicker response times and thus more effective support. Finally, close location imposes less disruption in sailor's lives when assigned to the ship maintenance activity for maintenance availability. The distance of 50 mi was chosen as the distance a ship could travel in half a day from setting sea and anchor detail to securing. A half-day was chosen as the amount of time a ship would likely spend to receive intermediate maintenance.

Scoring: The greater the number of ships(weighted proportionally by ship size in tons) in close proximity, the higher the activity score, as expressed below.
The score for activity *i* is $S_i = .5x_i + .5y_i$ where

$$x_i = \frac{t_i}{t_{\max}},$$

$t_i =$ number of ship types homeported at or within 50 miles of activity *i*,

$$y_i = \frac{n_i}{n_{\max}},$$

$$n_i = \sum_c z_c h_{ic} + .5\sum_c z_c f_{ic},$$

z_c is the standard tonnage of ship type *c*, h_{ic} is the number of ships of type *c* homeported at activity *i*, f_{ic} are the number of ships of type *c* homeported within 50 miles of activity *i* (but not

at *i*) and *c* indexes the ship types. z_c will be obtained from Navy Fact File (www.chinfo.navy.mil/factfile/ffiletop.html)

(25%) Metric: Proximity to Other DoD

(100%) Question: For ship maintenance activities identify the name of DoD installations within 350 mi of your installation that have depot or intermediate maintenance capability**.**

Note: Installations should measure the distance to other installations using http://dtod1.mtmc.army.mil/. Distances should be one-way. Include only installations not activities within a fence-line.

Installation name	Distance	Depot (Yes/No)	Intermediate (Yes/No)

Rationale: Proximity to other DoD facilities provides for the opportunity to share maintenance capabilities and workload. Sharing maintenance capabilities can allow facilities to complement each other and provide better service to the Fleet. Sharing workload permits more efficient use of resources. 350 mi was chosen as distance that constitutes a DoD automobile travel day according to Joint Federal Travel Regulations (NAVSO P-6034)

Scoring: The greater the number of installations (weighted by close proximity) with depot or intermediate maintenance capability, the higher the score as expressed below.

The score for activity *i* is

$S_i = .34n_i + .33d_i + .33t_i$ where

n_i is activity *i*'s number score, $n = \frac{k_i}{k_{\max}}$; where $k_i = \sum_j \begin{cases} .02x_i & \text{if } x_i \le 50 \\ 1 & \text{if } x_i > 50 \end{cases}$

d_i is activity *i*'s distance score, $d_i = \frac{y_i}{y_{\max}}$,

t_i is activity *i*'s type score $t_i = \frac{z_i}{z_{\max}}$,

x_i is the number of installations listed within 350 miles of site *i*,

$y_i = \sum_j b_{ij}$

$$b_{ij} = \begin{cases} 1 & \text{if the distance between activity i and installation } j \le 50 \\ .2 + .016(100 - \text{distance}) & 50 < \text{if the distance between activity i and installation } j \le 100 \\ .2 & 100 < \text{if the distance between activity i and installation } j \le 350 \end{cases}$$

$$z_i = \sum_j c_{ij} \ ,$$

$$c_{ij} = \begin{cases} 1 & \text{if installation j has only an intermediate or only a depot maintenance facility} \\ 2 & \text{if installation j has both intermediate and depot maintenance facilities} \end{cases}$$

j indexes the listed other close installations.

(25%) Metric: Proximity to Ship Support Activities

(100%) Question: For ship maintenance activities, what non-DoD ship support maintenance capabilities/companies has your activity contracted with or concluded an agreement for maintenance services?

Note: Installations should measure the distance to other installations from main gate to main gate using http://dtod1.mtmc.army.mil/. Contract/agreements include ISSA, MOA, MOU, etc.
For Total $ Value, answer in FY 03 dollars that are expended on the end item, for FY99 through FY03. Number of contracts equals Delivery Orders and contracts awarded.

Contractor Name	End Product (Service /item)	Distance	Number of contracts/ agreements in FY 99	Number of contracts/ agreements in FY 00	Number of contracts/ agreements in FY 01	Number of contracts/ agreements in FY 02	Number of contracts/ agreements in FY 03	Total $ (K) value

Rationale: The number of facilities and contracts as well as the extent of working relationships with non-DoD agencies and private sector companies provides the shipyard with additional resources. The relationships can help the shipyard meet requirements when the capacity or skills are not resident at the shipyard, thus allowing the depot to complete work packages otherwise not possible or more efficiently. The interaction with the private sector also can provide exposure to different practices, emerging technologies and a potential source of skilled labor, allowing the depot to evaluate alternative practices and adopt the best. The number of contracts, trend, and value represent the depth of the interaction with the private sector.

Scoring: The sum of: contractors; distance weighted by proximity; contracts trend (number of contracts per fiscal year); and the total value of the contracts, as expressed below.

The score for activity *i* is:

$S_i = .25k_i + .25d_i + .25c_i + .25v_i$ where

k_i is activity i's number score, where $k_i = \sum_j \begin{cases} .02x_i & \text{if } x_i \le 50 \\ 1 & \text{if } x_i > 50 \end{cases}$

and x_i = the number of contractors,

d_i is activity i's distance score, $d_i = \dfrac{y_i}{y_{\max}}$,

c_i is activity i's number of contracts trend score $c_i = .9\left(\dfrac{z_i - z_{\min}}{z_{\max} - z_{\min}}\right) + .1$ if the activity reports any contracts and $c_i = 0$ if the activity does not report any contracts. z_i is the slope coefficient obtained from an ordinary least squares regression using number of contracts and a constant as the dependent variables and year as the independent variable, and z_{max} and z_{min} are the maximum and minimum z_i among activities reporting any contracting

$v_i = \dfrac{w_i}{w_{\max}}$ where w_i is the total value of contracts for an activity, $w_{\max}$ is the highest number of reported contracts

y_i is the number of installations listed within 350 miles of site I,

$$y_i = \sum_j b_{ij}$$

$$b_{ij} = \begin{cases} 1 & \text{if the distance between activity i and installation } j \le 50 \\ .2 + .016(100 - \text{distance}) & 50 < \text{if the distance between activity i and installation } j \le 100 \\ .2 & 100 < \text{if the distance between activity i and installation } j \le 350 \end{cases}$$

- End product is information for scenario development

(15%) Metric: Environmental Compliance and Permit Capacity

(100%) Question: Information scored: How many constraints by environmental issues, does your facility have with respect to how your activity conducts operations in FY 03?

Data collected in DOD Capacity Data Call questions numbered 199, 200, 201, 215, 218, 219, 238, 241, 245, 249, 250, 252, 254, 256, 257, 259, 260, 261, 263, 264, 284.

Rationale: Environmental restrictions limit industrial operations inhibiting mission accomplishment.

Scoring: An activity's score is the minimum number of all restrictions reported divided by the activity's total number of reported restrictions, as expressed below.

The score for activity *i* is $S_i = \frac{x_{\min}}{x_i}$ where x_i is the count of the listed DoD questions that the activity reports any restriction, and x_{min} is the minimum count among the responding activities. A DoD question is counted only once whether there are only one or multiple restrictions reported in that question. If x_{min}=0, then S_i=1 for activities reporting x_i=0, and $S_i = \frac{1}{x_i}$ for all other activities.

(50%) Attribute: Workload Classification

Rationale: A Naval ship cannot meet Fleet material readiness requirements without the breadth, experience and capabilities that a ship maintenance activity performs. This also represents the activity's ability to contribute to DoD's current and future mission readiness.

(30%) Metric: Specialized Capabilities

(100%) Question: For ship maintenance activities, has your ship maintenance activity been designated as having a specialized capability / skills or certifications?

Note: The second column is to capture capabilities, skills, or certifications that have been used in the last two years (FY 02/FY03). Use column four only for description of other item listed by activity.

See Section 3 Ship Overhaul and Repair Question 4 for table.

Rationale: Ship maintenance activities have developed many specialized capabilities, which are mandatory to support complex ship overhaul and repair. These include critical processes and specialized capabilities necessary for ship maintenance.

Scoring: The total number of capabilities identified by an activity divided by the highest number reported by any activity, as expressed below.

$S_i = \frac{x_i}{x_{\max}}$,where

$x_i=3c_i+2r_i+m_i$,

c_i is the number of responses activity *i* reports it has that are in the "capability" column below,

r_i is the number of certifications activity *i* reports it has that are in the "certification" column below,

m_i is the number of capabilities activity *i* reports it has that are in the "machine/equipment" column below, and

x_{max} is the maximum x_i reported.

Applies to all uses of this data in all criteria, attributes, and metrics:
Use the following multiplication factors for determining the capabilities score above.

Capability (x3)	Machine/Equipment (x1)	Certification (x2)
Ship class engineering and planning yard function	Thermal arc flame spray	Authority to perform Naval nuclear propulsion work
Nuclear powered ship reactor refueling capability and facility	Lathe, turret, cnc	Qualification to perform submarine safety (SUBSAFE) work
Capacity to install and service helicopter recovery systems aboard ship	Lathe, engine shaft	Dive unit qualified for water-borne propeller replacement, hydrophone repair, anchor repair
Perform submarine mast and antenna repair	Lathe, boring – propeller shafts	Other
Specialized experience in advanced technologies in Deep Ocean submergence platforms	Furnace, Carbon Arc	
Perform surface ship antenna repair	Cutting machine, gas – Cutting steel plate into structural shapes	
Periscope Repair & Test Facility	Furnace, Heat treating – heat treating/stress relieving large forgings	
Other	Mill, boring & turning – Machining of large mechanical components	
	Balancing machine – balancing large work pieces (propellers)	
	Cutting machine, NC, flame/plasma – cutting structural shapes from metal plate	
	Oven, vacuum drying – rapid drying of large electrical components (motors, gens)	
	Decarburization system – remove carbon from molten steel	
	Machine center, turning	
	Furnace, heat treating, car type – heat treating/stress relieving large propellers	
	Battery charger, submarine	
	Mill, boring horizontal, CNC	
	Grinder, cylindrical – precision grinding	
	Honing machine, horizontal – 32” dia to 25’ long	
	Press, forging	
	Thermal spray/blast system – coatings to machinery parts	
	Furnace system – induction melting of metal for casting various components	
	Welder, robotic	
	Machining Center, CNC – large mechanical components	
	Radiography Imaging system – radiography QA inspection of foundry castings	

	Laser cutting machine, CNC	
	Milling Machine, CNC – Mfg wooden patterns for foundry casting molds	
	Mould conveyors – continuous casting of steel ingots	
	Auto propeller opt. Measurement syst – laser measurement of ship's propellers	
	Plasma/oxy cutting table, numerical control	
	Punching Machine, metal, turret type	
	Acoustical Test Facility – testing of transducers and hydrophones	
	Fatigue Test Tank Facility – Cyclical hydrostatic pressure testing of hull models and matl	
	Computer systems	
	Engineering Data Management Info and Control System	
	Boring Vertical MIL	
	Lathe, hollow spindle	
	Shaft Lathe	
	Lathe, boring, single end	
	Fastener workstation 6-axis CNC mill – turn center	
	Gyro test station	
	CNC Horizontal Multi-tool/ Program Center	
	Large 14" Pipe Bender	
	CNC Pipe Tee/ Branch Extrusion/ Cutting Center	
	Industrial Laboratory (Material Testing)	
	Antenna Range	
	5 axis Horizontal Machining Centers	
	Capacity to do weight tests using water bags	
	Other	

(25%) Metric: Ship Type/Class Serviced

(100%) Question: For ship maintenance activities, how many fleet units are home-ported at your installation and within 50 mi. Identify those ship classes receiving maintenance from your activity; identify the number of each type of maintenance event?

Note: Number of ship class receiving maintenance is the number served regardless of homeport. Installations should measure the distance to other installations using

http://dtod1.mtmc.army.mil/. Distances should be one-way. Do not include ships accounted for in the homeport column in the within 50 mi column.

See Section 3 Ship Overhaul and Repair Question 1 for table

Rationale: The ship maintenance activity's recent experience on different ship classes represents accumulated expertise and knowledge. The greater breadth of classes served demonstrates depot suitability for a larger scope of maintenance capacity.

Scoring: The activity's score is the number of different ship classes that the activity has serviced, divided by the highest number reported by any activity.

The score for activity *i* is $S_i = \frac{t_i}{t_{\max}}$ where

$t_i =$ number of different ship types receiving maintenance from activity *i* and t_{max} is the maximum of the t_i.

(25%) Metric: Last Source

(100%) Question: For ship maintenance activities, has your ship repair activity been designated by a service or government agency as the last source for any ship type/ product? If so, identify the number of DLH used to produce that product and if a specialized capability is required.

Product	Service/ Agency designating activity as last source	Total DLH used to produce FY 99	Total DLH used to produce FY 00	Total DLH used to produce FY 01	Total DLH used to produce FY 02	Total DLH used to produce FY 03	Specialized capability required (Y/N)

Rationale: For some products, a ship maintenance activity has been designated the "last source". In this situation, other activities do not have the capability or the capacity to perform this work and DoD relies on the "last source" activities for these products.

Scoring: The sum of: last source products produced; last source trend (number of last source products per fiscal year); and DLHs used for last source production, as expressed below.

The score for activity *i* is $S_i = .5p_i + .3t_i + .2m_i$ where p_i is site *i*'s product score, t_i is activity *i*'s trend score, and m_i is activity *i*'s DLH score.

The product score for activity *i* is $p_i = \frac{x_i}{x_{\max}}$ where x_i is the number of different last source products the activity identifies, and x_{max} is the maximum among all responding activities.

The trend score for activity *i* is $t_i = .9\left(\frac{y_i - y_{\min}}{y_{\max} - y_{\min}}\right) + .1$ if the site reports any last source workload and $t_i=0$ if the site reports no last source workload. y_i is the slope coefficient obtained from an ordinary least squares regression using DLH and a constant as the dependent variables and year as the independent variable, and y_{max} and y_{min} are the maximum and minimum y_i among activities reporting any last source workload.

The DLH score for activity *i* is $m_i = \frac{z_i}{z_{\max}}$, where z_i is the sum of last source DLH worked from the fiscal years 1999 through 2003, and z_{max} is the maximum of the z_i.

(20%) Metric: Type of Ship Availabilities Performed

(100%) Question: For ship maintenance activities, how many fleet units are home-ported at your installation and within 50 mi. Identify those ship classes receiving maintenance from your activity; identify the number of each type of maintenance event?

Note: Number of ship class receiving maintenance is the number served regardless of homeport. Installations should measure the distance to other installations using http://dtod1.mtmc.army.mil/. Distances should be one-way. Do not include ships accounted for in the homeport column in the within 50 mi column.

See Section 3 Ship Overhaul and Repair Question 1 for table

Rationale: The depot's recent experience performing different availabilities represents accumulated expertise and knowledge. A greater breadth of availabilities demonstrates depot suitability for a larger scope of maintenance. The distance of 50 mi was chosen as the distance a ship could travel in half a day from setting sea and anchor detail to securing. A half-day was chosen as the amount of time a ship would likely spend to receive intermediate maintenance.

Scoring: The activity's score is the number of availabilities completed, each weighted by complexity, as expressed below.

The score for activity *i* is $S_i = \frac{n_i}{n_{\max}}$ where

$n_i = r_i + .8a_i + .6b_i + .4c_i$,

r_i is the number of refueling overhauls (RCOH) performed,
a_i is the number of ROH, COH and DPIA overhauls performed,
b_i is the number of other docking overhauls DSRA, EDSRA, DRAV, DMP, DPMA performed,
c_i is the number of non-docking overhauls PIA, POM, RAV, CN, INACT, ERP,EOH, PMA, SRA performed, and
n_{max} is the maximum weighted score reported.

(25%) Attribute: Workforce and Skills

Rationale: Specialized skills and workforce availability are a key component of production. They are the intellectual capital, which the ship maintenance activity must use and invest in to maintain current and future readiness.

(40%) Metric: Specialized Skills and Certifications

(100%) Question: For ship maintenance activities, has your Ship maintenance activity been designated as having a specialized capability / skills or certifications?

Note: The second column is to capture capabilities, skills, or certifications that have been used in the last two years (FY 02/FY03). Use column four only for description of other item listed by activity.

See Section 3 Ship Overhaul and Repair Question 4 for table

Rationale: Ship maintenance activities have developed many specialized capabilities, which are mandatory to support complex ship overhaul and repair. These include critical processes, specialized capabilities and worker skills necessary for ship maintenance.

Scoring: The total number of skills and certifications used in the last two years by an activity divided by the highest number reported by any activity, as expressed below.

$$S_i = \frac{y_i}{y_{\max}}$$

y_i is the score for capabilities/ skills used in last two years
where

$y_i = 3c_i + 2r_i + m_i$,

c_i is the number of responses activity i reports as used in the last two years that are in the "capability" column in the scoring table,

r_i is the number of certifications activity i reports as used in the last two years that are in the "certification" column in the scoring table,

m_i is the number of capabilities activity i reports as used in the last two years that are in the "machine/equipment" column in the scoring table, and

y_{max} is the maximum y_i reported.

Applies to all criteria, attributes, and metrics:
Use the following multiplication factors for determining the score above.
See Criteria 1, Workload Classification Attribute, Specialized Capabilities Question for scoring table

(35%) Metric: Quantity of Skilled Workers

(100%) Question: For Naval shipyards, for all shops provide your most current work force summary broken out in the categories below.

Note: Shops are defined as employees working in the following commodity groups: Heavy Fabrication, Foundry, Forge, Sheet Metal, Welding, Inside Machine, Marine (Outside) Machine, Boiler, Electrical, Piping, Wood Crafting, Shipwright, Electronics, Paint, Cranes & Rigging, Services, Tool Manufacture, Optical Instruments, Plastic Fabrication, Air Condition & Refrigeration, Environmental and Safety, Hazardous Material, Nuclear Engineering & Planning, Radiological Engineering and Health, Radiological Monitoring and Support, Nuclear Quality Assurance, Nuclear Project Management, Business Support, Nuclear Testing, Non-Nuclear Engineering & Planning, Non-Nuclear Quality Assurance, Non-Nuclear Project Management, Non-Nuclear Testing, Calibration.

First Line Supervisors	Journeymen	Apprentices

Rationale: The size and experience of the skilled workforce is a measure of the ability to meet production and contingency requirements.

Scoring: The activities score is a weighted score of the number of journeymen and apprentices divided by the sum of journeymen, apprentices, and first line supervisors reported by an activity, as expressed below.

The score for activity *i* is $S_i = .7\left(\frac{t_i}{t_{\max}}\right) + .3\begin{cases} \frac{x_i}{\bar{x}} & \text{if } x_i \le \bar{x} \text{ and } \bar{x} \ge .35 \\ \frac{2\bar{x} - x_i}{\bar{x}} & \text{if } x_i > \bar{x} \text{ and } \bar{x} \ge .35 \\ \frac{x_i}{.35} & \text{if } x_i \le \bar{x} \text{ and } \bar{x} < .35 \\ \frac{.7 - x_i}{.35} & \text{if } x_i > \bar{x} \text{ and } \bar{x} < .35 \end{cases}$ where

$x_i = \frac{.7 j_i + .3 a_i}{t_i}$,

j_i is the number of journeymen at activity *i*,

a_i is the number of apprentices at activity *i*,

t_i is the total number of journeymen, apprentices, and first-line supervisors at activity *i*, and

$\bar{x}$ is the average of the x_i.

(The different scoring depending on the mean relative to .35 is needed in case the average is very low, and there is one site that has a much higher x_i than the others. The scoring above is essentially an inverted "V", with a point at the mean getting 1, and falling off on both sides.)

(25%) Metric: Workforce Development Opportunities

(100%) Question: For Naval shipyards, how many hours of training were expended on the job, and how many dollars were provided to personnel for training during the listed fiscal years?

Note: Cost for apprentice program (row 1) should not be included in continuing education program (row 2).

	FY-02	FY-03
Funds expended for the apprenticeship program		
Funds expended to compensate workforce for continuing education, technical schools, maintenance of certifications, and college degreed programs.		
How many hours of training does you activity provide to each workforce employee for training or continuing education in support of maintaining trade skill technical experience for the listed years?		
Number of employees enrolled in training or continuing education in support of maintaining trade skill technical experience for the listed years?		
Number of apprentices enrolled in program each year.		
Number of apprentices that graduate each year.		
What percent of apprentices qualify for journeyman at the end of their apprenticeship for the listed years below?		

Rationale: Training and development programs are the key to maintaining the necessary ship maintenance and repair workforce. We evaluate both continuing education programs and apprenticeship programs because it is necessary to keep skills updated and to have a program that replenishes the skill base as the existing workforce attrites. In continuing education, we measure the strength by the funding and time devoted to training. In the apprenticeship program, we measure the strength by the size of the program and by how the site benefits from the program in graduating and retaining journeymen.

Scoring: The sum of the average of FY 02 and 03: training hours; the percent of apprentices that graduated; percentage of apprentices that become journeymen; and percentage of graduates still employed, as expressed below.

Activity score is $S_i = \frac{x_i}{x_{\max}}$, where x_i is activity workforce score; $x_{\max}$ is the highest workforce score reported,

$$x_i = \left(\frac{h_{02} + h_{03}}{2} \right).4 + \left(\frac{e}{g} \right).4 + (a).1 + .1k \ )$$

h_{yr} is number of training hours in year yr at activity i,

$e = \left(\frac{c_{02} + c_{03}}{2} \right)$, where c_{yr} is the number of apprentices graduated in year yr at activity i

$g = \left(\frac{d_{02} + d_{03}}{2} \right)$ where d_{yr} is the number of apprentices enrolled in year yr at activity i

$a = \left(\frac{f_{02} + f_{03}}{2} \right)$, f_{yr} is the percentage of apprentice graduates that become journeymen in year *yr* at activity *i*

k is $k = \left(\frac{j_{02} + j_{03}}{2} \right)$, j_{yr} is the percentage of apprentice graduates still employed.

(25%) CRITERIA #2 - The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval and air forces throughout a diversity of climate and terrain areas and staging areas for the use of Armed Forces in homeland defense missions) at both existing and potential receiving locations.

(100%) Attribute: Facilities

Rationale: A ship maintenance activity's facilities are a fundamental enabler for accomplishing its mission. Dry docks and piers are the primary location where ship maintenance events take place. The industrial buildings and specialized facilities provide the supporting production areas and capabilities to conduct ship overhaul and repair.

(45%) Metric: Dry Dock Capacity

(100%) Question: For ship maintenance activities, list the following structural characteristics of each graving dry dock at your facility. Do not include non-operational dry docks.

Note: Assume 6-feet high standard blocking. Indicate if floatation assistance is required by including an asterisk in column 3 after ship class. Condition code provided by iNFADS (Navy Facility Asset Database System)

Dry dock number	Condition code	Largest ship class that dry dock can accommodate	Number of cranes serving dry dock	Maximum weight lifting capacity at the dry dock (tons)	Nuclear certified

Rationale: A significant amount of ship repair work can only be done in a dry dock, making the suitability of the dry dock the crucial facility in a depot. We break the dry dock value into three categories: size, nuclear certification, and condition. Larger dry docks are more valuable than smaller dry docks, because they provide more capability, and the private sector has fewer assets that can be used for the larger ships. Nuclear certification is included because it is necessary for repairs on Navy nuclear-powered ships, and similar facilities are less abundant in the private sector than conventional dry docks. The usefulness of the dry dock is degraded as the material condition falls.

Scoring: The sum of the activity's dry docks weighted by: ship class that can be accommodated; nuclear certification; facility condition code; number of cranes available; and maximum lift capacity of the cranes, as expressed below.

$$S_i = \frac{dd_i}{dd_{\max}}$$

$$dd_i = \sum_j [sc_{ij}(0.6) + n_{ij}(0.3)]cc_{ij} + (\frac{nc_{ij}}{nc_{\max}} + \frac{c_{ij}}{c_{\max}})(0.1),$$

where dd_i is the dry dock score for activity *i* and

sc_{ij} is the score for the largest class ship that will fit in dry dock *j* at activity i receives all points.

$$sc_{ij} = \begin{cases} 1 & \text{if the largest ship class that the dry dock can accommodate is a CVN or CV} \\ .85 & \text{if the largest ship class that the dry dock can accommodate is a LHD, LHA or AOE} \\ .65 & \text{if the largest ship class that the dry dock can accommodate is a LPD or LSD} \\ .5 & \text{if the largest ship class that the dry dock can accommodate is a CG, DDG, DD, or SSBN} \\ .4 & \text{if the largest ship class that the dry dock can accommodate is a SSN} \\ .3 & \text{if the largest ship class that the dry dock can accommodate is a FFG} \\ .1 & \text{if the largest ship class that the dry dock can accommodate is a MCM, MHC, or PC} \end{cases}$$

n_{ij} =1 if dry dock *j* at activity *i* is nuclear certified, and
n_{ij} =0 if it is not nuclear,

cc_{ij} is the condition code score for dry dock *j* at activity *i*,

$$cc_{ij} = \begin{cases} 1 & \text{if the condition code is "adequate"} \\ .66 & \text{if the condition code is "substandard"} \\ .33 & \text{if the condition code is "inadequate"} \end{cases}$$

nc_{ij} is score for the number of cranes serving dry dock *j* at activity *i*:

$$nc_{ij} = \begin{cases} .25 & \text{if the dry dock is served by only 1 crane} \\ .5 & \text{if the dry dock is served by 2 cranes} \\ .75 & \text{if the dry dock is served by 3 cranes} \\ 1 & \text{if the dry dock is served by 4 or more cranes} \end{cases}$$

c_{ij} is the maximum crane lift capacity among the cranes serving dry dock *j* at activity *i*, and $c_{\max}$ is the maximum dry dock crane capacity available among all dry docks answering the question.

Scoring Note: maximum lift capacity at any shipyard dry dock is the highest response received to this question.

(30%) Metric: Pier and Wharf Capacity

(100%) Question: Information scored: pier capacity

Information obtained from Capacity Data Call DoD 11, 612 and DoD 613.

Rationale: An activity's pier and wharf capacity are essential for pre- and post-dry dock evolutions, and for non-dry dock availabilities. The docking period for a ship availability is usually about two-thirds of the total availability length. Adequate pier or wharf capacity is required to complete the remainder of the availability.

Scoring: The sum of the activity's piers/wharves weighted by capacity for: pier length; depth at pier; shore power; lift capacity of the cranes; sanitary waste; compressed air; nuclear certification; and condition code, as expressed below.

$$S_i = \frac{p_i}{p_{\max}} \text{ where}$$

$$p_i = \sum_i \{[\frac{l_i}{l_{\max}}(0.1) + \frac{d_i}{d_{\max}}(0.1) + \frac{e_i}{e_{\max}}(0.1) + \frac{c_i}{c_{\max}}(0.1) + \frac{w_i}{w_{\max}}(0.1) + \frac{a_i}{a_{\max}}(0.1) + n_i(0.4)]*\mathrm{cc}_{ij}\}$$

Where:

l_{ij} is the length of pier *j* at activity *i* and $l_{\max}$ is the maximum length of all piers answering this question,

d_{ij} is the depth at pier *j* at activity *i* and $d_{\max}$ is the maximum depth of all piers answering the question,

e_{ij} is the shore power available at pier *j* at activity *i*, and $e_{\max}$ is the maximum shore power available of all piers answering the question,

c_{ij} is the crane capacity at pier *j* at activity *i*, and $c_{\max}$ is the maximum crane capacity available at all piers answering the question,

w_{ij} is sanitary waste capacity at pier *j* at activity *i*, and $w_{\max}$ is the maximum waste capacity available at all piers answering the question,

a_{ij} is the compressed air at the pier, and $a_{\max}$ is the maximum compressed air available at all piers answering the question

n_{ij} is 1 if nuclear capable, and 0 if non-nuclear capable

cc_{ij} is the condition code of the pier as received from Data call #1 DoD question 11 for the pier and is evaluated at:

$$cc_{ij} = \begin{cases} 1 & \text{if the condition code is "adequate"} \\ .66 & \text{if the condition code is "substandard"} \\ .33 & \text{if the condition code is "inadequate"} \end{cases}$$

(10%) Metric: Industrial Building Availability

(100%) Question: For ship maintenance activities, provide the following information for each identified shop.

Shop	Maximum length of equipment that can be worked on	Maximum volume of equipment that can be worked on	Maximum wt of equipment that can be worked
Machine shop			
Heavy fabrication			
Welding			
Electrical			
Shipwright			
Optical instruments			
Foundry			
Forge			
Sheet metal			
Piping			
Paint			

Rationale: Industrial buildings provide the space for shop work, which is needed to perform work that either must be or is more efficiently performed off-ship. In addition to valuing specific equipment capabilities in other questions, we want to value the shop facilities by the limitations that they have on what size equipment they can work. We measure size in the three dimensions (length, volume, and weight).

Scoring: The activity shop score is the sum of length, volume and weight, as defined below, as expressed below.

$S_i = \frac{d_i}{d_{\max}}$ where d_i activity score, d_{max} is highest score reported

$$d_i = \sum \left(\frac{l_i}{l_{\max}} + \frac{v_i}{v_{\max}} + \frac{w_i}{w_{\max}} \right)$$

l_i is maximum length of equipment that can be worked on any inside shop facility at activity i,

v_i is maximum volume of equipment that can be worked on any inside shop facility
w_i is maximum weight of equipment that can be worked on any inside shop facility

(10%) Metric: Dry Dock and Pier Crane Support

(100%) Question: For ship maintenance activities, for each pier or wharf provide the following at your installation.

Pier/wharf Name	Number of portal and fixed cranes serving pier/wharf	Max lift capacity at pier/wharf

Rationale: For a ship undergoing repair, it is often necessary to physically remove or replace major ship equipment while the ship is in dry dock or at pier side.
The number of portal and fixed cranes plus their total lift capability determines the shipyard's ability to complete repair and installation on this major ship equipment.

Scoring: Activity pier/wharf crane score is total of the number of cranes value plus the pier/wharf maximum lift capacity divided by highest capacity reported, as defined below, as expressed below.

$S_i = \frac{p_i}{p_{\max}}$ where

$$p_i = \sum_j \left(c_{ij} + \frac{l_{ij}}{l_{\max}} \right)$$

$$c_{ij} = \begin{cases} .25 & \text{if the pier/wharf is served by only 1 crane} \\ .5 & \text{if the pier/wharf is served by 2 cranes} \\ .75 & \text{if the pier/wharf is served by 3 cranes} \\ 1 & \text{if the pier/wharf is served by 4 or more cranes} \end{cases}$$

l_{ij} is maximum lift capacity at pier/wharf,

l_{max} is maximum lift capacity at any pier/wharf,

j indexes the piers and wharves at each site, and

p_{max} is the maximum of the p_i.

(5%) Metric: Specialized Facilities

(100%) Question: For ship maintenance activities, has your Ship maintenance activity been designated as having a specialized capability / skills or certifications?

Note: The second column is to capture capabilities, skills, or certifications that have been used in the last two years (FY 02/FY03). Use column four only for description of other item listed by activity.

See Section 3 Ship Overhaul and Repair Question 4 for table.

Rationale: Ship maintenance activities have developed many specialized capabilities, which are mandatory to support complex ship overhaul and repair. These include critical processes and specialized capabilities necessary for ship maintenance.

Scoring: The total number of capabilities identified by an activity divided by the highest number reported by any activity, as expressed below.

$S_i = \dfrac{x_i}{x_{\max}}$,where

$x_i = 3c_i + 2r_i + m_i$,

c_i is the number of responses activity i reports it has that are in the "capability" column of the scoring table,

r_i is the number of certifications activity i reports it has that are in the "certification" column of the scoring table,

m_i is the number of capabilities activity i reports it has that are in the "machine/equipment" column of the scoring table, and

x_{max} is the maximum x_i reported.

Applies to all criteria, attributes, and metrics:
Use the following multiplication factors for determining the score above.

See Criteria 1, Workload Classification Attribute, Specialized Capabilities Question for scoring table

(30%) CRITERIA #3 - The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.

(45%) Attribute: Facilities

Rationale: A ship maintenance activity's facilities are a fundamental enabler for accomplishing its mission. Dry docks and piers are the primary location where ship maintenance events take place. The industrial buildings and specialized facilities provide the supporting production areas and capabilities to conduct ship overhaul and repair. For the ability to accommodate contingency and mobilization, an activity's facilities received greater weight, because the development of new facilities may take substantial time to build.

(45%) Metric: Dry Dock Capacity

(100%) Question: For ship maintenance activities, list the following structural characteristics of each graving dry dock at your facility. Do not include non-operational dry docks.

Note: Assume 6-feet high standard blocking. Indicate if floatation assistance is required by including an asterisk in column 3 after ship class. Condition code provided by iNFADS (Navy Facility Asset Database System)

Dry dock number	Condition code	Largest ship class that dry dock can accommodate	Number of portal and fixed cranes serving dry dock	Maximum crane lifting capacity at the dry dock (tons)	Nuclear certified

Rationale: A significant amount of ship repair work can only be done in a dry dock, making the suitability of the dry dock the crucial facility in a depot. We break the dry dock value into three categories: size, nuclear certification, and condition. Larger dry docks are more valuable than smaller dry docks, because they provide more capability, and the private sector has fewer assets that can be used for the larger ships. Nuclear certification is included because it is necessary for repairs on Navy nuclear-powered ships, and similar facilities are less abundant in the private sector than conventional dry docks. The usefulness of the dry dock is degraded as the material condition falls.

Scoring: The activity score is total dry dock score divided by the highest number reported by all activities. Dry dock scores are a weighted score of the largest ship class that can be accepted, plus nuclear certification times the condition code value plus weighted score of the number of cranes available and maximum lift capacity.

$$S_i = \frac{dd_i}{dd_{\max}}$$

$$dd_i = \sum_j [sc_{ij}(0.6) + n_{ij}(0.3)]cc_{ij} + (\frac{nc_{ij}}{nc_{\max}} + \frac{c_{ij}}{c_{\max}})(0.1),$$

where dd_i is the dry dock score for activity *i* and

sc_{ij} is the score for the largest class ship that will fit in dry dock *j* at activity i receives all points.
;

$$sc_{ij} = \begin{cases} 1 & \text{if the largest ship class that the dry dock can accommodate is a CVN or CV} \\ .85 & \text{if the largest ship class that the dry dock can accommodate is a LHD, LHA or AOE} \\ .65 & \text{if the largest ship class that the dry dock can accommodate is a LPD or LSD} \\ .5 & \text{if the largest ship class that the dry dock can accommodate is a CG, DDG, DD, or SSBN} \\ .4 & \text{if the largest ship class that the dry dock can accommodate is a SSN} \\ .3 & \text{if the largest ship class that the dry dock can accommodate is a FFG} \\ .1 & \text{if the largest ship class that the dry dock can accommodate is a MCM, MHC, or PC} \end{cases}$$

n_{ij} =1 if dry dock *j* at activity *i* is nuclear certified, and n_{ij} =0 if it is not nuclear,

cc_{ij} is the condition code score for dry dock *j* at activity *i*,

$$cc_{ij} = \begin{cases} 1 & \text{if the condition code is "adequate"} \\ .66 & \text{if the condition code is "substandard"} \\ .33 & \text{if the condition code is "inadequate"} \end{cases}$$

nc_{ij} is score for the number of cranes serving dry dock *j* at activity *i*:

$$nc_{ij} = \begin{cases} .25 & \text{if the dry dock is served by only 1 crane} \\ .5 & \text{if the dry dock is served by 2 cranes} \\ .75 & \text{if the dry dock is served by 3 cranes} \\ 1 & \text{if the dry dock is served by 4 or more cranes} \end{cases}$$

c_{ij} is the maximum crane lift capacity among the cranes serving dry dock *j* at activity *i*, and

$c_{\max}$ is the maximum dry dock crane capacity available among all dry docks answering the question.

Scoring Note: maximum lift capacity at any shipyard dry dock is the highest response received to this question.

(5%) Metric: Pier and Wharf Capacity

(100%) Question: Information scored: pier capacity

Information obtained from Capacity Data Call DoD612 and DoD613.

Rationale: An activity's pier and wharf capacity are essential for pre- and post-dry dock evolutions, and for non-dry dock availabilities. The docking period for a ship availability is usually about two-thirds of the total availability length. Adequate pier or wharf capacity is required to complete the remainder of the availability.

Scoring: The activity score is the total pier score divided by highest activity score reported. The total pier score is the sum of the length plus the depth plus shore power available plus crane capacity plus sanitary waste capacity plus compress air plus nuclear certification multiplied by the condition code value. Each value is divided by the highest value reported by any activity, as expressed below.

$S_i = \frac{p_i}{p_{\max}}$ where

$$p_i = \sum_j \{[\frac{l_{ij}}{l_{\max}}(0.1) + \frac{d_{ij}}{d_{\max}}(0.1) + \frac{e_{ij}}{e_{\max}}(0.1) + \frac{c_{ij}}{c_{\max}}(0.1) + \frac{w_{ij}}{w_{\max}}(0.1) + \frac{a_{ij}}{a_{\max}}(0.1) + n_{ij}(0.4)]*cc_{ij}\}$$

Where:

l_{ij} is the length of pier *j* at activity *i* and $l_{\max}$ is the maximum length of all piers answering this question,

d_{ij} is the depth at pier *j* at activity *i* and $d_{\max}$ is the maximum depth of all piers answering the question,

e_{ij} is the shore power available at pier *j* at activity *i*, and $e_{\max}$ is the maximum shore power available of all piers answering the question,

c_{ij} is the crane capacity at pier *j* at activity *i*, and $c_{\max}$ is the maximum crane capacity available at all piers answering the question,

w_{ij} is sanitary waste capacity at pier *j* at activity *i*, and $w_{\max}$ is the maximum waste capacity available at all piers answering the question,

a_{ij} is the compressed air at the pier, and $a_{\max}$ is the maximum compressed air available at all piers answering the question

n_{ij} is 1 if nuclear capable, and 0 if non-nuclear capable

cc_{ij} is the condition code of the pier as received from Data call #1 DoD question 11 for the pier and is evaluated at:

$$cc_{ij} = \begin{cases} 1 & \text{if the condition code is "adequate"} \\ .66 & \text{if the condition code is "substandard"} \\ .33 & \text{if the condition code is "inadequate"} \end{cases}$$

(15%) Metric: Industrial Building Availability

(100%) Question: For ship maintenance activities, provide the following information for each identified shop.

Shop	Maximum length of equipment that can be worked on	Maximum volume of equipment that can be worked on	Maximum wt of equipment that can be worked
Machine shop			
Heavy fabrication			
Welding			
Electrical			
Shipwright			
Optical instruments			
Foundry			
Forge			
Sheet metal			
Piping			
Paint			

Rationale: Industrial buildings provide the space for shop work, which is needed to perform work that either must be, or is, more efficiently performed off-ship. In addition to valuing specific equipment capabilities in other questions, we want to value the shop facilities by the limitations that they have on what size equipment they can work. We measure size in the three dimensions (length, volume, and weight).

Scoring: The activity shop score is length plus volume plus weight, each value is divided by the highest reported value from all activities. Activity score is the shop score divided by the highest score, as expressed below.

$S_i = \frac{d_i}{d_{\max}}$ where d_i activity score, d_{max} is highest score reported

$$d_i = \sum \left(\frac{l_i}{l_{\max}} + \frac{v_i}{v_{\max}} + \frac{w_i}{w_{\max}} \right)$$

l_i is maximum length of equipment that can be worked on any inside shop facility at activity i,

v_i is maximum volume of equipment that can be worked on any inside shop facility
w_i is maximum weight of equipment that can be worked on any inside shop facility

(10%) Metric: Dry Dock and Pier Crane Support

(100%) Question: For ship maintenance activities, for each pier or wharf provide the following at your installation.

Pier/wharf Name	Number of portal and fixed cranes serving pier/wharf	Max lift capacity at pier/wharf

Rationale: For a ship undergoing repair, it is often necessary to physically remove or replace major ship equipment while the ship is in dry dock or at pier side.
The number of portal and fixed cranes plus their total lift capability determines the shipyard's ability to complete repair and installation on this major ship equipment.

Scoring: The sum of the activity's dry docks weighted by: ship class that can be accommodated; nuclear certification; facility condition code; number of cranes available; and maximum lift capacity of the cranes, as expressed below.

$S_i = \frac{p_i}{p_{\max}}$ where

$$p_i = \sum_j \left(c_{ij} + \frac{l_{ij}}{l_{\max}} \right)$$

$$c_{ij} = \begin{cases} .25 & \text{if the pier/wharf is served by only 1 crane} \\ .5 & \text{if the pier/wharf is served by 2 cranes} \\ .75 & \text{if the pier/wharf is served by 3 cranes} \\ 1 & \text{if the pier/wharf is served by 4 or more cranes} \end{cases}$$

l_{ij} is maximum lift capacity at pier/wharf,

l_{max} is maximum lift capacity at any pier/wharf,

j indexes the piers and wharves at each site, and

p_{max} is the maximum of the p_i.

(25%) Metric: Specialized Facilities

(100%) Question: For ship maintenance activities, has your Ship maintenance activity been designated as having a specialized capability / skills or certifications?

Note: The second column is to capture capabilities, skills, or certifications that have been used in the last two years (FY 02/FY03). Use column four only for description of other item listed by activity.

See Section 3 Ship Overhaul and Repair Question 4 for table.

Rationale: Ship maintenance activities have developed many specialized capabilities, which are mandatory to support complex ship overhaul and repair. These include critical processes and specialized capabilities necessary for ship maintenance.

Scoring: The total number of capabilities identified by an activity divided by the highest number reported by any activity, as expressed below.

$$S_i = \frac{x_i}{x_{\max}} \text{,where}$$

$x_i = 3c_i + 2r_i + m_i$,

c_i is the number of responses activity i reports it has that are in the "capability" column of the scoring table,

r_i is the number of certifications activity i reports it has that are in the "certification" column of the scoring table,

m_i is the number of capabilities activity i reports it has that are in the "machine/equipment" column of the scoring table, and

x_{max} is the maximum x_i reported.

Applies to all criteria, attributes, and metrics:

Use the following multiplication factors for determining the score above.
See Criteria 1, Workload Classification Attribute, Specialized Capabilities Question for scoring table

(35%) Attribute: Workforce and Skills

Rationale: Specialized skills and workforce availability are a key component of production. They are the intellectual capital with which the ship maintenance activity must use and invest to maintain current and future readiness. A skilled workforce requires significant time to expand in the event of a contingency or mobilization.

(30%) Metric: Specialized Skills and Certifications

(100%) Question: For ship maintenance activities, has your Ship maintenance activity been designated as having a specialized capability / skills or certifications?

Note: The second column is to capture capabilities, skills, or certifications that have been used in the last two years (FY 02/FY03). Use column four only for description of other item listed by activity.

See Section 3 Ship Overhaul and Repair Question 4 for table.

Rationale: Ship maintenance activities have developed many specialized capabilities, which are mandatory to support complex ship overhaul and repair. These include critical processes and specialized capabilities necessary for ship maintenance.

Scoring: The total number of capabilities identified by an activity divided by the highest number reported by any activity, as expressed below.

$$S_i = \frac{y_i}{y_{\max}}$$

y_i is the score for capabilities/ skills used in last two years where

$y_i=3c_i+2r_i+m_i$,

c_i is the number of responses activity i reports it has as used in the last two years that are in the "capability" column in the scoring table,

r_i is the number of certifications activity i reports it has as used in the last two years that are in the "certification" column in the scoring table,

m_i is the number of capabilities activity i reports it has as used in the last two years that are in the "machine/equipment" column in the scoring table, and

y_{max} is the maximum y_i reported.

Applies to all criteria, attributes, and metrics:
Use the following multiplication factors for determining the score above.

See Criteria 1, Workload Classification Attribute, Specialized Capabilities Question for scoring table

(20%) Metric: Quantity of Skilled Workers

(100%) Question: For Naval shipyards, for all Shops provide your most current work force summary broken out in the categories below.

Note: Shops are defined as employees working in Heavy Fabrication, Foundry, Forge, Sheet Metal, Welding, Inside Machine, Marine (Outside) Machine, Boiler, Electrical, Piping, Wood Crafting, Shipwright, Electronics, Paint, Cranes & Rigging, Services, Tool Manufacture, Optical Instruments, Plastic Fabrication, Air Condition & Refrigeration, Environmental and Safety, Hazardous Material, Nuclear Engineering & Planning, Radiological Engineering and Health, Radiological Monitoring and Support, Nuclear Quality Assurance, Nuclear Project Management, Business Support, Nuclear Testing, Non-Nuclear Engineering & Planning, Non-Nuclear Quality Assurance, Non-Nuclear Project Management, Non-Nuclear Testing, Calibration.

First Line Supervisors	Journeymen	Apprentices

Rationale: The size and experience of the skilled workforce is a measure of the ability to meet production and contingency requirements.

Scoring: The activities score is a weighted score of the number of journeymen and apprentices divided by the sum of journeymen, apprentices, and first line supervisors reported by an activity, as expressed below.

The score for activity *i* is $S_i = .7\left(\frac{t_i}{t_{\max}}\right) + .3\begin{cases} \frac{x_i}{\bar{x}} & \text{if } x_i \le \bar{x} \text{ and } \bar{x} \ge .35 \\ \frac{2\bar{x} - x_i}{\bar{x}} & \text{if } x_i > \bar{x} \text{ and } \bar{x} \ge .35 \\ \frac{x_i}{.35} & \text{if } x_i \le \bar{x} \text{ and } \bar{x} < .35 \\ \frac{.7 - x_i}{.35} & \text{if } x_i > \bar{x} \text{ and } \bar{x} < .35 \end{cases}$ where

$x_i = \frac{.7 j_i + .3 a_i}{t_i}$,

j_i is the number of journeymen at activity *i*,

a_i is the number of apprentices at activity *i*,

t_i is the total number of journeymen, apprentices, and first-line supervisors at activity *i*, and

$\bar{x}$ is the average of the x_i.

(The different scoring depending on the mean relative to .35 is needed in case the average is very low, and there is one site that has a much higher x_i than the others. The scoring above is essentially an inverted "V", with a point at the mean getting 1, and falling off on both sides.

(50%) Metric: Workforce Development Opportunities

(100%) Question: For Naval shipyards, how many hours of training were expended on the job, and how many dollars were provided to personnel for training during the listed fiscal years?

Note: Cost for apprenticeship program (row 1) should not be included in continuing education program (row 2)

	FY-02	FY-03
Funds expended for the apprenticeship program		
Funds expended to compensate workforce for continuing education, technical schools, maintenance of certifications, and college degreed programs.		
How many hours of training does you activity provide to each workforce employee for training or continuing education in support of maintaining trade skill technical experience for the listed years?		
Number of employees enrolled in training or continuing education in support of maintaining trade skill technical experience for the listed years?		
Number of apprentices enrolled in program each year.		
Number of apprentices that graduate each year.		
What percent of apprentices qualify for journeyman at the end of their apprenticeship for the listed years?		

Rationale: This metric is particularly important to building a future workforce in response to contingency and mobilization needs, as well as that necessary for planned future maintenance. Training and development programs are the key to maintaining the necessary ship maintenance and repair workforce. We evaluate both continuing education programs and apprenticeship programs because it is necessary to keep skills updated and to have a program that replenishes the skill base as the existing workforce attrites. In continuing education, we measure the strength by the funding and time devoted to training. In the apprenticeship program, we measure the strength by the size of the program and by how the site benefits from the program in graduating and retaining journeymen.

Scoring: The sum of the average of FY 02 and 03: training hours; the percent of apprentices that graduated; percentage of apprentices that become journeymen; and percentage of graduates still employed, as expressed below.

Activity score is $S_i = \frac{x_i}{x_{\max}}$ where x_i is activity workforce score; $x_{\max}$ is the highest workforce score reported

x_i is $x_i = \left(\frac{h_{02}+h_{03}}{2}\right).4 + \left(\frac{e}{g}\right).4 + (a).1 + .1k$) and h is number of training hours per year at an activity,

$e = \left(\frac{c_{02}+c_{03}}{2}\right)$ where c is the number of apprentices graduated per year

g is $g = \left(\frac{d_{02}+d_{03}}{2}\right)$ where d is the number of apprentices enrolled per year

a is $a = \left(\frac{\mathrm{f}_{02}+\mathrm{f}_{03}}{2}\right)$ f is the percentage of apprentice graduates that become journeymen per year

k is $k = \left(\frac{\mathrm{j}_{02}+j_{03}}{2}\right)$ j is the percentage of apprentice graduates still employed.

(20%) Attribute: Flexibility

Rationale: To support the readiness needs of the Fleet during contingency operations, mobilization, and return from combat zones, ship maintenance activities must have the ability to expand their workload. If required, they must also have access to private sector maintenance support to supplement their capabilities.

(35%) Metric: Regulatory Ability to Expand Operations

(100%) Question: Information scored: Amount of pollution-causing expansion. Use Capacity Data Call question DoD211

Rationale: Addresses the ability to perform additional workload in the face of environmental regulations.

Scoring: The sum of the difference between permitted and emitted air pollution expansion factors, as defined below, as expressed below.

$S_i = \frac{d_i}{d_{\max}}$ where d_i pollution expansion indicator, d_{max} is highest indicator

$$d_i = \frac{voc_i}{voc_{\max}} + \frac{nox_i}{nox_{\max}} + \frac{no_i}{no_{\max}} + \frac{co_i}{co_{\max}} + \frac{so_i}{so_{\max}} + \frac{pmt_i}{pmt_{\max}} + \frac{pm\mathrm{f}_i}{\mathrm{pmf}_{\max}} + \frac{pb_i}{pb_{\max}}$$

voc_i is difference between permitted and emitted

nox_i is difference between permitted and emitted

no_i is NO_2 difference between permitted and emitted

co_i is CO difference between permitted and emitted

so_i is SO_2 difference between permitted and emitted

pmt_i is PM 10 difference between permitted and emitted

pmf_i is PM 2.5 difference between permitted and emitted

pb_i is difference between permitted and emitted, and the

max is the maximum difference for each pollutant.

(35%)Metric: Utility Expansion Opportunity

(100%) Question: Scored information: High voltage electrical capacity expansion room.

Use Capacity Data Call question DoD621

Rationale: Addresses the ability to acquire the energy necessary to execute additional workload.

Scoring: The activity score is the amount of off base daily capacity less the normal steady state daily load divided by the highest score reported, as expressed below.

$S_i = \frac{e_i}{e_{\max}}$ where

$e_i = ob - ns$ if $ob \geq ns$, and $e_i = 0$ *if* $ob < ns$,

ob is Off Base Daily Capacity
ns is Normal Steady State Daily Load

(30%) Contract Support and Expansion

1. **(50%) Question:** For ship maintenance activities, what non-DoD ship support maintenance capabilities/companies has your activity contracted with or concluded an agreement for maintenance services?

Note: Installations should measure the distance to other installations from main gate to main gate using http://dtod1.mtmc.army.mil/. Contract/agreements include ISSA, MOA, MOU, etc. For Total $ Value, answer in FY 03 dollars that are expended on the end item, for FY99 through FY03. Number of contracts equals Delivery Orders and contracts awarded.

Contractor Name	End Product (Service /item)	Distance	Number of contracts/ agreements in FY 99	Number of contracts/ agreements in FY 00	Number of contracts/ agreements in FY 01	Number of contracts/ agreements in FY 02	Number of contracts/ agreements in FY 03	Total $ (K) value

Rationale: The number of facilities and contracts as well as the extent of working relationships with non-DoD agencies and private sector companies provides the shipyard with additional resources. The relationships can help the shipyard meet requirements when the capacity or skills are not resident at the shipyard, thus allowing the depot to complete work packages otherwise not possible or more efficiently. The interaction with the private sector also can provide exposure to different practices, emerging technologies and a potential source of skilled labor, allowing the depot to evaluate alternative practices and adopt the best. The number of contracts, trend, and value represent the depth of the interaction with the private sector.

Scoring: The sum of: contractors; contracts trend (number of contracts per fiscal year); and the total value of the contracts, as expressed below.

$S_i = \frac{e_i}{e_{\max}}$ where

The score for activity e_i is

$e = .34n_i + .33c_i + .33v_i$ where

n_i is activity i's number of contractors, $n_i = \begin{cases} .02x_i & \text{if } x_i \le 50 \\ 1 & \text{if } x_i > 50 \end{cases}$

c_i is activity i's number of contracts trend score $c_i = .9\left(\frac{z_i - z_{\min}}{z_{\max} - z_{\min}}\right) + .1$ if the activity reports any contracts and $c_i = 0$ if the activity does not reports any contracts. z_i is the slope coefficient obtained from an ordinary least squares regression using number of contracts and a constant as the dependent variables and year as the independent variable, and z_{max} and z_{min} are the maximum and minimum z_i among activities reporting any contracting

v_i is $v_i = \frac{w_i}{w_{\max}}$ where w_i is the total value of contracts for an activity, $w_{\max}$ is the highest reported total value of contracts for all activities

2. **(50%) Question:** For Naval shipyards, report the name and distance to the nearest Metropolitan Statistical Area (MSA), and report the total employment within the MSA in the following two Major Standard Occupational Classification (SOC) Groups:

49-0000 Installation, Maintenance, and Repair Occupations
51-0000 Production Occupations, excluding the following occupations Bakers; Butchers and Meat Cutters; Meat, Poultry, and Fish Cutters and Trimmers; Slaughterers and Meat Packers; Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders; Food Batchmakers; Food Cooking Machine Operators and Tenders; Laundry and Dry-Cleaning Workers; Pressers, Textile, Garment, and Related Materials; Sewing Machine Operators; Shoe and Leather Workers and Repairers; Shoe Machine Operators and Tenders; Sewers, Hand; Tailors, Dressmakers, and Custom Sewers; Textile Bleaching and Dyeing Machine Operators and Tenders; Textile Cutting Machine Setters, Operators, and Tenders ; Textile Knitting and Weaving Machine Setters, Operators, and Tenders; Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders; Fabric and Apparel Patternmakers ; Upholsterers; Furniture Finishers; Dental Laboratory Technicians; Medical Appliance Technicians; Ophthalmic Laboratory Technicians

Note: (MSA employment data is available via the Bureau of Labor Statistics at http://www.bls.gov/oes/2002/oessrcma.htm)

Metropolitan Statistical Area (name)	Distance (miles)	Total employment 49-0000	Total employment 51-0000

Rationale: The local labor market is a source of skilled or potentially trainable labor. This labor pool is important in the depot being able to replenish the workforce over the long-term. The size of the appropriate labor pool is represented by the workforce in industries with skills and aptitudes similar to those that shipyards value. The size of the labor pool desired is relative to the size of the workforce—if the depot workforce is large relative to the labor force, then there is little additional supply of labor. The proximity of the labor market is incorporated because it is harder to recruit workers who have to travel farther.

Scoring: The activity score is the distance to the MSA multiplied by the relative size of the MSA, as expressed below.

$S_i = d_i r_i$, where

$$d_i = \begin{cases} 1 & \text{if the distance to the MSA is less than or equal to 50 miles} \\ .5 & \text{if the distance to the MSA is more than 50 and less than 75 miles} \\ .25 & \text{if the distance to the MSA is more than 75 and less than 100 miles} \\ 0 & \text{if the distance to the MSA is more than 100 miles} \end{cases}$$

$$r_i = \begin{cases} 1 & \text{if } \dfrac{\text{specified MSA employment}}{\text{activity employment}} > 10 \\ .75 & \text{if } 7.5 < \dfrac{\text{specified MSA employment}}{\text{activity employment}} \le 10 \\ .5 & \text{if } 2.5 < \dfrac{\text{specified MSA employment}}{\text{activity employment}} \le 7.5 \\ .25 & \text{if } 1 < \dfrac{\text{specified MSA employment}}{\text{activity employment}} \le 2.5 \\ 0 & \text{if } \dfrac{\text{specified MSA employment}}{\text{activity employment}} \le 1 \end{cases}$$

(20%) CRITERIA #4 - The cost of operations and the manpower implications.

(20%) Attribute: Costs

Rationale: A simple and direct measure of an activity's cost of operations is total throughput cost per unit of work delivered.

(100%) Metric: Total Operating Costs

(100%) Question: For ship maintenance activities, what is your activity's total operating cost (less material) for FY 03 and FY 04 (budgeted)?

	FY 03 (K) $	FY 04 (Budgeted) (K) $
Total operating cost		

Rationale: A simple and direct measure of an activity's cost of operations is total throughput cost per unit of work delivered. This question requests the total operating cost for FY03 and FY04, which will be divided by workload delivered in direct labor hours (DLHs) in FY03 and FY04 respectively, as obtained by the Data Call #1, to give the unit cost of operations. Material is excluded because it can vary significantly from year to year depending on the nature of the work performed and could skew the resultant metric.

Scoring: The activity score is sum of FY 03 and FY 04 operating cost divided by the sum of the FY 03 and 04 workload, as expressed below.

Activity score is $S_i = \dfrac{x_{\min}}{x_i}$ where $x_{\min}$ is the minimum among all responding activities,

$$x_i = \left(\frac{o_{03} + o_{04}}{w_{03} + w_{04}} \right),$$

o_{03} = operating cost for FY-03

o_{04} = operating cost for FY-04

w_{03} = sum of all FY-03 workload reported from DoD question 526 data call #1

w_{04} = sum of all FY-04 workload reported from DoD question 526 data call #1

(40%) Attribute: Workforce and Skills

Rationale: Specialized skills and workforce availability are a key component of production. They are the intellectual capital with which the ship maintenance activity must use and invest in, and are the single highest costs item for the activity.

(50%) Metric: Specialized Skills and Certifications

(100%) Question: For ship maintenance activities, has your Ship maintenance activity been designated as having a specialized capability / skills or certifications?

Note: The second column is to capture capabilities, skills, or certifications that have been used in the last two years (FY 02/FY03). Use column four only for description of other item listed by activity.

See Section 3 Ship Overhaul and Repair Question 4 for table.

Rationale: Ship maintenance activities have developed many specialized capabilities, which are mandatory to support complex ship overhaul and repair. These include critical processes and specialized capabilities necessary for ship maintenance.

Scoring: The total number of capabilities identified by an activity divided by the highest number reported by any activity, as expressed below.

$$S_i = \frac{y_i}{y_{\max}}$$

y_i is the score for capabilities/ skills used in last two years where

$y_i = 3c_i + 2r_i + m_i$,

c_i is the number of responses activity *i* reports it has as used in the last two years that are in the "capability" column in the scoring table,

r_i is the number of certifications activity *i* reports it has as used in the last two years that are in the "certification" column in the scoring table,

m_i is the number of capabilities activity *i* reports it has as used in the last two years that are in the "machine/equipment" column in the scoring table, and

y_{max} is the maximum y_i reported.

Applies to all criteria, attributes, and metrics:

Use the following multiplication factors for determining the score above.
See Criteria 1, Workload Classification Attribute, Specialized Capabilities Question for scoring table

(40%) Metric: Quantity of Skilled Workers

(100%) Question: For Naval shipyards, for all Shops provide your most current work force summary broken out in the categories below.

Note: Shops are defined as employees working in Heavy Fabrication, Foundry, Forge, Sheet Metal, Welding, Inside Machine, Marine (Outside) Machine, Boiler, Electrical, Piping, Wood Crafting, Shipwright, Electronics, Paint, Cranes & Rigging, Services, Tool Manufacture, Optical Instruments, Plastic Fabrication, Air Condition & Refrigeration, Environmental and Safety, Hazardous Material, Nuclear Engineering & Planning, Radiological Engineering and Health, Radiological Monitoring and Support, Nuclear Quality Assurance, Nuclear Project Management, Business Support, Nuclear Testing, Non-Nuclear Engineering & Planning, Non-Nuclear Quality Assurance, Non-Nuclear Project Management, Non-Nuclear Testing, Calibration.

First Line Supervisors	Journeymen	Apprentices

Rationale: The size and experience of the skilled workforce is a measure of the ability to meet production and contingency requirements.

Scoring: The activities score is a weighted score of the number of journeymen and apprentices divided by the sum of journeymen, apprentices, and first line supervisors reported by an activity, as defined below, as expressed below.

The score for activity *i* is $S_i = .7\left(\frac{t_i}{t_{\max}}\right) + .3\begin{cases} \frac{x_i}{\bar{x}} & \text{if } x_i \le \bar{x} \text{ and } \bar{x} \ge .35 \\ \frac{2\bar{x} - x_i}{\bar{x}} & \text{if } x_i > \bar{x} \text{ and } \bar{x} \ge .35 \\ \frac{x_i}{.35} & \text{if } x_i \le \bar{x} \text{ and } \bar{x} < .35 \\ \frac{.7 - x_i}{.35} & \text{if } x_i > \bar{x} \text{ and } \bar{x} < .35 \end{cases}$ where

$x_i = \frac{.7 j_i + .3 a_i}{t_i}$,

j_i is the number of journeymen at activity *i*,

a_i is the number of apprentices at activity *i*,

t_i is the total number of journeymen, apprentices, and first-line supervisors at activity *i*, and

$\bar{x}$ is the average of the x_i.

(The different scoring depending on the mean relative to .35 is needed in case the average is very low, and there is one site that has a much higher x_i than the others. The scoring above is essentially an inverted "V", with a point at the mean getting 1, and falling off on both sides.)

(10%) Metric: Workforce Development Opportunities

(100%) Question: For Naval shipyards, how many hours of training were expended on the job, and how many dollars were provided to personnel for training during the listed fiscal years?

Note: Cost for apprenticeship program (row 1) should not be included in continuing education program (row 2).

	FY-02	FY-03
Funds expended for the apprenticeship program		
Funds expended to compensate workforce for continuing education, technical schools, maintenance of certifications, and college degreed programs.		
How many hours of training does you activity provide to each workforce employee for training or continuing education in support of maintaining trade skill technical experience for the listed years?		
Number of employees enrolled in training or continuing education in support of maintaining trade skill technical experience for the listed years?		
Number of apprentices enrolled in program each year.		
Number of apprentices that graduate each year.		
What percent of apprentices qualify for journeyman at the end of their apprenticeship for the listed years below?		

Rationale: Training and development programs maintain the critical ship maintenance and repair skills, and enable the site's workforce to new and emerging requirements and technologies. A well-educated and trained workforce is more likely to be flexible in the work that it can perform. We evaluate both continuing education programs and apprenticeship programs because it is necessary to keep skills updated and to have a program that replenishes the skill base as the existing workforce attrites. In continuing education, we measure the strength by the funding and time devoted to training. In the apprenticeship program, we measure the strength by the size of the program and by how the site benefits from the program in graduating and retaining journeymen.

Scoring: The average per person costs for the apprenticeship and continuing education programs, as defined below, as expressed below.

Activity score is $S_i = \frac{m_i}{m_{\max}}$, where m_i is activity funding score; $m_{\max}$ is the highest funding score reported

$$m_i = \left(\frac{n}{g}\right).5 + \left(\frac{l}{t}\right).5$$

$n = \left(\frac{p_{02} + p_{03}}{2}\right)$, p_{yr} is the amount of funding for the apprenticeship program in year *yr*,

$g = \left(\frac{d_{02} + d_{03}}{2}\right)$, d_{yr} is the number of apprentices enrolled in year *yr*,

$l = \left(\frac{b_{02} + b_{03}}{2}\right)$, b_{yr} is amount of funding for continuing education in year *yr*,

$t = \left(\frac{q_{02} + q_{03}}{2}\right)$, q_{yr} is the number of personnel enrolled in continuing education in year *yr*

(40%) Attribute: Efficiency

Rationale: An activity's efficiency of operations is an important contributor to its military value.

(100%) Metric: History of Efficient Operations

(100%) Question: For Naval shipyards, please provide the total number DLH used and the total number of budgeted DLH in the following maintenance events completed for the fiscal years FY 99, FY 00, FY 01, FY 02, FY 03, and FY 04.

See Section 3 Ship Overhaul and Repair Question 13 for table

Rationale: An activity's efficiency of operations contributes to its military value. This question will document efficiency by measuring the planned notional DLH of work for a ship availability compared to the actual man-days applied to complete the availability.

Scoring: The activity efficiency comparing actual and planned DLH and the DLH trend, as expressed below, as expressed below.

Activity score is $S_i = .7\left(\frac{x_{\max} - x_i}{x_{\max} - x_{\min}}\right) + .3c_i$ where

$$x_i = \frac{u - p}{p},$$

u is total used DLH for all six years,
p is total planned DLH for six years,
x_{max} and x_{min} are the maximum and minimum x_i reported,
c_i is activity i's efficiency trend score $c_i = \left(\frac{z_{\max} - z_i}{z_{\max} - z_{\min}} \right)$ if the activity reports any maintenance events, $c_i = 0$ if the site reports no DLH used.
z_i is the slope coefficient obtained from an ordinary least squares regression using x_i as the dependent variable and year and a constant as the independent variables

FUNCTION: Intermediate Maintenance
Criteria 1 is most heavily weighted to reflect the belief that IMA's are Fleet following activities, without purpose when fleet units are not collocated with the IMA. By being close to fleet units, IMA's have the ability to provide a quick turn-around and short response time to Fleet emergent and routine maintenance needs. Criteria 1 and 2 together represent the in-place features of the IMA. Criteria 3 is next most important because it reflects the ability to meet future requirements as new platforms join the Navy inventory. Additionally, it provides the capability to meet contingency needs. Although Criteria 4 is an important factor for maintenance, the need to meet readiness requirements is the driving force for maintenance activities.

(50%) CRITERIA #1 - The current and future mission capabilities and the impact on operational readiness of Department of Defense's total force, including the impact on joint warfighting, training and readiness.

(45%) Attribute: Proximity Considerations

Rationale: The weight for Proximity Considerations reflects the view that IMA's are Fleet followers and must be close to Fleet units to provide useful service. Proximity to the Fleet, other government installations and private sector maintenance capabilities enables more effective and efficient support. Environmental constraints are included because geographic considerations such as proximity to urban areas contribute to limitations on industrial operations and ability to provide Fleet support.

(70%) Metric: Proximity to Ship Home Ports

(100%) Question: For ship maintenance activities, how many fleet units are home-ported at your installation, within 50 mi. Identify those ship classes receiving maintenance from your activity; identify the number of each type of maintenance event?

Note: Number of ship class receiving maintenance is the number served regardless of homeport. Installations should measure the distance to other installations using http://dtod1.mtmc.army.mil/. Distance should be one-way. Do not include ships accounted for in the homeport column in the within 50 mi column.

See Section 3 Ship Overhaul and Repair Question 1 for table

Rationale: We value proximity to ship homeports because sites nearer the customer provide better repair resources. In particular ships near the ship maintenance activities have better access to technical expertise and equipment capabilities to correct equipment problems. Close location allows quicker response times and thus more effective support. Finally, close location imposes less disruption in sailor's lives when assigned to the ship maintenance activity for maintenance availability. The distance of 50 mi was chosen as the distance a ship could travel in half a day from setting sea and anchor detail to securing. A half-day was chosen as the amount of time a ship would likely spend to receive intermediate maintenance.

Scoring: The greater the number of ships (weighted proportionally by ship size in tons) in close proximity, the higher the activity score, as expressed below.

The score for activity *i* is $S_i = .5x_i + .5y_i$ where

$$x_i = \frac{t_i}{t_{\max}},$$

$t_i =$ number of ship types homeported at or within 50 miles of activity *i*,

$$y_i = \frac{n_i}{n_{\max}},$$

$$n_i = \sum_c z_c h_{ic} + .5\sum_c z_c f_{ic},$$

z_c is the standard tonnage of ship type *c*, h_{ic} is the number of ships of type *c* homeported at activity *i*, f_{ic} are the number of ships of type *c* homeported within 50 miles of activity *i* (but not at *i*) and *c* indexes the ship types. z_c will be obtained from Navy Fact File (www.chinfo.navy.mil/factfile/ffiletop.html)

(10%) Metric: Proximity to Other DoD

(100%) Question: For ship maintenance activities, identify the name of DoD installations within 350 mi of your installation that have depot or intermediate maintenance capability.

Note: Installations should measure the distance to other installations using http://dtod1.mtmc.army.mil/. Distances should be one-way. Include only installations not activities within a fence-line.

Installation name	Distance	Depot (Yes/No)	Intermediate (Yes/No)

Rationale: Proximity to other DoD facilities provides for the opportunity to share maintenance capabilities and workload. Sharing maintenance capabilities can allow facilities to complement each other and provide better service to the Fleet. Sharing workload permits more efficient use of resources. 350 mi was chosen as distance that constitutes a DoD automobile travel day according to Joint Federal Travel Regulations (NAVSO P-6034)

Scoring: The greater the number of installations (weighted by close proximity) with depot or intermediate maintenance capability, the higher the score, as expressed below, as expressed below.

The score for activity *i* is

$S_i = .34n_i + .33d_i + .33t_i$ where

n_i is activity *i*'s number score, $n = \frac{k_i}{k_{\max}}$; where $k_i = \sum_j \begin{cases} .02x_i & \text{if } x_i \le 50 \\ 1 & \text{if } x_i > 50 \end{cases}$

d_i is activity *i*'s distance score, $d_i = \frac{y_i}{y_{\max}}$,

t_i is activity *i*'s type score $t_i = \frac{z_i}{z_{\max}}$,

x_i is the number of installations listed within 350 miles of site *i*,

$y_i = \sum_j b_{ij}$,

$$b_{ij} = \begin{cases} 1 & \text{if the distance between activity i and installation } j \le 50 \\ .2 + .016(100 - \text{distance}) & 50 < \text{if the distance between activity i and installation } j \le 100 \\ .2 & 100 < \text{if the distance between activity i and installation } j \le 350 \end{cases},$$

$z_i = \sum_j c_{ij}$,

$$c_{ij} = \begin{cases} 1 & \text{if installation j has only an intermediate or only a depot maintenance facility} \\ 2 & \text{if installation j has both intermediate and depot maintenance facilities} \end{cases}, \text{ and}$$

j indexes the listed other close installations.

(10%) Metric: Proximity to Ship Support Activities

1. (50%) Question: For ship maintenance activities, what non-DoD ship support maintenance capabilities/companies have your activity contracted with or concluded an agreement for maintenance services?

Note: Installations should measure the distance to other installations using http://dtod1.mtmc.army.mil/. Contract/agreements include ISSA, MOA, MOU, etc. For Total $ Value, answer in FY 03 dollars that are expended on the end item, for FY99 through FY03. Number of contracts equals Delivery Orders and contracts awarded.

Contractor Name	End Product (Service /item)	Distance	Number of contracts/ agreements in FY 99	Number of contracts/ agreements in FY 00	Number of contracts/ agreements in FY 01	Number of contracts/ agreements in FY 02	Number of contracts/ agreements in FY 03	Total $ (K) value

Rationale: The number of facilities and contracts as well as the extent of working relationships with non-DoD agencies and private sector companies provides the shipyard with additional resources. The relationships can help the shipyard meet requirements when the capacity or skills are not resident at the shipyard, thus allowing the depot to complete work packages otherwise not possible or more efficiently. The interaction with the private sector also can provide exposure to different practices, emerging technologies and a potential source of skilled labor, allowing the depot to evaluate alternative practices and adopt the best. The number of contracts, trend, and value represent the depth of the interaction with the private sector.

Scoring: The sum of: contractors; distance weighted by proximity; contracts trend (number of contracts per fiscal year); and the total value of the contracts, as expressed below.

The score for activity *i* is:

$S_i = .25k_i + .25d_i + .25c_i + .25v_i$ where

k_i is activity *i*'s number score, where $k_i = \begin{cases} .02x_i & \text{if } x_i \le 50 \\ 1 & \text{if } x_i > 50 \end{cases}$

and x_i = the number of contractors,

d_i is activity *i*'s distance score, $d_i = \dfrac{y_i}{y_{\max}}$,

c_i is activity *i*'s number of contracts trend score $c_i = .9\left(\dfrac{z_i - z_{\min}}{z_{\max} - z_{\min}}\right) + .1$ if the activity reports any contracts and $c_i = 0$ if the activity does not reports any contracts. z_i is the slope coefficient obtained from an ordinary least squares regression using number of contracts and a constant as the dependent variables and year as the independent variable, and z_{max} and z_{min} are the maximum and minimum z_i among activities reporting any contracting,

$v_i = \frac{w_i}{w_{\max}}$ where w_i is the total value of contracts for an activity, w_{max} is the highest number of reported contracts

y_i is the number of installations listed within 350 miles of site *I*,

$$y_i = \sum_j b_{ij}$$

$$b_{ij} = \begin{cases} 1 & \text{if the distance between activity i and contractor } j \le 50 \\ .2 + .016(100 - \text{distance}) & 50 < \text{if the distance between activity i and contractor } j \le 100 \\ .2 & 100 < \text{if the distance between activity i and contractor } j \le 350 \end{cases}$$

- End product is information for scenario development

2. (50%) Question: For ship intermediate maintenance activities identify any DoD activities, which are co-located with the activity that provide non-maintenance type support to fleet units under-going maintenance.

Support	Y/N
Berthing	
Navy schools	
Magazines	

Rationale: Ships under-going maintenance benefit from having total support co-located with the maintenance activity. This minimizes the need to transport weapons, TAD costs, or extended travel by sailors for training or berthing.

Scoring: The activity score is value based on the number of co-located activities, as defined below.

The score for activity *i* is

$$S_i = \begin{cases} 0 & \text{if none of the support activities are co-located} \\ .33 & \text{if one of the support activities are co-located} \\ .67 & \text{if two of the support activities are co-located} \\ 1 & \text{if all three of the support activities are co-located} \end{cases}$$

(10%) Metric: Environmental Compliance and Permit Capacity:

(100%) Question: Information scored: Amount of pollution expansion capability.

Use Capacity Data Call question DoD211

Rationale: Addresses the ability to perform additional workload in the face of environmental regulations.

Scoring: The sum of the difference between permitted and emitted air pollution expansion factors, as expressed below.

$S_i = \frac{d_i}{d_{\max}}$ where d_i pollution expansion indicator, d_{max} is highest indicator

$$d_i = \frac{voc_i}{voc_{\max}} + \frac{nox_i}{nox_{\max}} + \frac{no_i}{no_{\max}} + \frac{co_i}{co_{\max}} + \frac{so_i}{so_{\max}} + \frac{pmt_i}{pmt_{\max}} + \frac{pmf_i}{\mathrm{pmf}_{\max}} + \frac{pb_i}{pb_{\max}}$$

voc_i is difference between permitted and emitted

nox_i is difference between permitted and emitted

no_i is NO_2 difference between permitted and emitted

co_i is CO difference between permitted and emitted

so_i is SO_2 difference between permitted and emitted

pmt_i is PM 10 difference between permitted and emitted

pmf_i is PM 2.5 difference between permitted and emitted

pb_i is difference between permitted and emitted, and the

max is the maximum difference for each pollutant.

(35%) Attribute: Workload Classification

Rationale: A Naval ship cannot meet Fleet material readiness requirements without the breadth, experience and capabilities that a ship maintenance activity performs. This also represents the activity's ability to contribute to DoD's current and future mission readiness.

(30%) Taking Maintenance & Repair to the Fleet

(100%) Question: For ship intermediate maintenance activities, identify your organization's ability to provide ship overhaul and repair capability to units at other area bases, forward sites, or overseas.

Note: Function includes CASREP response, SRA, underway testing, etc. This does not include any part of the activity which is designated to regularly deploy.

Function	Location	DLH TAD for maintenance in FY 03	Total workload in DLH for FY 03

Rationale: Part of the military value of an intermediate ship maintenance activity is its ability to deliver maintenance assets to units at other area bases, forward sites, or overseas when required by the Fleet.

Scoring: The activity score is the weighted sum of the number of functions divided by the highest number reported plus the ratio of TAD DLH to total workload, as expressed below.

The score for activity *i* is

$S_i = .5f_i + .5m_i$ where

f_i is $f_i = \frac{x_i}{x_{\max}}$ where x_i is the sum of functions reported at an activity, x_{max} is the greatest number of functions reported

m_i is $m_i = \frac{y_i}{y_{\max}}$ where y_i is the ratio of TAD DLH to total workload DLH as defined below, and y_{max} is the maximum ratio reported by all activities.

y_i is $y_i = \frac{t_{man}}{t_{tot}}$, where t_{man} is the sum of reported TAD DLH, t_{tot} is the total DLH workload reported for all functions at each location

(70%) Metric: Type of Ship Maintenance & Repair Performed

1. **(60%) Question:** For ship maintenance activities, how many fleet units are home-ported at your installation and within 50 mi. Identify those ship classes receiving maintenance from your activity; identify the number of each type of maintenance event?

Note: Number of ship class receiving maintenance is the number served regardless of homeport. Installations should measure the distance to other installations using http://dtod1.mtmc.army.mil/. Distance should be one-way. Do not include ships accounted for in the homeport column in the within 50 mi column.

See Section 3 Ship Overhaul and Repair Question 1 for table

Rationale: The ship maintenance activity's recent experience on different ship classes represents accumulated expertise and knowledge. The greater breadth of classes served demonstrates depot suitability for a larger scope of maintenance capacity.

Scoring: The activity's score is the number of availabilities completed, each weighted by complexity, as expressed below.

The score for activity *i* is $S_i = \frac{n_i}{n_{\max}}$ where

$n_i = r_i + .8a_i + .6b_i + .4c_i$,

r_i is the number of refueling overhauls (RCOH) performed,
a_i is the number of ROH, COH and DPIA overhauls performed,
b_i is the number of other docking overhauls DSRA, EDSRA, DRAV, DMP, DPMA performed,
c_i is the number of non-docking overhauls PIA, POM, RAV, CN, INACT, ERP,EOH, PMA, SRA performed, and
n_{max} is the maximum weighted score reported.

2. **(40%) Question:** For ship intermediate maintenance activity, has your IMA facility done intra-/inter-service or inter-agency work in FY03?

Service/agency	Product	

Rationale: Measures the amount of inter-service and inter-agency work done in FY03, which is an indicator of the amount of Joint work being done by an activity.

Scoring: The activity score is sum of the intra-/inter-service or inter-agency work and product/agency combinations, as expressed below.

The score for activity *i* is $S_i = .5a_i + .5p_i$ where a_i is activity *i*'s agency score, and p_i is activity *i*'s product score.

The agency score for activity *i* is $a_i = \frac{x_i}{x_{\max}}$ where x_i is the number of different agencies that the activity does work for, and x_{max} is the maximum among all responding activities.

The product score for activity *i* is $p_i = \frac{y_i}{y_{\max}}$ where y_i is the number of different product and service/agency combinations that the activity identifies, and y_{max} is the maximum among all responding activities

(20%) Attribute: Workforce and Skills

Rationale: Specialized skills, certifications, and Navy Enlisted Classification codes are required for an activity to accomplish the varied work necessary for ship repair. It values workforce capability and meets the Navy's need for shore billets.

(30%) Metric: Specialized Skills and Certifications

(100%) Question: For ship maintenance activities, has your Ship maintenance activity been designated as having a specialized capability / skills or certifications?

Note: The second column is to capture capabilities, skills, or certifications that have been used in the last two years (FY 02/FY03). Use column four only for description of other item listed by activity.

See Section 3 Ship Overhaul and Repair Question 4 for table

Rationale: Ship maintenance activities have developed many specialized capabilities, which are mandatory to support complex ship overhaul and repair. These include critical processes, specialized capabilities and worker skills necessary for ship maintenance.

Scoring: The total number of skills and certifications used in the last two years by an activity divided by the highest number reported by any activity, as expressed below.

$$S_i = \frac{y_i}{y_{\max}}$$

y_i is the score for capabilities/ skills used in last two years where

$y_i = 3c_i + 2r_i + m_i$,

c_i is the number of responses activity *i* reports as used in the last two years that are in the "capability" column in the scoring table,

r_i is the number of certifications activity *i* reports as used in the last two years that are in the "certification" column in the scoring table,

m_i is the number of capabilities activity *i* reports as used in the last two years that are in the "machine/equipment" column in the scoring table, and

y_{max} is the maximum y_i reported.

Applies to all criteria, attributes, and metrics:
Use the following multiplication factors for determining the score above.
See Criteria 1, Workload Classification Attribute, Specialized Capabilities Question for scoring table.

(30%) Metric: Quantity of Skilled Workers

(100%) Question: For ship intermediate maintenance activities, list NECs assigned to this IMA activity.

Note: EDVR is Enlisted Distribution and Verification Report, NEC is Navy Enlisted Classification Code and reference document for NEC is MILPERSMAN 1221-010

NEC	NECs Required by EDVR for FY 04	NECs Assigned for FY 04	Projected NECs number required for FY 05	Projected NECs assigned in FY 05

Rationale: The size and experience of the skilled workforce is a measure of the ability to meet production and contingency requirements.

Scoring: The activity score is the vacant billets, which is the difference between the required billets and the assigned billets, as expressed below.

Activity score $S_i = \frac{x_{\min}}{x_i}$, x_i is the number of vacant billets per activity, $x_{\min}$ is the activity reporting the fewest vacant billets

x_i is $x_i = (b_{04} - v_{04}) + (b_{05} - v_{05})$ where b is the sum of required billets in each year, and v is the sum of number of assigned billets in each year.

(10%) Metric: Educational (Workforce Development) Opportunities

(100%) Question: For ship intermediate maintenance activities, list the learning institutions (community colleges, universities, technical schools), both brick and mortar as well as on-line, for which Sailors have used tuition assistance, or similar DoD sponsored programs. Provide the number of Sailors attending each institution for the following fiscal years FY 03 and FY 04.

Institution	Number of Sailors attending in FY 03	Number of Sailors attending in FY 04

Rationale: Training and development programs are the key to maintaining the necessary ship maintenance and repair workforce. We evaluate continuing education programs because it is necessary to keep skills updated and to have a program that replenishes the skill base as the existing workforce attrites. In continuing education, we measure the strength by the funding and time devoted to training.

Scoring: The activity score is the number of institutions plus the percentage of Sailors attending institutions, as expressed below.

Activity score $S_i = \frac{x_i}{x_{\max}}$, where x_i is a function of personnel attending per activity and number of institutions, x_{max} is the activity reporting the greatest x_i.

where $x_i \quad = .6s_i + \left(\frac{a}{p_i}\right).4$

a is the number of sailors attending all institutions in FY 03 and FY 04 divided by 2

p is the number of sailors assigned for FY 04

$s_i = \frac{u_i}{u_{\max}}$ where u_i is the number of learning institutions, and $u_{\max}$ is the maximum number of learning institutions at an activity.

(30%) Metric: Military Sea/ Shore Rotation Billets

(100%) Question: For ship intermediate maintenance activities, list the number of billets required and personnel assigned for pay-grades 0-6 through E-1 for FY 04 and FY 05.

Billets	Actual number assigned for FY 04	FY 04 required by ODVR/EDVR	FY 05 required by ODVR/EDVR	FY 05 projected assigned
O-6				
thru				
E-1				

Rationale: The availability of shore billets provides an opportunity for sailors to gain skills to take back to the Fleet. Sailors assigned shows workforce availability.

Scoring: The activity score is the vacant billets, which is the difference between the required billets and the assigned billets, as expressed below.

Activity score $S_i = \frac{x_{\min}}{x_i}$ where x_i is the number of vacant billets per activity, x_{min} is the activity reporting the fewest vacant billets

x_i is $x_i \quad = (b_{04} - v_{04}) + (b_{05} - v_{05})$, where b is the required billets per year, v is the number of assigned billets per year

(15%) CRITERIA #2 - The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval and air forces throughout a diversity of climate and terrain areas and staging areas for the use of Armed Forces in homeland defense missions) at both existing and potential receiving locations.

(70%) Attribute: Facilities

Rationale: A ship maintenance activity's facilities are a fundamental enabler for accomplishing its mission. Dry docks and piers are the primary location where ship maintenance events take place. The industrial buildings and specialized facilities provide the supporting production areas and capabilities to conduct ship overhaul and repair.

(25%) Metric: Dry Dock Capacity

(100%) Question: For ship maintenance activities, list the following structural characteristics of each graving dry dock at your facility. Do not include non-operational dry docks.

Note: Assume 6-feet high standard blocking. Indicate if floatation assistance is required by including an asterisk in column 3 after ship class. Condition code provided by iNFADS (Navy Facility Asset Database System)

Dry dock number	Condition code	Largest ship class that dry dock can accommodate	Number of portal and fixed cranes serving dry-dock	Maximum crane lifting capacity at the dry dock (tons)	Nuclear certified

Rationale: A significant amount of ship repair work can only be done in a dry dock, making the suitability of the dry dock the crucial facility in a depot. We break the dry dock value into three categories: size, nuclear certification, and condition. Larger dry docks are more valuable than smaller dry docks, because they provide more capability, and the private sector has fewer assets that can be used for the larger ships. Nuclear certification is included because it is necessary for repairs on Navy nuclear-powered ships, and similar facilities are less abundant in the private sector than conventional dry docks. The usefulness of the dry dock is degraded as the material condition falls.

Scoring: The activity score is total dry dock score divided by the highest number reported by all activities. Dry dock scores are a weighted score of the largest ship class that can be accepted, plus nuclear certification times the condition code value plus weighted score of the number of cranes available and maximum lift capacity, as expressed below.

$$S_i = \frac{dd_i}{dd_{\max}}$$

$$dd_i = \sum_j [sc_{ij}(0.6) + n_{ij}(0.3)]cc_{ij} + (\frac{nc_{ij}}{nc_{\max}} + \frac{c_{ij}}{c_{\max}})(0.1),$$

where dd_i is the dry dock score for activity *i* and

sc_{ij} is the score for the largest class ship that will fit in dry dock *j* at activity i receives all points.
;

$$sc_{ij} = \begin{cases} 1 & \text{if the largest ship class that the dry dock can accommodate is a CVN or CV} \\ .85 & \text{if the largest ship class that the dry dock can accommodate is a LHD, LHA or AOE} \\ .65 & \text{if the largest ship class that the dry dock can accommodate is a LPD or LSD} \\ .5 & \text{if the largest ship class that the dry dock can accommodate is a CG, DDG, DD, or SSBN} \\ .4 & \text{if the largest ship class that the dry dock can accommodate is a SSN} \\ .3 & \text{if the largest ship class that the dry dock can accommodate is a FFG} \\ .1 & \text{if the largest ship class that the dry dock can accommodate is a MCM, MHC, or PC} \end{cases}$$

n_{ij} =1 if dry dock *j* at activity *i* is nuclear certified, and n_{ij} =0 if it is not nuclear,

cc_{ij} is the condition code score for dry dock *j* at activity *i*,

$$cc_{ij} = \begin{cases} 1 & \text{if the condition code is "adequate"} \\ .66 & \text{if the condition code is "substandard"} \\ .33 & \text{if the condition code is "inadequate"} \end{cases}$$

nc_{ij} is score for the number of cranes serving dry dock *j* at activity *i*:

$$nc_{ij} = \begin{cases} .25 & \text{if the dry dock is served by only 1 crane} \\ .5 & \text{if the dry dock is served by 2 cranes} \\ .75 & \text{if the dry dock is served by 3 cranes} \\ 1 & \text{if the dry dock is served by 4 or more cranes} \end{cases}$$

c_{ij} is the maximum crane lift capacity among the cranes serving dry dock *j* at activity *i*, and $c_{\max}$ is the maximum dry dock crane capacity available among all dry docks answering the question.

Scoring Note: maximum lift capacity at any shipyard dry dock is the highest response received to this question.

(25%) Metric: Pier and Wharf Capacity

(100%) Question: Information scored: pier capacity

Information obtained from Capacity Data Call DoD612 and DoD613.

Rationale: An activity's pier and wharf capacity are essential for pre- and post-dry dock evolutions, and for non-dry dock availabilities. The docking period for a ship availability is usually about two-thirds of the total availability length. Adequate pier or wharf capacity is required to complete the remainder of the availability.

Scoring: The activity score is the total pier score divided by highest activity score reported. The total pier score is the sum of the length plus the depth plus shore power available plus crane capacity plus sanitary waste capacity plus compress air plus nuclear certification multiplied by the condition code value. Each value is divided by the highest value reported by any activity, as expressed below.

$S_i = \frac{p_i}{p_{\max}}$ where

$$p_i = \sum_i \{[\frac{l_i}{l_{\max}}(0.1) + \frac{d_i}{d_{\max}}(0.1) + \frac{e_i}{e_{\max}}(0.1) + \frac{c_i}{c_{\max}}(0.1) + \frac{w_i}{w_{\max}}(0.1) + \frac{a_{ij}}{a_{\max}}(0.1) + n_{ij}(0.4)]*cc_{ij}\}$$

Where:

l_{ij} is the length of pier *j* at activity *i* and $l_{\max}$ is the maximum length of all piers answering this question,

d_{ij} is the depth at pier *j* at activity *i* and $d_{\max}$ is the maximum depth of all piers answering the question,

e_{ij} is the shore power available at pier *j* at activity *i*, and $e_{\max}$ is the maximum shore power available of all piers answering the question,

c_{ij} is the crane capacity at pier *j* at activity *i*, and $c_{\max}$ is the maximum crane capacity available at all piers answering the question,

w_{ij} is sanitary waste capacity at pier *j* at activity *i*, and $w_{\max}$ is the maximum waste capacity available at all piers answering the question,

a_{ij} is the compressed air at the pier, and $a_{\max}$ is the maximum compressed air available at all piers answering the question

n_{ij} is 1 if nuclear capable, and 0 if non-nuclear capable

cc_{ij} is the condition code of the pier as received from Data call #1 DoD question 11 for the pier and is evaluated at:

$$cc_{ij} = \begin{cases} 1 & \text{if the condition code is "adequate"} \\ .66 & \text{if the condition code is "substandard"} \\ .33 & \text{if the condition code is "inadequate"} \end{cases}$$

(25%) Metric: Industrial Building Availability

(100%) Question: For ship maintenance activities, provide the following information for each identified shop.

Shop	Maximum length of equipment that can be worked on	Maximum volume of equipment that can be worked on	Maximum wt of equipment that can be worked
Machine shop			
Heavy fabrication			
Welding			
Electrical			
Shipwright			
Optical instruments			
Foundry			
Forge			
Sheet metal			
Piping			
Paint			

Rationale: Industrial buildings provide the space for shop work, which is needed to perform work that either must be or is more efficiently performed off-ship. In addition to valuing specific equipment capabilities in other questions, we want to value the shop facilities by the limitations that they have on what size equipment they can work. We measure size in the three dimensions (length, volume, and weight).

Scoring: The activity shop score is the sum of length, volume and weight, as expressed below.

$S_i = \dfrac{d_i}{d_{\max}}$ where d_i activity score, d_{max} is highest score reported

$$d_i = \sum \left(\frac{l_i}{l_{\max}} + \frac{v_i}{v_{\max}} + \frac{w_i}{w_{\max}} \right)$$

l_i is maximum length of equipment that can be worked on any inside shop facility at activity i,

v_i is maximum volume of equipment that can be worked on any inside shop facility

w_i is maximum weight of equipment that can be worked on any inside shop facility

(15%) Metric: Dry Dock and Pier Crane Support

(100%) Question: For ship maintenance activities, for each pier or wharf provide the following at your installation.

Pier/wharf Name	Number of portal and fixed cranes serving pier/wharf	Max lift capacity at pier/wharf

Rationale: For a ship undergoing repair, it is often necessary to physically remove or replace major ship equipment while the ship is in dry dock or at pier side. The number of portal and fixed cranes plus their total lift capability determines the shipyard's ability to complete repair and installation on this major ship equipment.

Scoring: The sum of the activity's dry docks weighted by: ship class that can be accommodated; nuclear certification; facility condition code; number of cranes available; and maximum lift capacity of the cranes, as expressed below.

$$S_i = \frac{p_i}{p_{\max}} \text{ where}$$

$$p_i = \sum_j \left(c_{ij} + \frac{l_{ij}}{l_{\max}} \right)$$

$$c_{ij} = \begin{cases} .25 & \text{if the pier/wharf is served by only 1 crane} \\ .5 & \text{if the pier/wharf is served by 2 cranes} \\ .75 & \text{if the pier/wharf is served by 3 cranes} \\ 1 & \text{if the pier/wharf is served by 4 or more cranes} \end{cases}$$

l_{ij} is maximum lift capacity at pier/wharf,

l_{max} is maximum lift capacity at any pier/wharf,

j indexes the piers and wharves at each site, and

p_{max} is the maximum of the p_i.

(10%) Metric: Specialized Facilities

(100%) Question: For ship maintenance activities, has your Ship maintenance activity been designated as having a specialized capability / skills or certifications?

Note: The second column is to capture capabilities, skills, or certifications that have been used in the last two years (FY 02/FY03). Use column four only for description of other item listed by activity.

See Section 3 Ship Overhaul and Repair Question 4 for table.

Rationale: Ship maintenance activities have developed many specialized capabilities, which are mandatory to support complex ship overhaul and repair. These include critical processes and specialized capabilities necessary for ship maintenance.

Scoring: The total number of capabilities identified by an activity divided by the highest number reported by any activity, as expressed below.

$S_i = \frac{x_i}{x_{\max}}$,where

$x_i = 3c_i + 2r_i + m_i$,

c_i is the number of responses activity i reports that are in the "capability" column of the scoring table,

r_i is the number of certifications activity i reports that are in the "certification" column of the scoring table,

m_i is the number of capabilities activity i reports that are in the "machine/equipment" column of the scoring table, and

x_{max} is the maximum x_i reported.

Applies to all criteria, attributes, and metrics:
Use the following multiplication factors for determining the score above.
See Criteria 1, Workload Classification Attribute, Specialized Capabilities Question for scoring table

(30%) Attribute: Real Estate

Rationale: Availability of energy to support surge requirements or an increase in workload. Surge is the need to provide short turn-around maintenance support to the Fleet units who are departing to or returning from contingency operations.

(100%) Metric: Expansion Potential

(100%) Question: Scored information: High voltage electrical capacity expansion room.

Use Capacity Data Call question DoD621

Rationale: The availability of energy to support surge requirements or an increase of workload.

Scoring: The activity score is the amount of off base daily capacity less the normal steady state daily load divided by the highest score reported, as expressed below.

$S_i = \frac{e_i}{e_{\max}}$ where

$e_i = ob - ns$

ob is Off Base Daily Capacity

ns is Normal Steady State Daily Load

(25%) CRITERIA #3 - The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.

(45%) Attribute: Facilities

Rationale: A ship maintenance activity's facilities are a fundamental enabler for accomplishing its mission. Dry docks and piers are the primary location where ship maintenance events take place. The industrial buildings and specialized facilities provide the supporting production areas and capabilities to conduct ship overhaul and repair. For the ability to accommodate contingency and mobilization, an activity's facilities received greater weight, because the development of new facilities may take substantial time to build.

(25%) Metric: Dry Dock Capacity

(100%) Question: For ship maintenance activities, list the following structural characteristics of each graving dry dock at your facility. Do not include non-operational dry docks.

Note: Assume 6-feet high standard blocking. Indicate if floatation assistance is required by including an asterisk in column 3 after ship class. Condition code provided by iNFADS (Navy Facility Asset Database System)

Dry dock number	Condition code	Largest ship class that dry dock can accommodate	Number of portal and fixed cranes serving dry-dock	Maximum crane lifting capacity at the dry dock (tons)	Nuclear certified

Rationale: A significant amount of ship repair work can only be done in a dry dock, making the suitability of the dry dock the crucial facility in a depot. We break the dry dock value into three categories: size, nuclear certification, and condition. Larger dry docks are more valuable than smaller dry docks, because they provide more capability, and the private sector has fewer assets that can be used for the larger ships. Nuclear certification is included because it is necessary for repairs on Navy nuclear-powered ships, and similar facilities are less abundant in the private sector than conventional dry docks. The usefulness of the dry dock is degraded as the material condition falls.

Scoring: The activity score is total dry dock score divided by the highest number reported by all activities. Dry dock scores are a weighted score of the largest ship class that can be accepted, plus nuclear certification times the condition code value plus weighted score of the number of cranes available and maximum lift capacity, as expressed below.

$$S_i = \frac{dd_i}{dd_{\max}}$$

$$dd_i = \sum_j [sc_{ij}(0.6) + n_{ij}(0.3)]cc_{ij} + (\frac{nc_{ij}}{nc_{\max}} + \frac{c_{ij}}{c_{\max}})(0.1),$$

where dd_i is the dry dock score for activity *i* and

sc_{ij} is the score for the largest class ship that will fit in dry dock *j* at activity i receives all points.
;

$$sc_{ij} = \begin{cases} 1 & \text{if the largest ship class that the drydock can accommodate is a CVN or CV} \\ .85 & \text{if the largest ship class that the drydock can accommodate is a LHD, LHA or AOE} \\ .65 & \text{if the largest ship class that the drydock can accommodate is a LPD or LSD} \\ .5 & \text{if the largest ship class that the drydock can accommodate is a CG, DDG, DD, or SSBN} \\ .4 & \text{if the largest ship class that the drydock can accommodate is a SSN} \\ .3 & \text{if the largest ship class that the drydock can accommodate is a FFG} \\ .1 & \text{if the largest ship class that the drydock can accommodate is a MCM, MHC, or PC} \end{cases}$$

n_{ij} =1 if dry dock *j* at activity *i* is nuclear certified, and n_{ij} =0 if it is not nuclear,

cc_{ij} is the condition code score for dry dock *j* at activity *i*,

$$cc_{ij} = \begin{cases} 1 & \text{if the condition code is "adequate"} \\ .66 & \text{if the condition code is "substandard"} \\ .33 & \text{if the condition code is "inadequate"} \end{cases}$$

nc_{ij} is score for the number of cranes serving dry dock *j* at activity *i*:

$$nc_{ij} = \begin{cases} .25 & \text{if the dry dock is served by only 1 crane} \\ .5 & \text{if the dry dock is served by 2 cranes} \\ .75 & \text{if the dry dock is served by 3 cranes} \\ 1 & \text{if the dry dock is served by 4 or more cranes} \end{cases}$$

c_{ij} is the maximum crane lift capacity among the cranes serving dry dock *j* at activity *i*, and

$c_{\max}$ is the maximum dry dock crane capacity available among all dry docks answering the question.

Scoring Note: maximum lift capacity at any shipyard dry dock is the highest response received to this question.

(35%) Metric: Pier and Wharf Capacity

(100%) Question: Information scored: pier capacity

Information obtained from Capacity Data Call DoD612 and DoD613.

Rationale: An activity's pier and wharf capacity are essential for pre- and post-dry dock evolutions, and for non-dry dock availabilities. The docking period for a ship availability is usually about two-thirds of the total availability length. Adequate pier or wharf capacity is required to complete the remainder of the availability.

Scoring: The activity score is the total pier score divided by highest activity score reported. The total pier score is the sum of the length plus the depth plus shore power available plus crane capacity plus sanitary waste capacity plus compress air plus nuclear

certification multiplied by the condition code value. Each value is divided by the highest value reported by any activity, as expressed below.

$$S_i = \frac{p_i}{p_{\max}} \text{ where}$$

$$p_i = \sum_j \{[\frac{l_{ij}}{l_{\max}}(0.1) + \frac{d_{ij}}{d_{\max}}(0.1) + \frac{e_{ij}}{e_{\max}}(0.1) + \frac{c_{ij}}{c_{\max}}(0.1) + \frac{w_{ij}}{w_{\max}}(0.1) + \frac{a_{ij}}{a_{\max}}(0.1) + n_{ij}(0.4)]*cc_{ij}\}$$

Where:

l_{ij} is the length of pier *j* at activity *i* and $l_{\max}$ is the maximum length of all piers answering this question,

d_{ij} is the depth at pier *j* at activity *i* and $d_{\max}$ is the maximum depth of all piers answering the question,

e_{ij} is the shore power available at pier *j* at activity *i*, and $e_{\max}$ is the maximum shore power available of all piers answering the question,

c_{ij} is the crane capacity at pier *j* at activity *i*, and $c_{\max}$ is the maximum crane capacity available at all piers answering the question,

w_{ij} is sanitary waste capacity at pier *j* at activity *i*, and $w_{\max}$ is the maximum waste capacity available at all piers answering the question,

a_{ij} is the compressed air at the pier, and $a_{\max}$ is the maximum compressed air available at all piers answering the question

n_{ij} is 1 if nuclear capable, and 0 if non-nuclear capable

cc_{ij} is the condition code of the pier as received from Data call #1 DoD question 11 for the pier and is evaluated at:

$$cc_{ij} = \begin{cases} 1 & \text{if the condition code is "adequate"} \\ .66 & \text{if the condition code is "substandard"} \\ .33 & \text{if the condition code is "inadequate"} \end{cases}$$

(15%) Metric: Industrial Building Availability

(100%) Question: For ship maintenance activities, provide the following information for each identified shop.

Shop	Maximum length of	Maximum volume	Maximum wt of

	equipment that can be worked on	of equipment that can be worked on	equipment that can be worked
Machine shop			
Heavy fabrication			
Welding			
Electrical			
Shipwright			
Optical instruments			
Foundry			
Forge			
Sheet metal			
Piping			
Paint			

Rationale: Industrial buildings provide the space for shop work, which is needed to perform work that either must be or is more efficiently performed off-ship. In addition to valuing specific equipment capabilities in other questions, we want to value the shop facilities by the limitations that they have on what size equipment they can work. We measure size in the three dimensions (length, volume, and weight).

Scoring: The activity shop score is the sum of length, volume and weight, as expressed below.

$S_i = \frac{d_i}{d_{\max}}$ where d_i activity score, d_{max} is highest score reported

$$d_i = \sum \left(\frac{l_i}{l_{\max}} + \frac{v_i}{v_{\max}} + \frac{w_i}{w_{\max}} \right)$$

l_i is maximum length of equipment that can be worked on any inside shop facility at activity i,

v_i is maximum volume of equipment that can be worked on any inside shop facility
w_i is maximum weight of equipment that can be worked on any inside shop facility

(15%) Metric: Dry Dock and Pier Crane Support

(100%) Question: For ship maintenance activities, for each pier or wharf provide the following at your installation.

Pier/wharf Name	Number of portal and fixed cranes serving pier/wharf	Max lift capacity at pier/wharf

Rationale: For a ship undergoing repair, it is often necessary to physically remove or replace major ship equipment while the ship is in dry dock or at pier side. The number of portal and fixed cranes plus their total lift capability determines the shipyard's ability to complete repair and installation on this major ship equipment.

Scoring: The sum of the activity's dry docks weighted by: ship class that can be accommodated; nuclear certification; facility condition code; number of cranes available; and maximum lift capacity of the cranes, as expressed below.

$$S_i = \frac{p_i}{p_{\max}} \text{ where}$$

$$p_i = \sum_j \left(c_{ij} + \frac{l_{ij}}{l_{\max}} \right)$$

$$c_{ij} = \begin{cases} .25 & \text{if the pier/wharf is served by only 1 crane} \\ .5 & \text{if the pier/wharf is served by 2 cranes} \\ .75 & \text{if the pier/wharf is served by 3 cranes} \\ 1 & \text{if the pier/wharf is served by 4 or more cranes} \end{cases}$$

l_{ij} is maximum lift capacity at pier/wharf,

l_{max} is maximum lift capacity at any pier/wharf,

j indexes the piers and wharves at each site, and

p_{max} is the maximum of the p_i.

(10%) Metric: Specialized Facilities

(100%) Question: For ship maintenance activities, has your Ship maintenance activity been designated as having a specialized capability / skills or certifications?

Note: The second column is to capture capabilities, skills, or certifications that have been used in the last two years (FY 02/FY03). Use column four only for description of other item listed by activity.

See Section 3 Ship Overhaul and Repair Question 4 for table.

Rationale: Ship maintenance activities have developed many specialized capabilities, which are mandatory to support complex ship overhaul and repair. These include critical processes and specialized capabilities necessary for ship maintenance.

Scoring: The total number of capabilities identified by an activity divided by the highest number reported by any activity, as expressed below.

$S_i = \frac{x_i}{x_{\max}}$,where

$x_i = 3c_i + 2r_i + m_i$,

c_i is the number of responses activity i reports that are in the "capability" column of the scoring table,

r_i is the number of certifications activity i reports that are in the "certification" column of the scoring table,

m_i is the number of capabilities activity i reports that are in the "machine/equipment" column of the scoring table, and

x_{max} is the maximum x_i reported.

Applies to all criteria, attributes, and metrics:
Use the following multiplication factors for determining the score above.
See Criteria 1, Workload Classification Attribute, Specialized Capabilities Question for scoring table.

(35%) Attribute: Workforce and Skills

Rationale: Specialized skills, certifications, and Navy Enlisted Classification codes are required by the activities to accomplish work as well as the efforts to continue to improve the skills of the workforce. It is weighted to value the workforce capability and meets the Navy's need for shore billets. A skilled workforce requires significant time to expand in the event of a contingency or mobilization.

(25%) Metric: Specialized Skills and Certifications

(100%) Question: For ship maintenance activities, has your Ship maintenance activity been designated as having a specialized capability / skills or certifications?

Note: The second column is to capture capabilities, skills, or certifications that have been used in the last two years (FY 02/FY03). Use column four only for description of other item listed by activity.

See Section 3 Ship Overhaul and Repair Question 4 for table.

Rationale: Ship maintenance activities have developed many specialized capabilities, which are mandatory to support complex ship overhaul and repair. These include critical processes and specialized capabilities necessary for ship maintenance.

Scoring: The total number of capabilities identified by an activity divided by the highest number reported by any activity, as expressed below.

$$S_i = \frac{y_i}{y_{\max}}$$

y_i is the score for capabilities/ skills used in last two years where

$y_i=3c_i+2r_i+m_i$,

c_i is the number of responses activity *i* reports as used in the last two years that are in the "capability" column in the scoring table,

r_i is the number of certifications activity *i* reports as used in the last two years that are in the "certification" column in the scoring table,

m_i is the number of capabilities activity *i* reports as used in the last two years that are in the "machine/equipment" column in the scoring table, and

y_{max} is the maximum y_i reported.

Applies to all criteria, attributes, and metrics:
Use the following multiplication factors for determining the score above.
See Criteria 1, Workload Classification Attribute, Specialized Capabilities Question for scoring table.

(25%) Metric: Quantity of Skilled Workers

(100%) Question: For ship intermediate maintenance activities, list NECs assigned to this IMA activity.

Note: EDVR is Enlisted Distribution and Verification Report, NEC is Navy Enlisted Classification Code and reference document for NEC is MILPERSMAN 1221-010

NEC	NECs Required by EDVR for FY 04	NECs Assigned for FY 04	Projected NECs number required for FY 05	Projected NECs assigned in FY 05

Rationale: The size and experience of the skilled workforce is a measure of the ability to meet production and contingency requirements.

Scoring: The activity score is the vacant billets divided by authorized billets less the assigned billets, as expressed below.

Activity score $S_i = \frac{x_{\min}}{x_i}$ x_i is the number of vacant billets per activity, $x_{\min}$ is the activity reporting the fewest vacant billets

x_i is $x_i = (b_{04} - v_{04}) + (b_{05} - v_{05})$ where b is the sum of authorized number of billets in each year, and v is the sum of number of assigned billets in each year.

(25%) Metric: Educational (Workforce Development) Opportunities

(100%) Question: For ship intermediate maintenance activities, list the learning institutions (community colleges, universities, technical schools), both brick and mortar as well as on-line, for which Sailors have used tuition assistance, or similar DoD sponsored programs. Provide the number of Sailors attending each institution for the following fiscal years FY 03 and FY 04.

Institution	Number of Sailors attending in FY 03	Number of Sailors attending in FY 04

Rationale: Training and development programs are the key to maintaining the necessary ship maintenance and repair workforce. We evaluate continuing education programs because it is necessary to keep skills updated and to have a program that replenishes the skill base as the existing workforce attrites. In continuing education, we measure the strength by the funding and time devoted to training.

Scoring: The activity score is the number of institutions plus the percentage of Sailors attending institutions, as expressed below.

Activity score $S_i = \frac{x_i}{x_{\max}}$, where x_i is a function of personnel attending per activity and number of institutions, $x_{\max}$ is the activity reporting the greatest x_i.

where $x_i = .6s_i + \left(\frac{a_i}{p_i}\right).4$

a_i is the number of sailors attending all institutions in FY 03 and FY 04 divided by 2

p_i is the number of sailors assigned for FY 03 and FY 04 divided by 2

$s_i = \frac{u_i}{u_{\max}}$ where u_i is the number of learning institutions, and $u_{\max}$ is the maximum number of learning institutions at an activity.

(25%) Metric: Military Sea/ Shore Rotation

(100%) Question: For ship intermediate maintenance activities, list the number of billets required and personnel assigned for pay-grades 0-6 through E-1 for FY 04 and FY 05.

Billets	Actual number assigned for FY 04	FY 04 required by ODVR/EDVR	FY 05 required by ODVR/EDVR	FY 05 projected assigned
O-6				
thru				
E-1				

Rationale: The availability of shore billets provides an opportunity for sailors to gain skills to take back to the Fleet. Sailors assigned shows workforce availability.

Scoring: The activity score is the vacant billets divided by authorized billets less the assigned billets, as expressed below.

Activity score $S_i = \frac{x_{\min}}{x_i}$ where x_i is the number of vacant billets per activity, $x_{\min}$ is the activity reporting the fewest vacant billets

x_i is $x_i = (b_{04} - v_{04}) + (b_{05} - v_{05})$, where b is the authorized number of billets per year, v is the number of assigned billets per year

(20%) Attribute: Plant Value (Planned / recent operational capability improvements)

Rationale: Identifies the investment made in new capabilities and improvements.

(100%) Metric: Recent and Programmed Capital Investments

(100%) Question: For ship intermediate activity, what funded and in-progress investments Type I and II plant property and Type IV are occurring at this IMA?

Note: Only include projects funded through FY 04 Armed Services Appropriations Act.

Project	New capability	IOC date	Give specialized capability (Y/N)	$ Value

Rationale: Captures future capabilities of IMAs through capital improvements.

Scoring: The activity score is a weighted sum of the number of products plus specialized capability, as expressed below.

Activity score is $S_i = \frac{x_i}{x_{\max}}$ where

x_i is $x_i = .8p_i + .2u_i$, p is a sum of the number of reported projects

u_i where $u = \left\{ \begin{matrix} yes = 1 : \text{if unique capability} \\ no = 0 \end{matrix} \right\}$.

New capability/IOC date/$ value for scenario development

(10%) CRITERIA #4 - The cost of operations and the manpower implications

(50%) Attribute: Workforce and Skills

Rationale: Specialized skills, certifications, and Navy Enlisted Classification codes are required by the activities to accomplish work as well as the efforts to continue to improve the skills of the workforce. It is weighted to value the workforce capability and meets the Navy's need for shore billets.

(25%) Metric: Specialized Skills and Certifications

(100%) Question: For ship maintenance activities, has your Ship maintenance activity been designated as having a specialized capability / skills or certifications?

Note: The second column is to capture capabilities, skills, or certifications that have been used in the last two years (FY 02/FY03). Use column four only for description of other item listed by activity.

See Section 3 Ship Overhaul and Repair Question 4 for table

Rationale: Ship maintenance activities have developed many specialized capabilities, which are mandatory to support complex ship overhaul and repair. These include critical processes, specialized capabilities and worker skills necessary for ship maintenance.

Scoring: The total number of skills and certifications used in the last two years by an activity divided by the highest number reported by any activity, as expressed below.

$$S_i = \frac{y_i}{y_{\max}}$$

y_i is the score for capabilities/ skills used in last two years where

$y_i = 3c_i + 2r_i + m_i$,

c_i is the number of responses activity *i* reports as used in the last two years that are in the "capability" column in the scoring table,

r_i is the number of certifications activity *i* reports as used in the last two years that are in the "certification" column in the scoring table,

m_i is the number of capabilities activity *i* reports as used in the last two years that are in the "machine/equipment" column in the scoring table, and

y_{max} is the maximum y_i reported.

Applies to all criteria, attributes, and metrics:
Use the following multiplication factors for determining the score above.

(25%) Metric: Quantity of Skilled Workers

(100%) Question: For ship intermediate maintenance activities, list NECs assigned to this IMA activity.

Note: EDVR is Enlisted Distribution and Verification Report, NEC is Navy Enlisted Classification Code and reference document for NEC is MILPERSMAN 1221-010

NEC	NECs Required by EDVR for FY 04	NECs Assigned for FY 04	Projected NECs number required for FY 05	Projected NECs assigned in FY 05

Rationale: The size and experience of the skilled workforce is a measure of the ability to meet production and contingency requirements.

Scoring: The activity score is the vacant billets divided by authorized billets less the assigned billets, as expressed below.

Activity score $S_i = \frac{x_{\min}}{x_i}$ x_i is the number of vacant billets per activity, $x_{\min}$ is the activity reporting the fewest vacant billets

x_i is $x_i = (b_{04} - v_{04}) + (b_{05} - v_{05})$ where b is the sum of authorized number of billets in each year, and v is the sum of number of assigned billets in each year.

(25%) Metric: Educational (Workforce Development) Opportunities

(100%) Question: For ship intermediate maintenance activities, what was the IMA FY 03 TAD costs for training maintenance personnel required maintenance qualifications, NECs, and maintenance certifications?

Rationale: An educated workforce is a more capable workforce that can provide efficiencies. The more and varied the institutions, the greater the learning opportunities. The more sailors that take advantage of continuing education, the better the readiness of the activity.

Scoring: The activity score is the reported TAD expenditure divided by the highest reported expenditure, as expressed below.

Activity score is $S_i = \frac{x_i}{x_{\max}}$ where

x_i is the TAD funds reported by the activity

$x_{\max}$ is the highest reported expenditure of funds

(25%) Metric: Military Sea/ Shore Rotation Billets

(100%) Question: For ship intermediate maintenance activities, list the number of billets required and personnel assigned for pay-grades 0-6 through E-1 for FY 04 and FY 05.

Billets	Actual number assigned for FY 04	FY 04 required by ODVR/EDVR	FY 05 required by ODVR/EDVR	FY 05 projected assigned
O-6				
thru				
E-1				

Rationale: The availability of shore billets provides an opportunity for sailors to gain skills to take back to the Fleet. Sailors assigned shows workforce availability.

Scoring: The activity score is the vacant billets divided by authorized billets less the assigned billets, as expressed below.

Activity score $S_i = \frac{x_{\min}}{x_i}$ where x_i is the number of vacant billets per activity, $x_{\min}$ is the activity reporting the fewest vacant billets

x_i is $x_i = (b_{04} - v_{04}) + (b_{05} - v_{05})$, where b is the authorized number of billets per year, v is the number of assigned billets per year

(30%) Attribute: Costs

Rationale: A simple and direct measure of an activity's cost of operations is total throughput cost per unit of work delivered.

(100%) Metric: Total Operating Costs

(100%) Question: For ship maintenance activities, what is your activity's total operating cost (less material) for FY 03 and FY 04 (budgeted)?

	FY 03 (K)$	FY 04 (budgeted) (K)$
Total operating cost		

Rationale: A simple and direct measure of an activity's cost of operations is total throughput cost per unit of work delivered. This question requests the total operating cost for FY03 and FY04, which will be divided by workload delivered in direct labor hours (DLHs) in FY03 and FY04 respectively, as obtained by the Capacity Data Call, to give the unit cost of operations. Material is excluded because it can vary significantly from year to year depending on the nature of the work performed and could skew the resultant metric.

Scoring: The activity score is sum of FY 03 and FY 04 operating cost divided by the sum of the FY 03 and 04 workload, as expressed below.

Activity score is $S_i = \frac{x_{\min}}{x_i}$ where $x_{\min}$ is the minimum among all responding activities,

$$x_i = \left(\frac{o_{03} + o_{04}}{w_{03} + w_{04}} \right),$$

o_{03} = operating cost for FY-03

o_{04} = operating cost for FY-04

w_{03} = sum of all FY-03 workload reported from DoD question 526 capacity data call

w_{04} = sum of all FY-04 workload reported from DoD question 526 capacity data call

(20%) Attribute: Plant Value & Maintenance Cost

Rationale: Captures the existing value of facilities, the continuing cost to maintain those facilities, and investment in improvements in capabilities.

(25%) Metric: Plant Replacement Value of Facilities & Equipment

(100%) Question: For ship intermediate maintenance activities, what is the total estimated replacement value of the equipment and buildings for this IMA?

Rationale: Maximize ships served relative to facilities and equipment investment.

Scoring: The activity score is the replacement value divided by the number of ships served, as expressed below.

Activity score is $S_i = \frac{x_{\min}}{x_i}$ where

x_i is $x_i = \frac{v_i}{b_i}$ where v is replacement value, b_i is the number of ships from ship repair sub-group IJCSG question 1

$x_{\min}$ is the lowest reported value

(25%) Metric: Maintenance & Repair of Buildings

(100%) Question: For ship intermediate maintenance activities, what were your activity's annual Real Property Maintenance (RPM) expenses (in $K) for FY 99-03?

	FY 99	FY 00	FY 01	FY 02	FY 03
Real Property Maintenance expenses $(K)					

Rationale: Maximize ships served relative to the continuing maintenance costs of facilities

Scoring: The activity score is the real property maintenance costs divided by the number of ships served, as expressed below.

Activity score $S_i = \frac{x_{\min}}{x_i}$ where $x_{\min}$ is the minimum maintenance cost per ship repaired and x_i is the activity score as defined by:

$$x_i = \frac{\sum_{FY} c_{rpm}}{S_{numbers}}$$

Where c_{rpm} is the RPM cost for each FY, and,
$S_{numbers}$ is the number of ships repaired at the SIMA as reported in Military Value question 1.

(50%) Metric: Recent and Programmed Capital Investments

(100%) Question: For ship intermediate activity, what funded and in-progress investments Type I and II plant property and Type IV are occurring at this IMA?

Note: Only include projects funded through FY 04 Armed Services Appropriations Act.

Project	New capability	IOC date	Give specialized capability (Y/N)	$ Value

Rationale: Captures future capabilities of IMAs through capital improvements.

Scoring: The activity score is a weighted sum of the number of products plus specialized capability, as expressed below.

Activity score is $S_i = \frac{x_i}{x_{\max}}$ where

x_i is $x_i = .8p + .2u$, p is a sum of the number of reported projects

u is $u = \#ofspecializedprojects$.
New capability/IOC date/$ value for scenario development

Section 4: Issues Impacting Analysis

Each of the subgroups has identified two specific sections of title 10 United States Code as potentially having significant impact on the overall BRAC analysis; title 10 USC §2464 (commonly referred to as the "Core Law") and 10 USC §2466 (commonly referred to as the "50/50 Law"). Each of these sections impact the demand, or requirement side of capacity and potentially impacts our determination of "excess capacity."

Title 10 USC §2464 requires that DoD maintain a core logistics capability that is Government-owned and Government-operated (including Government personnel and Government-owned and Government-operated, equipment, and facilities) to ensure a ready and controlled source of technical competence and resources necessary to ensure effective and timely response to a mobilization, national defense contingency situations, and other emergency requirements.

10 USC §2466 requires that not more than 50 percent of the funds made available in a fiscal year to a military department or a Defense Agency for depot-level maintenance and repair workload may be used to contract for the performance by non-Federal Government personnel of such workload for the Military Department or the Defense Agency. Any such funds that are not used for such a contract shall be used for the performance of depot-level maintenance and repair workload by employees of the Department of Defense. The Secretary of Defense may waive the limitation for a fiscal year for reasons of national security. In this case the Secretary must submit a notification to Congress with the reasons for a waiver. Also, the Secretary may not delegate the authority for a waiver.

It is recognized that these statutes do not hinder an unconstrained military value analysis, It is possible that they will impact scenario development and should be addressed at that time

DRAFT

MEMORANDUM FOR CHAIRMAN, MEDICAL JOINT CROSS-SERVICE GROUP

SUBJECT: Medical Joint Cross-Service Group (Medical JCSG) Report on Military Value Analysis

The Infrastructure Steering Group (ISG) has reviewed the Medical JCSG Military Value report submitted to it on March 24, 2004. The ISG appreciates the dedicated effort and military judgment that your members, as the experts in the field, put into revising this report in response to our initial comments. As part of the process to review issues raised by the Military Departments, the ISG tasked the BRAC Deputy Assistant Secretaries (DASs) to develop recommendations for resolving issues with the military value reports. The BRAC DASs met to review the issues pertaining to your JCSG. Subject to incorporating the comment expressed herein, the ISG approves your report as the basis for your military value analysis.

The ISG is concerned that wording on page 7 reflects a conclusion not to close any facilities that might be considered unique, regardless of whether they provide a needed capability. Please revise the first full paragraph on page 7 to track the language used in a similar paragraph on page 17.

After incorporation of the directed revision above, please provide a final copy of your Military Value Analysis report to the OSD BRAC Office. If you have any questions regarding these comments, please contact Peter Potochney, Director, Base Realignment and Closure, at 614-5356.

Michael W. Wynne
Acting USD (Acquisition, Technology & Logistics)
Chairman, Infrastructure Steering Group

cc: Infrastructure Steering Group Members
MilDep BRAC DASs

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MEDICAL JOINT CROSS SERVICE GROUP

MILTARY VALUE REPORT

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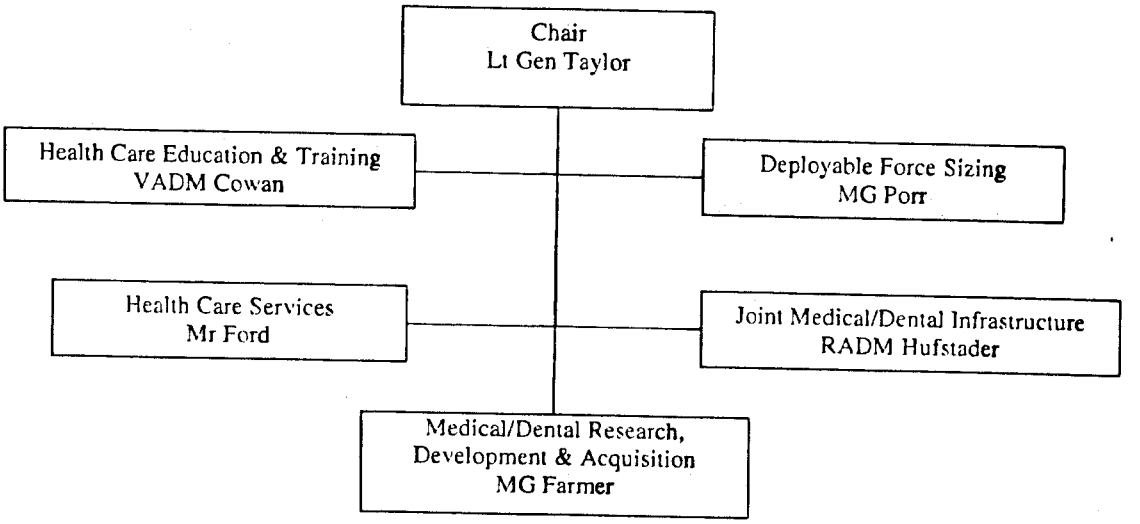
Figure 1: Medical Joint Cross Service Group Structure.



This structure provides the best coverage of the functions within the Military Heath System. Grouping of functions provides an effective framework for evaluating the potential for cross service and Joint opportunities for improving the Military Health System's Military Value while emphasizing its continued transformation to best support warfighting needs and the medical benefit.

The Medical Joint Cross Service Group currently has empanelled 84 military, 21 civilian, and 2 contract personnel. The contract personnel are subject matter experts who are providing their expertise to the Medical Joint Cross Service Group in addition to their other contracted duties. A small number of these personnel are located outside the Washington DC area, including one in California. These personnel support the Medical Joint Cross Service Group as an additional duty and represent the Group's subject matter experts. In some cases, the work of the Medical Joint Cross Service Group now requires, on average, 10-15% of the man-hours available from its members and participants.

The Medical Joint Cross-Service Group has leveraged available technology and established a web-based E-Room to facilitate intra-Group communication. Support for this E-Room has been provided from within the Medical Joint Cross Service Group.

MILITARY VALUE DEFINITION

The Military Value analysis establishes the analytical basis for adding or subtracting missions/activities to or from facilities and installations. It is the combination of the assessment of a facility's capability to perform specific functions based upon the first four DoD Final Selection criteria, and a calculation of the relative Military Value of facilities performing similar functions. As directed in the authorizing legislation, Military Value is the primary consideration in making recommendations for the closure or realignment of military installations. Key aspects to the Military Value Analysis Process include; a careful review of Military Value Final Selection Criteria, and weights; selection/identification of attributes, metrics, questions, and weights; and preparation of a

plan to score data call responses. The Services will conduct the Military Value Data Call, and the JCSGs score the data and determine the Military Value.

The Medical Joint Cross Service Group Military Value analysis will include three sub functions: Health Care Education and Training, Health Care Services, and Medical/Dental Research, Development and Acquisition. These three sub functions are scored individually and include an assessment of the facilities condition and ability to support the function. The three sub functions will be combined into a single military value score for each medical facility in accordance with Table 1 below. This weighting was developed by the members of the Medical Joint Cross Service Group and represents the consensus of the principal members. This weighting provides an avenue for assigning a relative military value for all medical facilities that may be present at a location and is weighted towards the central military Health Care mission, Health Care Services, without denying the significance of the other sub functional areas inherent to the medical mission.

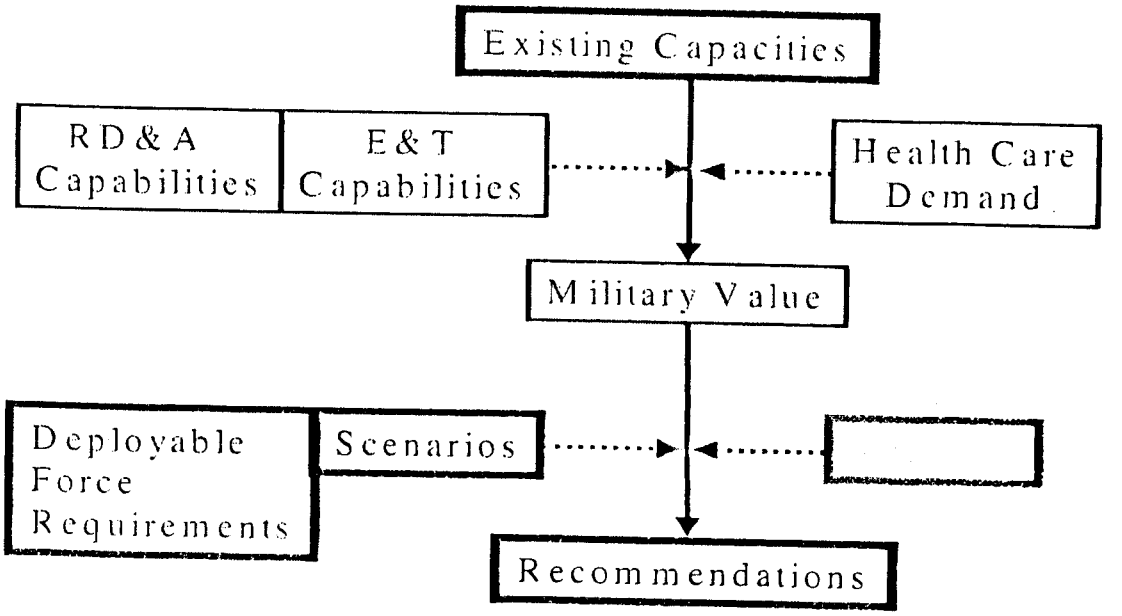
Table 1: Composite Medical Military Value Score

Function	Weight
Health Care Education & Training	20%
Health Care Services	60%
Medical/Dental Research, Development & Acquisition	20%

The Campaign Plan depicted below outlines how the military value analysis fits into the overall MJCSG strategy for developing recommendations for the BRAC 2005 exercise. The basic strategy for developing the Deployable Force Sizing Sub-Group, to the MJCSG BRAC 2005 recommendations, will be to ensure the military medical capabilities necessary to support contingency operations remain. Current Service baseline readiness requirements are already known based on previous strategic planning guidance (2MTW). However, the future force and/or readiness requirements can not be determined until the completion and issuance of pending Strategic and Contingency Planning Guidance (SPG/CPG), Joint Strategic Capabilities Plan (JSCP) and the results from the USD P&R and OSD PA&E Medical Readiness Review in the MHS to support the 1-4-2-1 scenarios.

DoD is awaiting a single translation of the National Security Strategy (NSS) into military objectives, priorities, and risk tolerance. Combatant Commanders are being assigned a much larger role in shaping the defense strategy articulated in the SPG. We anticipate the SPG to direct us on joint capabilities planning in support of this new strategy rather than programmatic solutions. No specific timelines for completion have been established. The MJCSG will consider the results of the new joint capabilities based approach, if available, during the scenario development phase in determining the baseline medical force.

Figure 2: MJCSG Campaign Plan



The mission of the Military Health System includes providing ready medical forces to deploy in support of contingent military operations. The Military Health System is also a key component affecting the Quality of Life of service members and their dependents highlighting the importance of sizing of military treatment facilities to support the surrounding beneficiary population. The Medical Joint Cross Service Group addressed this requirement by including an assessment of the population demographics local to the military treatment facility.

As with any other professional skill, maintaining currency in medical skills requires a caseload with minimum acuity and complexity. The population of active duty and active duty beneficiaries do not possess the needed caseload. Historically, the Military Health System has expanded its beneficiary population at selected military treatment facilities to include retirees to achieve the necessary workloads. In fact, the largest of the military treatment facilities are located in areas that include not only large numbers of active duty and their dependents, but also large retiree populations. Allowing these largest facilities to serve as "medical training platforms" for operationally needed medical specialties. This drives a need to consider the total available population of beneficiaries as a contributor to the Military Value calculations of a faculty. Along these same lines, some military treatment facilities have developed partnering arrangements with nearby faculties (civilian or federal) to provide the needed case mix and are assessed in the Military Value calculations.

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DOD FINAL SELECTION CRITERIA 1-4

OSD provided four criterions for determining Military Value. By statute, these criteria are to receive priority consideration in the formulation of BRAC recommendations. Other criteria, referred to as Other Considerations, address Return on Investment, and Economic, Community and Environmental impacts.

Criteria 1: *Current/Future Missions (shortened to Mission for purposes of this document).* The current and future mission capabilities and the impact on operational readiness of DoD's Total Force including impacts on Joint warfighting, training and readiness.

Criteria 2: *Availability/Condition of Infrastructure (shortened to Facilities for the purpose of this document).* The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.

Criteria 3: *Contingency, Mobilization, Future Total Force (shortened to Contingency for the purpose of this document)* The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.

Criteria 4: *Cost/Manpower Impact (shortened to Cost for purposed of this document).* The cost of operations and the manpower implications.

GENERAL ASSUMPTIONS

An important aspect of medical practice is the requirement that skills be maintained through continuous practice. This highlights the importance of the demographics of the population surrounding a medical activity. These demographics will have a part in determining its Military Value, particularly for the medical specialties. This results in the novel requirement to rank the Military Value a population consisting of members, their families, and other beneficiaries in a market area. Health Care availability in the local, off-base market is an important aspect of cost control and provides additional opportunities for maintaining medical proficiencies through partnerships with local civilian and other federal medical activities.

Medical care is a universal activity and local civilian medical capacity represents an opportunity to provide enhanced access to medical care for DoD beneficiaries without increasing the military treatment facility staffing. A part of the Military Value scoring for a military treatment facility will include an assessment of the potential for transferring medical care into the local civilian medical system.

Several medical activities display unique geographical aspects or fulfill service specific missions. These activities would be noted in the Military Value scoring. Medical facilities with a unique capability, such as a G-Force simulator, that represents a high capital cost will receive a higher Military Value. During the scenario deliberations the number and locations of these capabilities will be combined with Service imperatives for maintaining these capabilities and then be addressed.

Most medical training activities are not assumed to possess a strong correlation to their location and their Military Value is not related to strongly to location. Some enlisted and officer medical training may be dependent on ranges, maneuver training area, and airspace and this was noted in the military value scoring. The Medical Joint Cross Service Group assumed that the billeting capacity of a host facility, and its surrounding community, would be sufficient for the student loading. Likewise, professional medical education, to include residencies and internships, does not *a priori* need to be provided in a military treatment facility. Military treatment facilities with local or other federal partnering arrangements are an avenue for delivering this capability and will receive an addition to their Military Value.

SECTION 2. JCSG MILITARY VALUE ANALYSIS APPROACH

2.1 HEALTH CARE EDUCATION AND TRAINING

DEFINITION OF THE FUNCTION:

This function covers the infrastructure supporting the development of mission-ready medical forces, including professional Health Care providers and medical support staff. It also includes formal degree training in academic facilities, post-graduate, non-degree specialty training conducted in civilian and military facilities and training specifically developed to prepare medical personnel for leadership roles. This function does not address basic military training and professional military education. Health profession training includes doctors, dentists, nurses, physician assistants, and other non-provider professions, as well as corpsmen and other paraprofessionals within the overall analysis. This function has been further parsed into four subordinate functions: Health Professions Education, Health Professions Entry-level Training, Health Professions Continuing Education, and Health Professions Management and Leadership Training.

2.1.1 INTRODUCTION

The analysis of military value of education and training (ET) activities will be based on an assessment of the relative capabilities of various activities to conduct the spectrum of DoD medical/dental ET missions, including both training capabilities (e.g., skills, operational requirements, CBRE, etc.) and facility capabilities (e.g., specialized equipment, condition, etc.). In addition, value will be based on the historically demonstrated ability of activities to provide military unique ET, and to provide equivalent training in a more efficient or joint environment.

In performing the analysis of military value, the following assumptions will be made:

- All elements of the medical/dental ET mission will continue into the future.
- All elements of the medical/dental ET mission are important, but emphasis will be placed on military unique elements and Joint opportunities.
- Each mission-related core competency and unique facility capability must be sustained at some level to preserve capability to perform the mission.

- BRAC-associated closures and transfers will have to be carefully evaluated to ensure that the equivalent training is being produced and that facilities and training conditions are adequate.

A consequence of these assumptions is that the closure of any activity that is unique in its ability to train a particular element of the medical/dental ET mission, or provide unique capabilities in support of that mission, will have an immediate impact on the ability of the DoD to continue to meet the full spectrum of mission requirements. Closures of activities that are not unique in their missions or capabilities may reduce the DoD capacity to train personnel without careful prior planning and realignment.

2.1.2 MILITARY VALUE APPROACH AND SCORING PLAN

2.1.2.1 Scoring Plan Development

The Medical/Dental ET subgroup defined a total of 4 attributes and 8 associated metrics that pertain to the 4 Military Value Final Selection Criteria. Each metric will result in a percentage of the total, and that percentage will be multiplied by the weight attached to the question and metrics. The relative contributions of these attributes and metrics to military value (i.e., their weights) were determined by subject matter experts from each of the three Services and the Office of the Secretary of Defense. Subject matter experts included individuals with backgrounds in medical/dental ET, and were drawn from all spectrums of the ET process.

Weights were determined using comparison of the different ET elements, and the degree of their contribution to the ET process. The criteria were ranked in order of their importance to the ET process, and a consensus of the subject matter experts was reached prior to an assignment of weight. For each attribute that was characterized by multiple metrics, members of the Medical/Dental ET subgroup determined the relative weights of the metrics pertaining to the attribute through comparisons of the different metrics to each other. The relative weights of all attributes, metrics and questions were similarly developed through pairwise comparisons.

A sensitivity analysis was conducted, utilizing notional, uncertified data, on the resulting military value algorithm to determine the likelihood that it would differentiate among various medical/dental ET activities. While the possible range of overall scores is 0-100, a more realistic range of scores is from approximately 4 to 92, since there are a few metrics for which no real-world organization is likely to score zero. However, this range (i.e., 0-100) assumes that there are actual organizations that will have the lowest (or highest) possible score for every single metric. In reality, no single real-world organization is going to be worst on every single metric, nor, will there be an organization that is best on every single metric. So the actual range of values is expected to be less. To conduct the sensitivity analysis, four actual medical/dental ET activities were selected. For each activity, likely normalized scores were estimated for each metric, and the overall military value score was calculated based on the weights of the metrics. Estimates of metric values for each activity were derived from already available in-house data sources, or were based on general knowledge regarding each activity. The result of this analysis was a low score of 6.42 at a hospital with essentially no training. A small hospital with a single graduate medical program scored 28.50. A medical schoolhouse with no

graduate programs scored 42.80. A medical center having both graduate and initial training scored 84.30. Thus, it is anticipated that the selected metrics and weights will have sufficient sensitivity to clearly differentiate activities from one another.

2.1.2.2 Final Selection Criteria and Attributes

The following four attributes of Military Value were identified:

- *Operational/Mission Readiness* - The training required to support our current mission of operational medical support for the war on terror, and providing the benefit to all eligible recipients.

- *Physical Capacity* - The physical capacity and location of training, and the enhancement of medical services provided as a byproduct of the medical education ant training programs.

- *Military Unique Training* - The military unique components of the medical education and training programs, as well as the ability to provide equivalent training in a reduced timeframe.

- *Joint/Integrated Training* - The extent to which medical/dental education and training programs exist with other Services and other local organizations (DoD or non-DoD)

The above four attributes are variously described by eight metrics. Each attribute is uniquely aligned to at least one of the four DoD Military Value Final Selection Criteria for BRAC '05 as shown in Table 2.

Table 2: Relation of Attributes to Military Value Final Selection Criteria Education and Training

Military Value Final Selection Criterion	Attribute (No. Of Metrics)
1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including impacts on joint warfighting, training and readiness.	• Operation/Mission Readiness (1 metric) • Military Unique Training (2 metrics) • Joint/Integrated Training (2 metrics)
2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.	• Physical Capacity (2 metrics)
3. The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.	• Military Unique Training (2 metrics)
4. The cost of operations and the manpower implications.	• Physical Capacity (2 metrics) • Military Unique Training (2 metrics)

2.1.2.3 Metrics

A total of eight metrics were defined, each of which relates to a single attribute. Each metric has a predetermined weight, which will be multiplied by the percentage score obtained from each question. Most metrics will require the collection of new data through the Military Value data call. In some cases, all or part of the data required to generate the metric will be obtained from data collected through the Capacity Data Call.

2.1.2.4 Scoring Plan

Appendix A presents the scoring plan for Medical/Dental ET activities, identifying weights for each Final Selection criterion, attribute, and question. In Table 3 below, the weight listed for each question is not a total weight, per se, but rather indicates the contribution that the data from the question provides to the overall metric. As described above, metrics are derived from a percentage, which is then multiplied by the weight given to the question, metric, attribute and criteria. Once all the data is calculated, a single score from 0 to 100 will be derived for each activity. These activities will then be ranked from 1 to (n), for highest to lowest for a military value score. Programs offered at each facility will be noted, to determine where future realignment may be possible. A summary table of the weighting for the military value scoring is presented in Table 3 below.

Table 3: Education & Training Scoring Summary.

Criteria		Attributes		Metrics			Questions		
Name	Weight	Name	Weight	Name	Weight	Points	Name	Weight	Points
C1: Mission	45	A1: Operational Readiness	45%	M1: Throughput as a % of total	100%	20.25	(Throughput*trng length)/Total Trnd- Graduate	50%	10.13
							(Throughput*trng length)/Total Trnd- Initial	50%	10.13
		A3: Military Unique Training	20%	M5: Prog w/o Civ Counterpart	70%	6.30	% of Prog w/o civilian counterpart - CE	50%	3.15
							% of Prog w/o civilian counterpart - Initial	50%	3.15
				M6: Military Trng Time Efficiency	30%	2.70	% of Equivalent Prgms in shorter time than civilian - initial	100%	2.70
		A4: Joint/Integrated Training	35%	M7: Civilian Joint Ventures	50%	7.88	% Prgms joint sponsored w/civilian institutions - Graduate	50%	3.94
							% Prgms joint sponsored w/civilian institutions - Initial	50%	3.94
				M8: Integrated/Interservice Trng	50%	7.88	% Prgms integrated/interservice - Graduate	50%	3.94
							% Prgms integrated/interservice - Initial	50%	3.94
C2: Facilities	20	A2: Physical Capacity and Facility Condition	100%	M2: Facilities	75%	15.00	Q15: FCI	50%	7.50
							Q16: Weighted Age	50%	7.50
				M3: Information Technology	25%	5.00	Q20: Cable plant	100%	5.00
C3: Contingency	25	A3: Military Unique Training	100%	M5: Prog w/o Civ Counterpart	70%	17.50	% of Prog w/o civilian counterpart - CE	50%	8.75
							% of Prog w/o civilian counterpart - Initial	50%	8.75
				M6: Military Trng Time Efficiency	30%	7.50	% of Equivalent Prgms in shorter time than civilian - initial	100%	7.50
C4: Cost	10	A2: Physical Capacity and Facility Condition	70%	M4: Ability to Train Onsite	100%	7.00	% Complete training in area - Graduate	40%	2.80
							% Complete training in area - Initial	60%	4.20
		A3: Military Unique Training	30%	M6: Military Trng Time Efficiency	100%	3.00	% of Equivalent Prgms in shorter time than civilian - initial	100%	3.00

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2.1.3 DATA CALL

New Military Value Data Call questions are provided in Appendix A. Some Military Value metrics will be derived from responses to Capacity Data call questions, as noted.

2.1.4 ISSUES IMPACTING ANALYSIS

Throughput is determined by manning needs, rather than the ability of an activity to provide training seats. The last three training cycles were averaged to normalize this effect. Also, civilian and inter-service training programs were queried separately to identify which programs might be difficult to relocate to another location, and which already provide Joint service training opportunities.

2.2 HEALTH CARE SERVICES.

DEFINITION OF THE FUNCTION:

Health Care Services is the measurement of the medical support, including all specialties, required by a defined population surrounding a military treatment facility. The population includes active duty, retired, and dependant Health Care requirements, and the services individual policy-driven medical support. The physical assets supporting the military Health Care system (including the campus facilities, capital/investment equipment, Class VIII storage, and blood) will also be evaluated.

2.2.1 INTRODUCTION

The analysis of Military Value of Health Care Services will be based on weights developed using a consensus methodology with subject matter experts representing all the services. In general, scoring on individual questions was based on the range of possible values across all facilities with significant outliers discarded. Once the range was established, scores were developed on a ten-point scale using linear cut points. The analysis of Military Value of medical/dental infrastructure will be based on assessment of the relative capabilities of various activities to conduct the spectrum of DoD medical/dental missions. In addition, value will be based on the historically demonstrated ability of the facilities to support the mission and operational needs of the activity.

In performing the analysis of military value, the following assumptions will be made:

- All elements of the medical/dental market mission will continue into the future.
- All elements of the medical/dental market mission are important, but emphasis will be placed on services supporting the Active Duty members to underscore the support for force readiness.

- A major factor in the weighting of infrastructure Military Value will be the age and condition of the facility.
- BRAC-associated closures and transfers will have to be carefully evaluated to ensure that the health care services necessary for operational missions will be continued.

2.2.2 MILITARY VALUE APPROACH AND SCORING PLAN HEALTH CARE SERVICES

2.2.2.1 Scoring Plan Development

The Health Care Services subgroup defined a total of 6 attributes and 17 metrics that pertain to two of the Military Value Final Selection Criteria for Health Care Services. A summary table of the weighting for the military value scoring is presented in Table 5 below.

A sensitivity analysis was conducted, utilizing notional, uncertified data, on the resulting military value algorithm to determine the likelihood that it would differentiate among various medical activities. While the possible range of overall scores is 0-100, a more realistic range of scores is from approximately 6 to 88, since there are a few metrics for which no real-world organization is likely to score zero. However, this range (i.e., 0-100) assumes that there are actual organizations that will have the lowest (or highest) possible score for every single metric. In reality, no single real-world organization is going to be worst on every single metric, nor, will there be an organization that is best on every single metric. So the actual range of values is expected to be less. To conduct the sensitivity analysis, nine actual medical/dental activities were selected, five hospitals and four clinics. For each activity, likely normalized scores were estimated for each metric, and the overall military value score was calculated based on the weights of the metrics. Estimates of metric values for each activity were derived from already available in-house data sources, or were based on general knowledge regarding each activity. The result of this analysis was a low score of 6 at a small clinic in a location with adequate civilian capacity. A large clinic in an isolated area scored 60. A small hospital with adequate civilian capacity scored 25. A medical center with a large military population scored 88. Thus, it is anticipated that the selected metrics and weights will have sufficient sensitivity to clearly differentiate activities from one another.

2.2.2.2 Final Selection Criteria and Attributes

- *Demand* - A facility's value in meeting the mission is primarily related to the population that it serves. By locating treatment facilities in major markets, that facility provides services to those located there and the population provides the necessary workload needed to keep providers current in their medical skills.

- *Civilian Capacity* - Military bases are many times located in remote or medically underserved areas. It is therefore of Military Value to provide health care services in these locations via military treatment facilities.

- *Physical Capacity and Facility Condition* - The facility capacity and its condition are a major component of infrastructure, and a large element of mission/operational effectiveness and productivity.

- *Operational and Mission Responsiveness* - The ability to respond to deployment, mission and operational needs via supplies and beds space.

- *Cost Efficiency* - Cost Effectiveness is measured by the cost per unit of workload. These are adjusted for the relative costliness of care provided in the community.

- *Throughput* - Military Treatment Facilities that produce more workload reduce purchase care costs and, in general, have the ability to reduce costs because of economies of scale.

The above 6 attributes are variously measured by 17 metrics. Each attribute is uniquely aligned to one of the 4 DoD Military Value Final Selection Criteria for BRAC '05 as shown in Table 4.

Table 4: Relation of Attributes to Military Value Final Selection Criteria Medical Service Market Requirements

Military Value Final Selection Criterion	Attribute (No. of Metrics)
1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including impacts on joint warfighting, training and readiness.	• Demand (2 metrics) • Civilian Capacity (2 metrics)
2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.	• Physical Capacity and Facility Condition (2 Metrics)
3. The ability to accommodate contingency, mobilization, and future total force requirements at both existing and	• Operational/Mission Responsiveness (3 metrics)

potential receiving locations to support operations and training.	
4. The cost of operations and the manpower implications.	• Cost/Efficiency (2metrics) • Throughput (5 metrics)

2.2.2.3 Metrics

A total of 17 metrics were defined, each of which relates to a single attribute. Each metric has a predetermined weight, which will be multiplied by the percentage score obtained from each question. Most metrics will require the collection of new data through the Military Value data call. In some cases, all or part of the data required to generate the metric will be obtained from the data collected through the Capacity Data Call.

2.2.2.4 Scoring Plan

Appendix B, **Error! Reference source not found.** presents the scoring plan for Health Care Service activities, identifying weights for each Final Selection criterion, attribute, and question. The weights listed for each question is not an actual weight, per se, but rather indicates the contribution that the data from the question provides to the overall metric. Metrics are derived from a percentage, which is then multiplied by the weight given to the question, metric, attribute, and criteria. Once the data is calculated, a single score from 0 to 100 will be derived for each activity. These activities will then be ranked from 1 to (n), for highest to lowest for a military value score. Programs offered at each facility will be noted, to determine where future realignment may be possible.

Table 5: Health Care Services Scoring Summary.

Criteria		Attributes		Metrics			Questions		
Name	Weight	Name	Weight	Name	Weight	Points	Name	Weight	Points
C1: Mission	45	A1: Demand	60%	M1: Eligible Population	70%	18.90	Active Duty Eligibles	85.7%	16.20
							AD Family Members Eligibles	7.1%	1.35
							Other Eligibles	7.1%	1.35
				M2: Enrolled Population	30%	8.10	AD Family Members Enrolled	66.7%	5.40
							Other non-AD Enrolled	33.3%	2.70
		A2: Civilian Capacity	40%	M3 Civilian/VA Beds	50%	9.00	# of Civilian/VA Hospitals	20%	1.80
							# of Civilian/VA Beds per population	80%	7.20
				M4: Civilian/VA Providers	50%	9.00	# Primary Care providers per population	60%	5.40
							# Specialty Care providers per population	25%	2.25
							# Dentists per population	15%	1.35
C2: Facilities	25	A3: Physical capacity and facility condition	100%	M5: Facilities	75%	18.75	FCI	50%	9.38
							Weighted Age	50%	9.38
				M6: Equipment	25%	6.25	Equipment average age	100%	6.25
C3: Contingency	10	A4: Operations/mission responsiveness	100%	M7: Blood	40%	4.00	Population	50%	2.00
							On-Site FDA testing	50%	2.00
				M8: Class VIIIA	20%	2.00	Proximity	100%	2.00
				M9: Contingency beds	40%	4.00	Contingency beds	100%	4.00
C4: Cost	20	A5: Cost/Efficiency	40%	M10: Inpatient Costs	35%	2.80	Cost per RWP	100%	2.80
				M11: Outpatient Costs	50%	4.00	Cost per RVU	100%	4.00
				M12: Dental Costs	15%	1.20	Cost per DWV	100%	1.20
		A6: Throughput	60%	M13: Inpatient Care	30%	3.60	Total RWP	100%	3.60
				M14: Outpatient Care	40%	4.80	Total RVU	100%	4.80
				M15: Dental Care	10%	1.20	Total DWV	100%	1.20
				M16: Pharmacy	10%	1.20	Total Scripts	100%	1.20
				M17: Ancillary	10%	1.20	Total weighted Rad Procedures	77%	0.92
							Total weighted Lab Procedures	23%	0.28

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2.2.2.5 Data Call

Health Care Services data call questions are provided in **Error! Reference source not found.**, Appendix B. Some Military Value metrics will be derived from responses to Capacity Data call questions, as noted in the table.

2.2.2.6 Issue Impacting Analysis

The major issue impacting the analysis will be the interdependence of facilities within the same general market. Care will need to be given to adequately analyze the impacts of changes in one facility on the value of other facilities in the same area. Populations that are currently served by one Military Treatment Facility may be shifted to others in that area. It is not possible at this time to determine if excess space is a positive or negative factor for an activity until the potential realignment of the force is proposed. Once force posture is determined by the Services, medical/dental space evaluation and potential modifications could be calculated.

2.3 MEDICAL AND DENTAL RESEARCH, DEVELOPMENT AND ACQUISITION

DEFINITION OF THE FUNCTION:

This function includes all aspects of research, from basic research to advanced demonstration, required to provide a continuous stream of transformational capabilities and systems to sustain and optimize the health and performance of war fighters. The Medical and Dental Research, Development and Acquisition Workgroup will review the DoD's ability to sustain those capabilities that are required to effectively discover, develop, acquire and field medical solutions to evolving war fighter needs. Attainment of these capabilities is dependent on coupling the requisite medical, regulatory (FDA licensure) and scientific/technical expertise with a physical infrastructure that facilitates innovation and productivity.

2.3.1 INTRODUCTION

The analysis of military value of medical/dental RDA activities will be based on an assessment of the relative capabilities of various activities to conduct the spectrum of DoD medical/dental RDA missions, including both workforce capabilities (e.g., skills, training, etc.) and facility capabilities (e.g., specialized equipment, condition, etc.). In addition, value will be based on the historically demonstrated ability of activities to provide RDA support to operations, and their relative productivity.

In performing the analysis of military value, the following assumptions will be made:

developed through a series of comparative judgments of the relative importance of different pairs of elements. By comparing each element with every other element, an overall algorithm is developed that integrates across all elements.

For each attribute that was characterized by multiple metrics, members of the Medical/Dental RDA subgroup determined the relative weights of the metrics pertaining to the attribute through pair-wise comparisons of the different metrics to each other. The relative weights of all attributes to each other were similarly developed through pair-wise comparisons, with the weights of Final Selection criteria derived directly from the attribute weights. In all but one case, there was a one-to-one relationship between questions and metrics, so it was not necessary to weight questions (i.e., each question had a weight of 100 with respect to the metric, on a 0-100 scale). In the single case where multiple questions contributed differentially to a metric, the questions were weighted relative to each other using the same pair-wise comparison process.

The three Services and DoD were each allowed two votes for each pairwise comparison that was conducted during the weighting process: one vote was taken from an S&T organizational perspective, and the other from an advanced development/acquisition organizational perspective. After initial weighting of all attributes and metrics was completed, it was determined that there were no significant differences in the attribute or metric weights when viewed from these two perspectives, and so the final weights reflect the averaged weights from both sets of votes.

A sensitivity analysis was conducted, utilizing notional, uncertified data, on the resulting military value algorithm to determine the likelihood that it would differentiate among various medical/dental RDA activities. While the possible range of overall scores is 0-100, a more realistic range of scores is from approximately 5 to 100, since there are a few metrics for which no real-world organization is likely to score zero. However, this range (i.e., 5-100) assumes that there are actual organizations that will have the lowest (or highest) possible score for every single metric. In reality, no single real-world organization is going to be worst on every single metric, nor, will there be an organization that is best on every single metric. So the actual range of values is expected to be less. To conduct the sensitivity analysis, two actual medical/dental RDA activities were selected, one of which is expected to score among the highest activities, and the other that is expected to come out among the lowest. For each of the two activities, likely normalized scores were estimated for each metric, and the overall military value score was calculated based on the weights of the metrics. Estimates of metric values for each activity were derived from already available in-house data sources, or were based on general knowledge regarding each activity. In a few cases where there was no reasonable basis for estimating a metric value for one or both activities, the values were set equal for both activities, so that the metric did not contribute to the overall final differential in military value score. The result of this analysis was that the "high scoring" activity had a total score of 60, while the "low scoring" activity had a score of 18. Thus, it is anticipated that the selected metrics and weights will have sufficient sensitivity to clearly differentiate activities from one another.

2.3.2.2 Final Selection Criteria and Attributes

The following 7 attributes of Military Value were identified:

- *Mission Scope/Uniqueness* - The fraction of the overall DoD mission currently supported by an activity and the extent to which an activity is unique within the DoD in supporting specific mission elements
- *Workforce* - The quality of the workforce, its uniqueness within the DoD, and its technical ability to perform work across the spectrum of DoD medical/dental RDA missions
- *Physical Plant: Mission* - The uniqueness within the DoD of the specialized equipment present at an activity
- *Beneficial Relationships* - The extent to which mission-supporting relationships exist with other Services and other local organizations (DoD or non-DoD)
- *Physical Plant: Condition* - The general condition of the buildings and equipment located at an activity
- *Operational Responsiveness* - The degree to which an activity can directly support operations through a variety of actions
- *Cost Effectiveness* - The relative effectiveness of an activity compared to other activities engaged in similar work

The above 7 attributes are variously measured by 19 metrics. Each attribute is uniquely aligned to one of the 4 DoD Military Value Final Selection Criteria for BRAC '05 as shown in Table 6.

Table 6: Relation of Attributes to Military Value Final Selection Criteria Medical/Dental Research, Development and Acquisition (RDA)

Military Value Final Selection Criterion	Attribute (No. of Metrics)
1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including impacts on joint warfighting, training and readiness.	• Mission Scope/Uniqueness (2 metrics) • Workforce (6 metrics) • Physical Plant: Mission (1 metric) • Beneficial Relationships (2 metrics)
2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.	• Physical Plant: Condition (2 metrics)
3. The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.	• Operational Responsiveness (1 metric)
4. The cost of operations and the manpower implications.	• Cost Effectiveness (5 metrics)

2.3.2.3 Metrics

A total of 19 metrics were defined, each of which relates to a single attribute. Each metric is described by a formula that combines the raw data obtained from activities into a dimensionless value ranging from a minimum of zero (lowest military value) to a maximum of one (highest military value). Most metrics will require the collection of new data through the Military Value data call. In some cases, all or part of the data required to generate the metric will be obtained from data collected through the Capacity data call.

To control for the impact of organizational size, raw measures are normalized when necessary by dividing the raw measure by the number of FTEs performing the work. (FTEs were considered to be a better normalizing measure than funding, as funding can vary unpredictably across activities according to the proportion of military to civilian staff and the

level of installation support.[2]) In most cases, raw measures are also normalized to the score of the activity that receives the highest score for the measure, so that the "best" activity for any particular metric will receive a normalized score of one for that metric. In a few cases, normalization of results to the "best" activity is unnecessary because the metric naturally varies from zero to one, with a high score of one having an objective meaning with respect to military value. The formulas and rationale for each metric are provided in Appendix C

The normalization of metrics and use of a consistent range of potential values (i.e., 0 to 1) across all metrics allows weights to be consistently applied to metrics in a linear algorithm. Normalization also avoids the problem of potential distortions in overall scoring that could occur due to large quantitative variations in the range of possible responses for different metrics.

2.3.2.4 Scoring Plan

Appendix C, **Table 12** presents the scoring plan for medical/dental RDA activities, identifying weights for each Final Selection criterion, attribute, and question. As described above, metrics are derived from raw data resulting from questions, and these raw data are typically normalized using data from the question itself (e.g., an activity's raw score is divided by the raw score for the highest scoring activity), and/or data from other questions (e.g., an activity's raw score is normalized to the number of FTEs at the activity). *Thus, an activity's answer to a particular question cannot simply be multiplied by the weight of the question to provide the value of the metric.* Rather the weight shown for each question indicates the contribution that the data from the question contributes to the overall metric. The formulas in Appendix A provide additional description of how data from questions will be converted into metric values. Questions identified by their titles in the table are provided in full in Appendix C to this report.

Owing to past consolidations and other reasons, a number of installations exist at which multiple Service-unique medical/dental RDA activities are located. Although military value data will be collected and analyzed at the activity level, data for all medical/dental RDA activities at the same installation must also be combined and similarly analyzed so that an integrated view of the overall military value of an installation can be assessed. For example, it may be seen that no single activity possesses a unique capability in a particular area of interest, yet the installation as a whole is unique with respect to the area of interest, because the only activities that have this capability are all located at the same installation. Thus, the installation as a whole may have a greater military value (from a medical/dental RDA perspective) then any single medical/dental RDA activity that is located there. Because of the nature of the formulas used to calculate metrics, the metric scores of individual activities located at the same installation cannot simply be added or averaged to determine the installation score. Rather, the raw data from each activity at the installation will be pooled,

[2] Although the level of installation support is a factor related to ability to perform work cost effectively at any given location, the impact of this factor will be considered during scenario development, rather than during the initial value determination.

treated as if the various activities were a single activity, and compared to other installations using the same metric formulas used to assess individual activities. Depending on the metric, pooling across different activities will require adding data together, or averaging raw measures.

A summary table of the scoring plan is presented below at Table 7.

Table 7: RD&A: Scoring Summary.

Criteria		Attributes		Metrics			Questions		
Name	Weight	Name	Weight	Name	Weight	Points	Name	Weight	Points
C1: Mission	55%	A1: Mission Scope/Uniqueness	31%	M1: Capability Domains Supt in FY03	61%	10.40	Q1: Capability Domains supported in FY03	100%	10.40
				M2: Mission Uniqueness	39%	6.65	Q2: Med/Den RDA full time equivalents	100%	6.65
		A2: Workforce	41%	M3: # of S&T Core Comp Supt in FY03	12%	2.71	Q3: # of S&T Core Comp Supt in FY03	100%	2.71
				M4: # of AD/Acq Core Comp Supt in FY03	13%	2.93	Q4: # of AD/Acq Core Comp Supt in FY03	100%	2.93
				M5: # of S&T Core Comp w/ Ability to Supt	26%	5.86	Q5: # of S&T Core Comp w/ Ability to Supt	100%	5.86
				M6: # of AD/Acq Core Comp w/ Ability to Supt	19%	4.28	Q6: # of AD/Acq Core Comp w/ Ability to Supt	100%	4.28
				M7: Workforce Uniqueness	17%	3.83	Q7: Workforce Uniqueness	100%	3.83
				M8: Education Level	13%	2.93	Q8: # of Doctoral degrees	68%	1.99
							Q9: # of Masters degrees	25%	0.73
							Q10: # of Bachelor degrees	7%	0.21
		A3: Physical Plant - Mission	18%	M9: Facility Uniqueness	100%	9.90	Q11: Facility Uniqueness	100%	9.90
		A4: Beneficial Relationships	10%	M10: Jointness	65%	3.58	Q12: Mission jointness; funding jointness; workforce jointness; organization/mgmt jointness	100%	3.58
				M11: Collaborations/Agreements w/ Local Org	35%	1.93	Q13: Collaborations/agreements w/ local organizations	100%	1.93
C2: Facilities	5%	A5: Physical Plant - Condition	100%	M12: Building Condition	25%	1.25	Q14: Building Condition	100%	1.25
				M13: Specialized facility/ Equipment Utilization	75%	3.75	Q15: Specialized facility/ Equipment Utilization	100%	3.75
C3: Contingency	23%	A6: Operational Effectiveness	100%	M14: Operational Support Actions	100%	23.00	Q16: Operational Support Actions	100%	23.00
C4: Cost	17%	A7: Cost Effectiveness	100%	M15: S&T Output per FTE	28%	4.76	Q17: S&T Output per FTE	100%	4.76
				M16: Contracting Output (Value) per FTE	15%	2.55	Q18: Contracting Output (Value) per FTE	100%	2.55
				M17: Logistics Management Action per FTE	12%	2.04	Q19: Logistics Management Action per FTE	100%	2.04
				M18: Projects Managed per FTE	28%	4.76	Q20: Projects Managed per FTE	100%	4.76
				M19: Regulatory Actions per FTE	18%	3.06	Q21: Regulatory Actions per FTE	100%	3.06

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2.3.3 DATA CALL

New Military Value data call questions are provided in Table 13, Appendix C. Some Military Value metrics will be derived from responses to Capacity Data call questions, as noted in the table.

2.3.4 ISSUES IMPACTING ANALYSIS

There is currently concern that the Military Value analysis process provides no way to clearly visualize and account for mission-essential organizational linkages that cross functional areas (or may extend beyond the DoD to other Federal agencies). Examples include close working relationships between S&T organizations and materiel developers, between RDA organizations and operational communities, and between DoD and other federal laboratories. While the existence of such linkages does not necessarily preclude base closure and realignment actions, any such actions must take account of these linkages to ensure that they can be sustained by newly realigned organizations. This may, for example, entail that certain linked organizations be moved in parallel.

SECTION 3. ISSUES IMPACTING OVERALL ANALYSIS

As the data from the Capacity and Military Value Data Calls is received, a significant issue is the manpower needed to reduce the data to develop the Capacity and Military Value analysis. In both cases the transcription of the data into the analysis framework will be time consuming and error prone. The MJCSG does not have the expertise available to address this need. In addition, the MJCSG foresees the need for technical expertise to help understand and build the models used in the scenario phase to develop the BRAC recommendations. The MJCSG has investigated the use of focused contractor support to address these needs. We've received a bid of $350,000 to gain the support of three contract personnel through the end of CY 04. Request that the ISG members provide this funding

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APPENDICES

APPENDIX A

Table 8: Education and Training Military Value Scoring Plan

Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
Criterion 1: *The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including impacts on joint warfighting, training and readiness.*	45				The operational mission is given the largest weight as it drives force structure. Force structure drives training requirements.
• **Attribute: Operational/Mission Readiness**		45			Training programs train to service defined manning requirements.
o Metric: Throughput			100		Throughput provides an assessment of each facility's contribution in meeting the service's overall manning requirements
• Question: List the graduate programs, and provide the number of training starts and the number of graduates for the 3 most recently completed training cycles.				50	Graduate education training is important in ensuring that an appropriate number of trained specialists were available to support the war fighter.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
▪ Question: What percentage of your graduate programs are jointly sponsored with a civilian institution?				50	Military graduate education programs jointly sponsored with civilian institutions results in a sharing of personnel, facilities and other resources to mutual benefit.
▪ Question: What percent of your programs for initial officer and enlisted training (achieves minimum requirements for a skill identifier) are jointly sponsored with a civilian institution?				50	Utilizing civilian training programs enhances the scope of the military program and decreases onsite staff.
o **Metric:** Interservice/Integrated Training			50		Increases efficiency and operational effectiveness of military training programs.
▪ Question: What percent of your current programs are interservice/integrated for graduate education?				50	Integrated military graduate education programs result in a sharing of personnel, facilities and other resources to mutual benefit. Increases perspective of military medicine and interoperability of the MHS.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
• Question: What percent of your current programs are interservice/integrated for initial officer and enlisted training (achieves minimum requirements for a skill identifier)?				50	Increases the perspective of the service member, and increases interoperability in theatre.
Criterion 2: *The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.*	20				The condition of facilities and associated equipments contributes to the overall military value of a medical/dental training activity. Also, it is essential to maintain those opportunities and facilities that permit military unique training.
• **Attribute: Physical Capacity and Facility Condition**		100			Physical location and facilities required for training.
o **Metric:** Facilities			75		Age and Condition of facilities is directly linked to the value of infrastructure.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
▪ Question: For medical facilities: What is the Average Weighted Age of each medical facility greater than 2,000 SF on the installation? This question is also applicable to medical education and research facilities that are not CATCODE 500. Installations will complete a variable size grid that includes: building number, FAC code, Size (SF), Year Built, and Average Weighted Age calculation. Amplification: Calculate the average weighted age of each facility to incorporate additions, alterations and renovations. Calculate the age of the medical facility by subtracting the year built from 2003. Σ (Chronological Building Age*Building Gross Square Feet)/Σ Total Building Gross Square Feet = Average Weighted Age For example: If a 20,000 SF facility was built in 1980 and had major renovations to 75,000 SF in 1995 and a 100,000 SF addition was added in 2002, then the Average Weighted Age				50	Provides the foundation skills to meet the mission.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
300,000 SF = 13 years and not 24 years that you would calculate if you only used the original year the facility was built.					

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
▪ Question: For medical facilities: What is the FCI (Facilities Condition Index) of each medical facility greater than 2,000 SF on the installation? This question is also applicable to medical education and research facilities that are not CATCODE 500. Installations will complete a variable size grid that includes: building number, FAC Code, Size (SF), project backlog, plant replacement value, and FCI calculation. Amplification: Facilities Condition Index is calculated by determining the O&M facilities backlog for each medical facility and dividing the project backlog by the Plant Replacement Value for the medical facility. (Plant Replacement Value may also be called the Cost Replacement Value (CRV). Count all unexecuted projects by facility with a cost greater that $25K. Any JCAHO "Plan for Improvement" deficiencies should be included In the Project Backlog.				50	Graduate education potentially provides a greater range of services than would otherwise be provided by the treatment facility.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
o **Metric:** Information Technology			25		
▪ Question: For medical facilities: What type of cable plant is in the MTF? Drop down choices include: ATM or equivalent, GIG Ethernet, Fast Ethernet/FDDI, Ethernet, Other) Amplification: MTF refers only to the primary medical facility on the installation. Do not include every medical facility when answering this question. While there may be a combination of transmission modes, protocols, and media within the MTF, select the option that best corresponds to the rated capacity of the network in terms of bandwidth.				100	Although all types of cable plants in the MTF have some military value, declining speed based on cable plant, results in declining ability to run robust applications like CHCS II and telemedicine.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
Criterion 3: *The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.*	25				A primary benefit of the DoD's medical/dental training programs is their ability to provide operational forces with specialized medical support and expert consultation on emergent problems, and deployable operational support on an as-needed basis. These capabilities directly contribute to the success of current operations. The ability of medial/dental training activities to provide this support is therefore a strong contributor to military value.
• **Attribute: Military Unique**		100			Operating in military unique situations requires training.
o **Metric:** Programs without civilian counterpart			70		Many civilian programs come close to approximating military programs, but do not provide elements required for military operations.
▪ Question: What is the percentage of the total of continuing education programs offered at your activity that are without civilian counterpart or military unique components?				50	Military medical sustainment training is crucial to deployment readiness.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
▪ Question: What is the percentage of the total initial officer and enlisted training (achieves minimum requirements for a skill identifier) programs offered at your activity without civilian counterpart or within military unique components?				50	Initial training is weighted high because it is the core of military specific training.
o **Metric**: Military Training Time Efficiency			30		Decreases time that providers are removed from MHS
▪ Question: What is the percentage of the total initial officer and enlisted training programs (achieves minimum requirements for a skill identifier) that require less time than civilian equivalents?				100	Importance of effective utilization.
Criterion 4: *The cost of operations and the manpower implications.*	15				Cost and manpower implications for training needs to considered.
• **Attribute: Physical Capacity and Facility Condition**		40			Physical location and facilities required for training.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
o **Metric**: Ability to provide all program requirements within the local area			100		The ability to train the complete package on site (includes local geographic area) important as opposed to programs that require TAD or PCS moves to accomplish training
▪ Question: What is the percentage of the total of graduate and advanced training programs offered at your activity that can be completed without temporary duty outside the local area?				40	Provides the foundation skills to meet the mission.
▪ Question: What is the percentage of initial officer and enlisted training (achieves minimum requirements for a skill identifier) that can be completed without temporary duty outside the local area?				60	Training required to ensure core competency and meet military mission.
o **Metric:** Military Training Time Efficiency			100		An important aspect of military training programs is the ability to provide the complete training package (professional and military) in a shorter more efficient timeframe.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
• Question: What is the percentage of the total initial officer and enlisted training programs (achieves minimum requirements for a skill identifier) that require less time than civilian equivalents?				100	Permits service members to report for duty, and be fully functional more quickly.

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Table 9: Education and Training (ET) Military Value Question Scoring

Attribute 1: Metric 1: Throughput
Attribute: Operational/Mission Readiness
BRAC Selection Criterion: (1) Mission Requirements & Impacts (4) Cost/Manpower
Data Required: *Number of program starts and number of graduates for the 3 most recent completion cycles for all the programs provided at your facility. List each program separately and indicate whether the program is an initial officer/enlisted program or an advanced graduate program.*
Formula: Throughput = Program Graduates (for each program offered at your activity) where Program graduates are averaged over the 3 most recent completion cycles are divided by program starts are averaged over the 3 most recent completion cycles.
Rationale/Comments: The greater the ability of a program to produce qualified graduates = higher value. Activities with more than one program will have the data averaged, so that each activity will results in a single score.

Attribute 2: Metric 1: Ability to provide program requirements in local area
Attribute: Physical Capacity and Facility Condition
BRAC Selection Criterion: (1) Mission Requirements & Impacts (2) Availability & Condition of Land & Facilities (4) Cost/Manpower
Data Required: The number of programs which can complete requirements in the local area, and the total number of programs offered at each activity. Report initial officer and enlisted programs separate from advanced graduate programs.
Formula: Programs Completed Locally = Programs Completed Within Local Area (Programs offered at your activity) where Percentage of total training programs that can be completed without temporary duty outside the local area.
Rationale/Comments: The ability of a program to produce qualified graduates locally, results in both a time and fiscal resource benefit = higher value. .

Attribute : Metric : Facilities Condition Index (Facilities)

Attribute: Physical Capacity and Facility Condition

BRAC Selection Criterion: (1) Mission Requirements & Impacts (2) Availability & Condition of Land & Facilities (4) Cost/Manpower

Data Required: Facility Condition Index (FCI) for each medical facility >2,000 SF will be provided by installation. This data will be weighted by facility size to determine a cumulative score for the installation.

Formula:
Installation FCI = Sum (Facility FCI X Facility Size)/ Sum of Total Installation Size

Scoring:

Installation FCI	Score
0 - 0.050	1.0
0.051 - 0.100	.6
0.101 - 0.350	.3
> 0.350	0.0

Rationale/Comments: Facilities requiring significant dollar investment divert financial resources from the mission.

Attribute : Metric : Average Weighted Age of Each Medical Facility (Facilities)

Attribute: Physical Capacity and Facility Condition

BRAC Selection Criterion: (1) Mission Requirements & Impacts (2) Availability & Condition of Land & Facilities (4) Cost/Manpower

Data Required: Average Weighted Age (AWA) for each medical facility >2,000 SF will be provided by installation. This data will be weighted by facility size to determine a cumulative score for the installation.

Formula:
Installation AWA = Sum (Facility AWA X Facility Size) / Sum of Total Installation Size

Scoring:

Installation AWA (years)	Score
0 - 5	1.0
6 - 10	0.9
11 - 15	0.8
16 - 20	0.7
21 - 25	0.6
26 - 30	0.5
31 - 35	0.4
36 - 40	0.3
41 - 45	0.2
46 - 50	0.1
> 50	0.0

Rationale/Comments: Older facilities that have not been maintained on a regular basis degrade ability to perform mission.

Attribute [redacted]: Metric [redacted]: Cable Plant

Attribute: Physical Capacity and Facility Condition

BRAC Selection Criterion: (1) Mission Requirements & Impacts (2) Availability & Condition of Land & Facilities (4) Cost/Manpower

Data Required: MTF's cable plant classification (ATM, GIG Ethernet, Fast Ethernet, Other)

Formula: None

Scoring:

Cable Plant	Score
ATM	1.0
GIG Ethernet	0.8
Fast Ethernet	0.5
Ethernet	0.3
Other	0.1

Rationale/Comments: Although all types of cable plants in the MTF have some Military Value, declining speed based on cable plant, results in declining ability to run robust applications like CHCS II and telemedicine.

Attribute 3: Metric 1: Training Programs Without Civilian Counterpart

Attribute: Military Unique

BRAC Selection Criterion: (1) Mission Requirements & Impacts (2) Availability & Condition of Land & Facilities (3) Ability to Accommodate Requirements to Support Operations & Training

Data Required: Number of Programs without Civilian Counterpart, and total number of training programs provided at the activity. List initial officer and enlisted programs separately from the advanced graduate programs.

Formula:

$$\text{Programs with All or Some Military Unique Components} = \frac{\text{Programs Military Unique Components (Programs offered at your activity)}}{}$$

where

Percentage of total training programs that have either some or all of their required elements which military unique components.

Rationale/Comments: Military specific training is required for sustainment and crucial to deployment readiness = higher value.

Attribute 3: Metric 2: Military Training Efficiency
Attribute: Military Unique
BRAC Selection Criterion: (1) Mission Requirements & Impacts (3) Ability to Accommodate Requirements to Support Operations & Training (4) Cost/Manpower
Data Required: Number of Initial Training Programs completed in less time than civilian equivalent programs, and total number of initial training programs for each activity.
Formula: Equivalent Programs Requiring Less Time = Initial Programs Completed In Less Time Than Civilian Equivalent (Programs offered at your activity) / Total Programs (Programs offered at your activity) where Percentage of total initial training programs that can produce graduates in less time than civilian equivalent programs.
Rationale/Comments: Permits service members to report for duty, and be fully functional more quickly = higher value.

Attribute 4: Metric 1: Civilian Joint Training
Attribute: Joint/Integrated Training Programs
BRAC Selection Criterion: (1) Mission Requirements & Impacts
Data Required: Number of Programs that are Jointly Sponsored by Civilian Institutions, and total number of training programs offered at each activity. Provide the initial officer and enlisted programs separately from the advanced graduate programs.
Formula: Joint Civilian Sponsored Programs = Programs Jointly Sponsored by Civilian Institutions (Programs offered at your activity) / Total Programs (Programs offered at your activity) where Percentage of total training programs that are jointly sponsored by Civilian Institutions.
Rationale/Comments: Utilizing local civilian programs to enhance military training = higher value.

Attribute 4: Metric 1: Interservice Integrated Training
Attribute: Joint/Integrated Training Programs
BRAC Selection Criterion: (1) Mission Requirements & Impacts
Data Required: Number of Interservice Integrated Programs, and Total Number of Training Programs offered at each activity. Provide initial officer and enlisted programs separately from advanced graduate programs.
Formula: Interservice Integrated Programs = $\frac{\text{Interservice Integrated Programs (Programs offered at your activity)}}{\text{Total Programs (Programs offered at your activity)}}$ where Percentage of total training programs that are interservice integrated.
Rationale/Comments: Conserves resources, increase the perspective of the service member and increases interoperability in theatre = higher value.

APPENDIX B

Table 10: Medical Market Military Value Scoring Plan

Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
Criterion 1: *The current and future mission requirements and the impact on operational readiness of the Department of Defense's total force, including impacts on joint warfighting, training and readiness.*	45				The mission of the Military Health System is to enhance DoD and our nation's security by providing health support for the full range of military operations and sustaining the health of all those entrusted to our care
• **Attribute: Demand**		60			A facility's value in meeting the mission is primarily related to the population that it serves. By locating treatment facilities in major markets, that facility provides services to those located there and the population provides the necessary workload needed to keep providers current in their medical skills.
o **Metric:** Eligible population			70		Eligible populations make up the market that a facility could potentially serve.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
▪ Question: What is the number of AD eligible for medical care within the inpatient catchment area and outpatient PRISM area?				85.7	Active duty members must get their care through the Military Health System. They have top priority for care in Military Treatment facilities. Keeping Active Duty members medically ready must be the highest priority.
▪ Question: What is the number of ADFM eligible for medical care within the inpatient catchment area and outpatient PRISM area?				7.1	Active Duty Family Members have the next level of priority. Providing medical benefits for this population in military treatment facilities reduces stress on the member and enhances retention.
▪ Question: What is the number of other beneficiaries eligible for medical care within the inpatient catchment area and the outpatient PRISM area?				7.1	Other eligible beneficiaries provide clinical cases not necessarily seen in active duty or their family members.
o **Metric:** Enrolled population			30		Beneficiaries who enroll with Military Treatment Facilities commit to having their care managed in exchange for lower co-payments. Facilities that have a large enrolled population are assured of a certain level of demand.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
▪ Question: No Military value Question. Use Capacity Data Call DoD #542. Active Duty and Active Duty family members enrolled				66.7	Providing medical benefits for this population in military treatment facilities reduces stress on the member and enhances retention.
▪ Question: No Military Value Question. Use Capacity Data Call DoD #542. Total enrolled				33.3	Other eligible beneficiaries provide clinical cases not necessarily seen in active duty or their family members.
• **Attribute: Civilian Capacity**		40			Military bases are many times located in remote or medically underserved areas. It is therefore of military value to provide health care services in these locations with military treatment facilities.
o **Metric:** Civilian/VA Beds			50		This metric measures the ability of the civilian community to provide inpatient care.
▪ Question: # of civilian/VA hospitals				20	Lack of any civilian inpatient care facility increases the military value of a military treatment facility. The presence of only one civilian facility implies little competition in the area.
▪ Question: # of civilian/VA beds				80	Indicates the ability of the civilian inpatient facilities to accommodate military beneficiaries.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
o **Metric:** Civilian/VA providers			50		This metric measures the ability of the civilian community to provide outpatient care.
▪ Question: No Military Value question. Use HHS Area Resource File. # of Primary Care providers per population				60	Indicates the ability of the civilian primary care providers to accommodate military beneficiaries.
▪ Question: No Military Value question. Use HHS Area Resource File. # of Specialty Care providers per population				25	Indicates the ability of the civilian specialty care providers to accommodate military beneficiaries.
▪ Question: No Military Value question. Use HHS Area Resource File. # Dentists per Population				15	Indicated the ability of the civilian dental providers to accommodate military beneficiaries.
Criterion 2: The availability and condition of land, facilities and associated airspace, including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions, at both existing and potential receiving locations.	25				
• **Attribute: Physical Capacity and Facility Condition**		100			

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
o **Metric:** Facilities			75		

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
▪ Question: For medical facilities (medical, funding source): What is the Installation Medical Facilities Average Weighted Age including all medical facilities greater than 2,000 SF on the Installation? Do not include stand-alone medical research and development buildings. Installations will complete a variable size grid that includes: building number, FAC code, Size (SF), Year Built, Building Average Weighted Age calculation, and Size x Building Average Weighted Age calculation. Amplification: Step 1: Calculate the Building Average Weighted Age of each medical facility greater than 2,000 SF to incorporate additions, alterations and renovations. Building Average Weighted Age = Σ (Building Age for that section of the building that has been renovated or addition * Building Size for that section of the building) / Σ Total Building Size				50	Older facilities that have not been maintained on a regular basis degrade ability to perform mission

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
Calculate the building age for that section of the building that has been renovated or addition by subtracting the year built (or renovated) from 2004. Building Size will be measured in Gross Square Feet. Alteration and renovation projects are considered in this calculation when they included major renovations that updated the engineering systems in this area. Minor alterations i.e. floor upgrades or minor wall changes do not constitute major renovations. For example if a 200,000 SF hospital was built in 1980 and had major renovations to 75,000 SF in 1995 and a 100,000 SF addition was added in 2002 then the Building Average Weighted Age for this facility would be: (125,000 SF x 24 years + 75,000 SF x 9 years + 100,000 SF x 2 years)/300,000 SF = 13 years and not 24 years that you would calculate if you only used the original year the facility was built. Note, round the calculation to the nearest whole year. Step 2: Calculate the Installation Medical Facilities Average Weighted Age. Installation Medical Facilities Average Weighted Age = Σ (Building Average					

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
Example: Continuing with the previous example, the Installation has a second medical facility consisting of a 100,000 SF building with a Building Average Weighted Age of 25. From the previous example, the first medical facility is 300,000 SF with a Building Average Weighted Age of 13 years. The Medical Facilities Installation Average Weighted Age would be: (100,000 SF x 25 years + 300,000 SF x 13 years) / (100,000 SF + 300,000 SF) = 16 years					

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
▪ Question: For medical facilities (medical, funding source): What is the Installation Medical Facilities Condition Index including all medical facilities greater than 2,000 SF on the Installation? Do not include stand-alone medical research and development buildings. Installations will complete a variable size grid that includes: building number, FAC code, Cost of unexecuted projects, Plant Replacement Value (PRV), Building Medical Facility Condition Index (BMFCI) calculation, and BMFCI x PRV calculation. **Amplification:** Step1: Calculate the Building Medical Facilities Condition Index (BMFCI) for each medical facility greater than 2,000 SF. BMFCI = Total cost of unexecuted projects for that building / Plant Replacement Value (PRV) for that building Total cost of unexecuted projects includes all projects by facility with cost greater than $25,000 and without construction award by 15 Mar 04. Planned projects that have is replacing in this data call. Only list the new replacement facility under				50	Facilities requiring significant dollar investment divert financial resources from the mission.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
sufficient project information that a project number (either in a medical database, i.e. DMLSS or an Installation engineering database) and initial cost estimate have been developed but are not funded will be considered "unexecuted" projects. Include O&M and MILCON funded projects through FY07 - do not include projects programmed in FY08 – FY11. Plant Replacement Value (may also be called the Cost Replacement Value - CRV) is determined from the Facility Sustainment Model (FSM). Note: The BMFCI should typically be less than 1, but could be greater than 1 if a replacement facility (MILCON or O&M) is planned. If a replacement facility project is under construction, then it is "executed." Do not include the building that this project Example: An installation has two medical facilities a hospital (PRV = $40M) and a medical warehouse (PRV = $5M). A FY06 MILCON replacement hospital has been programmed (but not executed) at a cost of $50M. The FCI for the hospital is $50M/$40M = 1.25. There is a $50K planned renovation to the medical warehouse that will not start construction until Jul 04. The medical warehouse FCI is $50,000/$5,000,000 = 0.01					

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
IMFCI = Σ (Building Medical Facility Condition Index * PRV for that building) / Σ Total of all Buildings PRV Example: Continuing with the previous example, the IMFCI = (1.25 x $40M + 0.01 x $5M) / ($40M + $5M) = 1.11 Round the IMFCI to 2 decimal places.					
o **Metric:** Equipment			25		
▪ No military value question. Use capacity data, DOD #536 Medical/ Dental Investment Equipment				100	Indication of continued usefulness of medical investment equipment. Sets a baseline age for consideration of life cycle cost.
Criterion 3: *The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations to support operations and training.*	10				
• **Attribute: Operation/Mission Responsiveness**		100			
o **Metric:** Class VIIIb (Blood)			40		

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
▪ Question: How many DoD civilians were located on the installation in FY01, 02, 03? Use capacity data, DOD #542 Medical/Dental Enrollment and DOD #543 Non-Permanent Party Utilizing Medical Resources.				50	Blood is a perishable product with a self-life of 35 – 42 days depending on the anticoagulant used. The only source of this product is human donors, hence the need for donors. While blood can be purchased from other commercial sources there is usually a shortage of product.
▪ Question: For medical facilities: If your facility has FDA testing for blood, what is the actual number of units that you process per day, and what is the theoretical maximum you could process per day?				50	Pertains to those locations that perform FDA testing on site i.e., Fort Knox, Fort Hood, Lackland AFB. Services have limited locations that are capable of performing this function, and how much they are capable of producing.
o **Metric: Class VIIIa**			20		
▪ Question: For medical facilities: What percentage of the medical logistics warehouse storage space is physically attached to the primary medical facility on the Installation and does not require outside travel to access the primary medical facility?				100	The closer the warehouse, the lower the cost to handle materiel and shorter time to deliver. Lower costs occur when the warehouse in close proximity through reduction in manpower and vehicle costs.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
o **Metric: Contingency Beds**			40		Measures the MTFs ability to provide inpatient care to increased number of casualties due to combat operations after being evacuated back to CONUS.
▪ No military value question. Use capacity data question DOD #541 Medical Inpatient Beds.				100	Contingency beds as defined in capacity data call determine a hospitals potential capacity to provide inpatient care to casualties
Criterion 4: *The cost of operations and the manpower implications*	20				Cost effectiveness and throughput are a significant factor in determining the desirability of having a Military Treatment Facility.
• **Attribute: Cost/Efficiency**		40			Cost Effectiveness is measured by the cost per unit of workload. These are adjusted for the relative costliness of care provided in the civilian community.
o **Metric:** Inpatient costs			35		Inpatient costs measure the cost of providing care for a discharge adjusted for the complexity of that discharge.
▪ Question: What is the total inpatient cost (MEPRS A) for FY03?				100	See rationale for associated metric.
o **Metric:** Outpatient costs			50		Outpatient costs measure the cost of providing care for a visit adjusted for the complexity of that visit.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
▪ Question: What is the total outpatient cost (MEPRS B) for FY03?				100	See rationale for associated metric.
• **Attribute: Throughput**		60			Military Treatment Facilities that produce more workload reduce purchase care costs and, in general, have the ability to reduce costs because of economies of scale.
o **Metric:** Inpatient care			30		Measures the total volume of inpatient care adjusted for complexity.
▪ **Question: What was the total number of RWPs produced in FY03?**				100	See rationale for associated metric.
o **Metric: Outpatient care**			40		Measures the total volume of outpatient care adjusted for complexity.
▪ Question: What was the total of number RVUs produced in FY03?				100	See rationale for associated metric.
o **Metric: Dental Care**			10		
▪ Question: What was the total number of DWUs produced in FY03?				100	Dental work units describe the demand for care from the beneficiary poipulation

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
o **Metric: Pharmacy**			10		Providing prescription drugs is a major benefit. Furthermore, prescriptions provided in the Military Treatment Facilities, in general, cost the government less than those provided in civilian pharmacies because of government pricing.
▪ Question: Total prescriptions				100	See rationale for associated metric.
o **Metric: Ancillary**			10		Measures the total volume of ancillary care adjusted for complexity.
▪ Question: What was the total number of weighted radiological procedures produced in FY03?				77	Measures the volume of radiological procedures.
▪ Question: What was the total number of laboratory procedures produced in FY03?				23	Measures the volume of laboratory procedures.

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Table 11: Formulas for Calculation of Healthcare Services Military Value Metrics

Metric 1.1: Active Duty Eligible Population

Attribute: A1: Demand

BRAC Selection Criterion:
(C1) Mission

Data Required: Number of Active Duty Members eligible for health care near a facility.

Question: For your permanently established medical/dental facilities, provide the following eligible population information as of September 2003:
- Active Duty (AD) eligible for medical care within the inpatient catchment area and outpatient PRISM area (mark N/A for catchment area population if the facility is not a hospital)

Amplification:
DEERS Extract of M2 (MHS Mart): Fiscal Month 12 Report
For dental only clinics, use the PRISM area of the closest medical facility

Scoring:
Score (for Hospitals)

Number of Eligibles	Score
Over 35,000	1.0
31,501-35,000	0.9
28,001-31,500	0.8
24,501–28,000	0.7
21,001-24,500	0.6
17,501-21,000	0.5
14,001-17,500	0.4
10,501-14,000	0.3
7,001-10,500	0.2
3,501-7,000	0.1

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0-3,500	0.0

Score (for Clinics)

Number of Eligibles	Score
Over 12,000	1.0
10,801-12,000	0.9
9,601-10,800	0.8
8,401–9,600	0.7
7,201-8,400	0.6
6,001-7,200	0.5
4,801-6,000	0.4
3,601-4,800	0.3
2,401-3,600	0.2
1,201-2,400	0.1
0-1,200	0.0

Metric 1.2: Active Duty Family Member Eligible Population

Attribute: A1: Demand

BRAC Selection Criterion:
(C1) Mission

Data Required: Number of Active Duty Family Members eligible for health care near a facility.

Question: For your permanently established medical/dental facilities, provide the following eligible population information as of September 2003:
- Active Duty Family Members (ADFM) eligible for medical care within the inpatient catchment area and outpatient PRISM area (mark N/A for catchment area population if the facility is not a hospital)

Amplification:
DEERS Extract of M2 (MHS Mart); Fiscal Month 12 Report
For dental only clinics, use the PRISM area of the closest medical facility

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Scoring:

Score (for Hospitals)

Number of AD Family Member Eligibles	Score
Over 45,000	1.0
40,501-45,000	0.9
36,001-40,500	0.8
31,501–36,000	0.7
27,001-31,500	0.6
22,501-27,000	0.5
18,001-22,500	0.4
13,501-18,000	0.3
9,001-13,500	0.2
4,501-9,000	0.1
0-4,500	0.0

Score (for Clinics)

Number of AD Family Member Eligibles	Score
Over 15,000	1.0
13,501-15,000	0.9
12,001-13,500	0.8
10,501–12,000	0.7
9,001-10,500	0.6
7,501-9,000	0.5
6,001-7,500	0.4
4,501-6,000	0.3
3,001-4,500	0.2
1,501-3,000	0.1
0-1,500	0.0

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Metric 1.3: Other Eligible Population

Attribute: A1: Demand

BRAC Selection Criterion:
(C1) Mission

Data Required: Number of Other Beneficiaries eligible for health care near a facility.

Question: For your permanently established medical/dental facilities, provide the following eligible population information as of September 2003:
Non-Active Duty/Dependant (NAD/NADD) under 65 eligible for medical care within the inpatient catchment area and outpatient PRISM area (mark N/A for catchment area population if the facility is not a hospital)

Amplification:
DEERS Extract of M2 (MHS Mart); Fiscal Month 12 Report
For dental only clinics, use the PRISM area of the closest medical facility

Scoring:
Score (for Hospitals)

Number of Other Eligibles	Score
Over 70,000	1.0
63,001-70,000	0.9
56,001-63,000	0.8
49,001–56,000	0.7
42,001-49,000	0.6
35,001-42,000	0.5
28,001-35,000	0.4
21,001-28,000	0.3
14,001-21,000	0.2

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7,001-14,000	0.1
0-7,000	0.0

Score (for Clinics)

Number of Other Eligibles	Score
Over 30,000	1.0
27,001-30,000	0.9
24,001-27,000	0.8
21,001–24,000	0.7
18,001-21,000	0.6
15,001-18,000	0.5
12,001-15,000	0.4
9,001-12,000	0.3
6,001-9,000	0.2
3,001-6,000	0.1
0-3,000	0.0

Metric 2.1: Active Duty Family Member Enrolled Population

Attribute: A1: Demand

BRAC Selection Criterion:
(C1) Mission

Data Required:
Capacity Data Call Question DOD #542: Medical /Dental Enrollment
Question: For your permanently established medical/dental facilities, provide the following enrollment information:
- Active Duty (AD) enrolled in TRICARE Prime

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- Active Duty Family Members (ADFM) enrolled in TRICARE Prime
- Non-Active Duty/Dependant (NAD/NADD) under 65 enrolled in TRICARE Prime
- Non-Active Duty/Dependant (NAD/NADD) over 65 enrolled in TRICARE for Life (TFL)
- Non-Active Duty/Dependant (NAD/NADD) enrolled in Plus
- Total Enrolled Population excluding Plus

Source / Reference: DEERS Extract of M2 (MHS Mart); end of FY Report

Please fill in the following table(s)

Beneficiaries Enrolled in TRICARE Prime	AD (Pers)	ADFM (Pers)	NAD+NAD D <65 (Pers)	NAD+NAD D >65 (Pers)	Plus (Pers)	Total Enrolled Population excluding Plus (Pers)[3]
FY01						
FY02						
FY03						

Question: For your permanently established medical/dental facilities, provide the following enrollment information:
What is the total number of Active Duty Family Members (ADFM) enrolled in TRICARE Prime

Amplification:
DEERS Extract of M2 (MHS Mart); Fiscal Month 12 Report
For dental only clinics, use the PRISM area of the closest medical facility

Scoring:
Score (for Hospitals)

Active Duty Family Member Enrolled	Score
Over 20,000	1.0
18,001-20,000	0.9
16,001-18,000	0.8

[3] Source: TRICARE Management Agency (TMA), Falls Church, VA

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14,001–16,000	0.7
12,001-14,000	0.6
10,001-12,000	0.5
8,001-10,000	0.4
6,001-8,000	0.3
4,001-6,000	0.2
2,001-4,000	0.1
0-2,000	0.0

Score (for Clinics)

Active Duty Family Member Enrolled	Score
Over 12,000	1.0
10,801-12,000	0.9
9,601-10,800	0.8
8,401–9,600	0.7
7,201-8,400	0.6
6,001-7,200	0.5
4,801-6,000	0.4
3,601-4,800	0.3
2,401-3,600	0.2
1,201-2,400	0.1
0-1,200	0.0

Metric 2.2: Other Enrolled Population
Attribute: A1: Demand
BRAC Selection Criterion: (C1) Mission
Data Required:

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Capacity Data Call Question DOD #542: Medical /Dental Enrollment

Question: For your permanently established medical/dental facilities, provide the following enrollment information:

- Active Duty (AD) enrolled in TRICARE Prime
- Active Duty Family Members (ADFM) enrolled in TRICARE Prime
- Non-Active Duty/Dependant (NAD/NADD) under 65 enrolled in TRICARE Prime
- Non-Active Duty/Dependant (NAD/NADD) over 65 enrolled in TRICARE for Life (TFL)
- Non-Active Duty/Dependant (NAD/NADD) enrolled in Plus
- Total Enrolled Population excluding Plus

Source / Reference: DEERS Extract of M2 (MHS Mart); end of FY Report

Please fill in the following table(s)

Beneficiaries Enrolled in TRICARE Prime	AD (Pers)	ADFM (Pers)	NAD+NADD <65 (Pers)	NAD+NADD >65 (Pers)	Plus (Pers)	Total Enrolled Population excluding Plus (Pers)[1]
FY01						
FY02						
FY03						

Question: For your permanently established medical/dental facilities, provide the following enrollment information: Non-Active Duty/Dependant (NAD/NADD) under 65 enrolled in TRICARE Prime

Amplification:
DEERS Extract of M2 (MHS Mart); Fiscal Month 12 Report
For dental only clinics, use the PRISM area of the closest medical facility

Scoring:
Score (for Hospitals)

Other Enrolled	Score

[1] Source: TRICARE Management Agency (TMA), Falls Church, VA

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Over 15,000	1.0
13,501-15,000	0.9
12,001-13,500	0.8
10,501–12,000	0.7
9,001-10,500	0.6
7,501-9,000	0.5
6,001-7,500	0.4
4,501-6,000	0.3
3,001-4,500	0.2
1,501-3,000	0.1
0-1,500	0.0

Score (for Clinics)

Other Enrolled	Score
Over 7,000	1.0
6,301-7,000	0.9
5,601-6,300	0.8
4,901–5,600	0.7
4,201-4,900	0.6
3,501-4,200	0.5
2,801-3,500	0.4
2,101-2,800	0.3
1,401-2,100	0.2
701-1,400	0.1
0-700	0.0

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Metric 3.1: Civilian/VA Hospitals

Attribute: A2: Civilian Capacity

BRAC Selection Criterion:
(C1) Mission

Data Required: Number of Civilian/VA Hospitals from DHHS Area Resource File

Question: For your permanently established medical/dental facilities, provide the following enrollment information:
What is the number of civilian/VA hospitals within the catchment area?

Scoring:
Score (for Hospitals)

Civilian/VA Hospitals	Score
No Hospitals	1.0
1 Hospital	0.8
2 or more hospitals	0.0

Score (for Clinics)
0.0

Metric 3.2: Civilian/VA Hospitals Beds per population

Attribute: A2: Civilian Capacity

BRAC Selection Criterion:
(C1) Mission

Data Required: Number of Civilian/VA Hospital Beds per population from DHHS Area Resource File

Question: For your permanently established medical/dental facilities, provide the following enrollment information:
What is the number of civilian/VA hospital beds within the catchment area divided by the civilian population divided by civilian US average?

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Scoring:
Score (for Hospitals)

Civilian/VA Hospital Beds per Population	Score
<81.9% Civilian Average	1.0
82%-83.9% Civilian Average	0.9
84%-85.9% Civilian Average	0.8
86%-87.9% Civilian Average	0.7
88%-89.9% Civilian Average	0.6
90%-91.9% Civilian Average	0.5
92%-93.9% Civilian Average	0.4
94%-95.9% Civilian Average	0.3
96%-97.9% Civilian Average	0.2
98%-99.9% Civilian Average	0.1
100% or more Civilian Average	0.0

Score (for Clinics)
0.0

Metric 4.1: Civilian Primary Care Providers per population

Attribute: A2: Civilian Capacity

BRAC Selection Criterion: (C1) Mission

Data Required: Number of Civilian Primary Care Providers per population from DHHS Area Resource File

Question: For your permanently established medical/dental facilities, provide the following enrollment information:
What is the number of Civilian Primary Care Providers within the catchment area/PRISM area divided by the civilian population divided by civilian US average?

Amplification: For hospitals, catchment area data will be used; for clinics PRISM area data will be used.

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Data Required: Installation Medical Facilities Condition Index (IMFCI) for each medical facility > 2,000 SF.

Question: For medical facilities (medical, funding source): What is the Installation Medical Facilities Condition Index including all medical facilities greater than 2,000 SF on the Installation? Do not include stand-alone medical research and development buildings.

Installations will complete a variable size grid that includes: building number, FAC code, unexecuted projects cost, Plant Replacement Value (PRV), Building Medical Facility Condition Index (BMFCI) calculation, and BMFCI x PRV calculation.

	Bldg #	FAC Code	Unexecuted Project Cost	PRV	Building Medical Facility Condition Index (BMFCI)	BMFCI x PRV
Medical Facility #1						
Medical Facility #2						

Amplification:
Step1: Calculate the Building Medical Facilities Condition Index (BMFCI) for each medical facility greater than 2,000 SF.

BMFCI = Total cost of unexecuted projects for that building / Plant Replacement Value (PRV) for that building

Total cost of unexecuted projects includes all projects by facility with cost greater than $25,000 and without construction award by 15 Mar 04. Planned projects that have sufficient project information that a project number (either in a medical database, i.e. DMLSS or an Installation engineering database) and initial cost estimate have been developed but are not funded will be considered "unexecuted" projects. Include O&M and MILCON funded projects through FY07 - do not include projects programmed in FY08 – FY11.

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Plant Replacement Value (may also be called the Cost Replacement Value - CRV) is determined from the Facility Sustainment Model (FSM).

Note: The BMFCI should typically be less than 1, but could be greater than 1 if a replacement facility (MILCON or O&M) is planned. If a replacement facility project is under construction, then it is "executed." Do not include the building that this project is replacing in this data call. Only list the new replacement facility under construction using its project cost as the PRV and having zero unexecuted facility projects – the FCI will be 0.

Example: An installation has two medical facilities a hospital (PRV = $40M) and a medical warehouse (PRV = $5M). A FY06 MILCON replacement hospital has been programmed (but not executed) at a cost of $50M. The FCI for the hospital is $50M/$40M = 1.25. There is a $50K planned renovation to the medical warehouse that will not start construction until Jul 04. The medical warehouse FCI is $50,000/$5,000,000 = 0.01

Step 2: Calculate the Installation Medical Facilities Condition Index (IMFCI):

IMFCI = Σ (Building Medical Facility Condition Index * PRV for that building) / Σ Total of all Buildings PRV

Example: Continuing with the previous example, the IMFCI = (1.25 x $40M + 0.01 x $5M) / ($40M + $5M) = 1.112.

Round the IMFCI to 3 decimal places.

Scoring:

Installation Medical Facility Condition Index	Score
0.000 – 0.100	1.0
0.101 – 0.200	0.9
0.201 – 0.300	0.8
0.301 – 0.500	0.6
0.501 - 0.700	0.4
- 0.701 – 0.900	0.2

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> 0.901	0.0	

Metric 5.2: Facilities (Installation Medical Facilities Average Weighted Age)

Attribute: A3: Physical capability and facility condition

BRAC Selection Criterion:
(C2) Facilities

Data Required: Installation Medical Facilities Average Weighted Age for each medical facility > 2,000 SF.

Question: For medical facilities (medical, funding source): What is the Installation Medical Facilities Average Weighted Age including all medical facilities greater than 2,000 SF on the Installation? Do not include stand-alone medical research and development buildings.
Installations will complete a variable size grid that includes: building number, FAC code, Size (SF), Year Built, Building Average Weighted Age calculation, and Size x Building Average Weighted Age calculation.

	Building Number	FAC Code	Size (SF)	Year Built	Building Avg. Wt. Age (BAWA)	Size x BAWA
Medical Facility #1						
Medical Facility #2						

Amplification:
Step 1: Calculate the Building Average Weighted Age (BAWA) of each medical facility greater than 2,000 SF to incorporate additions, alterations and renovations.

Building Average Weighted Age (BAWA) = Σ (Building Age for that section of the building that has been renovated or addition * Building Size for that section of the building) / Σ Total Building Size

Calculate the building age for that section of the building that has been renovated or addition by subtracting the year built (or renovated) from 2004.

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Building Size will be measured in Gross Square Feet.

Alteration and renovation projects are considered in this calculation when they included major renovations that updated the engineering systems in this area. Minor alterations i.e. floor upgrades or minor wall changes do not constitute major renovations.

For example if a 200,000 SF hospital was built in 1980 and had major renovations to 75,000 SF in 1995 and a 100,000 SF addition was added in 2002 then the Building Average Weighted Age for this facility would be: (125,000 SF x 24 years + 75,000 SF x 9 years + 100,000 SF x 2 years)/300,000 SF = 13 years and not 24 years that you would calculate if you only used the original year the facility was built. Note, round the calculation to the nearest whole year.

Step 2: Calculate the Installation Medical Facilities Average Weighted Age (IMFAWA).

Installation Medical Facilities Average Weighted Age (IMFAWA) = Σ (Building Average Weighted Age * Building Size) / Σ Total of all Buildings Size

Example: Continuing with the previous example, the Installation has a second medical facility consisting of a 100,000 SF building with a Building Average Weighted Age of 25. From the previous example, the first medical facility is 300,000 SF with a Building Average Weighted Age of 13 years. The Medical Facilities Installation Average Weighted Age would be: (100,000 SF x 25 years + 300,000 SF x 13 years) / (100,000 SF + 300,000 SF) = 16 years

Scoring:

Installation Medical Facilities Average Weighted Age (years)	Score
0 – 5	1.0
6 – 10	0.9
11 – 15	0.8
16 – 20	0.7
21 – 25	0.6
26 – 30	0.5
31 – 35	0.4
36 – 40	0.3

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41 – 45	0.2	
46 – 50	0.1	
> 50	0.0	

Rationale/Comments: Older facilities that have not been maintained on a regular basis degrade ability to perform mission.

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Metric 6: Equipment - Medical Investment Equipment Age

Attribute: A3: Physical capacity and facility condition

BRAC Selection Criterion:
(C2) Facilities

Data Required: From Capacity Data Call, DOD #536 Medical/Dental Investment Equipment: Date of acquisition
Capacity Data Call Question DoD #536: Medical / Dental Investment Equipment
Question: For your permanently established medical/dental facilities, provide the following for each piece of Investment Equipment (>$250,000):
Source / Reference: Joint Medical Asset Repository (JMAR), Defense Medical Logistics Standard System (DMLSS), Defense Property Accountability System (DPAS), Service Legacy Systems

Please fill in the following table(s), adding rows as necessary

Equipment Nomenclature (Text)	Date of Acquisition (Text)	Date of Lease/Rent (Text)	# of Procedures performed in FY02 (Procedures)	# of Procedures in FY03 (Procedures)	Total # of hours equipment was fully operational in FY02 (Hrs/Yr)	Total # of hours equipment was fully operational in FY03 (Hrs/Yr)	Total # of procedures per hr per manufacturer's spec (Procedures)

Formula:

1. Calculate equipment age by subtracting acquisition date from 2003
2. Calculate a score for each piece of equipment

Equipment Age (years)	Score
0 – 3	1.0
4 – 6	0.7
7 – 9	0.4
> = 10	0.0

3. Calculate an average equipment score for the facility
Average Equipment Score = Sum of all equipment scores / number of pieces of equipment

4. Rank order facilities by average equipment score from youngest to oldest.

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Scoring:

Rank Order	Score
#1 (youngest average equipment score)	1.0
#2	1.0 – 0.3/n = x
#n (oldest average equipment score)	0.3

Rationale/Comments: Indication of continued usefulness of medical equipment. Sets a baseline age for consideration of life-cycle cost.

**Data provided in capacity data call*

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Metric 7.1: Blood (Installation Population)

Attribute:
(A4) Operations/mission responsiveness

BRAC Selection Criterion:
(C3) Contingency

Data Required:
From Military Value Data Call: For Medical Facilities: How many DoD civilians were located on the Installation in FY01, 02, 03?
From Capacity Data Call: DOD #542 Medical/Dental Enrollment: (1) number of Active Duty (AD) enrolled in TRICARE Prime, (2) number of Active Duty Family Members (ADFM) enrolled in Tricare Prime, (3) number of Non-Active Duty/Dependents under 65 (NAD +NADD < 65) enrolled in Tricare Prime; and DOD #543 Non-Permanent Party Utilizing Medical Resources (4) number of Non-permanent party personnel.

Capacity Data Call Question DOD #542: Medical /Dental Enrollment
Question: For your permanently established medical/dental facilities, provide the following enrollment information:
- Active Duty (AD) enrolled in TRICARE Prime
- Active Duty Family Members (ADFM) enrolled in TRICARE Prime
- Non-Active Duty/Dependant (NAD/NADD) under 65 enrolled in TRICARE Prime
- Non-Active Duty/Dependant (NAD/NADD) over 65 enrolled in TRICARE for Life (TFL)
- Non-Active Duty/Dependant (NAD/NADD) enrolled in Plus
- Total Enrolled Population excluding Plus

Source / Reference: DEERS Extract of M2 (MHS Mart); end of FY Report

Please fill in the following table(s)

Beneficiaries Enrolled in TRICARE Prime	AD (Pers)	ADFM (Pers)	NAD+NADD <65 (Pers)	NAD+NADD >65 (Pers)	Plus (Pers)	Total Enrolled Population excluding Plus (Pers)[5]
FY01						
FY02						
FY03						

[5] Source: TRICARE Management Agency (TMA), Falls Church, VA

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CAPACITY DATA CALL QUESTION DOD #543: NON-PERMANENT PARTY UTILIZING MEDICAL RESOURCES

Question: For your permanently established medical/dental facilities, identify the Active Duty Student Load and reserve component personnel not permanently assigned to the catchment area but utilizing medical services in FY01, FY02 and FY03.

Source / Reference: Medical Facility Commander

Amplification: This captures all non-permanent party personnel not enrolled to your MTF but utilize the services of your MTF.

Please fill in the following information

Requested Information	Answers
Non permanent party personnel (FY01) (Pers)	
Non permanent party personnel (FY02) (Pers)	
Non permanent party personnel (FY03) (Pers)	

Formula:

1. Calculate the 3-year average (FY01-03) of the DoD Civilians located on the Installation.
2. Calculate the 3-year average (FY01-03) of the Active Duty (AD) enrolled in TRICARE Prime.
3. Calculate the 3-year average (FY01-03) of the AD Family Members (ADFM) enrolled in TRICARE Prime.
4. Calculate the 3-year average (FY01-03) of the Non-Active Duty/Dependent under 65 (NAD +NADD < 65) enrolled in TRICARE Prime.
5. Calculate the 3-year average (FY01-03) of the non-permanent party personnel.
6. Calculate the potential blood donor population by adding together the averages of DoD Civilians, AD, ADFM, NAD+NADFM, and non-permanent party populations.

Scoring:

Potential Blood Donor Population (Raw)	Score
> 8,000	1
4,000 – 8,000	0.5

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< 4,000	0	

Rationale/Comments: Blood is a perishable product with a shelf life of 35 – 42 days depending on the anticoagulant used. The only source of this product is human donors, hence the need for donors. While blood can be purchased from other commercial sources there is usually a shortage of product.

Metric 7.2: Blood (On-Site FDA Testing)

Attribute:
(A4) Operations/mission responsiveness

BRAC Selection Criterion:
(C3) Contingency

Data Required: (1) Actual number of blood units that a facility currently test per day. (2) Theoretical maximum number of blood units that a facility could process per day.

Formula: Rank order facilities from highest to lowest by number of current test per day, 1 to n.

Scoring:

Rank Order	Score
#1 (highest current daily test)	1.0
#2	1.0 – 0.5/n = x
#n (lowest current daily test)	0.5

Rationale/Comments: The DoD has limited locations that are capable of performing this function.

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Metric 8: Class VIIIA (Warehouse Proximity)

Attribute:
A4: Operations/mission responsiveness

BRAC Selection Criterion:
(C3) Contingency

Data Required: Percentage of warehouse storage space physically attached to the primary medical facility

Formula: None

Scoring:

% of warehouse storage space physically attached	Score
100	1.0
50 – 99	0.5
< 50	0.0

Rationale/Comments: The closer the warehouse, the lower the cost to handle materiel and shorter time to deliver. Lower costs occur when the warehouse is in close proximity through the reduction in manpower and vehicle costs.

Metric 9: Contingency Beds (Contingency Beds)

Attribute:
(A2) Operations/mission responsiveness

BRAC Selection Criterion:
(C3) Contingency beds

Data Required: From capacity data call DOD #541 Medical Inpatient Beds: Total Number of contingency beds

Capacity Data Call Question DOD #541: Medical Inpatient Beds
Question: For your permanently established medical/dental facilities, provide the number of Staffed, Equipped and Contingency Beds by type (ICU, OB, Other and Rooms not Currently Utilized for Inpatient care).

Source / Reference: Facility Commander, facility master plan

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Amplification: 1. Staffed Bed - Bed that is actually staffed based on workload as opposed to the number of beds the hospital may have been built or configured to contain.
2. Equipped Bed - bed the hospital was originally built or subsequently reconfigured to support. Room must include electrical and medical gas utility support for each bed. Beds and other supporting equipment must be present and immediately available. Wheeling beds in the room from a storage room down the hall does not meet this requirement. Equipped beds may not necessarily be staffed, but are maintained as ready for use.
3. Contingency Bed - bed that can be used in wards or rooms designed for patient beds. Beds are spaced on six (6) foot centers and include embedded electrical and gas utilities support for each bed. Beds must be setup and ready within 72 hours. Use of portable gas or electrical utilities does not meet this requirement. This measure is applicable only for hospitals and medical centers. Expansion beds outside of the facility (gym, tentage, etc) are not considered for this measurement.
4. Patient rooms not being used for patient care, including all those being used as storage, break rooms, duty rooms, offices, etc.
5. OB beds include 1) Labor, Delivery, Recovery, Post-Partum (LDRPs) beds and 2) Post-Partum beds.

Please fill in the following table(s)

Medical/Dental facility rooms	ICU (Beds)	OB (Beds)	Other Beds (Beds)	Patient rooms not used for inpatient care (Beds)	Total Beds (excluding not used) (Beds)
Staffed					
Equipped					
Contingency					
Total					

Formula: None

Scoring:

Total Number of Contingency Beds	Score
> =100	1.0
50 –99	0.7
1 - 49	0.3

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0	0	
Rationale/Comments: Determines a medical facilities military value to provide inpatient care to casualties.		

**Data provided in capacity data call*

Metric 10.1: Inpatient Costs

Attribute: A2: Cost/Efficiency

BRAC Selection Criterion:
(C4) Cost

Data Required: Average Inpatient Costs per RWP adjusted for local wage index

Question: For your permanently established medical facilities, what was the total inpatient cost (MEPRS A) for FY2003?
For your permanently established inpatient medical facilities, what was the total number of Relative Weighted Products (RWPs) produced in FY2003?
Local Wage Index from Centers for Medicare and Medicaid Services

Amplification: Average Inpatient Costs per RWP adjusted for local Wage index = Total Inpatient Cost/Total RWPs X Local Wage Index

Scoring:
Score (for Hospitals)

Average Inpatient Costs per RWP adjusted for local wage index	Score
7,500 or Less	1.0

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7,501-8,000	0.9
8,001–8,500	0.8
8,501-9,000	0.7
9,001-9,500	0.6
9,501-10,000	0.5
10,001-10,500	0.4
10,501-11,000	0.3
11,001-11,500	0.2
11,501-12,000	0.1
12,001 or More	0.0

Score (for Clinics)
0.0

Metric 11.1: Outpatient Costs

Attribute: A2: Cost/Efficiency

BRAC Selection Criterion:
(C4) Cost

Data Required: Average Outpatient Costs per RVU adjusted for local wage index

Question: For your permanently established medical facilities, what was the total outpatient cost (MEPRS B) for FY2003?
For your permanently established medical facilities, what was the total number of simple work Relative Value Units (RVUs) produced in FY2003?
Local Wage Index from Centers for Medicare and Medicaid Services

Amplification: Average Outpatient Costs per RVU adjusted for local Wage index = Total Inpatient Cost/Total RVUs X Local Wage Index

Scoring:
Score (for Hospitals)

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Average Outpatient Costs per RVU adjusted for local wage index	Score
125 or Less	1.0
126-135	0.9
136-145	0.8
146-155	0.7
156-165	0.6
166-175	0.5
176-185	0.4
186-195	0.3
196-205	0.2
206-215	0.1
216 or more	0.0

Score (for Clinics)

Average Outpatient Costs per RVU adjusted for local wage index	Score
110 or Less	1.0
111-140	0.9
141-170	0.8
171-200	0.7
201-230	0.6
231-260	0.5
261-290	0.4
291-320	0.3
321-350	0.2
351-380	0.1
381 or more	0.0

Metric 12.1: Dental Costs

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Attribute: A2: Cost/Efficiency

BRAC Selection Criterion:
(C4) Cost

Data Required: Average Dental Costs per DWV adjusted for local wage index

Question: For your permanently established medical facilities, what was the total dental cost (MEPRS C) for FY2003?
For your permanently established medical facilities, what was the total number Dental Weighted Values (DWVs) produced in FY2003?
Local Wage Index from Centers for Medicare and Medicaid Services

Amplification: Average Dental Costs per DWV adjusted for local Wage index = Total Dental Cost/Total DWVs X Local Wage Index

Scoring:

Average Outpatient Costs per DWV adjusted for local wage index	Score
125 or Less	1.0
126-135	0.9
136-145	0.8
146-155	0.7
156-165	0.6
166-175	0.5
176-185	0.4
186-195	0.3
196-205	0.2
206-215	0.1
216 or more	0.0

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Metric 13.1: Inpatient Care

Attribute: A2: Throughput

BRAC Selection Criterion:
(C4) Cost

Data Required: Number of RWPs

Question: For your permanently established inpatient medical facilities, what was the total number of Relative Weighted Products (RWPs) produced in FY2003?

Scoring:
Score (for Hospitals)

Total Number of RWPs	Score
More than 10,000	1.0
9,001-10,000	0.9
8,001–9,000	0.8
7,001-8,000	0.7
6,001-7,000	0.6
5,001-6,000	0.5
4,001-5,000	0.4
3,001- 4,000	0.3
2,001-3,000	0.2
1,001-2,000	0.1
0 – 1,000	0.0

Score (for Clinics)
0.0

Metric 14.1: Outpatient Care

Attribute: A2: Throughput

BRAC Selection Criterion:
(C4) Cost

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Data Required: Number of RVUs

Question: For your permanently established medical facilities, what was the total number of simple work Relative Value Units (RVUs) produced in FY2003?

Scoring:

Score (for Hospitals)

Total Number of RVUs	Score
Over 450,000	1.0
405,001-450,000	0.9
360,001-405,000	0.8
315,001–360,000	0.7
270,001-315,000	0.6
225,001-270,000	0.5
180,001-225,000	0.4
135,001-180,000	0.3
90,001-135,000	0.2
45,001-90,000	0.1
0-45,000	0.0

Score (for Clinics)

Total Number of RVUs	Score
More than 100,000	1.0
90,001-100,000	0.9
80,001–90,000	0.8
70,001-80,000	0.7
60,001-70,000	0.6
50,001-60,000	0.5
40,001-50,000	0.4
30,001- 40,000	0.3
20,001-30,000	0.2
10,001-20,000	0.1

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0 – 10,000	0.0

Metric 15.1: Dental Care

Attribute: A2: Throughput

BRAC Selection Criterion:

(C4) Cost

Data Required: Number of DWVs

Question: For your permanently established medical facilities, what was the total number of Dental Weighted Values (DWVs) produced in FY2003?

Scoring:

Total Number of DWVs	Score
More than 100,000	1.0
90,001-100,000	0.9
80,001–90,000	0.8
70,001-80,000	0.7
60,001-70,000	0.6
50,001-60,000	0.5
40,001-50,000	0.4
30,001- 40,000	0.3
20,001-30,000	0.2
10,001-20,000	0.1
0 – 10,000	0.0

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Metric 16.1: Pharmacy

Attribute: A2: Throughput

BRAC Selection Criterion:
(C4) Cost

Data Required: Number of Prescriptions

Question: For your permanently established medical facilities, what was the total number of prescriptions (new and refills) produced in FY2003?

Scoring:
Score (for Hospitals)

Total Number of Prescriptions	Score
Over 800,000	1.0
720,001-800,000	0.9
640,001-720,000	0.8
560,001–640,000	0.7
480,001-560,000	0.6
400,001-480,000	0.5
320,001-400,000	0.4
240,001-320,000	0.3
160,001-240,000	0.2
80,001-160,000	0.1
0-8,0000	0.0

Score (for Clinics)

Total Number of Prescriptions	Score
More than 300,000	1.0
270,001-300,000	0.9
240,001–270,000	0.8

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210,001-240,000	0.7
180,001-210,000	0.6
150,001-180,000	0.5
120,001-150,000	0.4
90,001- 120,000	0.3
60,001-90,000	0.2
30,001-60,000	0.1
0 – 30,000	0.0

Metric 17.1: Radiology

Attribute: A2: Throughput

BRAC Selection Criterion:
(C4) Cost

Data Required: Number of Weighted Radiological Procedures

Question: For your permanently established medical facilities, what was the total number of weighted radiological procedures produced in FY2003?

Scoring:
Score (for Hospitals)

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Total Number of Weighted Radiological Procedures	Score
More than 300,000	1.0
270,001-300,000	0.9
240,001–270,000	0.8
210,001-240,000	0.7
180,001-210,000	0.6
150,001-180,000	0.5
120,001-150,000	0.4
90,001- 120,000	0.3
60,001-90,000	0.2
30,001-60,000	0.1
0 – 30,000	0.0

Score (for Clinics)

Total Number of Weighted Radiological Procedures	Score
Over 35,000	1.0
31,501-35,000	0.9
28,001-31,500	0.8
24,501–28,000	0.7
21,001-24,500	0.6
17,501-21,000	0.5
14,001-17,500	0.4
10,501-14,000	0.3
7,001-10,500	0.2
3,501-7,000	0.1
0-3,500	0.0

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Metric 17.1: Laboratory

Attribute: A2: Throughput

BRAC Selection Criterion:
(C4) Cost

Data Required: Number of Weighted Laboratory Procedures

Question: For your permanently established medical facilities, what was the total number of weighted laboratory procedures produced in FY2003?

Scoring:
Score (for Hospitals)

Total Number of Weighted Laboratory Procedures	Score
More than 2,000,000	1.0
1,800,001-2,000,000	0.9
1,600,001–1,800,000	0.8
1,400,001-1,600,000	0.7
1,200,001-1,400,000	0.6
1,000,001-1,200,000	0.5
800,001-1,000,000	0.4
600,001- 800,000	0.3
400,001-600,000	0.2
200,001-400,000	0.1
0 – 200,000	0.0

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Score (for Clinics)	
Total Number of Weighted Laboratory Procedures	Score
More than 160,000	1.0
144,001-160,000	0.9
128,001–144,000	0.8
112,001-128,000	0.7
96,001-112,000	0.6
80,001-96,000	0.5
64,001-80,000	0.4
48,001- 64,000	0.3
32,001-48,000	0.2
16,001-32,000	0.1
0 – 16,000	0.0

APPENDIX C

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Table 12: Medical/Dental RDA Military Value Scoring Plan

Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
Criterion 1: *The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including impacts on joint warfighting, training and readiness.*	54.6				Force health, both in terms of prevention and treatment, has a significant impact on readiness and warfighting capability. Through the execution of the medical/dental RDA mission, medical/dental RDA activities directly support the current and future mission needs of the DoD, and for this reason, the ability to fulfill the complete scope of the medical/dental RDA mission was deemed the most critical criterion.
• **Attribute: Mission Scope/Uniqueness**		31			The ability of a medical/dental RDA activity to support current and future force needs is derived from the extent of the mission that is supported. Activities that uniquely perform an identified subelement of the medical/dental RDA mission are of particular value because disruptions of their efforts strongly increases the risk of mission failure within that subelement of the mission.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
○ **Metric:** Capability Domains Supported in FY03			61		Capability domains define subelements of the mission and are areas in which efforts are needed to discover, develop, acquire and field the medical solutions (products and information) necessary to maintain the current and future operational readiness of the DoD total force. The number of capability domains reflects the fraction of the overall medical/dental RDA mission that an activity supports, and thus is a measure of its impact on current and future readiness and warfighting.
▪ Question: Medical Capability Domains *(in Capacity Data Call)*				100	See rationale for associated metric.
○ **Metric:** Mission Uniqueness			39		Capability domains define subelements of the mission and are areas in which efforts are needed to discover, develop, acquire and field the medical solutions (products and information) necessary to maintain the current and future operational readiness of the DoD total force. An activity which has a high percentage of the total DoD workforce supporting a particular capability domain represents a unique resource within DoD and is therefore of high value (see rationale for associated attribute).

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
▪ Question: Medical and Dental RDA Full Time Equivalents *(in Capacity Data Call)*				100	See rationale for associated metric.
• **Attribute: Workforce**		41			The medical/dental RDA workforce has a highly specialized set of skills that are the most important element for successful performance of the medical/dental RDA mission.
○ **Metric:** Number of Research (S&T) Core Competencies Supported in FY03			12		Research core competencies define the specialties needed to discover and mature medical technologies (products and information) necessary to support the current and future operational readiness of the DoD total force. A workforce with multiple core competencies has a greater ability to perform all required elements of the medical/dental RDA mission, and therefore represents high value.
▪ Question: Number of Research (S&T) Core Competencies Supported in FY03				100	See rationale for associated metric.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
o **Metric:** Number of Advanced Development/Acquisition Core Competencies Supported in FY03			13		Advanced development/Acquisition core competencies define the specialties needed to develop, acquire and field the medical technologies (products and information) necessary to support the current and future operational readiness of the DoD total force. A workforce with multiple core competencies has a greater ability to perform all required elements of the medical/dental RDA mission, and therefore represents high value.
▪ Question: Number of Advanced Development/Acquisition Core Competencies Supported in FY03				100	See rationale for associated metric.
o **Metric:** Number of Research (S&T) Core Competencies With Ability To Support			26		Research core competencies define the specialties needed to discover and mature medical technologies (products and information) necessary to support the current and future operational readiness of the DoD total force. A workforce that has the ability to work within a relatively larger number of core competencies has a greater ability to flexibly apply its workforce as conditions or priorities change, and therefore represents a greater capacity to perform all required elements of the medical/dental RDA mission.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
▪ Question: Number of Research and Development Core Competencies With Ability to Support				100	See rationale for associated metric.
○ **Metric:** Number of Advanced Development/Acquisition Core Competencies With Ability To Support			19		Advanced development/Acquisition core competencies define the specialties needed to develop, acquire and field the medical technologies (products and information) necessary to support the current and future operational readiness of the DoD total force. A workforce that has the ability to work within a relatively larger number of core competencies has a greater ability to flexibly apply its workforce as conditions or priorities change, and therefore represents a greater capacity to perform all required elements of the medical/dental RDA mission.
▪ Question: Number of Advanced Development/Acquisition Core Competencies With Ability To Support				100	See rationale for associated metric.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
o **Metric:** Workforce Uniqueness			17		Core competencies define the areas needed to discover, mature, develop, acquire and field the medical technologies necessary to maintain the current and future operational readiness of the DoD total force. An activity which has a high percentage of the total DoD workforce supporting a particular core competency represents a unique resource within DoD whose loss could directly compromise the ability of DoD to perform a subelement of the medical/dental RDA mission. Such unique resources are therefore of relatively higher value.
▪ Question: Number of Research (S&T) Core Competencies Supported in FY03; Number of Advanced Development/ Acquisition Core Competencies Supported in FY03				100	See rationale for associated metric.
o **Metric:** Educational Level			13		Medical and dental research and development is a highly specialized endeavor, and educational level is an indicator of the specialization of a workforce to their task. A higher average education level represents a more specialized workforce that is likely to produce work of higher quality and may be difficult to replace, and is therefore considered to be of high value.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
▪ Question: Number of Doctoral Degrees				68	Doctoral degrees (including Ph.D., M.D., and D.D.S. degrees) are generally mandatory for technical leadership of medical and dental R&D activities, and so the relative proportion of the workforce that holds such degrees is a contributor to the overall educational level.
▪ Question: Number of Masters Degrees				25	Masters level degrees in scientific areas are often held by highly skilled technicians engaged in medical and dental R&D activities, and can contribute to the quality of performance. Professional masters degrees (such as M.B.A.'s) can also contribute to quality of work in less technical acquisition areas. Thus, the relative proportion of the workforce that holds such degrees is a contributor to the overall educational level.
▪ Question: Number of Bachelors Degrees				7	Bachelors degrees are generally considered mandatory for basic laboratory technicians engaged in medical and dental R&D activities, and can contribute to the quality of performance in less technical acquisition areas. Thus, the relative proportion of the workforce that holds such degrees is a contributor to the overall educational level.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
• **Attribute: Physical Plant - Mission**		18			Effective performance of medical/dental RDA frequently requires specialized facilities or equipment. Those facilities or items of specialized equipment that are uniquely located at a single activity in DoD are of particular value because BRAC-related loss of access to these facilities/equipment items strongly increases the risk of mission failure within that subelement of the mission that is supported by the facility or equipment item.
o **Metric:** Facility Uniqueness			100		See rationale for associated attribute.
▪ Question: Major Equipment and Facilities *(in Capacity Data Call)*				100	See rationale for associated attribute.
• **Attribute: Beneficial Relationships**		10			Medical/dental R&D is generally a highly collaborative effort, and relationships with other organizations are generally deemed beneficial as they increase the responsiveness, cost effectiveness, speed and/or quality of an effort.
o **Metric:** Jointness			65		Jointness is a measure of the benefit derived from existing relationships within DoD, and among organizations located together at a single installation. A high degree of jointness is considered beneficial to DoD, and is therefore of high value.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
▪ Question: Mission Jointness; Funding Jointness; Workforce Jointness; Organization/ Management Jointness				100	Jointness is a concept that may be measured in several ways, none of which is necessarily more accurate than the other. Jointness may be indicated by interservice reliance as reflected by (a) performance of joint missions, (b) multi-service funding, (c) level of service diversity within the workforce, or (d) by the level of interservice sharing in organization costs and management functions. Of these 4 different parameters of jointness, the parameter that results in the highest military value score for a particular activity will be selected as the most accurate measure.
○ **Metric:** Collaborations & Agreements with Local Organizations			35		Local organizations, including other DoD or government activities, universities, industrial research organizations, etc., may provide resources that facilitate the accomplishment of the activity's, and therefore DoD's mission. The extent to which agreements exist with local organizations indicates the ability of the local environment to support the activity's needs, as well as the dependence of the activity on the local organizations. A high degree of collaboration is considered beneficial to the activity, and is therefore of high value.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
• Question: Collaborations & Agreements with Local Organizations				100	See rationale for associated metric.
Criterion 2: *The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense missions) at both existing and potential receiving locations.*	5.4				The condition of facilities and associated equipments contributes to the overall military value of a medical/dental RDA activity, as well-maintained facilities and equipment contribute to productivity and enhances workforce recruitment and retention in the long run.
• **Attribute: Physical Plant - Condition**		100			Medical/dental RDA activities are directly affected by the quality of the facilities (i.e., buildings) where the work is performed. These activities also may require specialized facilities and equipment in order to complete their mission.
o **Metric:** Building Condition			25		The condition of the buildings is an indicator of the quality of the site for an activity, and is derived directly from the Facility Condition Index (FCI), a four point scale based on the ratio of current capital investment required for a building to meet required/desired mission performance to the total replacement value of the building. Buildings with low ratios are in good condition or require little investment, and therefore are of high value.
• Question: Building Condition				100	See rationale for associated metric.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
○ **Metric:** Specialized Facility/ Equipment Utilization			75		Medical research and development may require specialized facilities/equipment. The usage of a particular facility or equipment item is an indicator of both the general value of the item (i.e., valuable items are used frequently) and the condition of the item (items in poor condition have significant down time). High usage levels are therefore of high value.
▪ Question: Major Equipment and Facilities *(in Capacity Data Call)*				100	See rationale for associated metric.

Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
Criterion 3: *The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.*	22.6				A primary benefit of the DoD's medical/dental RDA programs is their ability to provide operational forces with specialized expert consultation on emergent problems and questions, and deployable operational support on an as-needed basis. These capabilities directly contribute to the success of current operations. The ability of RDA activities to provide this support is therefore a strong contributor to military value.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
• **Attribute: Operational Responsiveness**		100			The ability of a Medical/dental RDA activity to accommodate contingency, mobilization and force requirements is reflected by its operational responsiveness (support) during recent actions.
o **Metric:** Operational Support Actions			100		Operational responsiveness is indicated by the level of effort an activity has historically extended to provide support to current operations (i.e., Global War on Terrorism thru the end of FY03). Operational support actions may include deployments, reachback consultations, provision of information products, provision of new equipment training, contracting actions to support operational needs, etc. A greater level of effort represents greater operational responsiveness, and is therefore of high value.
▪ Question: Operational Support Actions				100	See rationale for associated metric.
Criterion 4: *The cost of operations and the manpower implications.*	17.4				Cost effectiveness is a principal business objective for all medical/dental RDA programs, and should be contributing factor when choosing among alternative activities that offer substantially similar capabilities to perform the mission.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
• **Attribute: Cost Effectiveness**		100			Cost and manpower implications are best expressed in terms of cost effectiveness, which is determined by the ratio of output to input invested. Medical/dental RDA activities, depending on their function, have a variety of outputs including information, procurements, logistical efforts, program management, and regulatory support. Full time equivalents (FTEs) is a more accurate measure of input than dollars invested, as traditional measures of cost such as funding executed by an activity do not necessarily reflect the true cost of the work to the government (see p. 4).
○ **Metric:** Science & Technology Output per FTE			27.5		The output of a medical research program is primarily informational - patents, papers and product transitions. An activity with a higher level of output per unit of workforce represents a more cost efficient effort, and is therefore of high value.
▪ Question: Science & Technology Outputs				100	See rationale for associated metric.
○ **Metric:** Contracting Output (Value) per FTE			15		Contracting is one of several principal acquisition activities. An activity with a higher level of output per unit of workforce represents a more cost efficient effort, and is therefore of high value.
▪ Question: Contracting Value				100	See rationale for associated metric.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
○ **Metric:** Logistics Management Actions per FTE			12		Logistics support is one of several principal acquisition activities. The total number of logistics management actions is a measure of the volume of logistics support work performed by an activity. An activity with a higher level of output per unit of workforce represents a more cost efficient effort, and is therefore of high value.
▪ Question: Logistics Management Actions				100	See rationale for associated metric.
○ **Metric:** Products Managed (Value) per FTE			27.5		A principal acquisition function is product management. The total value of products managed is a measure of the volume of program management work performed. (Products in this case are defined as modernization items either in development, procurement, or fielding that are being handled as individual items.) An activity with a higher level of output per unit of workforce represents a more cost efficient effort, and is therefore of high value.
▪ Question: Products Managed (Value)				100	See rationale for associated metric.

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Element	Weight				Rationale
	Sel Crit	Attrib	Metric	Question	
o **Metric:** Regulatory Actions per FTE			18		A KEY ACTIVITY FOR MEDICAL/DENTAL ACQUISITION ORGANIZATION IS THE ABILITY TO CONDUCT WORK IN COMPLIANCE WITH REGULATIONS GOVERNING HUMAN AND ANIMAL USE, AS WELL AS FOOD AND DRUG ADMINISTRATION (FDA) REGULATIONS GOVERNING MEDICAL PRODUCT DEVELOPMENT. THE NUMBER OF REGULATORY ACTIONS COMPLETED IS ONE MEASURE OF THE VOLUME OF REGULATORY AFFAIRS SUPPORT WORK PERFORMED. AN ACTIVITY WITH A HIGHER LEVEL OF OUTPUT PER UNIT OF WORKFORCE REPRESENTS A MORE COST EFFICIENT EFFORT, AND IS THEREFORE OF HIGH VALUE.
▪ Question: Regulatory Actions				100	See rationale for associated metric.

DCN 2631

Table 13: Formulas for Calculation of Medical/Dental Research, Development and Acquisition (RDA) Military Value Metrics

Metric 1.1: Capability Domains Supported in FY03 (CD_{FY03})

Attribute: Mission Scope/Uniqueness

BRAC Final Selection Criterion: (1) Mission Requirements & Impacts

Data Required: *Number of capability domains supported in FY03**

Capacity Data Call Question DOD #554: Medical Capability Domains

Question: For your Medical and Dental Research, Development, and Acquisition activities, enter "yes" in appropriate column(s) to identify those capability domains (a) that are supported within your activity's mission (i.e., for which your activity receives programmed funds or has programmed Full Time Equivalents), (b) in which direct mission-funded or reimbursable work was performed in FY03, or (c) that your activity possesses capability to support (i.e., domains for which your activity possesses appropriately skilled personnel and appropriate facilities). Identify all domains that apply. See the Amplification section for definitions of the capability domain that are listed in the table.

Source / Reference: Comptroller Records, Commander/Director Assessment

Amplification:
1. Direct question to installation activities performing Medical and Dental Research, Development, and Acquisition (RDA) functions.
2. The capability domains to be used in classifying an activity's capabilities are defined as follows:

Basic Research: Biological Sciences. Basic research aimed at discovering and understanding fundamental biological principles and processes underlying military health and performance at the system/organism, cellular, subcellular, and molecular levels, and basic biomedical research focused on physiological and pathogenic mechanisms of militarily relevant injuries and diseases, and discovery of novel approaches to medical countermeasures.

Basic Research: Cognitive & Neural Science: Human Performance. Basic research aimed at determining and understanding psychological and neurological factors influencing human cognitive performance (including sensory processing and integration) under military operational conditions.

Technology Maturation: Chemical-Biological: Medical Chemical Defense. Technology maturation efforts (beyond basic research) focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., drugs, diagnostics) and medical strategies for prevention, treatment, and management of casualties caused by chemical warfare agents.

Technology Maturation: Chemical-Biological: Medical Biological Defense. Technology maturation efforts (beyond basic research), focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., vaccines, drugs, diagnostics) and medical strategies for prevention, treatment, and management of casualties caused by biological warfare agents.

Technology Maturation: Biomedical: Infectious Diseases. Technology maturation efforts (beyond basic research), focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., vaccines, drugs, diagnostics, vector controls) and medical strategies for prevention and treatment of endemic infectious diseases of military importance.

Technology Maturation: Biomedical: Combat Casualty Care. Technology maturation efforts (beyond basic research), focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., diagnostic and therapeutic systems, drugs, biologicals) and medical and surgical strategies for medical management of combat casualties in field settings and during evacuation. Also includes efforts focused on technologies and strategies for prevention and field management of dental-related incapacitation.

Technology Maturation: Biomedical: Military Operational Medicine. Technology maturation efforts (beyond basic research), focused on developing information on human responses to environmental and occupational threats and/or systems hazards present in military operational settings, and on evaluating policy and doctrinal alternatives and exploring systems (e.g, warfighter monitoring, drugs, nutritional supplements) to prevent injury and performance degradation caused by these threats.

Technology Maturation: Biomedical: Medical Radiological Defense. Technology maturation efforts (beyond basic research), focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., diagnostic systems, drugs, biologicals) and medical strategies for prevention, treatment, and management of casualties caused by ionizing radiation.

Technology Maturation: Human Systems: Protection, Sustainment & Physical Performance. Technology maturation efforts (beyond basic research), focused on developing information on human systems interactions to support development of personal protective systems, and improve sustainment and physical performance. It includes combat clothing and individual equipment; combat rations and field-feeding equipment; logistics readiness; physical aiding and enhancement; vehicle escape and crash safety; warrior survival and rescue; aerial delivery; and dismounted, mounted, and aircrew warrior systems integration, including warfighter systems analysis.

Medical/Dental Acquisition: Pharmaceuticals & Biologicals. System development and demonstration activities and procurement activities directed towards the advanced development and initial fielding of novel pharmaceuticals and biologicals whose development is subject to the regulatory oversight of the U.S. Food and Drug Administration Centers for Drug Evaluation and Research and Biologics Evaluation and Research.

Medical/Dental Acquisition: Medical Devices. System development and demonstration activities and procurement activities directed towards the advanced development and initial fielding of novel medical devices whose development is subject to the regulatory oversight of the U.S. Food and Drug Administration Center for Devices and Radiological Health.

Medical/Dental Acquisition: COTS and Assemblages. Acquisition activities directed towards the procurement of commercial off the shelf (COTS) medical products and non-regulated medical support items for sustainment of TO&E units.

Medical/Dental Acquisition: Enterprise IM/IT Systems. Acquisition activities directed towards the development and procurement of medical enterprise information management/information technology systems.

Please fill in the following table(s)

Capability Domains	Within Activity Mission (Yes/No)[6]	Work Conducted in FY03 (Yes/No)[7]	Possess Capability to Support (Yes/No)[8]
Basic Research: Biological Sciences			
Basic Research: Cognitive & Neural Science: Human Performance			
Technology Maturation: Chem-Bio: Medical Chemical Defense			
Technology Maturation: Chem-Bio: Medical Biological Defense			
Technology Maturation: Biomedical: Infectious Diseases			
Technology Maturation: Biomedical: Combat Casualty Care			
Technology Maturation: Biomedical: Military Operational Medicine			
Technology Maturation: Biomedical: Medical Radiological Defense			
Tech Maturation: Human Sys: Protection Sustainment & Phys Perform			
Medical/Dental Acquisition: Pharmaceuticals & Biologicals			
Medical/Dental Acquisition: Medical Devices			
Medical/Dental Acquisition: COTS and Assemblages			
Medical/Dental Acquisition: Enterprise IM/IT Systems			

[6] Amplification: Enter yes if the capability domain is supported within your activity's mission (i.e., your activity receives programmed funds or has programmed Full Time Equivalents supporting the domain)

[7] Source: Comptroller Records; Amplification: Enter Yes if direct mission-funded or reimbursable work supporting the capability domain was performed in FY03

[8] Amplification: Enter Yes if your activity possesses capability to support the capability domain (i.e., your activity possesses appropriately skilled personnel and appropriate facilities to perform work in the area)

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Question: No Military Value Data Call Question.

Formula:

$$CD_{FY03} = \frac{CD_a}{CD_{max}}$$

where
CD_a = Number of Capability Domains supported by Activity in FY03, and CD_{max} = Highest number of Capability Domains supported by any activity in FY03

Rationale/Comments: Higher number of capability domains supported = higher value. Data for each activity are normalized to the highest value reported by any activity.

**Data provided in capacity data call*

Metric 1.2: Mission Uniqueness (U_m)

Attribute: Mission Scope/Uniqueness

BRAC Final Selection Criterion: (1) Mission Requirements & Impacts

Data Required: *FTEs supporting each capability domain in FY03*

Capacity Data Call Question DOD #555: Full Time Equivalents

Question: For each medical and dental research, development, and acquisition activity at your installation, identify the capability domain and indirect category in which work was performed. Enter in the appropriate column (a) actual Full Time Equivalents (FTEs) supporting the domain for FY03; (b) actual FTEs for the peak year during the period from FY94 to FY03; and (c) the activity commander/technical director's estimated FTEs for a workforce optimized for maximum sustainable performance of your current mission. Capability domains are defined in the Amplification section. Actual FTEs to be reported for FY03 and the peak year are those FTEs that were supported by direct mission funding plus reimbursables and other sources. All FTEs for the activity must be counted: technical staff should be allocated to the appropriate capability domain, while the Management and Support indirect categories should be used for FTEs that are not directly allocable to a capability domain. For this question, FTE estimates should be provided for military, civilian government personnel, on-site contractors, and Intergovernmental Personnel Act appointees. For the Technical Director's estimate, the total FTEs across all capability domains and indirect categories should reflect the maximum estimated capacity of your facility, assuming that funding and personnel hiring restrictions were lifted, but that your facility is constrained to its current configuration (i.e., no expansion, space renovations or upgrades). One FTE is defined as 2087 hours per year. The peak year is defined as the year in which the total number of FTEs for the activity as a whole was maximal. If the facilities have been substantially altered since FY94, the peak year should only be selected from among those years following the conversion of the facility to its FY03 configuration.

Source / Reference: Personnel Records, Comptroller Records, Activity Commander/Technical Director

Amplification:

1. Direct question to installation activities performing Medical and Dental Research, Development, and Acquisition (RDA) functions.

2. Capability domains are defined as follows:

Basic Research: Biological Sciences. Basic research aimed at discovering and understanding fundamental biological principles and processes underlying military health and performance at the system/organism, cellular, subcellular, and molecular levels, and basic biomedical research focused on physiological and pathogenic mechanisms of militarily relevant injuries and diseases, and discovery of novel approaches to medical countermeasures.

Basic Research: Cognitive & Neural Science: Human Performance. Basic research aimed at determining and understanding psychological and neurological factors influencing human cognitive performance (including sensory processing and integration) under military operational conditions.

Technology Maturation: Chemical-Biological: Medical Chemical Defense. Technology maturation efforts (beyond basic research) focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., drugs, diagnostics) and medical strategies for prevention, treatment, and management of casualties caused by chemical warfare agents.

Technology Maturation: Chemical-Biological: Medical Biological Defense. Technology maturation efforts (beyond basic research), focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., vaccines, drugs, diagnostics) and medical strategies for prevention, treatment, and management of casualties caused by biological warfare agents.

Technology Maturation: Biomedical: Infectious Diseases. Technology maturation efforts (beyond basic research), focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., vaccines, drugs, diagnostics, vector controls) and medical strategies for prevention and treatment of endemic infectious diseases of military importance.

Technology Maturation: Biomedical: Combat Casualty Care. Technology maturation efforts (beyond basic research), focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., diagnostic and therapeutic systems, drugs, biologicals) and medical and surgical strategies for medical management of combat casualties in field settings and during evacuation. Also includes efforts focused on technologies and strategies for prevention and field management of dental-related incapacitation.

Technology Maturation: Biomedical: Military Operational Medicine. Technology maturation efforts (beyond basic research), focused on developing information on human responses to environmental and occupational threats and/or systems hazards present in military operational settings, and on evaluating policy and doctrinal alternatives and exploring systems (e.g, warfighter monitoring, drugs, nutritional supplements) to prevent injury and performance degradation caused by these threats.

Technology Maturation: Biomedical: Medical Radiological Defense. Technology maturation efforts (beyond basic research), focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., diagnostic systems, drugs, biologicals) and medical strategies for prevention, treatment, and management of casualties caused by ionizing radiation.

Technology Maturation: Human Systems: Protection, Sustainment & Physical Performance. Technology maturation efforts (beyond basic research), focused on developing information on human systems interactions to support development of personal protective systems, and improve sustainment and physical performance. It includes combat clothing and individual equipment; combat rations and field-feeding equipment; logistics readiness; physical aiding and enhancement; vehicle escape and crash safety; warrior survival and rescue; aerial delivery; and dismounted, mounted, and aircrew warrior systems integration, including warfighter systems analysis.

Medical/Dental Acquisition: Pharmaceuticals & Biologicals. System development and demonstration activities and procurement activities directed towards the advanced development and initial fielding of novel pharmaceuticals and biologicals whose development is subject to the

regulatory oversight of the U.S. Food and Drug Administration Centers for Drug Evaluation and Research and Biologics Evaluation and Research.

Medical/Dental Acquisition: Medical Devices. System development and demonstration activities and procurement activities directed towards the advanced development and initial fielding of novel medical devices whose development is subject to the regulatory oversight of the U.S. Food and Drug Administration Center for Devices and Radiological Health.

Medical/Dental Acquisition: COTS and Assemblages. Acquisition activities directed towards the procurement of commercial off the shelf (COTS) medical products and non-regulated medical support items for sustainment of TO&E units.

Medical/Dental Acquisition: Enterprise IM/IT Systems. Acquisition activities directed towards the development and procurement of medical enterprise information management/information technology systems.

Please fill in the following table(s)

Capability Domain or Indirect Category	FY03 FTEs (FTEs)	Peak Year FTEs (FTEs)	Estimated Max FTEs (FTEs)	Confidence Level (Text)
Basic Research: Biological Sciences				
Basic Research: Cognitive & Neural Science: Human Performance				
Technology Maturation: Chem-Bio: Medical Chemical Defense				
Technology Maturation: Chem-Bio: Medical Biological Defense				
Technology Maturation: Biomedical: Infectious Diseases				
Technology Maturation: Biomedical: Combat Casualty Care				
Technology Maturation: Biomedical: Military Operational Medicine				
Technology Maturation: Biomedical: Medical Radiological Defense				
Tech Maturation: Human Systems: Protection, Sustainment & Perf				
Medical/Dental Acquisition: Pharmaceuticals &				

Biologicals				
Medical/Dental Acquisition: Medical Devices				
Medical/Dental Acquisition: COTS and Assemblages				
Medical/Dental Acquisition: Enterprise IM/IT Systems				
Management				
Support				
TOTAL				

Question: No Military Value Data Call Question.

Formula:

$$U_m = \frac{\sum_{n=1}^{13} CD_n \text{ (for Activity)}}{\sum_{n=1}^{13} CD_n \text{ (for Activity with highest number of domains uniquely supported)}}$$

where
$CD_n = 1$ if (Activity FTEs supporting $domain_n$ in FY03 ÷ DoD FTEs supporting $domain_n$ in FY03) ≥ 0.7, and
$CD_n = 0$ if (Activity FTEs supporting $domain_n$ in FY03 ÷ DoD FTEs supporting $domain_n$ in FY03) < 0.7.

Rationale/Comments: Activities whose FTEs supporting any single capability domain represent a high percentage (e.g., >70%) of the DoD's total FTEs supporting the domain in FY03 are relatively unique in providing the capability, and are higher value. A uniqueness subscore (i.e., 1 or zero) is determined for each of the 13 capability domains, and the total across all domains (i.e., the number of domains uniquely supported) provides the raw score for the activity. Raw scores for each activity are normalized to the highest value reported by any activity.

**Data provided in capacity data call*

Metric 2.1: Number of Research (S&T) Core Competencies Supported in FY03 (CCR_{FY03})

Attribute: Workforce

BRAC Final Selection Criterion: (1) Mission Requirements & Impacts

Data Required: Number of S&T core competencies supported in FY03

Question: In the table provided, identify the research (science & technology) core competencies that were supported in FY03 by the professional staff at your activity. Individuals should be reported if they were engaged in basic and/or applied research focusing on maturing technologies for transition into advanced development programs or on providing information products to other end users (for definitions of each core competency listed in the table, see Amplification section.) For each of the core competencies listed in the table, enter the number of professional personnel at your activity who both (1) have significant expertise within the competency area and (2) whose work in FY03 was best described by the indicated competency. Your response should be limited to DoD civilian and military employees. Significant expertise is defined as having either an advanced degree or certification in a field relevant to the competency, or having at least 2 years of direct work experience in the competency area. Individuals should only be counted against a single core competency (i.e., the total number of individuals across all competencies must equal the total number of professional staff within your activity who are directly engaged in research efforts).

Source: Personnel Records, Curricula Vitae, Staff Surveys

Formula:

$$CCR_{FY03} = \frac{CC(S\&T)_a}{CC(S\&T)_{max}}$$

where

$CC(S\&T)_a$ = Number of S&T core competencies supported by Activity in FY03, and
$CC(S\&T)_{max}$ = Highest number of S&T core competencies supported by any activity in FY03

Amplification: Research (S&T) core competency definitions are as follows:

- Vaccines for ID/BW Threats. Discover and mature technologies for vaccines to prevent and/or minimize morbidity and mortality caused by endemic pathogens and biological warfare agents
- Drugs/Biologicals for ID/BW Threats. Discover and mature technologies for drugs and non-vaccine biologicals to prevent and/or minimize morbidity and mortality caused by endemic pathogens and biological warfare agents
- Diagnostics for ID/BW Threats. Discover and mature technologies for test methods, reagents, and systems to diagnose infectious diseases and biological warfare agent exposure
- Countermeasures for Disease Vectors. Discover and mature technologies for capabilities (personal protective measures, vector controls and animal reservoir controls) to control transmission of infectious diseases
- Disease Surveillance Tools. Discover and mature technologies for detection, identification, and assessment of militarily relevant disease and biological threats
- BW Casualty Management Techniques. Discover/validate/disseminate medical management techniques for enhanced field treatment of casualties caused by biological warfare agents
- Drugs/Biologicals for Chemical Hazards and CW Threats. Discover and mature technologies for pharmaceuticals and biologicals for pretreatment, prophylaxis, immediate post-exposure treatment, and field medical management of individuals exposed to chemical hazards and CW

agents
- Topical Protectants/Decontaminants for Chemical Hazards and CW Threats. Discover and mature technologies for skin protectants and decontaminants to prevent or remove chemical contamination

- Diagnostics for Chemical Hazards and CW Threats. Discover and mature technologies for diagnostic systems for management of casualties caused by chemical hazards and CW agents
- Therapeutic Systems for Chemical Hazards and CW Threats. Discover and mature technologies for therapeutic systems for management of casualties caused by chemical hazards and CW agents
- Chemical Hazard and Threat Assessment. Discover/validate information on and predictive models of human biological response to chemical hazards and threat agents associated with military systems or operational environments (to include both CW and non-CW agents); discover and mature technologies for detection, identification, and assessment of chemical hazards and threats; and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders.
- Chemical Casualty Management Techniques. Discover and mature technologies for medical management techniques for enhanced field treatment of casualties caused by chemical hazards and threat agents
- Thermal Stress and Performance. Discover/validate information on and predictive models of human physiologic response to hypothermic and hyperthermic stresses; assess nutritional, pharmacological and behavioral countermeasures for such stresses; discover and mature technologies for systems for thermal stress monitoring; and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders
- Hyperbaric/Hypobaric Stress and Performance. Discover/validate information on and predictive models of human physiologic response to hyperbaric and hypobaric stress; assess nutritional, pharmacological and behavioral countermeasures for such stresses; discover and mature technologies for systems for hyper/hypobaric stress monitoring; and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders
- Cognitive/Emotional Stress and Performance. Discover/validate information on and predictive models of human psychological response to cognitive and emotional stresses (sleep deprivation, sustained task performance, traumatic situations, deployment); assess nutritional, pharmacological and behavioral countermeasures for such stresses; discover and mature technologies for systems for cognitive/emotional stress monitoring; and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders
- Biomechanical Stress and Physical Performance. Discover/validate information on and predictive models of human physiological response to biomechanical stresses associated with systems or occupational activities, assess physical and behavioral countermeasures for such stresses, assess physical and behavioral countermeasures for such stresses, and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders
- RFR/Microwave Hazards and Threats. Discover/validate information on and predictive models of human physiological response to radio frequency and microwave range radiation;

discover and mature technologies for dosimetric systems and countermeasures; and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders

- Ocular Hazards and Visual Performance. Discover/validate information on and predictive models of human physiological response to laser radiation and other ocular hazards; assess physical, pharmacological and behavioral countermeasures for prevention or treatment of laser and other ocular injuries and enhancing visual performance; and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders
- Auditory Hazards and Auditory Performance. Discover/validate information on and predictive models of human physiological response to auditory systems hazards; assess physical, pharmacological and behavioral countermeasures for prevention or treatment of auditory injuries; and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders
- Sensorimotor Performance and Systems Hazards. Discover/validate information on and predictive models of human perception and psychological/psychomotor response to sensory stimuli associated with military systems and systems interfaces, assess physical and behavioral countermeasures for such stresses, and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders
- Health Promotion. Discover/validate information on and predictive models of human health habits and behaviors in military populations, assess behavioral measures to increase health and well-being of military personnel, and sustain the DoD knowledge base to support development of operational doctrine and guidance to operational commanders.
- Hemorrhage Countermeasures. Discover and mature technologies for pharmaceuticals, biologicals, systems, and medical/surgical techniques for field medical management of hemorrhage.
- Hypovolemia Countermeasures. Discover/validate information on and predictive models of human physiological response to hypovolemia secondary to military trauma, and discover and mature technologies for pharmaceuticals, biologicals, diagnostic and therapeutic (i.e., life support) systems, and medical/surgical techniques to minimize morbidity and mortality caused by hypovolemia.
- Neurotrauma Countermeasures. Discover and mature technologies for pharmaceuticals and biologicals and medical/surgical techniques to minimize morbidity and mortality caused by penetrating head injuries.
- Mechanical Soft Tissue Trauma Countermeasures. Discover and mature technologies for pharmaceuticals, biologicals, systems, and medical/surgical techniques to minimize morbidity caused by mechanical trauma to soft tissues.
- Bone Trauma Countermeasures. Discover and mature technologies for pharmaceuticals, biologicals, systems, and medical/surgical techniques to minimize morbidity caused by mechanical trauma to bones (to include the large bones of extremities and the maxillofacial region)
- Advanced Diagnostics and Treatment. Discover and mature technologies for systems to remotely monitor soldiers, to assist health care providers in triage and treatment of wounded soldiers, and to supply autonomous critical-care life support on the battlefield.
- Oral-Dental-Maxillofacial Complex Disease/Trauma Countermeasures. Discover and mature technologies for pharmaceuticals, biologicals, materials, equipment, and techniques for use by dental and non-dental health providers in the prognosis and prophylaxis of disease and the immediate post-episodic treatment of trauma and other urgencies or emergencies related to the

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Oral-Dental-Maxillofacial Complex.
- Drugs/Biologicals for Radiological Threats. Discover and mature technologies for pharmaceuticals and biologicals for pretreatment, prophylaxis, immediate post-exposure treatment, and field medical management of individuals exposed to prompt, protracted or low-dose ionizing radiation.
- Diagnostics for Radiological Threats. Discover and mature technologies for diagnostic systems for early triage and management of casualties caused by prompt, protracted or low-dose ionizing radiation.
- Radiological Casualty Management Techniques. Discover/validate/disseminate medical management techniques for enhanced field treatment of casualties caused by ionizing radiation.
- Medical/Dental Informatics, Modeling and Simulation. Discover and mature information and communications technologies for medical/dental modeling and simulation (e.g., operational simulations for training and planning, casualty prediction, medical logistics assessment, etc.).

Sample Table:

Core Competency	Number of Personnel
Vaccines for ID/BW Threats	
Drugs/Biologicals for ID/BW Threats	
Diagnostics for ID/BW Threats	
Countermeasures for Disease Vectors	
Disease Surveillance Tools	
BW Casualty Management Techniques	
Drugs/Biologicals for Chemical Hazards and CW Threats	
Topical Protectants/Decontaminants for Chemical Hazards and CW Threats	
Diagnostics for Chemical Hazards and CW Threats	
Therapeutic Systems for Chemical Hazards and CW Threats	
Chemical Hazard and Threat Assessment	
Chemical Casualty Management Techniques	
Thermal Stress and Performance	
Hyperbaric/Hypobaric Stress and Performance	
Cognitive/Emotional Stress and Performance	
Biomechanical Stress and Physical Performance	
RFR/Microwave Hazards and Threats	
Ocular Hazards and Visual Performance	
Auditory Hazards and Auditory Performance	
Sensorimotor Performance and Systems Hazards	
Health Promotion	
Hemorrhage Countermeasures	
Hypovolemia Countermeasures	
Neurotrauma Countermeasures	
Mechanical Soft Tissue Trauma Countermeasures	
Bone Trauma Countermeasures	
Advanced Diagnostics and Treatment	

Oral-Dental-Maxillofacial Complex Disease/Trauma Countermeasures		
Drugs/Biologicals for Radiological Threats		
Diagnostics for Radiological Threats		
Radiological Casualty Management Techniques		
Medical/Dental Informatics, Modeling and Simulation		

Rationale/Comments: Higher number of core competencies supported = higher value. Data for each activity are normalized to the highest value reported by any activity.

Metric 2.2: Number of Advanced Development/Acquisition Core Competencies Supported in FY03 (CCA_{FY03})

Attribute: Workforce

BRAC Final Selection Criterion: (1) Mission Requirements & Impacts

Data Required: Number of advanced development/acquisition core competencies supported in FY03

Question: In the table provided, identify the advanced development and other acquisition core competencies that were supported in FY03 by the professional staff at your activity. Individuals should be reported if they were engaged in system development and demonstration directed towards the advanced development and initial fielding of military medical systems, or other types of acquisition support. (For definitions of each core competency listed in the table, see Amplification section.) For each of the core competencies listed in the table, enter the number of professional personnel at your activity who both (1) have significant expertise within the competency area and (2) whose work in FY03 was best described by the indicated competency. Your response should be limited to DoD civilian and military employees. Significant expertise is defined as having either an advanced degree or certification in a field relevant to the competency, or having at least 2 years of direct work experience in the competency area. Individuals should only be counted against a single core competency (i.e., the total number of individuals across all competencies must equal the total number of professional staff within your activity who are directly engaged in performance of system development and demonstration and/or other non-R&D acquisition functions.

Source: Personnel Records, Curricula Vitae, Staff Surveys

Formula:

$$CCA_{FY03} = \frac{CC(AD\&A)_a}{CC(AD\&A)_{max}}$$

where

$CC(AD\&A)_a$ = Number of advanced development/acquisition core competencies supported by Activity in FY03, and

$CC(AD\&A)_{max}$ = Highest number of advanced development/acquisition core competencies supported by any activity in FY03

Amplification: Advanced Development/Acquisition Core competency definitions are as follows:
- Clinical Trial Management and Execution. Provide support in the planning, execution, and

reporting process of clinical trial conduct. This involves protocol preparation, approval, conduct, support lab and regulatory procedures, data management, and study reports.

- Drug, Biologic, and Vaccine Development. Provide technical scientific/engineering support to the advanced development of new drugs and biologics. Includes conduct of related animal and compound studies, assay development, and provision of technical expert advice.
- Medical/Dental Device Engineering and Development. Provide technical, professional services in the form of market evaluation, test criteria development, technology insertion, configuration management, and other technical support functions required in advanced development or acquisition of FDA regulated medical devices.
- Information Management Software Engineering and Development. Provide technical support functions in the development of new medical/dental related software in support of the Military Health Care System or Service medical departments.
- Information Technology Engineering and Development. Provide technical support functions in he development or acquisition of hardware that provides Information Technology platforms for operate software applications and necessary communication protocols.
- Contract Management and Support. Provide technical or functional support to the awarding or administration of a contract with an outside agency. This includes all forms of grants and contracts that provide a product or service that support the research, development, and acquisition.
- Integrated Logistics Support. Provide planning and initial management of logistics support for modernization items being introduced into the Service inventory. This includes all of the ILS functions such as maintenance, packaging, handling, type classification, etc.
- Medical/Dental Systems Test and Evaluation. Provides the planning and execution of technical and operational tests required to fully support milestone decisions and/or product acceptance.
- Program and Inventory Management. Provide leadership to medical/dental product development and acquisition process to include oversight of sub-functions related to cost, schedule, and performance criteria, budgetary requirements and funding execution, customer and related organizational coordination, etc.

Sample Table:

Core Competency	Number of Personnel
Clinical Trial Management and Execution	
Drug, Biologic, and Vaccine Development	
Medical/Dental Device Engineering and Development	
Information Management Software Engineering and Development	
Information Technology Engineering and Development	
Contract Management and Support	

Integrated Logistics Support		
Medical/Dental Systems Test and Evaluation		
Program and Inventory Management		
Rationale/Comments: Higher number of core competencies supported = higher value. Data for each activity are normalized to the highest value reported by any activity.		

Metric 2.3: Number of Research (S&T) Core Competencies With Ability To Support (CCR'_{FY03})

Attribute: Workforce

BRAC Final Selection Criterion: (1) Mission Requirements & Impacts

Data Required: Number of S&T core competencies with ability to support

Question: In the table provided, identify the number of professional staff located at your activity in FY03 who have significant expertise relevant to each listed research (science & technology) core competency, regardless of whether they were actually working in the competency area during FY03. (Research core competencies provide basic and/or applied research focusing on maturing technologies for transition into advanced development programs or on providing information products to other end users; for definitions of core competencies, see Amplification section.) Significant expertise is defined as having either an advanced degree or certification in a field relevant to the competency, or having at least 2 years of direct work experience in the competency area. Individuals who possess significant expertise in more than one competency may be counted against as many competencies as appropriate. Your response should be limited to DoD civilian and military employees.

Source: Personnel Records, Curricula Vitae, Staff Surveys

Formula:

$$CCR'_{FY03} = \frac{CC(S\&T)'_a}{CC(S\&T)'_{max}}$$

where
$CC(S\&T)'_a$ = Number of S&T core competencies with ability to support reported by Activity, and
$CC(S\&T)'_{max}$ = Highest number of S&T core competencies with ability to support reported by any activity

Amplification: Research (S&T) core competency definitions are as follows:
- Vaccines for ID/BW Threats. Discover and mature technologies for vaccines to prevent and/or minimize morbidity and mortality caused by endemic pathogens and biological warfare agents
- Drugs/Biologicals for ID/BW Threats. Discover and mature technologies for drugs and non-vaccine biologicals to prevent and/or minimize morbidity and mortality caused by endemic pathogens and biological warfare agents
- Diagnostics for ID/BW Threats. Discover and mature technologies for test methods, reagents, and systems to diagnose infectious diseases and biological warfare agent exposure
- Countermeasures for Disease Vectors. Discover and mature technologies for capabilities (personal protective measures, vector controls and animal reservoir controls) to control transmission of infectious diseases
- Disease Surveillance Tools. Discover and mature technologies for detection, identification, and assessment of militarily relevant disease and biological threats
- BW Casualty Management Techniques. Discover/validate/disseminate medical management techniques for enhanced field treatment of casualties caused by biological warfare agents
- Drugs/Biologicals for Chemical Hazards and CW Threats. Discover and mature technologies for pharmaceuticals and biologicals for pretreatment, prophylaxis, immediate post-exposure treatment, and field medical management of individuals exposed to chemical hazards and CW agents

- Topical Protectants/Decontaminants for Chemical Hazards and CW Threats. Discover and mature technologies for skin protectants and decontaminants to prevent or remove chemical contamination
- Diagnostics for Chemical Hazards and CW Threats. Discover and mature technologies for diagnostic systems for management of casualties caused by chemical hazards and CW agents
- Therapeutic Systems for Chemical Hazards and CW Threats. Discover and mature technologies for therapeutic systems for management of casualties caused by chemical hazards and CW agents
- Chemical Hazard and Threat Assessment. Discover/validate information on and predictive models of human biological response to chemical hazards and threat agents associated with military systems or operational environments (to include both CW and non-CW agents); discover and mature technologies for detection, identification, and assessment of chemical hazards and threats; and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders.
- Chemical Casualty Management Techniques. Discover and mature technologies for medical management techniques for enhanced field treatment of casualties caused by chemical hazards and threat agents
- Thermal Stress and Performance. Discover/validate information on and predictive models of human physiologic response to hypothermic and hyperthermic stresses; assess nutritional, pharmacological and behavioral countermeasures for such stresses; discover and mature technologies for systems for thermal stress monitoring; and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders
- Hyperbaric/Hypobaric Stress and Performance. Discover/validate information on and predictive models of human physiologic response to hyperbaric and hypobaric stress; assess nutritional, pharmacological and behavioral countermeasures for such stresses; discover and mature technologies for systems for hyper/hypobaric stress monitoring; and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders
- Cognitive/Emotional Stress and Performance. Discover/validate information on and predictive models of human psychological response to cognitive and emotional stresses (sleep deprivation, sustained task performance, traumatic situations, deployment); assess nutritional, pharmacological and behavioral countermeasures for such stresses; discover and mature technologies for systems for cognitive/emotional stress monitoring; and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders
- Biomechanical Stress and Physical Performance. Discover/validate information on and predictive models of human physiological response to biomechanical stresses associated with systems or occupational activities, assess physical and behavioral countermeasures for such stresses, assess physical and behavioral countermeasures for such stresses, and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders
- RFR/Microwave Hazards and Threats. Discover/validate information on and predictive models of human physiological response to radio frequency and microwave range radiation; discover and mature technologies for dosimetric systems and countermeasures; and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and

guidance to operational commanders
- Ocular Hazards and Visual Performance. Discover/validate information on and predictive models of human physiological response to laser radiation and other ocular hazards; assess physical, pharmacological and behavioral countermeasures for prevention or treatment of laser and other ocular injuries and enhancing visual performance; and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders
- Auditory Hazards and Auditory Performance. Discover/validate information on and predictive models of human physiological response to auditory systems hazards; assess physical, pharmacological and behavioral countermeasures for prevention or treatment of auditory injuries; and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders
- Sensorimotor Performance and Systems Hazards. Discover/validate information on and predictive models of human perception and psychological/psychomotor response to sensory stimuli associated with military systems and systems interfaces, assess physical and behavioral countermeasures for such stresses, and sustain the DoD knowledge base to support development of non-medical materiel, operational doctrine, and guidance to operational commanders
- Health Promotion. Discover/validate information on and predictive models of human health habits and behaviors in military populations, assess behavioral measures to increase health and well-being of military personnel, and sustain the DoD knowledge base to support development of operational doctrine and guidance to operational commanders.
- Hemorrhage Countermeasures. Discover and mature technologies for pharmaceuticals, biologicals, systems, and medical/surgical techniques for field medical management of hemorrhage.
- Hypovolemia Countermeasures. Discover/validate information on and predictive models of human physiological response to hypovolemia secondary to military trauma, and discover and mature technologies for pharmaceuticals, biologicals, diagnostic and therapeutic (i.e., life support) systems, and medical/surgical techniques to minimize morbidity and mortality caused by hypovolemia.
- Neurotrauma Countermeasures. Discover and mature technologies for pharmaceuticals and biologicals and medical/surgical techniques to minimize morbidity and mortality caused by penetrating head injuries.
- Mechanical Soft Tissue Trauma Countermeasures. Discover and mature technologies for pharmaceuticals, biologicals, systems, and medical/surgical techniques to minimize morbidity caused by mechanical trauma to soft tissues.
- Bone Trauma Countermeasures. Discover and mature technologies for pharmaceuticals, biologicals, systems, and medical/surgical techniques to minimize morbidity caused by mechanical trauma to bones (to include the large bones of extremities and the maxillofacial region)
- Advanced Diagnostics and Treatment. Discover and mature technologies for systems to remotely monitor soldiers, to assist health care providers in triage and treatment of wounded soldiers, and to supply autonomous critical-care life support on the battlefield.
- Oral-Dental-Maxillofacial Complex Disease/Trauma Countermeasures. Discover and mature technologies for pharmaceuticals, biologicals, materials, equipment, and techniques for use by dental and non-dental health providers in the prognosis and prophylaxis of disease and the immediate post-episodic treatment of trauma and other urgencies or emergencies related to the Oral-Dental-Maxillofacial Complex.
- Drugs/Biologicals for Radiological Threats. Discover and mature technologies for

pharmaceuticals and biologicals for pretreatment, prophylaxis, immediate post-exposure treatment, and field medical management of individuals exposed to prompt, protracted or low-dose ionizing radiation.

- Diagnostics for Radiological Threats. Discover and mature technologies for diagnostic systems for early triage and management of casualties caused by prompt, protracted or low-dose ionizing radiation.
- Radiological Casualty Management Techniques. Discover/validate/disseminate medical management techniques for enhanced field treatment of casualties caused by ionizing radiation.
- Medical/Dental Informatics, Modeling and Simulation. Discover and mature information and communications technologies for medical/dental modeling and simulation (e.g., operational simulations for training and planning, casualty prediction, medical logistics assessment, etc.).

Sample Table:

Core Competency	Number of Personnel
Vaccines for ID/BW Threats	
Drugs/Biologicals for ID/BW Threats	
Diagnostics for ID/BW Threats	
Countermeasures for Disease Vectors	
Disease Surveillance Tools	
BW Casualty Management Techniques	
Drugs/Biologicals for Chemical Hazards and CW Threats	
Topical Protectants/Decontaminants for Chemical Hazards and CW Threats	
Diagnostics for Chemical Hazards and CW Threats	
Therapeutic Systems for Chemical Hazards and CW Threats	
Chemical Hazard and Threat Assessment	
Chemical Casualty Management Techniques	
Thermal Stress and Performance	
Hyperbaric/Hypobaric Stress and Performance	
Cognitive/Emotional Stress and Performance	
Biomechanical Stress and Physical Performance	
RFR/Microwave Hazards and Threats	
Ocular Hazards and Visual Performance	
Auditory Hazards and Auditory Performance	
Sensorimotor Performance and Systems Hazards	
Health Promotion	
Hemorrhage Countermeasures	
Hypovolemia Countermeasures	
Neurotrauma Countermeasures	
Mechanical Soft Tissue Trauma Countermeasures	
Bone Trauma Countermeasures	
Advanced Diagnostics and Treatment	
Oral-Dental-Maxillofacial Complex Disease/Trauma Countermeasures	
Drugs/Biologicals for Radiological Threats	

Diagnostics for Radiological Threats	
Radiological Casualty Management Techniques	
Medical/Dental Informatics, Modeling and Simulation	

Rationale/Comments: Higher number of core competencies that can be supported = higher value. Data for each activity are normalized to the highest value reported by any activity.

Metric 2.4: Number of Advanced Development/Acquisition Core Competencies With Ability To Support (CCA'_{FY03})

Attribute: Workforce

BRAC Final Selection Criterion: (1) Mission Requirements & Impacts

Data Required: Number of advanced development/acquisition core competencies with ability to support

Question: In the table provided, identify the number of professional staff located at your activity in FY03 who have significant expertise relevant to each listed advanced development/acquisition core competency, regardless of whether they were actually working in the competency area during FY03. (For definitions of core competencies, see Amplification section.) Individuals who possess significant expertise in more than one competency may be counted against as many competencies as appropriate. For individuals who worked within a core competency area during FY03, significant expertise is defined as having either an advanced degree or certification in a field relevant to the competency, or having at least 2 years of direct work experience in the competency area. Individuals who did not work within a core competency area during FY03 may be counted as having significant expertise in the area if they have an appropriate certification for the acquisition lifecycle activity or at least 2 years of prior direct work experience within the competency area. Your response should be limited to DoD civilian and military employees.

Source: Personnel Records, Curricula Vitae, Staff Surveys

Formula:

$$CCA'_{FY03} = \frac{CC(AD\&A)'_a}{CC(AD\&A)'_{max}}$$

where
$CC(AD\&A)'_a$ = Number of advanced development/acquisition core competencies with ability to support reported by Activity, and
$CC(AD\&A)'_{max}$ = Highest number of advanced development/acquisition core competencies with ability to support reported by any activity

Amplification: Advanced Development/Acquisition Core competency definitions are as follows:
- Clinical Trial Management and Execution. Provide support in the planning, execution, and reporting process of clinical trial conduct. This involves protocol preparation, approval, conduct, support lab and regulatory procedures, data management, and study reports.
- Drug, Biologic, and Vaccine Development. Provide technical scientific/engineering support to the advanced development of new drugs and biologics. Includes conduct of related animal and compound studies, assay development, and provision of technical expert advice.

- Medical/Dental Device Engineering and Development. Provide technical, professional services in the form of market evaluation, test criteria development, technology insertion, configuration management, and other technical support functions required in advanced development or acquisition of FDA regulated medical devices.
- Information Management Software Engineering and Development. Provide technical support functions in the development of new medical/dental related software in support of the Military Health Care System or Service medical departments.
- Information Technology Engineering and Development. Provide technical support functions in he development or acquisition of hardware that provides Information Technology platforms for operate software applications and necessary communication protocols.
- Contract Management and Support. Provide technical or functional support to the awarding or administration of a contract with an outside agency. This includes all forms of grants and contracts that provide a product or service that support the research, development, and acquisition.

- Integrated Logistics Support. Provide planning and initial management of logistics support for modernization items being introduced into the Service inventory. This includes all of the ILS functions such as maintenance, packaging, handling, type classification, etc.
- Medical/Dental Systems Test and Evaluation. Provides the planning and execution of technical and operational tests required to fully support milestone decisions and/or product acceptance.
- Program and Inventory Management. Provide leadership to medical/dental product development and acquisition process to include oversight of sub-functions related to cost, schedule, and performance criteria, budgetary requirements and funding execution, customer and related organizational coordination, etc.

Sample Table:

Core Competency	Number of Personnel
Clinical Trial Management and Execution	
Drug, Biologic, and Vaccine Development	
Medical/Dental Device Engineering and Development	
Information Management Software Engineering and Development	
Information Technology Engineering and Development	
Contract Management and Support	
Integrated Logistics Support	
Medical/Dental Systems Test and Evaluation	
Program and Inventory Management	

Rationale/Comments: Higher number of core competencies that can be supported = higher value. Data for each activity are normalized to the highest value reported by any activity.

Metric 2.5: Workforce Uniqueness (U_w)

Attribute: Workforce

BRAC Final Selection Criterion: (1) Mission Requirements & Impacts

Data Required: Number of professional staff supporting each research (S&T) and advanced development/acquisition core competency in FY03

Question: No Military Value Data Call Question - Derived from response to Questions 2.1 & 2.2

Formula:

$$U_W = \frac{\sum_{n=1}^{41} CC_n \text{ (for Activity)}}{\sum_{n=1}^{41} CC_n \text{ (for Activity with highest number of core competencies uniquely supported)}}$$

where

CC_n = 1 if (Activity FTEs supporting competency_n in FY03 ÷ Number of DoD staff supporting competency_n in FY03) $\geq$ 0.7, and

CC_n = 0 if (Activity FTEs supporting competency_n in FY03 ÷ Number of DoD staff supporting competency_n in FY03) < 0.7.

Rationale/Comments: A total of 41 S&T and advanced development/core competencies have been identified by the MJCSG. Activities whose staff aligned to any single core competency represent a high percentage (e.g., ≥70%) of the DoD's total staff within the competency in FY03 are relatively unique in providing the competency, and are higher value. A uniqueness subscore (i.e., 1 or zero) is determined for each of the competencies (S&T and Advanced Development/Acquisition), and the total across all competencies (i.e., the number of competencies uniquely supported) provides the raw score for the activity. Raw scores for each activity are normalized to the highest value reported by any activity.

Metric 2.6: Educational Level (EDU)

Attribute: Workforce

BRAC Final Selection Criterion: (1) Mission Requirements & Impacts

Data Required: Number of technical and management staff at each degree level: bachelors, masters, and doctoral level (based on highest level of attainment)

Question 1: Provide the total number of technical and management (supervisory) staff engaged in science and technology (S&T) and advanced development/acquisition activities at your location for FY 03 who possess a doctoral degree (i.e.., Ph.D., M.D., D.D.S., etc.) as their highest degree level attained. Limit your response to DoD civilian and military employees.

Question 2: Provide the total number of technical and management (supervisory) staff engaged in science and technology (S&T) and advanced development/acquisition activities at your location for FY 03 who possess a masters degree (i.e.., M.S., M.A., M.B.A., etc.) as their highest degree level attained. Limit your response to DoD civilian and military employees.

Question 3: Provide the total number of technical and management (supervisory) staff engaged in science and technology (S&T) and advanced development/acquisition activities at your location for FY 03 who possess a bachelors degree as their highest degree level attained. Limit your response to DoD civilian and military employees.
Source: Personnel Records.

Formula:

$$EDU = \frac{AvgE_a}{AvgE_{max}}$$

where
$AvgE_a$ is the weighted average education score for the activity, defined as:

$AvgE_a = (0.103B + 0.372M + D)/(B + M + D)$

in which B, M and D are the number of technical and management staff at the activity with bachelors, masters, and doctoral degrees, respectively, as highest level of attainment and

$AvgE_{max}$ is the weighted average education score (determined as above) for the activity with the highest score.

Rationale/Comments: Higher average educational level is considered to be an indicator of value. Weights are assigned to each degree level to indicate their relative desirability. Raw weighted average scores for each activity are normalized to the highest value reported by any activity.

Metric 3.1: Facility Uniqueness (U_F)

Attribute: Physical Plant: - Mission

BRAC Final Selection Criterion: (1) Mission Requirements & Impacts

Data Required: *Square footage and available workdays (as applicable) of specialized equipment and facilities of defined types**

Capacity Data Call Question DOD #556: Medical Major Equipment and Facilities

Question: Identify each medical and dental research, development and acquisition-related activities and equipment located with-in your facilities. Include in the list any formally approved major critical facilities or equipment, to include unique equipment and IM/IT infrastructure, that is/are planned for installation or procurement. For each reported item, select a type from the list provided in the 'Description' field, and identify in the appropriate field:

(a) the location of the item (including activity name, installation, and building number, or for leased space, list city and street address);
(b) significant characteristics that define the capabilities of the facility or piece of equipment [e.g., operating characteristics, accreditations (type and year of accreditation), etc.];
(c) its square footage;
(d) the number of workdays the item was used in FY03;
(e) the total available workdays for the item in FY03; and
(f) the capability domain(s) for which the item was used at any time from FY01 through FY03 [see capability domain definitions in Amplification section; enter "Yes" for all that apply].

In determining the number of workdays used in FY03, do not include any usage of the facility or equipment for purposes other than its intended R&D function. Total available workdays for FY03 should be the number of actual workdays in FY03 less any days the facility/equipment item was unavailable for R&D due to requirements for routine maintenance, scheduled upgrades, inspections or other similar reasons.

Report, at a minimum, the following items, if such facilities/equipment are present at your activity, and under 'Characteristics', include the characteristics identified in parentheses after each:

- Biosafety Level 2 Labs (list each suite as a separate item; identify whether there is an approved biosurety plan for the facility)
- Biosafety Level 3 Labs (list each suite as a separate item; identify whether there is an approved biosurety plan for the facility)
- Biosafety Level 4 Labs (list each suite as a separate item; identify whether there is an approved biosurety plan for the facility; identify whether the suite has aerosol capability)
- Dilute Chemical Surety Material Labs
- Chemical Surety Material Labs
- Hypobaric Chambers (list each chamber as a separate item; identify whether they are man-rated)
- Hyperbaric Chambers (list each chamber as a separate item; identify whether they are man-rated)
- Anechoic Chambers (list each chamber as a separate item)
- Climatic Chambers (list each chamber as a separate item; identify temperature and humidity

ranges, wind or rain generation capability, etc.)
- AAALAC Accredited Animal Facilities (identify the total average census by species for FY 03 and the maximum census by species when the facility is at 100% overall usage)
- Man-rated Research Simulator Facilities (this category includes fixed- and rotary-wing aircraft, multi-axis ride platforms, G-force simulators, etc.; list each type as a separate item and specify the type in the 'Characteristics' field)
- cGMP Biological Production Plant (list each suite as a separate item)
- cGMP Pharmaceutical Production Plant (list each suite as a separate item)
- Genomic Chip Fabrication Facility (list each facility separately)
- Electron Microscope Facility (identify the different types of microscopes that are present and the number of each)
- Medical Imaging Device Facilities (list only those facilities used for research; identify the specific types of devices that are present, e.g., CT, NMR, Ultrasound, X-ray, etc., and the number of each type)
- Clinical Studies Areas (identify the number of beds included in the facility)

In addition to those items listed above, report any other major facilities/equipment, limited to those items that are (a) integral to the building in which they are located (e.g., require special engineering, such as reinforced floors, electromagnetic shielding, special ventilation, etc.) and (b) would cost at least $250 K to relocate. Use the "Other" designation in the 'Description' field for any items of this type, and provide a further identification of each item in the 'Characteristics' field.

Source / Reference: Facility Records as of 30 Sep 2003

Amplification:

1. Direct question to installation activities performing Medical and dental Research, Development, and Acquisition (RDA) functions.
2. Capability domains are defined as follows:

Basic Research: Biological Sciences. Basic research aimed at discovering and understanding fundamental biological principles and processes underlying military health and performance at the system/organism, cellular, subcellular, and molecular levels, and basic biomedical research focused on physiological and pathogenic mechanisms of militarily relevant injuries and diseases, and discovery of novel approaches to medical countermeasures.

Basic Research: Cognitive & Neural Science: Human Performance. Basic research aimed at determining and understanding psychological and neurological factors influencing human cognitive performance (including sensory processing and integration) under military operational conditions.

Technology Maturation: Chemical-Biological: Medical Chemical Defense. Technology maturation efforts (beyond basic research) focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., drugs, diagnostics) and medical strategies for prevention, treatment, and management of casualties caused by chemical warfare agents.

Technology Maturation: Chemical-Biological: Medical Biological Defense. Technology maturation efforts (beyond basic research), focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., vaccines, drugs, diagnostics) and medical strategies for prevention, treatment, and management of casualties caused by biological warfare agents.

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Technology Maturation: Biomedical: Infectious Diseases. Technology maturation efforts (beyond basic research), focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., vaccines, drugs, diagnostics, vector controls) and medical strategies for prevention and treatment of endemic infectious diseases of military importance.

Technology Maturation: Biomedical: Combat Casualty Care. Technology maturation efforts (beyond basic research), focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., diagnostic and therapeutic systems, drugs, biologicals) and medical and surgical strategies for medical management of combat casualties in field settings and during evacuation. Also includes efforts focused on technologies and strategies for prevention and field management of dental-related incapacitation.

Technology Maturation: Biomedical: Military Operational Medicine. Technology maturation efforts (beyond basic research), focused on developing information on human responses to environmental and occupational threats and/or systems hazards present in military operational settings, and on evaluating policy and doctrinal alternatives and exploring systems (e.g, warfighter monitoring, drugs, nutritional supplements) to prevent injury and performance degradation caused by these threats.

Technology Maturation: Biomedical: Medical Radiological Defense. Technology maturation efforts (beyond basic research), focused on characterizing the feasibility, effectiveness and safety of candidate medical technologies (e.g., diagnostic systems, drugs, biologicals) and medical strategies for prevention, treatment, and management of casualties caused by ionizing radiation.

Technology Maturation: Human Systems: Protection, Sustainment & Physical Performance. Technology maturation efforts (beyond basic research), focused on developing information on human systems interactions to support development of personal protective systems, and improve sustainment and physical performance. It includes combat clothing and individual equipment; combat rations and field-feeding equipment; logistics readiness; physical aiding and enhancement; vehicle escape and crash safety; warrior survival and rescue; aerial delivery; and dismounted, mounted, and air-crew warrior systems integration, including warfighter systems analysis.

Medical/Dental Acquisition: Pharmaceuticals & Biologicals. System development and demonstration activities and procurement activities directed towards the advanced development and initial fielding of novel pharmaceuticals and biologicals whose development is subject to the regulatory oversight of the U.S. Food and Drug Administration Centers for Drug Evaluation and Research and Biologics Evaluation and Research.

Medical/Dental Acquisition: Medical Devices. System development and demonstration activities and procurement activities directed towards the advanced development and initial fielding of novel medical devices whose development is subject to the regulatory oversight of the U.S. Food and Drug Administration Center for Devices and Radiological Health.

Medical/Dental Acquisition: COTS and Assemblages. Acquisition activities directed towards the procurement of commercial off the shelf (COTS) medical products and non-regulated medical support items for sustainment of TO&E units.

Medical/Dental Acquisition: Enterprise IM/IT Systems. Acquisition activities directed towards the development and procurement of medical enterprise information management/information technology systems.

Please fill in the following information

Requested Information	Answers
Description (Text)10	
Location (Text)11	
Characteristics (Text)12	
Square Footage (SF)13	
FY03 Days Used (Day)14	
FY03 Days Available (Day)15	
Basic Research: Biological Sciences (Text)16	
Basic Research: Cognitive & Neural Science: Human Performance (Text)17	
Technology Maturation: Chem-Bio: Medical Chemical Defense (Text)18	
Technology Maturation: Chem-Bio: Medical Biological Defense (Text)19	
Technology Maturation: Biomedical: Infectious Diseases (Text)20	
Technology Maturation: Biomedical: Combat Casualty Care (Text)21	
Technology Maturation: Biomedical: Military Operational Medicine (Text)22	
Technology Maturation: Biomedical: Medical Radiological Defense (Text)23	
Tech Maturation: Human Sys: Protection Sustainment & Phys Perform (Text)24	
Medical/Dental Acquisition: Pharmaceuticals & Biologicals (Text)25	
Medical/Dental Acquisition: Medical Devices (Text)26	
Medical/Dental Acquisition: COTS and Assemblages (Text)27	
Medical/Dental Acquisition: Enterprise IM/IT Systems (Text)28	

Question: No Military Value Data Call Question.

Formula:

$$U_F = \frac{\sum_{n=1}^{m} F_n \text{ (for Activity)}}{\sum_{n=1}^{m} F_n \text{ (for Activity with highest number of unique facilities)}}$$

where

F_n = 1 if (Square footage or available workdays for items of type n for the activity ÷ square footage or available workdays for all items of type n within DoD) ≥ 0.7, and

F_n = 0 if (Square footage or available workdays for items of type n for the activity ÷ square footage or available workdays for all items of type n within DoD) < 0.7.

m = the total number of different types of specialized equipment and facilities identified by the MJCSG (or reported by activities in accordance with MJCSG criteria)

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Rationale/Comments: Activities are higher value if they possess specialized equipment/facilities that are relatively unique in the DoD (i.e., the activity possesses ≥70% of the facilities of a particular type). A uniqueness subscore (i.e., 1 or zero) is determined for each of the different types of equipment/facilities, and the total across all types provides the raw score for the activity. Raw scores for each activity are normalized to the highest value reported by any activity.

**Data provided in capacity data call*

Metric 4.1: Jointness (J)

Attribute: Beneficial Relationships

BRAC Final Selection Criterion: (1) Mission Requirements & Impacts

Data Required: % FY03 funding supporting joint mission(s); % FY03 funding from Defense Agencies and "Other" Services; % FY03 workforce assigned from Defense Agencies and "Other" Services; level of organizational sharing (qualitative 5 point scale)

Question 1 (J_m): Identify (1) your total FY03 funding, and (2) the percentage of your FY03 funding that was executed to fulfill a DoD executive or lead agent responsibility or other Joint mission.

Question 2 (J_f): Identify (1) your total FY03 funding, and (2) the percentage of your FY03 funding that was received from Defense agencies or (for Service activities) from Defense agencies or Services other than the parent Service of your activity.

Question 3 (J_w): Identify (1) the number of individuals in your FY03 DoD workforce (military and civilian government employees), and (2) the percentage of your FY03 DoD workforce that was assigned from Defense agencies or (for Service activities) from Defense agencies or Services other than the parent Service of your activity.

Question 4 (J_o): Which of the following best describes your activity?

a) Service-unique organization with service-unique management
b) Service-unique organization co-located with other related service-unique organization(s), with limited (<25%) sharing of facilities (space or equipment) among co-located organizations
c) Service-unique organization co-located with other related service-unique organization(s), with limited (<25%) sharing of facilities among co-located organizations and partial sharing of management functions (e.g., administrative functions, acquisition/logistics support, facilities management, personnel management, etc.)
d) Service-unique organization co-located with other related service-unique organization(s), with extensive (25% or greater) sharing of facilities among co-located organizations, but no significant sharing of management functions
e) Service-unique organization co-located with other related service-unique organization(s), with extensive (25% or greater) sharing of facilities among co-located organizations and partial sharing of management functions (e.g., administrative functions, acquisition/logistics support, facilities management, personnel management, etc.)
f) Joint organization under a joint command structure, or part of a Defense agency

Formula:

$$J = MAX\{J_m, J_F, J_W, J_O\}$$

where J_M = Mission Jointness, defined as the fraction of FY03 funding supporting joint mission(s),

J_F = Funding Jointness, defined as lesser of either (a) 1.0 or (b) 2 times the fraction of FY03 funding from Defense Agencies and "Other" Services,

J_W = Workforce Jointness, defined as lesser of either (a) 1.0 or (b) 2 times the fraction of the FY03 workforce assigned from Defense Agencies and "Other" Services, and

J_O = Organization/Management Jointness, the level of organizational sharing as defined by a qualitative 5 point scale:

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Score	Description
0.00	Service-unique organization with service-unique management
0.25	Service-unique organization co-located with other related service-unique organization(s), with limited (<25%) sharing of facilities (space or equipment) among co-located organizations
0.50	Service-unique organization co-located with other related service-unique organization(s), with limited (<25%) sharing of facilities among co-located organizations and partial sharing of management functions (e.g., administrative functions, acquisition/logistics support, facilities management, personnel management, etc.), *OR* Service-unique organization co-located with other related service-unique organization(s), with extensive (25% or greater) sharing of facilities among co-located organizations, but no significant sharing of management functions
0.75	Service-unique organization co-located with other related service-unique organization(s), with extensive (25% or greater) sharing of facilities among co-located organizations and partial sharing of management functions (e.g., administrative functions, acquisition/logistics support, facilities management, personnel management, etc.)
1.00	Joint organization under a joint command structure, or part of a Defense agency
Rationale/Comments: Degree of Jointness is determined based on whichever of 4 different measures provides the highest score.	

Metric 4.2: Collaborations & Agreements With Local Organizations (COLLAB)

Attribute: Beneficial Relationships

BRAC Final Selection Criterion: (1) Mission Requirements & Impacts

Data Required: Number of active formal collaborations and other agreements with organizations within 50 mile radius, *Technical FTEs**

Question: List all currently active collaborations or agreements that (a) facilitate accomplishing or performing your mission and (b) exist between your activity and an organization that is within a 50 mile radius of your activity. Such organizations may include operational military units, FFRDCs, universities and colleges, other government organizations, commercial activities, etc.. Limit your response to formal collaborations or agreements documented by memoranda of understanding, material transfer agreements, letters, or similar documentation. Do not include installation support agreements. For each collaboration or agreement, (1) identify the name of the organization with which the collaboration or agreement exists, and (2) provide a short (50 words or less) description of the purpose or nature of the collaboration or agreement.

Formula:

$$\text{COLLAB} = \frac{\left(\dfrac{CA}{FTE}\right)_{Activity}}{\left(\dfrac{CA}{FTE}\right)_{Max}}$$

where
CA is the number of active collaborations and other agreements for an activity in FY03,
FTE is the total number of Technical FTEs for the activity in FY03 (i.e., FTEs aligned to a Capability Domain), and $(CA/FTE)_{max}$ is the ratio of collaborations & agreements per Technical FTE at the activity reporting the highest ratio
[If FTE for an activity equal zero, COLLAB is undefined and will be set to a normalized value of zero]

Amplification:
Sample Table:

Organization	Description

Rationale/Comments: Local organizations, to include other DoD or government activities, universities, industrial research organizations, etc., can provide resources that facilitate the accomplishment of the DoD mission. The extent to which agreements exist with local organizations indicates the ability of the local environment to support DoD needs. Since the number of such agreements is partly a function of the size of an activity, the number of agreements is first normalized to the size of the activity by dividing by Technical FTEs, and then the activity's raw score is normalized to the score of the activity having the highest number of agreements per FTE.

**Data provided in capacity data call*

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Metric 5.1: Building Condition (B)

Attribute: Physical Plant: Condition

BRAC Final Selection Criterion: (2) Availability & Condition of Land & Facilities

Data Required: Building Facility Condition Index (FCI); Building Square Footage

See Capacity Data Call Question DoD #556 - Medical Major Equipment and Facilities under Section 3.1 (Facility Uniqueness), above. Data from this question (FY03 days used for each type of facility/ equipment item) will be used to determine the value of the metric. No new question is required for the Military Value data call

Question: Identify each medical and dental research, development and acquisition-related building within your activity, and provide the following information in the appropriate column:

- Name of the activity
- Installation where the building is located
- Building number
- Total square footage of building
- Facility Condition Index (FCI) [FCI is defined as the ratio of the current capital investment required to meet required/desired mission performance to the total replacement value; C-1 (<.25), C-2 (.25-.50), C-3 (.50-.75), or C-4 (>.75)]

Formula:

$$B = 1 - \left(\sum_{n=1}^{m} \frac{(C_n)(SF_n)}{SF_{Total}} \right)$$

where C_n is a factor related to the FCI of the nth building (C = 0.0, 0.33, 0.67, or 1.0 for FCI = C-1, C-2, C-3, or C-4, respectively),

SF_n is the square footage of the nth building,

SF_{Total} is the combined total square footage of all buildings for the activity, and

m is the total number of buildings for the activity

Amplification:

Sample Table:

Activity Name	Installation	Building Number	Square Feet	Facility Condition Index (C-1, C-2, C-3, C-4)

Rationale/Comments: Value is based on the weighted average condition across all buildings occupied by the activity, with weighting based on square footage. The condition score, C, is derived directly from the FCI, a four point scale based on the ratio of current capital investment required for a building to meet required/desired mission performance to the total replacement value of the building. A building with a low ratio (<.25, C-1) is in good condition and requires little or no investment, while a building in poor condition has a high ratio (>.75, C-4).

Metric 5.2: Specialized Facility/Equipment Utilization (SFUse)

Attribute: Physical Plant: Condition

BRAC Final Selection Criterion: (2) Availability & Condition of Land & Facilities

Data Required: *Days used in FY03 for each type of specialized facility/equipment item**

Formula:

$$SFUse = \frac{\left(\dfrac{\sum_{n=1}^{m}(\text{Days Used})_n}{365m}\right)_{\text{Activity}}}{\left(\dfrac{\sum_{n=1}^{m}(\text{Days Used})_n}{365m}\right)_{\text{Max (Activity with highest average utilization)}}}$$

where
$(\text{Days Used})_n$ = the number of days that the nth facility/equipment item was used in FY03, and
m = the number of specialized equipment/facility items reported by the activity
[If m=0, SFUse is undefined and will be set to a normalized value of zero]

Rationale/Comments: The number of days that a particular facility or equipment item is used is an indirect measure of both the general value of the item (i.e., valuable items are used frequently) and the condition of the item (items that are in poor condition have significant down time). Fractional FY03 usage (based on 365 days a year) is averaged across all items possessed by the activity, and normalized to the highest average fractional usage reported by any activity. Since some activities neither have nor need specialized equipment, this metric will be set to a normalized value of 1 (maximum value) when no specialized equipment is reported in order to avoid penalizing such activities.

**Data provided in capacity data call*

Metric 6.1: Operational Support Actions ($OUTPUT_{Op}$)

Attribute: Operational Responsiveness

BRAC Final Selection Criterion: (3) Ability to Accommodate Requirements to Support Operations & Training

Data Required: Number of workdays spent in operational support actions conducted from 11 Sep 01 thru 30 Sep 03

Question: Identify the number of workdays (based on an 8 hour workday) spent in the conduct of operational support actions of any type during the period from 11 September 2001 through 30 September 2003. The following is a non-exhaustive list of types of support actions that should be included: individual deployments of personnel to support operational requirements; consultations provided from CONUS to operational forces; provision of new equipment training; provision of information products, such as information papers or pamphlets, in response to requests from operational forces; tests conducted to support operational needs; and contracts awarded to support operational needs. Other types of documented support actions should be included as deemed appropriate.

Formula:

$$OUTPUT_{Op} = \frac{OSA_a}{OSA_{max}}$$

where
OSA_a is the number of workdays for operational support actions (all types) conducted by the activity, and

OSA_{max} is the number of workdays for operational support actions conducted by the activity with the largest number of workdays for such support

Rationale/Comments: The ability of an activity to provide operational support is measured by the level of effort utilized in support actions conducted since the beginning of the Global War on Terrorism, thru the end of FY03. A variety of different operational support actions (to include deployments, reachback consultations, provision of information products, provision of new equipment training, contracting actions to support operational needs, etc.) may be conducted. Raw numbers are normalized to the activity with the highest number.

Metric 7.1: Science & Technology Output per FTE ($OUTPUT_{S\&T}$)

Attribute: Cost Effectiveness

BRAC Final Selection Criterion: (4) Cost & Manpower Implications

Data Required: FY03 Number of: patent disclosures, scientific papers (all types), and product transitions (to advanced development, procurement, or other end user); *S&T FTEs**

Question: Identify the number of (1) patent disclosures, (2) scientific papers, and (3) product transitions from science and technology programs completed by the activity in FY03. Scientific papers should include all types of papers, to include peer-reviewed publications, technical reports, book chapters, and peer-reviewed conference abstracts, with the exception that multiple publications of the same information in different types of papers (e.g., an abstract and a peer-reviewed publication describing the same work) should only be counted as a single paper. Abstracts that are not peer-reviewed may not be counted. Product transitions should include all transitions of materiel technologies or information products from science and technology programs to advanced development program managers, procurement activities, or other end

users. (The number of transitions of information products should exclude any scientific papers counted separately in that category).

Formula:

$$OUTPUT_{S\&T} = \frac{(OST/FTE_{S\&T})_a}{(OST/FTE_{S\&T})_{max}}$$

where

$(OST/FTE_{S\&T})_a$ is the ratio of the number of patent disclosures, scientific papers and product transitions completed by the activity to the total number of S&T FTEs at the activity (i.e., FTEs aligned to an S&T Capability Domain), and

$(OST/FTE_{S\&T})_{max}$ is the ratio of the number of patent disclosures, scientific papers and product transitions completed by the activity to the total number of FTEs at the activity, for the activity with the highest ratio

[If $FTE_{S\&T} = 0$ for an activity, $OUTPUT_{S\&T}$ is undefined and will be set to a normalized value of zero]

Amplification:

Sample Table:

Output Type*	Number
Patent Disclosures	
Scientific Papers	
Product Transitions	

Rationale/Comments: The scientific output, measured as the sum of all patents, papers and product transitions, normalized to the size of the activity by FTE, is an overall measure of cost effectiveness of the activity. All types of papers, to include peer reviewed publications, technical papers, book chapters, and peer-reviewed abstracts are considered equally, with the exception that multiple publications of the same information in different types of papers should be considered as only a single paper. Likewise, all types of product transitions are considered equally. Output per FTE for each activity are additionally normalized to the activity with the highest output per FTE.

**Data provided in capacity data call*

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Metric 7.2: Contracting Output (Value) per FTE ($OUTPUT_{ConVal}$)

Attribute: Cost Effectiveness

BRAC Final Selection Criterion: (4) Cost & Manpower Implications

Data Required: Funded value of medical/dental RDA-related contracts awarded in FY03 that the activity either awarded or provided acquisition support for; FTEs devoted to contract support

Question: Identify (1) the funded value of medical/dental RDA-related contracts that were awarded in FY03 for which your activity either (a) served as the awarding organization, or (b) provided acquisition support, such as technical experts for Source Selection Boards; and (2) the total Full Time Equivalents for DoD employees (military and civilian) and support contractors performing medical/dental RDA-related contracting or contracting support functions during FY03.

Formula:

$$OUTPUT_{ConVal} \frac{(OCV/FTE_{Con})_a}{(OCV/FTE_{Con})_{max}}$$

where

$(OCV/FTE_{Con})_a$ is the ratio of the funded value of medical/dental RDA-related contracts awarded in FY03 that the activity either awarded or provided acquisition support for, to the total number of FTEs at the activity involved in contract support, and

$(OCV/FTE_{Con})_{max}$ is the ratio of the funded value of medical/dental RDA-related contracts awarded in FY03 that the activity either awarded or provided acquisition support for, to the total number of FTEs at the activity involved in contract support, for the activity with the highest ratio

[If $FTE_{Con} = 0$ for an activity, $OUTPUT_{ConVal}$ is undefined and will be set to a normalized value of zero]

Amplification:

Sample Table:

Description	Number
Funded Value of Contracts ($K)	

Rationale/Comments: Funded value of contracts awarded is one measure of the volume of contracting work performed. The ability to perform work efficiently increases value. Raw numbers for each activity are normalized to the number of contracting staff, and further normalized to the activity that had the greatest output per FTE in FY03.

Metric 7.3: Logistic Management Actions per FTE ($OUTPUT_{Log}$)

Attribute: Cost Effectiveness

BRAC Final Selection Criterion: (4) Cost & Manpower Implications

Data Required: Number of logistics management actions completed in FY03 (type classifications, requisitions, logistics support plans prepared, assemblages built, new equipment training plans completed, and fieldings supported); FTEs devoted to logistics management

Question: Identify (1) the number of logistics management actions (i.e., Type Classifications, Requisitions, Logistic Support Plans, Assemblages Built, New Equipment Training Plans, and Fieldings) completed by your activity in FY03, and (2) the total Full Time Equivalents for DoD employees (military and civilian) and support contractors devoted to logistics management during FY03.

Formula:

$$OUTPUT_{Log} = \frac{(OLog/FTE_{Log})_a}{(OLog/FTE_{Log})_{max}}$$

where

$(OLog/FTE_{Log})_a$ is the ratio of the number of logistics management actions completed by the activity in FY03 to the total number of logistics management FTEs at the activity, and

$(OLog/FTE_{Log})_{max}$ is the ratio of the number of logistics management actions completed by the activity in FY03 to the total number of logistics management FTEs at the activity, for the activity with the highest ratio

[If $FTE_{Log} = 0$ for an activity, $OUTPUT_{Log}$ is undefined and will be set to a normalized value of zero]

Amplification:

Sample Table:

Description	Number
Number of Logistics Management Actions Completed	

Rationale/Comments: Number of logistics management actions is one measure of the volume of logistics support work performed. The ability to perform work efficiently increases value. Raw numbers for each activity are normalized to the number of logistics management staff, and further normalized to the activity that had the greatest output per FTE in FY03.

Metric 7.4: Products Managed (Value) per FTE ($OUTPUT_{PMVal}$)

Attribute: Cost Effectiveness

BRAC Final Selection Criterion: (4) Cost & Manpower Implications

Data Required: Total FY03 funds for all products managed in FY03; FTEs devoted to acquisition program management

Question: Identify (1) the total FY03 funds for all products managed by your activity during FY03, and (2) the total Full Time Equivalents for DoD employees (military and civilian) and support contractors devoted to acquisition Program Management during FY03. Products are defined as modernization items that are in either advanced development, procurement, or fielding and are being handled as individual items. Assemblages are to be considered as a single product regardless of the number of component items.

Formula:

$$OUTPUT_{PMVal} = \frac{(OPV/FTE_{PM})_a}{(OPV/FTE_{PM})_{max}}$$

where
$(OPV/FTE_{PM})_a$ is the ratio of the total FY03 funds for all products managed by the activity in FY03 to the total number of acquisition program management FTEs at the activity, and

$(OPV/FTE_{PM})_{max}$ is the ratio of the total FY03 funds for all products managed by the activity in FY03 to the total number of acquisition program management FTEs at the activity, for the activity with the highest ratio

[If $FTE_{PMVal} = 0$ for an activity, $OUTPUT_{PMVal}$ is undefined and will be set to a normalized value of zero]

Amplification:
Sample Table:

Description	Number
FY03 Product Funding ($K)	

Rationale/Comments: Total value of products managed is one measure of the volume of program management work performed. (Products in this case are defined as modernization items either in development, procurement, or fielding that are being handled as individual items. Assemblages are considered as one product regardless of the number of components items.) The ability to perform work efficiently increases value. Raw numbers for each activity are normalized to the number of program management staff, and further normalized to the activity that had the greatest output per FTE in FY03.

Metric 7.5: Regulatory Actions per FTE ($OUTPUT_{Reg}$)

Attribute: Cost Effectiveness

BRAC Final Selection Criterion: (4) Cost & Manpower Implications

Data Required: Number of regulatory actions completed in FY03 (animal care and use actions, Institutional Review Board protocol reviews, QA/QC monitoring reports completed, FDA discussions held, FDA submissions completed, environmental documents completed, and final clinical trials reports completed); FTEs devoted to regulatory affairs support and oversight

Question: Identify (1) the number of regulatory actions completed by your activity in FY03 in support of DoD medical/dental RDA programs, and (2) the total Full Time Equivalents for DoD employees (military and civilian) and support contractors devoted to regulatory affairs support and oversight during FY03. Regulatory actions are defined as animal care and use actions, Institutional Review Board protocol reviews, Quality Assurance/Quality Control monitoring documents completed, FDA discussions held, FDA submissions completed, environmental documents completed, and final research reports completed for regulatory oversight bodies (i.e., Institutional Review Boards, Animal Care and Use Committees, etc.).

Formula:

$$OUTPUT_{Reg} = \frac{(OReg/FTE_{Reg})_a}{(OReg/FTE_{Reg})_{max}}$$

where

$(OReg/FTE_{Reg})_a$ is the ratio of the number of regulatory actions completed by the activity in FY03 to the total number of regulatory affairs support and oversight FTEs at the activity, and

$(OReg/FTE_{Reg})_{max}$ is the ratio of the number of regulatory actions completed by the activity in FY03 to the total number of regulatory affairs support and oversight FTEs at the activity, for the activity with the highest ratio

[If $FTE_{Reg} = 0$ for an activity, $OUTPUT_{Reg}$ is undefined and will be set to a normalized value of zero]

Amplification:

Sample Table:

Description	Number
Number of Regulatory Actions	

Rationale/Comments: Number of regulatory actions completed is one measure of the volume of regulatory affairs support work performed. The ability to perform work efficiently increases value. Raw numbers for each activity are normalized to the number of regulatory affairs support staff, and further normalized to the activity that had the greatest output per FTE in FY03.

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MEMORANDUM FOR CHAIRMAN, SUPPLY AND STORAGE JOINT CROSS-SERVICE GROUP

SUBJECT: Supply and Storage Joint Cross-Service Group (S&S JCSG) Report on Military Value Analysis

The Infrastructure Steering Group (ISG) has reviewed the S&S JCSG Military Value report submitted to it on March 24, 2004. The ISG appreciates the dedicated effort and military judgment that your members, as the experts in the field, put into revising this report in response to our initial comments. As part of the process to review issues raised by the Military Departments, the ISG tasked the BRAC Deputy Assistant Secretaries (DASs) to develop recommendations for resolving issues with the military value reports. The BRAC DASs met to review the issues pertaining to your JCSG. Representatives from the Supply and Storage JCSG participated in the discussion with the DASs to ensure the issues were well understood and potential solutions were implementable and reasonable. Subject to incorporation of the comments expressed herein, the ISG approves your report as the basis for your military value analysis.

In its report, the Supply and Storage JCSG proposes the use of out-year spending data as an indicator of the future condition of infrastructure (e.g., the quality of IT infrastructure). The use of out-year dollars is not appropriate for assessing the military value of facilities where your functions are currently being performed. The question of IT infrastructure should be assessed directly and should examine the value of infrastructure in its existing condition or as it may be changed by a project that has already been authorized and appropriated. For instance, your analysis could identify what IT capabilities are important to your functions and then measure which facilities currently possess those capabilities. Therefore, please revise your report to use only FY04 data to assess the facilities current capabilities, and by extension, its military value. For questions that involve capacity, projects that have been authorized and appropriated can be included, even though the resulting capacity will be phased in through FY 09 as the projects are completed.

In developing the labor pool availability metric for each Supply and Storage activity, your report uses area unemployment rates as a metric for labor pool availability. The use of the local unemployment rate as a measure of the labor pool is inappropriate

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because it does not accurately measure the availability of any particular skill set in that community. Moreover, it sends the signal that the Department values economically depressed locations over those with strong economies. Please replace unemployment rate with a more appropriate measure of labor pool availability, such as Metropolitan Statistical Area data on how many Supply and Storage occupations reside in the locality or the percentage of the local workforce that works on the installation (a lower number would indicate a better market for replacement workers).

The ISG agrees that the time it takes to fill positions is a good indicator of the available skilled workforce in the area. However, the manner in which the JCSG structured the metric is more a measure of the effectiveness of the personnel system than of the available skilled work force. Please revise Question # 63 to better reflect the availability of skilled workforce, perhaps by comparing the average time to fill all types of positions with the average time to fill a supply and storage position.

In several instances in your military value report references to the C-141 are used as the basis for obtaining data. The C-141 aircraft is leaving the Air Force inventory. Please revise questions 24, 25, 26, 37, 38, 39, 40, 53, and 54 by deleting all references to the C-141. If a given installation is suitable as a distribution node because it can handle only C-141s, this is not a military value discriminator. If it must handle C-5 or C-17 aircraft in addition to the C-141 in order to have value, the C-141 part of the question is moot.

Please revise the report to distinguish between those questions that were already asked in Data Call 1 and those which are new questions.

As an update to the April 8, 2004 meeting/discussion your representatives had with the BRAC DASs, the military value weights/scoring plan has been revised to address and capture distinct difference in kinds of capacity. With regard to location, which currently only applies to distribution and the measurement of delivery time to customer, it is agreed that the current metric of capturing time to deliver product from distribution center to a transportation node is a good measure. We continue to believe that there exists value in a supply activity/distribution center being able to deliver requirements not only to the shipping node, but also to the customers in a timely manner. We request that the JCSG pursue determining the ability to capture data that will complete the analysis of the delivery cycle and include such a metric if the data is available.

After incorporation of the directed revisions above, please provide a final copy of your Military Value Analysis report to the OSD BRAC Office. If you have any questions regarding these comments, please contact Peter Potochney, Director, Base Realignment and Closure, at 614-5356.

Michael W. Wynne
Acting USD (Acquisition, Technology & Logistics)
Chairman, Infrastructure Steering Group

cc: Infrastructure Steering Group Members
MilDep BRAC DASs

DCN 2631

Supply and Storage Joint Cross Service Group

[redacted]

MILITARY VALUE ANALYSIS FINAL REPORT

To the

INFRASTRUCTURE STEERING GROUP

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SECTION 1: INTRODUCTION

The Military Value guidance to the Supply and Storage Joint Cross-Service Group (S&S JCSG) detailed the requirement of designing attributes, metrics, data call questions and a quantitative scoring plan to array the relative military value of supply and storage activities across the Department of Defense (DOD). As previously reported, the S&S JCSG's approach divides the DOD supply and storage activities into three core functions: supply, storage, and distribution. To this end, the S&S JCSG, comprised of individuals representing all Services and the Defense Logistics Agency (DLA) crafted a methodology to analyze the military value of supply, storage and distribution functions around the fifty states, the District of Columbia, Guam, Puerto Rico and Samoa. The S&S JCSG envisions a strategically integrated, network-centric, supply chain with sufficient size and capability to provide reliable, flexible, efficient and operationally responsive combat support. The strategic integration of the supply, storage and distribution activities throughout the supply chain will drive combat force sustainment and the accommodation of surge requirements supporting operational demands.

Two overarching factors heavily influence the Supply and Storage Joint Cross-Service Group's approach to analyzing Military Value: the diversity of the commodities managed throughout the DOD supply chain and current real world surge requirements by all four Services and DLA.

Complexity Factor. The metrics used throughout the S&S JCSG military value analysis differentiate effectiveness and efficiency within commodity groups but do not account for the differences in management difficulty across commodity groups. The S&S JCSG developed a "Complexity Factor" (C-factor) to address this issue. This factoring device adjusts military value scores on a one-time basis for questions where commodity management difficulty varies. The C-factor eliminates the need to parse questions by commodity and collect large and complex amounts of data to reach the same conclusions.

The C-factor adjusts scores across material categories by accounting for two dimensions of management difficulty. The first dimension is by commodity type, such as Aviation, Fuels, Subsistence, Electronics, or Armaments. The second dimension is by product groups (i.e end items, repairables and consumables). Both dimensions are arrayed along a scale from 0.00 to 1.00. These dimensions are rolled into a single complexity factor for each activity. Part 1 of Appendix C provides a detailed explanation of the complexity factor. Part 2 of Appendix C provides a "Header Question" in the form of a table. This table is what

the field completes during the data call. Part 3 of Appendix C provides an example of how the S&S JCSG will calculate an activity's C-factor.

A detailed list of commodity type and product group definitions will be included in the OSD BRAC Library and distributed with the data call. This list provides detailed guidance about how activities should properly sort their commodity inventories.

Evaluating the management difficulty across commodity types and product groups is a subjective undertaking and not a science. An S&S JCSG sponsored working group met several times to establish a reasonable and logical framework for judging commodity management difficulty and appraising commodity types and product groups in an orderly and disciplined fashion. This "at large" working group brought a wide range of logistical backgrounds to bear in making this assessment. Each commodity type was analyzed for inventory management complexity and difficulty along the lines of legal restrictions, safety requirements, security requirements, technical aspects and sources of supply. The working group discussed, debated, voted, ranked and scored each area while populating two decision tables (1 for commodity types and another for product groups) before assigning weights. These decision tables have been retained internally as official records of deliberation documenting how these scales were quantified.

Surge Considerations. For more than two years the Military Services have been vigorously conducting combat operations in several theatres, most notably Afghanistan and Iraq. The logistics build up, or surge, requirements for these operations have challenged activities within the supply system[1] to varying degrees and at varying times. Due to the different roles of the Military Services and DLA during combat operations, consideration must be given to the impact and timing of surge requirements on Service-specific supply systems. Debate within the S&S JCSG, as to when and for what duration each Service surged, provided valuable insight into the need for a methodology to assess each activity's military value with respect to each Service's operations in a surge environment.

Towards this end the S&S JCSG determined that the most appropriate course of action would be for each activity to provide financial and performance data for the last three fiscal years (2001, 2002 and 2003). In scoring the data call responses an average will often be computed using all three years' data. The values derived from the averaged data

[1] In this context the "supply system" encompasses all aspects of supply, storage and distribution.

will serve to reduce the high variability caused by Service and Defense Agency surge activity within each fiscal year's data.

SECTION 2: APPROACH TO MILITARY VALUE ANALYSIS AND SCORING PLAN

For each of the military value criteria, the S&S JCSG developed "characteristics" that bring a supply system context to the criteria by integrating the core functions (supply, storage, and distribution). Characteristics provide the foundation for the attributes, metrics, and questions developed by the S&S JCSG. Characteristics also represent the second-order weighting of military value discussed in the scoring plan.

Since the characteristics were developed with the core functions in mind, it is worth revisiting the definitions of the core functions. The lists of key "sub-functions" (originally provided in the S&S JCSG's Capacity Report) below serve well as definitions for each function. Note that some sub-functions apply to more than one function.

- Supply
  - Requirements Determination
  - Requisitioning
  - Requisition Processing
  - Stock Control
  - Shelf-life Management
  - Technical Support
  - Quality Assurance
- Storage
  - Physical Inventory Management
  - Materiel Handling
  - Materiel Issuing
  - Warehousing
  - Packaging
  - Preserving
  - Quality Assurance
- Distribution
  - Shipping
  - Materiel Handling
  - Traffic Management
  - Quality Assurance

In the next section, "Description of all Criteria and Characteristics," the narrative description of the criteria and characteristics are provided. The core function of each characteristic is also noted.

Description of all Criteria and Characteristics

The weighing of criteria constitutes the first-order of military value prioritization. Criteria 1 and 3 are viewed as most indicative of military value and received equal military value weights of 35 percent. These two criteria respectively represent: 1) support and sustain current operations and 2) support and sustain future joint, expeditionary operations. Criterion 2 represents the military value of facilities and land and received a weight of 20 percent. Finally, criterion 4 represents cost and manpower implications and received a weight of 10 percent.

- **Criterion 1:** The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.
  - **Characteristic 1 (SUPPLY):** Use modern and flexible inventory management processes to support and enhance operational readiness, as defined by requirements determination, acquisition, and stock control.
  - **Characteristic 2 (STORAGE):** Support and sustain the worldwide projection of military power, as defined by the capability to receive, store and issue supplies and materiel.
  - **Characteristic 3. (DISTRIBUTION)** Distribute supplies and materiel to joint forces worldwide in the most efficient and effective manner, as defined in terms of shipping, distance, and capacity.

- **Criterion 2:** The availability and condition of land, facilities, and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed forces in homeland defense missions) at both existing and potential receiving locations.
  - **Characteristic 1. (SUPPLY)** Operate from modern, efficient, and expandable infrastructure that enhances the inventory management process.
  - **Characteristic 2. (STORAGE)** Operate from modern, efficient, and expandable infrastructure that enhances receipt, storage, and issue functions.
  - **Characteristic 3. (DISTRIBUTION)** Operate from modern, efficient, and expandable infrastructure that enhances distribution operations.

- **Criterion 3:** The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.
  - **Characteristic 1. (SUPPLY)** A modern, flexible inventory management capability with sufficient capacity to adapt to future requirements as defined by personnel, information technology (IT), and infrastructure.
  - **Characteristic 2. (STORAGE)** A modern, flexible storage system capability with sufficient capacity to adapt to future requirements as defined by personnel, IT, and infrastructure.
  - **Characteristic 3. (DISTRIBUTION)** A modern, flexible distribution system capability with sufficient capacity to adapt to future requirements as defined by personnel, IT, and infrastructure.

- **Criterion 4:** The cost of operations and the manpower implications.
  - **Characteristic 1. (SUPPLY)** Manage inventory processes to minimize cost and manpower requirements.
  - **Characteristic 2. (STORAGE)** Operate receipt, storage and issue functions that minimize cost and manpower.
  - **Characteristic 3. (DISTRIBUTION)** Conduct distribution operations that minimize cost.

Weighing the Attributes, Metrics and Questions

The weighting plan, provided in Appendix A, outlines the elements of the scoring plan as they relate to each individual question (e.g.: a response with a high value receives more points than a response with a lower value). Those elements that merit additional discussion are outlined in the following sub-sections.

Each criterion section below describes second-order (i.e. characteristic) weighing. Complete third, fourth, and fifth-order (i.e. attribute, metric, and question respectively) weighing is included in Appendix A. Second-order weighing is noted by functional descriptor, e.g. the "distribution characteristic."

Criterion 1: (35%)
Supply – Within the supply characteristic the flexibility and effectiveness of the processes are given slightly more weight (40%) than the acquisition process (30%) and stock control (30%). The flexibility and effectiveness of the stock control process is measured in terms of stock held in excess of requirements, a ratio of items to personnel managing these items, and finally the percentage of managed items specifically designated for joint support.

Storage – The storage characteristic is comprised largely of receiving, storing and issuing materiel. Within this criterion the weighting plan places slightly more importance on issuing (40%) than storing (35%) and finally receiving (25%). In evaluating storage operations the plan places a higher importance on inventory accuracy (60%) but also considers effective utilization of space and cost of storage operations (40%).

Distribution – The analysis of the distribution characteristic focuses on each activity's proximity to capable transportation nodes and efficiency and effectiveness of the shipping activity. Slightly more importance is attached to location/proximity (55%) than to the efficiency and effectiveness of the operation (45%).

Criterion 2: (20%)
Supply – The supply characteristic attributes and metrics focus on how modern, flexible and functional the workspaces are with more emphasis being placed on workspace modernness (40%). This additional emphasis, while slight, recognizes that up-to-date and efficient workspaces allow an activity to provide a more substantial contribution to future operations.

Storage – This section also focuses on how modern, flexible and functional storage workspaces are. With an eye towards the future, maximum possible retrievals are assigned more weight (60%) than current operating performance (20%) and efficiency (20%).

Distribution – Access to multiple shipment nodes (40%) is the most heavily weighted attribute. The activity's ability to rapidly increase capability is given more weight (35%) than current capacity of available transportation nodes (25%).

Criterion 3: (35%)
The sensitivity analysis conducted on all questions (discussed in detail at the conclusion of this section) revealed that identical questions, focused on the workforce, were being asked within all three functional areas. Due to differences in weighting these questions extended (weighted) values were very inconsistent. To ensure all workforce questions received the same weights they were removed from the supply, storage, and distribution portions and considered within a dedicated workforce characteristic weighted at 30%. No other Criterion presented similar circumstances.

The distribution characteristic is given a much larger weight (45%) than supply (20%) and storage (10%). This weighting is driven by the

judgment that contingency and mobilization hinges more heavily on distribution.

Supply – This characteristic is more heavily process driven while storage is more infrastructure and facilities dependent. Accordingly, the moderness of the IT infrastructure is the only non-workforce consideration.

Storage – Within the storage characteristic the condition and flexibility of the infrastructure receives more weighting (67%) than IT infrastructure (33%).

Distribution – The distribution characteristic has three equally weighted non-workforce attributes, IT infrastructure, strategic nodes, and distribution surge capability.

Criterion 4: (10%)
Equal weights were initially assigned to both the supply and storage characteristics (35%) with the balance assigned to distribution (30%). However, after analyzing the weighting and scoring plans in their entirety (discussed further at the conclusion of this section) the S&S JCSG concluded that this criterion's relatively low weight suggested that the functions should not be broken out in the scoring plan. Accordingly, all attributes, metrics and questions are rolled up directly under the criterion.

Scoring Plan

The S&S JCSG score plan uses 65 questions to determine the military value of each Supply and Storage activity. These questions cover a broad range of supply system topics and are assigned a range of weights: ranging from 0.35 to 5.25. The individual weights of the 65 questions total 100. Appendix B provides a table with the individual weights of all 65 questions.

All responses for each question will be normalized on a scale from 0.0 to 1.0. As a result, the activity with the most preferred response to a particular question will receive a normalized score of 1.0 for that question. An activity with the least preferred response to a particular question will receive a normalized score of 0.0. This normalized score for each question will be multiplied by the corresponding weight of the question as shown in the table of Appendix B. The product of this multiplication determines the military value contribution of a particular question for each Supply and Storage activity.[2]

[2] This methodology is expanded for all C-factor and T-factor questions.

This methodology enables the S&S JCSG to see the impact of not only each question (fifth-order analysis as discussed earlier) but also each function (second-order analysis) and each criterion (first-order analysis) on determining the military value of an activity. The sum of all military value contributions, maximum of 65 inputs, determines the military value of a Supply and Storage activity.

The S&S JCSG considered other methods for normalizing data from 0.0 to 1.0. Appendix B describes the normalization methods that will be used during the scoring of the military value questions. Appendix B also explains the rationale behind the differing methods of normalization. T-factor questions require two iterations of normalization. Each of these adjustment factors is explained in detail in the appendices.

Quality Assurance Review and Sensitivity Analysis:

The scoring plan underwent a rigorous quality assurance review that considered clarity, answerability, and relative scores of each question. A team of representatives from each Service and DLA considered the clarity and answerability of each question. In addition, individual Service BRAC offices were contacted in regards to questions that required additional answerability information.

In the course of this review, the S&S JCSG concluded that activities with more than one mode of shipping capability merited additional scoring considerations. To account for modal and nodal capability, transportation factors ("T-factors") were developed. The methodology concerning T-factors is outlined in Appendix D.

The final portion of the quality assurance effort involved a sensitivity analysis that reviewed the military value of each question.[3] The military values were aligned in magnitude order and examined to ensure questions' military values and relative standing were as intended when developed. As a result a number of the questions' weights were adjusted to ensure the questions' impacts were as intended.

In addition, it was discovered that all of the questions falling within Criterion 4 had the lowest military value. In addition, the questions within each characteristic section were very similar. As a result, the S&S JCSG opted to eliminate the characteristic factor and marginally increase the weighted value of each Criterion 4 question.

The sensitivity analysis conducted also revealed that identical questions, focused on the workforce, were being asked within all three functional areas. Due to differences in weighting these questions' military values

were very inconsistent. As discussed previously in this section, the questions were removed from their originally assigned characteristics and placed within a dedicated "workforce" characteristic.

Finally, the S&S JCSG understands that various dates for defining data input boundaries (e.g.: POM06, FY03, etc.) will be provided by the ISG prior to questions being forwarded to Services and Agencies.

SECTION 3: DATA QUESTIONS

The questions are included at Appendix E. The listing contains questions that are duplicates from Data Call 1 as well as questions that are redundant within this Data Call. Duplicate questions are annotated with a single asterisk (*). Redundant questions are annotated with a double asterisk (**). Questions that will have the C-factor applied to their score are indicated with a "(CF)". Questions that will have the T-Factors applied to their score are indicated with a "(TF)".

A considerable amount of discussion occurred relative to which activities should respond to the S&S JCSG questions, i.e.: "How should each question be "targeted"?". For all Services, and the Defense Logistics Agency, all activities determined to be "above the installation" in accordance with guidance provided in the OSD BRAC Library of Definitions should respond to the S&S JCSG's Military Value Analysis questions. It should be noted that all DLA activities are considered above the installation and all should respond to these questions.

For those activities defined as "at or below the installation," it is less clear whether the activity should respond. In general, those activities that are operational or deployable are considered "below the installation" and they should not respond to the questions. As a general rule these organizations deal exclusively with retail level stocks.

Activities "at the installation level", which are both retail and wholesale, or exclusively wholesale, in nature should respond to the questions. A recommended list of these activities, by Service/Agency is provided in Appendix F. However, the JCSG emphasizes that this list is merely a recommendation and that the final determination should rest with the respective Service BRAC offices. The results of the capacity analysis data call were not available for review in compiling this list.

SECTION 4: ISSUES IMPACTING ANALYSIS

As initially cited in the S&S JCSG capacity report, appropriate staffing of the S&S JCSG remains a concern. Until recently, the Services and DLA

did not staff the S&S JCSG work groups to the extent requested. Recent actions have been taken to satisfactorily address this issue. Despite the staffing concern, the S&S JCSG has met all timelines for deliverables and continues with its taskings. Nonetheless, discussions on field queries concerning Data Call 1 Questions, and the S&S JCSG's responses to those queries, did not consistently receive the desired degree of individual Service participation.

APPENDIX A: WEIGHTING PLAN

(35) Criterion 1.
The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.

(40) Characteristic 1. A modern and flexible inventory management process to support and enhance operational readiness, as defined by requirements determination, acquisition, and stock control. (SUPPLY)

(40) Attribute 1. An effective and efficient requirements determination process.

(70) Metric 1. Percent of demands received for stocked items.

(100) Question 1. Provide the Total Number of Demands Received along with the Total Number of Demands Received for Stocked Items for each of the fiscal years identified in the table below (FY01, FY02, and FY03).

	FY01	FY02	FY03
Total No. of Demands Received			
Total No. of Demands Received for Stocked Items			

AMPLIFICATION: Stocked items have authorized stockage levels. For Navy, stocked items are carried, and non-stocked items are not-carried. For all, demands are defined as line items, not quantity ordered. For example:

How to compute Number of Demands Received:
NSN 1234-01-567-8900
One customer order for 10 each
Second customer order for 1 each
Third customer order for 3 each

NSN 1111-01-222-3456
One customer order for 3 each
Second customer order for 4 each

If this were the entire universe of stock numbers managed by the Supply and Storage Activity, the Number of Demands Received equals 5.

Scoring: higher answer = higher points.

(30) Metric 2. Demand satisfaction.

(100) Question 2. Provide the total number of demands received for items that were fully filled on first submission (nothing backordered, no partial issues), along with the total number of all demands received during the same period for each

of the fiscal years identified in the table below (FY01, FY02, and FY03).

	FY01	FY02	FY03
Total No. of Demands Received that were Fully Filled			
Total No. Of Demands Received			

AMPLIFICATION: Demands are defined as line items, not quantity ordered. For example:

How to compute Number of Demands Received:
NSN 1234-01-567-8900
One customer order for 10 each
Second customer order for 1 each
Third customer order for 3 each

NSN 1111-01-222-3456
One customer order for 3 each
Second customer order for 4 each

The Number of Demands Received equals 5.

Scoring: higher answer = higher points.

(30) Attribute 2. An effective and efficient acquisition process.

(60) Metric 1. Percent of contract errors.

(100) Question 3. Within the Supply and Storage Activity, for each of the fiscal years shown in the table below (FY01, FY02, and FY03), provide the total number of contracts awarded during the fiscal, along with the number of all contract actions that were either (1) protested and the protest was adjudicated in favor of interested party that submitted the protest (before or after contract award) or (2) ratified after the Government benefited from an unauthorized commitment.

	FY01	FY02	FY03
Total No. of Contracts Awarded			
No. of Contracts with Upheld Protests			
No. of Ratified Contract Actions			

Scoring: lower answer = higher points.

(40) Metric 2. Contracts managed per person

(50) Question 4. For each of the fiscal years indicated below (FY01, FY02, and FY03), provide the total number of open contracts managed by the Supply and Storage Activity. Open

contracts are those that are not physically complete or not eligible for close-out procedures for any portion of each fiscal year. Include purchase orders and delivery orders in the total number of contracts.

	FY01	FY02	FY03
No. of Open Contracts Managed			

AMPLIFICATION: Depending on the length of a contract, you may count a contract in more than one fiscal year.

Scoring: scored as ratio with next question, higher ratio = higher points.

(50) Question 5. For each of the fiscal years identified below (FY01, FY02, FY03), provide the number of personnel engaged in contracting functions. The number of personnel should include Government civilians, military, support contractor personnel and should be expressed as full-time equivalents (FTEs) based on 2080 man-hours.

No. of Personnel Engaged in Contracting (FTEs)	FY01	FY02	FY03

AMPLIFICATION: Contracting functions include description (but not determination; hence not item management) of supplies and services required, selection and solicitation of sources, preparation and awarding of contracts, and all phases of contract administration.

(30) Attribute 3. An effective and efficient stock control process.

(60) Metric 1. Inventory turnover.

(60) Question 6. For each of the fiscal years shown in the table below (FY01, FY02, and FY03) provide the Supply and Storage Activity's inventory turnover rate. Inventory turnover rate is defined as the dollar value of annual sales (or issues) divided by the dollar value of the inventory level. Inventory level is further defined as the average of the beginning and ending inventory levels for each time period not including those portions of inventory levels with retention policies in support of war reserve requirements and those items mandated for retention by Service/Agency policies. Do not consider direct vendor deliveries on either side of the equation (sales or inventory levels). When calculating price for reparable (repairable) items, use standard price for both sales and inventory figures.

Inventory Turnover Rate	FY01	FY02	FY03

AMPLIFICATION: For Air Force units do not include RSP inventory in this calculation of turnover rate.

Scoring: higher answer = higher points.

(40) Question 7. What percentage of NSNs with stock on hand as of 30 Sep 03 had received zero customer demands within the last two fiscal years32 prior to 30 Sep 03?

Formula: $\frac{\text{No. of NSNs stocked with no demands in FY02 and FY03}}{\text{Total No. of NSNs stocked on 30 Sep 03}}$

% of Line Items Receiving Zero Demands as of 30 Sep 03	

Scoring: lower percentage = higher points.

(30) Metric 2. Ratio of NSNs managed per person.

(50) Question 8. Provide the number of NSNs managed by the Supply and Storage Activity at the end of the fiscal years shown below (30 Sep 01, 02, and 03). Include stocked and non-stocked items in the number of NSNs managed.

	30 Sep 01	30 Sep 02	30 Sep 03
No. of NSNs Managed			

AMPLIFICATION: For Navy, stocked and non-stocked may be defined as carried and not carried.

Scoring: scored as a ratio with next question, higher ratio = higher points.

(50) Question 9. For each of the fiscal years identified below (FY01, FY02, and FY03), provide the number of personnel engaged in stock control functions. The number of personnel should include Government civilians, military, support contractor personnel and should be expressed as full-time equivalents (FTEs) based on 2080 man-hours. Stock control is defined as the process of maintaining inventory data on the quantity, location, and condition of supplies and equipment due-in, on-hand, and due-out; and the determination of quantities of material and equipment available and/or required for issue.

	FY01	FY02	FY03
No. of Personnel Engaged in Stock Control (FTEs)			

Scoring: scored as a ratio with preceding question, higher ratio = higher points.

(10) Metric 3. Percent PICA items managed.

(100) Question 10. Of the total number of NSNs managed on 30 Sep 03, what percentage was the Supply and Storage Activity designated as the Primary Inventory Control Activity (PICA)?

% of NSNs Designated PICA items as of 30 Sep 03	

Scoring: higher answer = higher points.

(25) Characteristic 2. Support and sustain the worldwide projection of military power, as defined by the capability to receive, store and issue supplies and materiel. (STORAGE)

(25) Attribute 1. An effective and efficient receiving process.

(60) Metric 1. Throughput.

(100) Question 11. For each of the fiscal years shown below (FY01, FY02, and FY03), provide the total number of receipts processed by the Supply and Storage Activity. Receipt processing is defined as all actions taken by a receiving activity from the physical turnover of materiel by a carrier until the on-hand balance of the accountable stock record file or in-process receipt file is updated to reflect the received materiel as an asset in storage, or the materiel is issued directly from receiving to the customer.

	FY01	FY02	FY03
Total No. of Receipts Processed			

Scoring: higher answer = higher points.

(40) Metric 2. Receipt processing efficiency.

(50) Question 12. For each of the fiscal years shown in the table below (FY01, FY02, and FY03), provide the Supply and Storage Activity's average receipt processing time. Express time in hours. For this analysis, receipt processing time is the elapsed time from turnover of materiel from a carrier until the on-hand balance of the accountable stock record file, or the in-process receipt file is updated to reflect the received materiel as an asset in storage, or the materiel is issued directly from receiving to a customer. For bulk fuels, receipt processing time is the elapsed time from the termination of the product receipt until the on-hand balance of the accountable stock record file is updated.

Avg Receipt Processing Time	FY01	FY02	FY03

Formula = $\frac{\text{Total receipt processing time in hours over the fiscal year}}{\text{Total number of receipts processed over the fiscal year}}$

Scoring: lower answer = higher points.

(50) Question 13. For each of the fiscal years identified in the following table (FY01, FY02, and FY03), provide the average number of receipts processed per person for the Supply and Storage Activity. The average number of receipts processed per person is defined as the number of receipts processed over the time period given divided by the number of personnel working in the receiving section over that same time period. The number of personnel should include Government civilians, military and support contractors, and should be expressed as full-time equivalents (FTEs) based on 2080 man-hours.

Avg No. of Receipts Processed Per Person	FY01	FY02	FY03

Formula **=** $\frac{\text{Total number of receipts processed over the time period}}{\text{Total number of personnel (FTE) in receiving section over the same time period}}$

Scoring: higher answer = higher points.

(35) Attribute 2. Effective and efficient storage operations.

(60) Metric 1. Inventory accuracy.

(50) Question 14. For each of the fiscal years shown below (FY01, FY02, and FY03), provide the Supply and Storage Activity's average inventory accuracy rate. Inventory accuracy is defined as the total number of individual warehouse storage locations inventoried having the correct on-hand balance, expressed as a percentage. The calculation is as shown:

Rate = $\frac{\text{No. of individual warehouse storage locations inventoried with the correct on-hand balance over the time period}}{\text{Total No. of individual warehouse storage locations inventoried over the same time period}}$

Avg Inventory Accuracy Rate	FY01	FY02	FY03

Scoring: higher answer = higher points.

(50) Question 15. For each of the fiscal years shown below (FY01, FY02, and FY03), provide the Supply and Storage Activity's average warehouse location accuracy rate. Warehouse location accuracy rate shows the ratio of correct warehouse locations vs. the total number of warehouse locations surveyed. The calculation is as shown:

Rate = $\frac{\text{Total No. of locations surveyed - No. of incorrect warehouse locations over the time period}}{\text{Total No. of locations surveyed over the same time period}}$

Avg WarehouseLocation Accuracy Rate	FY01	FY02	FY03

Scoring: higher answer = higher points.

(40) Metric 2. Effective utilization of storage space.

(50) Question 16. As of 30 Sep 03, provide the total net cubic feet of permanent covered storage space operated by the Supply and Storage Activity. Permanent covered storage space includes permanent Government-owned facilities and excludes transitory, temporary and commercially leased facilities. Covered storage space includes general purpose warehouses, controlled humidity warehouses, refrigerated (freeze & chill) storage space, flammable/hazardous storage spaces, sheds, magazines and spaces for classified materials and materials requiring special controls. For bulk fuel Activities, provide the total gallons of wet tank storage space instead of net cubic feet of covered storage space.

Total Net Cubic Ft of Covered Storage Space as of 30 Sep 03	
Total Gals of Wet Tank Storage Space as of 30 Sep 03 (For Bulk Fuels)	

Scoring: scored as a ratio with the next question, higher ratio = higher points.

(50) Question 17. For fiscal year 2003, provide the actual operations and maintenance costs for the Supply and Storage Activity. Do not include costs for the actual purchase of inventory and materials managed, stored, and issued to customer organizations.

Actual Annual Cost of Operations ($K)	FY03

Scoring: scored as a ratio with preceding question, higher ratio = higher points.

(40) Attribute 3. An effective and efficient issue process.

(60) Metric 1. Issues Processed.

(100) Question 18. For each of the fiscal years identified below (FY01, FY02, and FY03), provide the total number of issues processed by the Supply and Storage Activity each day. The issue process begins with receipt of a material release order (MRO) and ends when material is offered to transportation for distribution to customers. The process includes picking or pulling material from storage or directly from transportation; inspection; cleaning; preserving; packaging; palletizing; preparation for shipment; preparation of any required documentation; and data entry. For supply and storage activities at the "installation" level, the issue process may end when material is placed in customer bins for pickup or handed directly to a customer when the storage facility is co-located with the customer, instead of when it is offered to transportation.

Total No. of Issues Processed	FY01	FY02	FY03

Scoring: higher answer = higher points

(40) Metric 2. Issue processing efficiency.

(50) Question 19. For each of the fiscal years identified in the table below (FY01, FY02, and FY03), provide the Supply and Storage Activity's average time required to complete an issue. The time required to complete an issue is defined as the elapsed time in hours from receipt of an MRO until items of supply are offered to transportation, or are offered for issue to customer organizations. For supply and storage activities at the "installation" level, the issue process may end when material is placed in customer bins for pickup or handed directly to a customer when the storage facility is co-located with the customer, instead of when it is offered to transportation.

Avg Time Required to Complete an Issue	FY01	FY02	FY03

Formula = $\frac{\text{Total Issue Processing Time in hours over the fiscal year}}{\text{Total Number of Issues processed over the fiscal year}}$

Scoring: lower answer = higher points.

(50) Question 20. For the Supply and Storage Activity, for the fiscal years identified in the following table (FY01, FY02, and FY03), provide the number of issues processed per person. The issue process begins with receipt of a material release order (MRO) and ends when material is offered to transportation for distribution to customers. The number of issues processed per person is defined as the number of issues processed over the time period given divided by the number of personnel performing issuing functions. In determining number of personnel performing issuing functions, include the total of all Government civilian, military and support contractor personnel assigned to perform issuing tasks. Express the number of personnel as full-time equivalents (FTEs) based on 2080 man-hours.

No. of Issues Processed per Person	FY01	FY02	FY03

Formula = $\frac{\text{Total Number of Issues processed over the time period}}{\text{Number of personnel (FTEs) performing issuing functions over the same time period}}$

AMPLIFICATION: To determine issuing section personnel, consider those personnel involved in the issue process, which begins with receipt of a material release order (MRO) and ends when material is offered to transportation for distribution to customers. The process includes picking or pulling material from storage or directly from

transportation; inspection; cleaning; preserving; packaging; palletizing; preparation for shipment; preparation of any required documentation; and data entry.

Scoring: higher answer = higher points.

(35) Characteristic 3. Distribute supplies and materiel to joint forces worldwide in the most efficient and effective manner, as defined in terms of shipping, distance, and capacity. (DISTRIBUTION)

(45) Attribute 1. An effective and efficient shipping operation.

(50) Metric 1. Ratio of the average tons shipped per day and the number of assigned personnel.

(100) Question 21. For the Supply and Storage Activity, for the fiscal years shown in the table below (FY01, FY02, and FY03), provide the tons of material shipped per person. The tons of material shipped per person is defined as the total tons of material shipped over the time period divided by the number of personnel performing shipping functions over the same time period. In determining number of personnel performing shipping functions, include the total of all Government civilian, military and support contractor personnel. Express the number of personnel as full-time equivalents (FTEs) based on 2080 man-hours. Shipping functions include planning, physically assembling, consolidating, documenting, and arranging for movement of material.

Tons Shipped per Person	FY01	FY02	FY03

$$\text{Formula} = \frac{\text{Total Tons shipped over the time period}}{\text{Number of personnel (FTEs) performing shipping functions over the same time period}}$$

AMPLIFICATION: For bulk fuels, compute tons using 7 pounds per gallon, regardless of type of product. 2000 pounds equates to one ton.

Scoring: higher ratio = higher points.

(50) Metric 2. Ratio of the average number of line items shipped per day and the number of assigned personnel.

(50) Question 22. For the fiscal years shown in the table below (FY01, FY02, and FY03), provide the total quantity of line items shipped by the Supply and Storage Activity. For bulk fuels, provide the information in gallons (not line items).

No. of line items Shipped	FY01	FY02	FY03
For bulk fuels, gallons shipped			

AMPLIFICATION:

How to compute quantity shipped:

NSN 1234-01-567-8900

One shipment for 10 each
Second shipment for 1 each
Third shipment for 3 each

NSN 1111-01-222-3456

One shipment for 3 each
Second shipment for 4 each

The quantity of items shipped equals 5. Include all shipments to include serviceable and unserviceable items (items ready for issue and not ready for issue)

Scoring: scored as a ratio with the next question, higher ratio = higher points.

(50) Question 23. For the Supply and Storage Activity, for each of the fiscal years identified below (FY01, FY02, and FY03), provide the number of personnel performing shipping functions. In determining number of personnel performing shipping functions, include the total of all Government civilian, military and support contractor personnel assigned to perform shipping tasks. Express the number of personnel as full-time equivalents (FTEs) based on 2080 man-hours. Shipping functions include planning, physically assembling, consolidating, documenting, and arranging for movement of material.

No. of Employees Engaged in Shipping Functions (FTEs)	FY01	FY02	FY03

Scoring: scored as a ratio with the preceding question, higher ratio = higher points.

(55) Attribute 2. Distribution Flexibility.

(33) Metric 1. Density of multiple distribution nodes.

(100) Question 24. List the name and number of all distribution nodes for each transportation mode within a 50-mile radius (as the crow flies) of the Supply and Storage Activity. List no more than the names of 5 nodes per mode. An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. 2000 pounds equates to one ton. Tons per day are based on a 24-hour period. For bulk fuels, compute tons using 7 pounds per gallon, regardless of product type. This question is not limited to distribution nodes on the Supply and Storage Activity's installation; it is requesting capacity for those nodes used by the

Supply and Storage Activity. The key to determining maximum throughput capacity is identifying the constraint that limits throughput for each distribution node (e.g. limited number of loading docks, maximum aircraft on ground, or pipeline size) or the transportation mode (e.g. no interstate highways near the installation, weight limit on existing roadways, or travel through congested areas).

Provide the number of distribution nodes			
Air	Water	Rail	Pipeline
List names of the distribution nodes (up to 5)			
Air Node Names	Water Node Names	Rail Node Names	Pipeline Node Names

Scoring: higher value = higher points.

(33) Metric 2. Distance in miles to distribution nodes

(100) Question 25. What is the distance in miles from the Supply and Storage Activity's most frequently used distribution node (from the main gate of your Installation): air, water, rail, and pipeline (pipeline for bulk fuel Activities only)? An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. If the distribution node is located on your installation, distance entered should be 0 miles.

Distribution Nodes	Distance in Miles
Air Node	
Water Node	
Rail Node	
Pipeline (Bulk Fuels Only) Node	

Scoring: lower weighted answer = higher points.

(33) Metric 3. Throughput capacity for distribution nodes

(100) Question 26. As of 31 May 04, what was the throughput capacity in tons per day for each of the Supply and Storage Activity's most frequently used distribution nodes. The

distribution nodes are air, water, rail, pipeline, and ground (pipeline for bulk fuel Activities only). An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. A ground node is simply an area designed to load and unload tractor trailer trucks. 2000 pounds equates to one ton. Tons per day are based on a 24-hour period. For bulk fuels, compute tons using 7 pounds per gallon, regardless of product type. The key to determining maximum throughput capacity is identifying the constraint that limits throughput for each distribution node (e.g. limited number of loading docks, maximum aircraft on ground, or pipeline size) or the transportation mode (e.g. no interstate highways near the installation, weight limit on existing roadways, or travel through congested areas).

Distribution Nodes	Throughput in Tons per Day
Air Node	
Water Node	
Rail Node	
Pipeline (Bulk Fuels Only) Node	
Ground Node	

Scoring: higher weighted answer = higher points.

(20) Criterion 2.
The availability and condition of land, facilities, and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed forces in homeland defense missions) at both existing and potential receiving locations.

(35) Characteristic 1. Operate from modern, efficient, and expandable infrastructure that enhances the inventory management process. (SUPPLY)

(40) Attribute 1. Modern workspace and IT capability.

(45) Metric 1. Internal and external ability to send and receive large volumes of electronic data.

(50) Question 27. As of 31 May 04, what is the current bandwidth capacity of the internal information technology (IT) infrastructure (backbone) within the Supply and Storage Activity? Express bandwidth in megabits per second (Mbps).

Bandwidth in Mbps	

Scoring: higher answer = higher points.

(50) Question 28. As of 31 May 04, what is the current bandwidth capacity of the external information technology (IT) infrastructure (data transmission capacity) at the Supply and Storage Activity? Express bandwidth in megabits per second (Mbps).

Bandwidth in Mbps	

Scoring: higher answer = higher points.

(55) Metric 2. Overall condition of an activity's facilities.

(100) Question 29. For each Government building controlled and operated by the Supply and Storage Activity as of 30 Sep 03, provide the building number, the total gross square feet and the condition code. For condition code, each service or agency should respond with their service or agency-unique codes as shown below:

Army: Green, amber or red.
Navy and Marine Corps: Adequate, substandard or inadequate.
Air Force: 1, 2 or 3.
DLA: Adequate, substandard or inadequate (or Host Unit's condition code if applicable)

Bldg No.	Gross Square Feet	Condition Code

Scoring: lower weighted answer = higher points.

(30) Attribute 2. Efficient utilization of workspace.

(100) Metric 1. Ratio of gross square feet of space available and number of assigned personnel.

(50) Question 30. As of 30 Sep 03, how many gross square feet of workspace did the Supply and Storage Activity occupy for inventory management functions? Inventory management functions include the management, cataloging, requirements determination, procurement, and determination of overhaul, stock distribution and disposal requirements. Include space occupied by Government civilians, military and support contractor personnel.

Gross Square Feet of Workspace	

Scored as a ratio with the next question, lower ratio = higher points.

(50) Question 31. For the Supply and Storage Activity, for FY03, provide the number of personnel performing inventory management functions. The number of personnel should be expressed as full-time equivalents (FTEs) based on 2080 man-hours, and should include Government civilians, military, and support contractor personnel. Inventory management is defined as the management, cataloging, requirements determination, procurement, and determination of overhaul, stock distribution and disposal requirements.

No. of Employees Engaged in Inventory Management Functions (FTEs)	FY03

Scoring: scored as a ratio with the preceding question lower ratio = higher points.

(30) Attribute 3. Expandability of workspace.

(100) Metric 1. Maximum number of personnel the office space can support given the DOD standard.

(100) Question 32. For the Supply and Storage Activity, as of 30 Sep 03, provide the maximum number of personnel your

inventory management workspace could support using a space standard of 162 gross square feet per person. Inventory management workspace includes those areas that house inventory management functions to include the management, cataloging, requirements determination, procurement, and determination of overhaul, stock distribution and disposal requirements.

Maximum No. of Personnel	

Scoring: higher answer = higher points.

(35) Characteristic 2. Operate from modern, efficient, and expandable infrastructure that enhances receipt, storage, and issue functions. (STORAGE)

(100) Attribute 1. Automated material retrieval systems.

(20) Metric 1. Number of retrievals via the automated material retrieval systems.

(100) Question 33. For each of the fiscal years shown in the table below (FY01, FY02, and FY03), provide the total number of individual retrievals performed by the Supply and Storage Activity's automated material retrieval system. An individual retrieval is a single removal of supplies from a storage location. An individual retrieval could involve removal of a single item, 1 box containing a dozen items, or 1 package containing 2 items.

No. of Individual Retrievals	FY01	FY02	FY03

Scoring: higher answer = higher points.

(20) Metric 2. Ratio of number of items retrieved and number of personnel required to operate the system.

(50) Question 34. For each of the fiscal years shown in the table below (FY01, FY02, and FY03), provide the total number of individual retrievals performed by the Supply and Storage Activity's automated material retrieval system. An individual retrieval is a single removal of supplies from a storage location. An individual retrieval could involve removal of a single item, 1 box containing a dozen items, or 1 package containing 2 items.

No. of Individual Retrievals	FY01	FY02	FY03

Scoring: Scored as a ratio with the next question, higher ratio = higher points.

(50) Question 35. For each of the fiscal years identified in the table below (FY01, FY02, and FY03), provide the number of employees operating the Supply and Storage Activity's automated material retrieval system. The number of personnel should be expressed as full-time equivalents (FTEs) based on

2080 man-hours, and should include Government civilians, military, and support contractor personnel.

No. of Employees (FTEs)	FY01	FY02	FY03

Scoring: Scored as a ratio with the preceding question, higher ratio = higher points.

(60) Metric 3. Maximum possible retrievals in one day.

(100) Question 36. As of 30 Sep 03, provide the maximum possible number of individual retrievals the Supply and Storage Activity's automated material retrieval system could perform in one day. An individual retrieval is a single removal of supplies from a storage location. An individual retrieval could involve removal of a single item, 1 box containing a dozen items, or 1 package containing 2 items. A day in this case is equal to a 24-hour shift.

Maximum Possible No. of Retrievals in One Day	

Scoring: higher answer = higher points.

(30) Characteristic 3. Operate from modern, efficient, and expandable infrastructure that enhances distribution operations. (DISTRIBUTION)

(40) Attribute 1. Access to multiple distribution nodes.

(100) Metric 1. Nodes available to the Supply and Storage Activity.

(100) Question 37. As of 31 May 04, indicate with a "yes" or "no" those distribution nodes that are available to the Supply and Storage Activity for distribution of supplies and materiel. Consider only those distribution nodes in operational condition and located on the installation where the Activity resides. An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. A ground node is simply an area designed to load and unload tractor trailer trucks.

Distribution Node	Available to Activity? (Yes or No)
Air Node	
Water Node	
Rail Node	
Pipeline (Bulk Fuels Only) Node	
Ground Node	

AMPLIFICATION: In the case of two or more adjacent DoD installations:, if you do not have to leave DoD property to gain access to an adjacent installation's distribution node(s), you may include the nodes of the adjacent installation in your answer.

Scoring: more modes = higher points.

(25) Attribute 2. Capacity of each available node.

(100) Metric 1. Maximum capacity in tons per day for each node.

(100) Question 38. As of 31 May 04, for each distribution node available to the Supply and Storage Activity provide the maximum shipping capacity in tons per day. A day is defined as a 24-hour period. Consider only those distribution nodes in operational condition and located on the installation where the Activity resides. For listed distribution nodes that do not meet the above criteria, respond with N/A. An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. A ground node is simply an area designed to load and unload tractor trailer trucks.

Available Distribution Node	Max Tons per Day
Air Node	
Water Node	
Rail Node	
Pipeline (Bulk Fuels Only) Node	
Ground Node	

AMPLIFICATION: In the case of two or more adjacent DoD installations: If you do not have to leave DoD property to gain access to the distribution node(s) on the adjacent installation, you may include the nodes of the adjacent installation in your answer. For bulk fuels, compute tons using 7 pounds per gallon, regardless of product type. 2000 pounds equates to one ton. The key to determining maximum shipping capacity is identifying the constraint that limits throughput for each distribution node (e.g. limited number of loading docks, maximum aircraft on ground, or pipeline size) or the transportation mode (e.g. no interstate highways near the installation, weight limit on existing roadways, or travel through congested areas).

Scoring: higher answer = higher points.

(35) Attribute 3. Capability to increase distribution volume.

(100) Metric 1. Ratio of utilized capacity and maximum capacity by distribution nodes.

(50) Question 39. For each of the distribution nodes available to the Supply and Storage Activity provide the average tons shipped per day for FY01, FY02 and FY03. A day is defined as a 24-hour period. Consider only those distribution nodes located

on the installation where the Activity resides. An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. A ground node is simply an area designed to load and unload tractor trailer trucks.

Available Distribution Nodes	Tons per Day - FY01	Tons per Day - FY02	Tons per Day - FY03
Air Node			
Water Node			
Rail Node			
Pipeline (Bulk Fuels Only) Node			
Ground Node			

AMPLIFICATION: In the case of two or more adjacent DOD installations: If you do not have to leave DOD property to gain access to the distribution node(s) on the adjacent installation, you may include the nodes of the adjacent installation in your answer. For bulk fuels, compute tons using 7 pounds per gallon, regardless of product type.

Scoring: Scored as a ratio with the next question, lower ratio = higher points.

(50) Question 40. As of 31 May 04, for each distribution node available to the Supply and Storage Activity provide the maximum shipping capacity in tons per day. A day is defined as a 24-hour period. Consider only those nodes in operational condition and located on the installation where the Activity resides. For listed distribution nodes that do not meet the above criteria, respond with N/A. An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. A ground node is simply an area designed to load and unload tractor trailer trucks.

Available Distribution Nodes	Max Tons per Day
Air Node	
Water Node	
Rail Node	
Pipeline (Bulk Fuels Only) Node	
Ground Node	

AMPLIFICATION: In the case of two or more adjacent DoD installations: If you do not have to leave DoD property to gain access to the distribution node(s) on the adjacent installation, you may include the nodes of the adjacent installation in your answer. For

bulk fuels, compute tons using 7 pounds per gallon, regardless of product type. 2000 pounds equates to one ton. The key to determining maximum shipping capacity is identifying the constraint that limits throughput for each distribution node (e.g. limited number of loading docks, maximum aircraft on ground, or pipeline size) or the transportation mode (e.g. no interstate highways near the installation, weight limit on existing roadways, or travel through congested areas).

Scoring: Scored as a ratio with the preceding question, lower ratio = higher points.

(35) Criterion 3.
The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.

(25) Characteristic 1. A qualified, flexible and sufficient workforce.

(60) Metric 1. Average Years of Service

(100) Question 41. As of 31 May 04, for the Supply and Storage Activity, what is the average number of years of government service per Government employee? Include government civilian and military personnel (do not include support contractor personnel).

Avg. Years Government Service per Government Employee	

Scoring: higher answer = higher score

(20) Metric 2. Education Level

(100) Question 42. As of 31 May 04, for the Supply and Storage Activity, provide the percentage of the total government workforce that has attained a four-year college degree. Include Government civilian and military personnel (do not include support contractor personnel).

% of Workforce with 4-year College Degree	

Scoring: higher weighted factor = higher score

(20) Metric 3. Labor Pool Availability

(100) Question 43. Provide the March 04 unemployment rate for the county in which the Supply and Storage Activity resides. Use a weighted average of county unemployment rates if more than 20% of your workforce resides in an adjacent county or counties. Use Department of Labor, not seasonally adjusted statistics.

Unemployment Rate	

AMPLIFICATION: Department of Labor has scheduled the release of the local area unemployment numbers for March 04 on 5 May 04. Use Department of Labor data from http://data.bls.gov

Scoring: higher percentage = higher score

(20) Characteristic 2. A modern, flexible inventory management capability with sufficient capacity to adapt to future requirements as defined by IT, and infrastructure. (SUPPLY)

(100) Attribute 1. A modern IT infrastructure.

(100) Metric 1. Capital expenditures and return on investment for IT.

(70) Question 44. What percentage of the Supply and Storage Activity's total dollars programmed in the FY04 Program Objective Memorandum (POM) for FY06-07 are dedicated to information technology (IT) capital expenditures for inventory management? Capital expenditures in this case are defined as expenditures for IT equipment, technology, software and infrastructure. Inventory management is defined as the management, cataloging, requirements determination, procurement, and determination of overhaul, stock distribution and disposal requirements. The calculation is shown below:

$$\frac{\text{Supply and Storage Activity FY06 -07 POM dollars programmed for IT capital expenditures for inventory management}}{\text{Supply and Storage Activity Total FY06-07 POM dollars programmed}}$$

% of Supply and Storage Activity POM Dollars for IT Capital Expenditures For Inventory Management	

Scoring: lower percentage = higher score.

(30) Question 45. For the Supply and Storage Activity, provide the anticipated return on investment for all the dollars programmed in the FY04 Program Objective Memorandum (POM) for FY06-07, which are dedicated to information technology (IT) capital expenditures for inventory management. Capital expenditures in this case are defined as expenditures for IT equipment, technology, software and infrastructure. Return on investment is defined as the total anticipated savings from IT capital expenditures divided by the total dollar value of IT capital expenditures. Inventory management is defined as the management, cataloging, requirements determination, procurement, and determination of overhaul, stock distribution and disposal requirements.

Supply and Storage Activity Return on Investment for IT Capital Expenditures for Inventory Management	

Scoring: higher percentage = higher score.

(10) Characteristic 3. A modern, flexible storage system capability with sufficient capacity to adapt to future requirements as defined by IT, and infrastructure. (STORAGE)

(33) Attribute 1. A modern IT infrastructure.

(100) Metric 1. Capital expenditures and return on investment for IT.

(70) Question 46. What percentage of the Supply and Storage Activity's total dollars programmed in the FY04 Program Objective Memorandum (POM) for FY06-07 are dedicated to information technology (IT) capital expenditures for storage functions? Capital expenditures in this case are defined as expenditures for IT equipment, technology, software and infrastructure. Storage functions include the receipt, holding, protection and issue of supplies, material and end items. The calculation is shown below:

$$\frac{\text{Supply and Storage Activity FY06 -07 POM dollars programmed for IT capital expenditures for storage functions}}{\text{Supply and Storage Activity Total FY06-07 POM dollars programmed}}$$

% of Supply and Storage Activity POM Dollars for IT Capital Expenditures for Storage Functions	

Scoring: lower percentage = higher score.

(30) Question 47. For the Supply and Storage Activity, provide the anticipated return on investment for all the dollars programmed in the FY04 Program Objective Memorandum (POM) for FY06-07, which are dedicated to information technology (IT) capital expenditures for storage functions. Capital expenditures in this case are defined as expenditures for IT equipment, technology, software and infrastructure. Return on investment is defined as the total anticipated savings from IT capital expenditures divided by the total dollar value of IT capital expenditures. Storage functions include the receipt, holding, protection and issue of supplies, material and end items.

Supply and Storage Activity Return on Investment for IT Capital Expenditures for Storage Functions	

Scoring: higher percentage = higher score.

(67) Attribute 2. A modern, flexible storage infrastructure.

(50) Metric 1. Projected MILCON requirements

(50) Question 48. What is the Supply and Storage Activity's total dollar value of programmed Military Construction (MILCON) projects for FY06-07 as identified in the FY04 POM?

Supply and Storage Activity's FY06-07 Programmed MILCON Dollars	

Scoring: lower answer = higher score.

(50) Question 49. What is the total square footage for all programmed Supply and Storage Activity Military Construction (MILCON) projects for FY06-07 as identified in the FY04 POM?

For bulk fuels, substitute total gallons for square footage as the unit of measure.

FY06-07 Programmed MILCON Total SqFt	
For Bulk Fuels; FY06-07 Programmed MILCON Total Gallons	

Scoring: lower answer = higher score.

(50) Metric 2. Available commercial warehousing capabilities.

(100) Question 50. As of 31 May 04, provide an estimate of the total square feet of available commercial warehouse space within a 25-mile radius of the Supply and Storage Activity. For bulk fuels, substitute total gallons for square footage as the unit of measure.

Total Sq Ft of Available Commercial Warehouse Space	
For Bulk Fuels; total gallons of commercial storage space	

Scoring: higher answer = higher score.

(45) Characteristic 4. A modern, flexible distribution system capability with sufficient capacity to adapt to future requirements as defined by IT, and infrastructure. (DISTRIBUTION)

(33) Attribute 1. A modern IT infrastructure.

(100) Metric 1. Capital expenditures and return on investment for IT.

(70) Question 51. What percentage of the Supply and Storage Activity's total dollars programmed in the FY04 Program Objective Memorandum (POM) for FY06-07 are dedicated to information technology (IT) capital expenditures for distribution functions? Capital expenditures in this case are defined as expenditures for IT equipment, technology, software and infrastructure. Distribution includes the functions of shipping, material handling, traffic management, and quality assurance. The calculation is shown below:

Supply and Storage Activity FY06 -07 POM dollars programmed for IT capital expenditures for Distribution functionsSupply and Storage Activity Total FY06-07 POM dollars programmed

% of Supply and Storage Activity POM Dollars for IT Capital Expenditures for Distribution Functions	

Scoring: lower percentage = higher score.

(30) Question 52. For the Supply and Storage Activity, provide the anticipated return on investment for all the dollars programmed in the FY04 Program Objective Memorandum (POM) for FY06-07, which are dedicated to information

technology (IT) capital expenditures for distribution functions. Capital expenditures in this case are defined as expenditures for IT equipment, technology, software and infrastructure. Return on investment is defined as the total anticipated savings from IT capital expenditures divided by the total dollar value of IT capital expenditures. Distribution includes the functions of shipping, material handling, traffic management, and quality assurance.

Supply and Storage Activity Return on Investment for IT Capital Expenditures for Distribution Functions	

Scoring: higher percentage = higher score.

(33) Attribute 2. Distribution Flexibility.

(25) Metric 1. Density of multiple distribution nodes.

(100) Question 53. List the name and number of all distribution nodes for each transportation mode within a 50-mile radius (as the crow flies) of the Supply and Storage Activity. List no more than the names of 5 nodes per mode. An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. 2000 pounds equates to one ton. Tons per day are based on a 24-hour period. For bulk fuels, compute tons using 7 pounds per gallon, regardless of product type. This question is not limited to distribution nodes on the Supply and Storage Activity's installation; it is requesting capacity for those nodes used by the Supply and Storage Activity. The key to determining maximum throughput capacity is identifying the constraint that limits throughput for each distribution node (e.g. limited number of loading docks, maximum aircraft on ground, or pipeline size) or the transportation mode (e.g. no interstate highways near the installation, weight limit on existing roadways, or travel through congested areas).

Provide the number of distribution nodes			
Air	Water	Rail	Pipeline
List names of the distribution nodes (up to 5)			
Air Node Names	Water Node Names	Rail Node Names	Pipeline Node Names

Scoring: higher value = higher points.

(75) Metric 2. Capacity/distance ratio for all available distribution

(25) Question 54. As of 31 May 04, what was the throughput capacity, in tons per day, for each of the distribution nodes most frequently used by the Supply and Storage Activity? The distribution nodes are air, rail, ground, water and pipeline (pipeline for bulk fuel Activities only). An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. A ground node is simply an area designed to load and unload tractor trailer trucks. 2000 pounds equates to one ton. Tons per day are based on a 24-hour period. For bulk fuels, compute tons using 7 pounds per gallon, regardless of product type. This question is not limited to distribution nodes on the Supply and Storage Activity's installation; it is requesting capacity for those nodes used by the Supply and Storage Activity. The key to determining maximum throughput capacity is identifying the constraint that limits throughput for each distribution node (e.g. limited number of loading docks, maximum aircraft on ground, or pipeline size) or the transportation mode (e.g. no interstate highways near the installation, weight limit on existing roadways, or travel through congested areas).

Distribution Nodes	Throughput Capacity in Tons per Day
Air Node	
Water Node	
Rail Node	
Pipeline (Bulk Fuels Only) Node	
Ground Node	

Scoring: scored as a ratio with question 56, higher ratio = higher points.

(25) Question 55. For the Supply and Storage Activity, provide the highest number of line items shipped in a single day for the two fiscal year period of FY02 and FY03. Consider all transportation modes to include air, water, rail, and ground (exclude pipeline).

Max Line Items Shipped via All Transportation Modes in One Day	

Scoring: scored as a ratio with question 56, higher ratio = higher points.

(50) Question 56. As of 31 May 04, what is the distance in miles from the Supply and Storage Activity (from the main gate of your Installation) to each of the most frequently used

distribution nodes: air, water, rail, and pipeline (pipeline for bulk fuel Activities only)? An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. If the distribution node is located on your installation, distance entered should be 0 miles.

Distribution Nodes	Distance in Miles
Air Node	
Water Node	
Rail Node	
Pipeline (Bulk Fuels Only) Node	

Scoring: scored as a ratio with the preceding 2 questions, higher ratio = higher points.

(33) Attribute 3. Surge Shipments.

(100) Metric 1. Maximum tons/line items per day.

(50) Question 57. As of 31 May 04, what is the maximum possible tonnage per day the Supply and Storage Activity can ship considering all the transportation modes (excluding pipeline) available? Transportation modes include air, rail, ground and water. The key to determining maximum throughput capacity is identifying the constraint that limits throughput for each distribution node (e.g. limited number of loading docks, maximum aircraft on ground, or pipeline size) or the transportation mode (e.g. no interstate highways near the installation, weight limit on existing roadways, or travel through congested areas (excluding pipeline)).

Max Tonnage per Day Possible to Ship via All Transportation Modes	

(50) Question 58. For the Supply and Storage Activity, provide the highest number of line items shipped in a single day for the two fiscal year period of FY02 and FY03. Consider all transportation modes to include air, rail, ground and water (exclude pipeline).

Max Line Items Shipped via All Transportation Modes in One Day	

(10) Criterion 4. The cost of operations and the manpower implications.

(60) Attribute 1. Cost of operations.

(60) Metric 1. Personnel costs.

(70) Question 59. For each of the fiscal years identified in the following table (FY01, FY02, and FY03), provide the cost per person of the Supply and Storage Activity's inventory management function. For costs, use the actual operations and maintenance costs for the Supply and Storage Activity over the time period. The number of inventory management personnel should be expressed as full-time equivalents (FTEs) based on 2080 man-hours, and should include Government civilians, military, and support contractor personnel. Inventory management is defined as the management, cataloging, requirements determination, procurement, and determination of overhaul, stock distribution and disposal requirements. Do not include costs for the actual purchase of inventory and materials managed, stored, and issued to customer organizations.

Cost per Person of Inventory Management Function	FY01	FY02	FY03

Formula = $\frac{\text{Actual Operations and Maintenance Costs for the Supply and Storage Activity over the time period}}{\text{Total number of inventory management personnel (FTEs) over the same time period}}$

Scoring: lower answer = higher points.

(30) Question 60. What is the Calendar Year 2004 locality pay percentage for Government civilian personnel at the Supply and Storage Activity's location?

CY04 Locality Pay Percentage for Government Civilian Personnel	

Scoring: lower answer = higher points.

(40) Metric 2. Ratio of facilities repair and maintenance costs to square feet of utilized space.

(50) Question 61. For each of the fiscal years shown in the table below (FY01, FY02, and FY03), provide the repair and maintenance costs (in actual dollars) for real property facilities used by the Supply and Storage Activity.

Facility Repair and Maintenance Costs	FY01	FY02	FY03

Scoring: scored as a ratio with the next question, lower ratio = higher points.

(50) Question 62. For each of the fiscal years shown in the table below (FY01, FY02, and FY03), what was the gross square footage of real property facilities used for Supply and Storage Activity functions?

Gross Sq Ft of Real Property Facilities	FY01	FY02	FY03

Scoring: scored as a ratio with the preceding question, lower ratio = higher points.

(40) Attribute 2. Manpower implications.

(60) Metric 1. Availability of skilled work force.

(100) Question 63. For each FY03, provide the length of time (in days) needed to fill the five longest Government civilian job openings within the Supply and Storage Activity. This measurement begins when the position is announced and ends when the hiring official has formally notified the personnel office of a selection of an individual.

	FY03
Days to fill personnel position (longest)	
Days to fill personnel position (2nd longest)	
Days to fill personnel position (3rd longest)	
Days to fill personnel position (4th longest)	
Days to fill personnel position (5th longest)	

Scoring: lower answer = higher points.

(40) Metric 2. Ratio of items managed and assigned personnel.

(50) Question 64. Provide the number of NSNs managed by the Supply and Storage Activity at the end of the fiscal years shown below (FY01, FY02, and FY03). Include stocked and non-stocked items in the number of NSNs managed.

	30 Sep 01	30 Sep 02	30 Sep 03
No. of NSNs Managed			

AMPLIFICATION: Stocked items have authorized stockage levels. For Navy, stocked items are carried, and non-stocked items are not-carried.

Scoring: scored as a ratio with the next question, higher ratio = higher points.

(50) Question 65. Provide the number of personnel (actual Government civilian, military, and contractor support personnel) assigned to the Supply and Storage Activity at the end of the fiscal years shown below (30 Sep 01, 02, and 03). This is a count of people, not a conversion to full-time equivalents.

No. of People Assigned to Supply and Storage Activity	30 Sep 01	30 Sep 02	30 Sep 03

Scoring: scored as a ratio with the preceding question, higher ratio = higher points.

APPENDIX B: SCORING PLAN

Table 1: Military Value Weight of each Question

Criteria & Questions	Supply Weight	Storage Weight	Distribution Weight	Common Weight	Total Weight
Criterion 1	**14.00%**	**8.75%**	**12.25%**	**0.00%**	**35.00%**
Q1	3.92%				
Q2	1.68%				
Q3	2.52%				
Q4	0.84%				
Q5	0.84%				
Q6	1.51%				
Q7	1.01%				
Q8	0.63%				
Q9	0.63%				
Q10	0.42%				
Q11		1.31%			
Q12		0.44%			
Q13		0.44%			
Q14		0.92%			
Q15		0.92%			
Q16		0.61%			
Q17		0.61%			
Q18		2.10%			
Q19		0.70%			
Q20		0.70%			
Q21			2.76%		
Q22			1.38%		
Q23			1.38%		
Q24			2.25%		
Q25			2.25%		
Q26			2.25%		
Criterion 2	**7.00%**	**7.00%**	**6.00%**	**0.00%**	**20.00%**
Q27	0.63%				
Q28	0.63%				
Q29	1.54%				
Q30	1.05%				
Q31	1.05%				
Q32	2.10%				
Q33		1.40%			
Q34		0.70%			
Q35		0.70%			
Q36		4.20%			
Q37			2.40%		
Q38			1.50%		
Q39			1.05%		
Q40			1.05%		

Table 1: Military Value Weight of each Question (cont.)

Criteria & Questions	Supply Weight	Storage Weight	Distribution Weight	Common Weight	Total Weight
Criterion 3	**7.00%**	**3.50%**	**15.75%**	**8.75%**	**35.00%**
Q41				5.25%	
Q42				1.75%	
Q43				1.75%	
Q44	4.90%				
Q45	2.10%				
Q46		0.82%			
Q47		0.35%			
Q48		0.58%			
Q49		0.58%			
Q50		1.17%			
Q51			3.68%		
Q52			1.58%		
Q53			1.31%		
Q54			0.98%		
Q55			0.98%		
Q56			1.97%		
Q57			2.63%		
Q58			2.63%		
Criterion 4	**0.00%**	**0.00%**	**0.00%**	**10.00%**	**10.00%**
Q59				2.52%	
Q60				1.08%	
Q61				1.20%	
Q62				1.20%	
Q63				2.40%	
Q64				0.80%	
Q65				0.80%	
Total	**28.00%**	**19.25%**	**34.00%**	**18.75%**	**100.00%**

S&S JCSG Normalization Method

The primary normalization method (hereafter referred to as "primary method") is applied to all field data for a particular question and the T3-factor (hereafter referred to as a "data set"). The primary method requires the following steps:

1) Determine the mean average of the data set.
2) Determine the "population standard deviation" (hereafter referred to as the "standard deviation") of the data set.
3) Give all values greater than 2 standard deviations from the mean a 1.0.

4) Give all values less than 2 standard deviations from the mean a 0.0.
5) Use the highest value within two standard deviations and the lowest value within two standard deviations of the mean to create a range of values.
6) From the range created in Step 5, subtract the low value from the high value.
7) Use the value calculated in Step 6 as the denominator for all normalization calculations for the data set.
8) Calculate the numerator for all normalization calculations by subtracting the low value in the range by each value in the data set (except those outside 2 standard deviations from the mean).
9) Divide the numerator from Step 8 by the denominator from Step 7 for all data.

$$\text{Normalized Scoring From the Range} = \frac{\text{Observed Value} - \text{Low Value}}{\text{High Value} - \text{Low Value}}$$

The table below provides an example of a data set with 21 activities. The example below compares the normalization results of the primary method and two alternative normalization methods also considered by the S&S JCSG. Using the field data set in the table

Activity	**Field Response**	**Normalization Methods**			
		Primary	Secondary	Alternative 1	Alternative 2
A	100	0.50	Fuzzy Logic Distributions are Dependent upon an Assigned Function (see Appendix D)	0.01	0.15
B	110	0.55		0.01	0.20
C	120	0.60		0.01	0.25
D	131	0.66		0.01	0.35
E	141	0.71		0.01	0.45
F	150	0.75		0.02	0.55
G	161	0.81		0.02	0.70
H	171	0.86		0.02	0.80
I	180	0.90		0.02	0.85
J	190	0.95		0.02	0.90
K	200	1.00		0.02	0.95
L	0	0.00		0.00	0.00
M	10,000	1.00		1.00	1.00
N	10	0.05		0.00	0.05
O	151	0.76		0.02	0.60
P	139	0.70		0.01	0.40
Q	159	0.80		0.02	0.65
R	169	0.85		0.02	0.75
T	129	0.65		0.01	0.30
U	149	0.75		0.01	0.50
V	12	0.06		0.00	0.10

Applying the nine steps of the primary method to Activity F in the table's example provides:

1) The mean average of the data set is 599.
2) The standard deviation of the data set is 2103.
3) Give all values greater than 4805 a normalized score of 1.0. (4805=599+2103+2103)
4) Give all values less than 0 a normalized score of 0.0.
5) Use 200 and 0 to create a range of values.
6) Subtract 0 from 200.
7) Use 200 as the denominator.
8) Subtract 0 from 150.
9) Divide 150 by 200.

Note that the example data set produces two normalized scores of 1.0. Activity M received a normalized score of 1.0 from Step 3 (outlier value). Activity K also received a normalized score of 1.0 from Step 9 (i.e. 200/200=1.0).

The secondary normalization method is applied to the field data for questions requiring the Proximity T-factor (T2). This method uses fuzzy logic to normalize data. Appendix D provides a detailed description of the fuzzy logic normalization method.

Alternative Methods of Normalization Considered by the S&S JCSG

Alternative Method 1 is a simplified version of the primary method and simply considers all values in a data set for normalization. To calculate Alternative Method 1, simply follow Step 5 through Step 9 of the primary method.

- Pros
  - Simple to compute
  - Most commonly used
- Cons
  - Allows outliers to skew data
  - Minimizes the "scatter" of values

Alternative Method 2 ranks all values in a data set. Assigns a normalized score based only on the rank of the value in the data set.

- Pros
  - Provides "perfect scatter" of observed values in the data set
  - Negates the skewing effect of outliers
- Cons

- Loses the "richness" of the data set; stripped of numeric values
- Rarely used

APPENDIX C: SCORING COMMODITY COMPLEXITY FOR SUPPLY ACTIVITIES (C-factor)

PART 1: Complexity Factor (C-factor) Methodology Description

The S&S JCSG developed a "complexity factor" (C-factor) to adjust for the complexities of managing different commodity types and product groups. The C-factor will be applied to all inventory management questions.

The C-factor considers two dimensions: 1) complexity differences between commodity types and 2) complexity differences between product groups. Based on the process outlined below each activity is assigned a complexity factor. The C-factor is multiplied by the 0.0 to 1.0 normalized score of each inventory management question. The C-factor is determined by:

1) The field completes a table (a header question will present the table) bounded by commodity type rows on the left and product group columns on the top. (The weights of the commodity types and product groups will not be displayed.)

2) The field populates each cell of the table with a number representing the percentage of the items managed (i.e. Aviation Repair parts, 5%). If the cell does not apply, the activity will be asked to annotate the cell with a "zero." All cells should add up to 100% to account for all line items managed by the activity.

Note: The Service and Defense Agency BRAC offices should reject any cumulative table submissions totaling over 100%.

3) The S&S JCSG, using the Complexity Factor Calculation Worksheet, calculates the commodity type contribution to the C-factor by summing the three product group values.
    a. Product group values are determined by multiplying the weights of the commodity type and product group by the percentage of line items managed.

4) The S&S JCSG sums the commodity type contributions to determine the Activity's C-factor

Note: See Part 3 of this Appendix for an example calculation.

PART 2: Complexity Factor Table

Header Question

Based on the total number of line items managed by the Supply and Storage Activity as of 30 Sep 2003, complete the following table by entering the percentages of the total line items for each product group by commodity type. Percentages may be entered for multiple commodity types; however, the total for all the percentages entered must equal 100%. Product groups not managed by your activity should be annotated with a "zero."

Commodity Types	Product Groups			
	End Items % of Total Line Items Managed	**Reparables** % of Total Line Items Managed	**Consumables** % of Total Line Items Managed	**Total**
Armaments				
Aviation				
Chemical & Biological				
Combat Vehicles				
Communications - Electronics				
Construction Equipment				
Conventional Ordnance				
Ground Vehicles				
Fuels/POL				
Medical				
Space & Missiles				
Nuclear Subsafe				
Ships, Vessels & Watercraft				
Subsistence				
Troop Support				
Other				
Other				
Totals				**100%**

PART 3: Complexity Factor Example

A C-factor Calculation Worksheet is provided to show how the C-factor is calculated. An example is provided below and shows the weights of both the commodity types and the product groups. The calculations in the table are illustrated on the next page. **All data provided is for illustrative purposes only.**

Complexity Factor Calculation Worksheet

Complexity Ranking	Commodity Types	Product Groups			Commodity Type Contribution
		End Items % of Total Line Items Managed Weight - 1.0	Reparables % of Total Line Items Managed Weight - .75	Consumables % of Total Line Items Managed Weight - .25	
1	Nuclear Subsafe Weight - 1.0				
2	Aviation (SOF) Weight - .95				
3	Space & Missiles Weight - .90	15%	20%	5%	.281
4	Communications-Electronics Weight - .85	10%	25%	25%	.297
5	Ships, Vessels & Watercraft Weight - .80				
6	Combat Vehicles Weight - .75				
6	Armaments Weight - .75				
8	Chemical & Biological Weight - .70				
8	Conventional Ordnance Weight - .70				
10	Ground Vehicles Weight - .55				
10	Construction Equipment Weight - .55				
12	Troop Support Equipment Weight - .45				
13	Medical Weight - .40				
14	Fuels/POL Weight - .30				
14	Subsistence Weight - .30				
14	Other Weight - .30				
Activity's Complexity Factor					.578

Explanation:

The weights assigned to commodity types and product groups were determined using the military judgment of most of the S&S JCSG members.

Example Calculation:

Factor for Missiles
= (.90)(.15)(1.0) + (.90)(.20)(.75) + (.90)(.05)(.25) = .281

Factor for Communications-Electronics
= (.85)(.1)(1.0) + (.85)(.25)(.75) = (.85)(.25)(.25) = .297

Activity's Complexity Factor
= .281 + .297 = .578

APPENDIX D: SCORING MODAL / NODAL CAPABILITY FOR DISTRIBUTION ACTIVITIES (T-factor)

When considering the distribution capabilities of Supply and Storage activities, the S&S JCSG assigns different military value weights to the modes of transportation available to an activity. For example, the S&S JCSG assigns greater military value to an activity's ability to ship by air than to its ability to ship by truck. The S&S JCSG also assigns greater military value to an activity's ability to ship via multiple transportation modes (air, sea, rail, pipeline, and/or ground). Finally, military value assignments also differ by the characteristics of an activity's distribution nodes (airports, sea ports, rail stations, etc.). Both the number of distribution nodes accessible to an activity and the proximity of the closest frequently used node are of importance when determining an activity's military value.

To determine the various military value assignments discussed above, activities receive transportation factors (T-factors). Similar to C-factors, T-factors represent a composite value of all the transportation modes used by an activity.

Scoring T-factor questions requires two iterations of normalization. The first normalization is on the raw data provided by the Data Call. Normalized raw data are multiplied by modal weights. The sum of these modal products (output from the multiplication) provides an activity's T-factor for that question. The second normalization is on the T-factors themselves. Consequently, the activity with the highest T-factor has its T-factor normalized to 1.0 before being multiplied by the military value weight of the question as determined by the scoring table (Appendix B).

Modal weights are constant throughout T-factor calculations. The difference in modal weights represents the differing degree of military value assigned to different transportation modes. Military judgment and experience within the DOD transportation community aided in the determination of the following five modal weights:

Air	=	0.30
Sea	=	0.25
Rail	=	0.20
Pipeline	=	0.15
Truck	=	0.10
TOTAL	=	1.00

Estimating the military value of an activity's distribution connectivity

Using a set of weights to capture the relative military importance of the five modes of transportation, w_a, w_r, w_t, w_s, and w_p, the military value of Activity i's distribution connectivity, $MVdc_i$, is computed simply as the weighted sum,

$$MVdc_i = w_a m_{ai} + w_r m_{ri} + w_t m_{ti} + w_s m_{si} + w_p m_{pi}$$

Such weights are usually just experience-based subjective estimates. The logic behind the particular values of the weights used in computing the Supply and Storage military values is discussed below.

Weighting the five modes of transportation

Installations, which have all five modes of transportation on them are rare and therefore have the most military value. These unique installations would be given 100 percent credit for having all five modes of transportation within their boundaries. Air (.30) + Sea (.25) + Rail (.20) + Pipeline (.15) + Truck (.10) = 1.0 or 100 percent of the weight. All installations have access to truck transportation and therefore truck has the least weighted value. Not all installations have access to pipeline, weighing pipeline more than truck. Fewer installations have rail access, increasing its military value and weight. Sea and Air are the most valuable modes of transportation. Although 95 percent of DOD cargo is shipped by sea overseas, air transportation is the most critical to the DOD's ability to deploy and sustain its forces and transports more just-in-time components.

Military Traffic Management Command Transportation Engineering Agency Pamphlet 700-2 stipulates an average of 400 miles per day for military convoys and 528 miles per day on average for unit trains, also illustrating that rail is more valuable than truck as more miles can be traversed in one day by rail than by truck.

In addition, Air Mobility Command load planners will save space on military aircraft for cargo that can be delivered in one-half of a day, i.e. from installations 200 miles or less away. Installations that are one-day away, or 400 miles, have less value as cargo will not be committed to a particular aircraft, but may be considered for intermediate aircraft load planning. And finally cargo received from installations, which are further than one-day, or more than 400 miles away, is placed in storage and load planned when aircraft become available.

Description and application of the three T-factors

Three types of T-factors are used in scoring the S&S JCSG military value questions.

Access to Multiple Nodes (T1)

The first type of T-factor (T1) is used to determine the military value of an activity's access to multiple distribution nodes (e.g. multiple airports) for each of the five transportation modes. The inherent value of this measurement is to portend distribution flexibility. (Applied to question 24 and question 53)

The S&S JCSG determined that the scoring of this T-factor should follow a function that represents the "law of diminishing returns." It was decided that the value of incrementally more nodes within a mode is different and follows the following relative value:

0 nodes	=	0.00 score
1 node	=	0.36 score
2 nodes	=	0.64 score
3 nodes	=	0.84 score
4 nodes	=	0.96 score
>=5 nodes	=	1.00 score

Example for Illustrational Purposes Only

Activity X can access: 4 Airports, 3 Seaports, 1 Rail Terminal, and no Pipeline Terminals.

Mode	Mode Weight	Field Response	Normalized Score	Sub-total
Air	0.30	4	0.96	0.288
Sea	0.25	3	0.84	0.210
Rail	0.20	1	0.36	0.072
Pipeline	0.15	0	0.00	0.000
T1-factor for Activity X				0.570

Activity Y can access: 3 Airports, no Seaports, 2 Rail Terminals, and 1 Pipeline Terminal.

Mode	Mode Weight	Field Response	Normalized Score	Sub-total
Air	0.30	3	0.84	0.252
Sea	0.25	0	0.00	0.000
Rail	0.20	2	0.64	0.128
Pipeline	0.15	1	0.36	0.05
T1-factor for Activity Y				0.434

Activity Z can access: no Airports, 2 Seaports, no Rail Terminals, and 1 Pipeline Terminal.

Mode	Mode Weight	Field Response	Normalized Score	Sub-total
Air	0.30	0	0.00	0.000
Sea	0.25	2	0.64	0.160
Rail	0.20	0	0.00	0.000
Pipeline	0.15	1	0.36	0.054
T1-factor for Activity Z				0.214

Proximity of Most Frequently Used Node (T2)

The second type of T-factor is used to determine the military value of the proximity of the activity's most frequently used distribution nodes (all five modal nodes). The importance of this measurement is to value the closeness of each modal node.

This Proximity T-factor (T2) is well suited for a unique normalization method known as fuzzy logic. A detailed explanation of fuzzy logic is provided after the T3 example.

Example for Illustrational Purposes Only

The proximity of Activity X's most frequently used distribution nodes to the activity's front gate: Airport - 10 miles; Seaport - 3 miles; Rail Terminal - 4 miles; and Pipeline Terminal - none.

Mode	Mode Weight	Field Response (miles)	Normalized Score	Sub-total
Air	0.30	10	Scored using Fuzzy Logic Function	
Sea	0.25	3		
Rail	0.20	4		
Pipeline	0.15	None		
T2-factor for Activity X				

The proximity of Activity Y's most frequently used distribution nodes to the activity's front gate: Airport - 20 miles; Seaport – on base; Rail Terminal - 2 miles; and Pipeline Terminal - 2 miles.

Mode	Mode Weight	Field Response (miles)	Normalized Score	Sub-total
Air	0.30	20	Scored using Fuzzy Logic Function	
Sea	0.25	0		
Rail	0.20	2		
Pipeline	0.15	2		
T2-factor for Activity Y				

The proximity of Activity Z's most frequently used distribution nodes to the activity's front gate: Airport – on base; Seaport - 6 miles; Rail Terminal – on base; and Pipeline Terminal - 4 miles.

Mode	Mode Weight	Field Response (miles)	Normalized Score	Sub-total
Air	0.30	0	Scored using Fuzzy Logic Function	
Sea	0.25	6		
Rail	0.20	0		
Pipeline	0.15	4		
T2-factor for Activity Z				

Tonnage Capacity of Most Frequently Used Node (T3)

The third type of T-factor (T3) is used to determine the military value of the tonnage capacity of the activity's most frequently used distribution nodes (all five modal nodes). The importance of this measurement is to value the throughput capacity of each modal node.

Example for Illustrational Purposes Only

The tonnage capacity of Activity X's most frequently used distribution nodes: Airport - 100 tons; Seaport - 3 million tons; Rail Terminal – 400,000 tons; Pipeline Terminal – not available; and via truck from the Installation – 1.4 million tons.

Mode	Mode Weight	Field Response (tons)	Normalized Score	Sub-total
Air	0.30	100	0.5	0.150
Sea	0.25	3,000,000	0.5	0.125
Rail	0.20	400,000	1.0	0.200
Pipeline	0.15	0	0.0	0.000
Ground	0.10	1,400,000	1.0	0.100
T3-factor for Activity X				0.475

The tonnage capacity of Activity Y's most frequently used distribution nodes: Airport - 200 tons; Seaport – not available; Rail Terminal – 200,000 tons; Pipeline Terminal – 40 tons; and via truck from the Installation – 1 million tons.

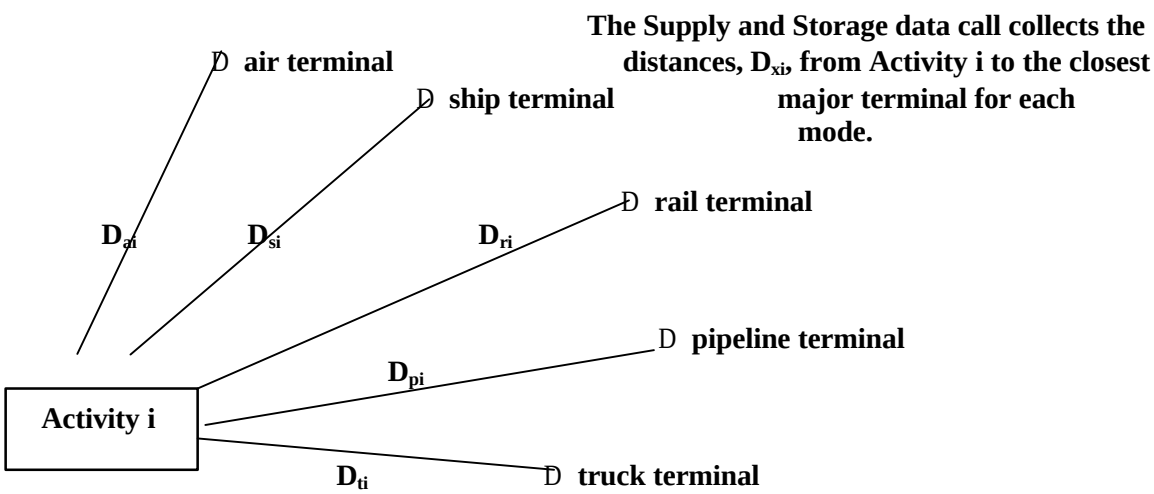
Mode	Mode Weight	Field Response (tons)	Normalized Score	Sub-total
Air	0.30	200	1.0	0.30
Sea	0.25	0	0.0	0.00
Rail	0.20	200,000	0.5	0.10
Pipeline	0.15	40	1.0	0.15
Ground	0.10	1,000,000	0.0	0.00
T3-factor for Activity Y				0.55

The tonnage capacity of Activity Z's most frequently used distribution nodes: Airport – not available; Seaport - 6 million tons; Rail Terminal – not available; Pipeline Terminal – 20 tons; and via truck from the Installation – 1.2 million tons.

Mode	Mode Weight	Field Response (tons)	Normalized Score	Sub-total
Air	0.30	0	0.0	0.000
Sea	0.25	6,000,000	1.0	0.250
Rail	0.20	0	0.0	0.000
Pipeline	0.15	20	0.5	0.075
Ground	0.10	1,200,000	0.5	0.050
T3-factor for Activity Z				0.375

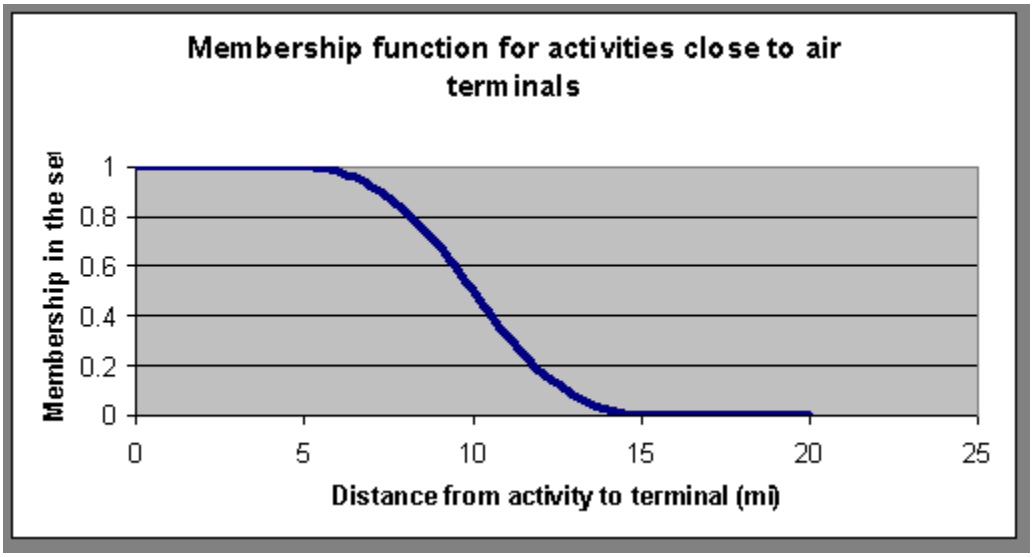
Fuzzy Logic: Discussion of the Normalization Method for the Field Data of the Proximity T-factor (T2)

How can we properly credit the military value of activities having varying degrees of access to a number of different modes of transportation? The schematic below shows Activity i is D_{ai}, Ds_i, D_{ri}, D_{pi}, and D_{ti} miles from its nearest major air, ship, rail, ship, pipeline, and truck terminals.



Distribution connectivity, a key component of the Military Value of the distribution function

Using the formal mathematical body of work known as Fuzzy Logic, one may assume that a the "fuzzy set" of activities that are *close* to a commercial air terminal expectedly may be represented or depicted as a on a smooth downward-sloping S-shaped membership function.
The value of an activity's *membership* in a fuzzy set, m_a, is a number



between 0 and 1 read from the vertical axis in a figure like the one above. A membership value in this particular fuzzy set reflects the degree to which an activity belongs in the set of all activities that are *close* to an air terminal.

A downward-sloping membership function describes groups of objects with membership values that decrease very slowly at both extremes but decrease more rapidly for intermediate elements. One versatile mathematical expression commonly used to capture this kind of membership function is

$$m_{(Dai;\ A,\ B,\ C)} = \begin{cases} 1 & \text{for } D_{ai} < A \\ 1 - 0.5[(D_{ai}-A)/(B-A)]^2 & \text{for } A \le D_{ai} < B \\ 0.5[(C-D_{ai})/(C-B)]^2 & \text{for } B \le D_{ai} < C \\ 0 & \text{for } D_{ai} \ge C \end{cases}$$

where A, B, and C are values that give the function its particular shape.

An example of set membership computations

Consider the fuzzy set of activities that are *close* to a commercial air terminal. The "fuzziness" arises in quantifying the meaning of the word *close*. Assume that

- Activities closer than 5 miles to an air cargo terminal are considered unquestionably close to it, membership $m_{(Dai;\ A,\ B,\ C)} = 1$ for $D_{ai} \leq 5$ miles.
- Activities farther away than say 15 miles from the nearest air cargo terminal are decidedly *not close*. membership $m_{(Dai;\ A,\ B,\ C)} = 0$ for $D_{ai} > 15$ miles.
- In terms of convenient routine access, activities in the vicinity of 10 miles from an air cargo terminal are considered moderately close, membership $m_{(Dai;\ A,\ B,\ C)} = 0.5$ for $D_{ai} = 10$ miles.

These judgments provide the needed estimates of the minimum, median, and maximum parameters: A= 5 miles, B = 10 miles, and C = 15 miles.

From Activity i, the distance to the nearest air cargo terminal is $D_{ai} = 8$ miles. Since $A \leq D_{ai} < B$ (i.e., $5 \leq 8 < 10$), Activity i's membership in the set of activities that are *close* to a commercial air terminal is:

$$m_{(8;\ 5,\ 10,\ 15)} = 1 - 0.5[(8-5)/(10-5)]^2 = 0.820$$

To answer the original distribution terminal question, we must consider all five modes of transportation. For this, we use five fuzzy sets, one for each mode of transportation:

- Activities *close to* air terminals
- Activities *close to* ship terminals (includes barge access on major waterways)
- Activities *close to* rail terminals (or rail sidings)
- Activities *close to* pipeline terminals
- Activities *close to* truck terminals (interstate highway system access points)

Activity i 's set memberships in each of these, denoted m_{ai}, m_{ri}, m_{ti}, m_{si}, and m_{pi}, reflect the degree to which it belongs in the five sets of activities, those close to an air terminal, those close to a rail terminal, those close to a truck terminal, those close to a ship terminal, and those close to a pipeline terminal, respectively.

APPENDIX E: QUESTIONS

Notes:

(1) This listing contains questions that are duplicates from Data Call 1 as well as questions that are redundant within this Data Call. Duplicate questions are annotated with a single asterisk (*). Redundant questions are annotated with a double asterisk (**).

(2) Questions that will have the Complexity Factor applied to their score are indicated with a "(CF)".

(3) Questions that will have the Multi-modal Distribution Capability Factor applied to their score are indicated with a "(TF)".

1. Provide the Total Number of Demands Received along with the Total Number of Demands Received for Stocked Items for each of the fiscal years identified in the table below (FY01, FY02, and FY03). **(CF)**

	FY01	**FY02**	**FY03**
Total No. of Demands Received			
Total No. of Demands Received for Stocked Items			

AMPLIFICATION: Stocked items have authorized stockage levels. For Navy, stocked items are carried, and non-stocked items are not-carried. For all, demands are defined as line items, not quantity ordered. For example:

How to compute Number of Demands Received:

NSN 1234-01-567-8900
One customer order for 10 each
Second customer order for 1 each
Third customer order for 3 each

NSN 1111-01-222-3456
One customer order for 3 each
Second customer order for 4 each

If this were the entire universe of stock numbers managed by the Supply and Storage Activity, the Number of Demands Received equals 5.

2. Provide the total number of demands received for items that were fully filled on first submission (nothing backordered, no partial issues), along with the total number of all demands received during the same period for each of the fiscal years identified in the table below (FY01, FY02, and FY03). **(CF)**

	FY01	**FY02**	**FY03**
Total No. of Demands Received that were Fully Filled			
Total No. Of Demands Received			

AMPLIFICATION: Demands are defined as line items, not quantity ordered. For example:

How to compute Number of Demands Received:
NSN 1234-01-567-8900
One customer order for 10 each
Second customer order for 1 each
Third customer order for 3 each

NSN 1111-01-222-3456
One customer order for 3 each
Second customer order for 4 each

If this were the entire universe of stock numbers managed by the Supply and Storage Activity, the Number of Demands Received equals 5.

3. Within the Supply and Storage Activity, for each of the fiscal years shown in the table below (FY01, FY02, and FY03), provide the total number of contracts awarded during the fiscal, along with the number of all contract actions that were either (1) protested and the protest was adjudicated in favor of interested party that submitted the protest (before or after contract award) or (2) ratified after the Government benefited from an unauthorized commitment. **(CF)**

	FY01	**FY02**	**FY03**
Total No. of Contracts Awarded			
No. of Contracts with Upheld Protests			
No. of Ratified Contract Actions			

4. For each of the fiscal years indicated below (FY01, FY02, and FY03), provide the total number of open contracts managed by the Supply and Storage Activity. Open contracts are those that are not physically complete or not eligible for close-out procedures for any portion of each fiscal year. Include purchase orders and delivery orders in the total number of contracts. **(CF)**

	FY01	**FY02**	**FY03**
No. of Open Contracts Managed			

AMPLIFICATION: Depending on the length of a contract, you may count a contract in more than one fiscal year.

5. For each of the fiscal years identified below (FY01, FY02, FY03), provide the number of personnel engaged in contracting functions. The number of personnel should include Government civilians, military, support contractor personnel and should be expressed as full-time equivalents (FTEs) based on 2080 man-hours. **(CF)**

No. of Personnel Engaged in Contracting (FTEs)	**FY01**	**FY02**	

AMPLIFICATION: Contracting functions include description (but not determination; hence not item management) of supplies and services required, selection and solicitation of sources, preparation and awarding of contracts, and all phases of contract administration.

6. For each of the fiscal years shown in the table below (FY01, FY02, and FY03) provide the Supply and Storage Activity's inventory turnover rate. Inventory turnover rate is defined as the dollar value of annual sales (or issues) divided by the dollar value of the inventory level. Inventory level is further defined as the average of the beginning and ending inventory levels for each time period not including those portions of inventory levels with retention policies in support of war reserve requirements and those items mandated for retention by Service/Agency policies. Do not consider direct vendor deliveries on either side of the equation (sales or inventory levels). When calculating price for reparable (repairable) items, use standard price for both sales and inventory figures. **(CF)**

	FY01	**FY02**	**FY03**
Inventory Turnover Rate			

AMPLIFICATION: For Air Force units do not include RSP inventory in this calculation of turnover rate.

7. What percentage of NSNs with stock on hand as of 30 Sep 03 had received zero customer demands within the last two fiscal years prior to 30 Sep 03? **(CF)**

Formula: $\frac{\text{No. of NSNs stocked with no demands in FY02 and FY03}}{\text{Total No. of NSNs stocked on 30 Sep 03}}$

% of Line Items Receiving Zero Demands as of 30 Sep 03	

8. Provide the number of NSNs managed by the Supply and Storage Activity at the end of the fiscal years shown below (30 Sep 01, 02, and 03). Include stocked and non-stocked items in the number of NSNs managed. **(CF)**

	30 Sep 01	**30 Sep 02**	**30 Sep 03**
No. of NSNs Managed			

AMPLIFICATION: For Navy, stocked and non-stocked may be defined as carried and not carried.

9. For each of the fiscal years identified below (FY01, FY02, and FY03), provide the number of personnel engaged in stock control functions. The number of personnel should include Government civilians, military, support contractor personnel and should be expressed as full-time equivalents (FTEs) based on 2080 man-hours. Stock control is defined as the process of maintaining inventory data on the quantity, location, and condition of supplies and equipment due in, on-hand, and due-out; and the determination of quantities of material and equipment available and/or required for issue. **(CF)**

No. of Personnel Engaged in Stock Control (FTEs)	**FY01**	**FY02**	**FY03**

10. Of the total number of NSNs managed on 30 Sep 03, what percentage was the Supply and Storage Activity designated as the Primary Inventory Control Activity (PICA)? **(CF)**

% of NSNs Designated PICA items as of 30 Sep 03	

11. For each of the fiscal years shown below (FY01, FY02, and FY03), provide the total number of receipts processed by the Supply and Storage Activity. Receipt processing is defined as all

actions taken by a receiving activity from the physical turnover of materiel by a carrier until the on-hand balance of the accountable stock record file or in-process receipt file is updated to reflect the received materiel as an asset in storage, or the materiel is issued directly from receiving to the customer.

	FY01	FY02	FY03
Total No. of Receipts Processed			

12. For each of the fiscal years shown in the table below (FY01, FY02, and FY03), provide the Supply and Storage Activity's average receipt processing time. Express time in hours. For this analysis, receipt processing time is the elapsed time from turnover of materiel from a carrier until the on-hand balance of the accountable stock record file, or the in-process receipt file is updated to reflect the received materiel as an asset in storage, or the materiel is issued directly from receiving to a customer. For bulk fuels, receipt processing time is the elapsed time from the termination of the product receipt until the on-hand balance of the accountable stock record file is updated.

Avg. Receipt Processing Time	FY01	FY02	FY03

Formula = $\frac{\text{Total receipt processing time in hours over the fiscal year}}{\text{Total number of receipts processed over the fiscal year}}$

13. For each of the fiscal years identified in the following table (FY01, FY02, and FY03), provide the average number of receipts processed per person for the Supply and Storage Activity. The average number of receipts processed per person is defined as the number of receipts processed over the time period given divided by the number of personnel working in the receiving section over that same time period. The number of personnel should include Government civilians, military and support contractors, and should be expressed as full-time equivalents (FTEs) based on 2080 man-hours.

Avg. No. of Receipts Processed Per Person	FY01	FY02	FY03

Formula = $\frac{\text{Total number of receipts processed over the time period}}{\text{Total number of personnel (FTE) in receiving section over the same time period}}$

14. For each of the fiscal years shown below (FY01, FY02, and FY03), provide the Supply and Storage Activity's average inventory accuracy rate. Inventory accuracy is defined as the total number of individual warehouse storage locations inventoried having the correct on-hand balance, divided by the total number of individual warehouse storage locations inventoried, times 100. The calculation is as shown:

Rate = $\frac{\text{No. of individual warehouse storage locations inventoried with the correct on-hand balance over the time period}}{\text{Total No. of individual warehouse storage locations inventoried over the same time period}} \times 100$

Avg. Inventory Accuracy Rate	FY01	FY02	FY03

15. For each of the fiscal years shown below (FY01, FY02, and FY03), provide the Supply and Storage Activity's average warehouse location accuracy rate. Warehouse location accuracy rate

shows the ratio of correct warehouse locations vs. the total number of warehouse locations surveyed. The calculation is as shown:

$$\text{Rate} = \frac{\text{Total No. of locations surveyed - No. of incorrect warehouse locations over the time period}}{\text{Total No. of locations surveyed over the same time period}} \times 100$$

Avg. Warehouse Location Accuracy Rate	**FY01**	**FY02**	**FY03**

16. As of 30 Sep 03, provide the total net cubic feet of permanent covered storage space operated by the Supply and Storage Activity. Permanent covered storage space includes permanent Government-owned facilities and excludes transitory, temporary and commercially leased facilities. Covered storage space includes general purpose warehouses, controlled humidity warehouses, refrigerated (freeze & chill) storage space, flammable/hazardous storage spaces, sheds, magazines and spaces for classified materials and materials requiring special controls. For bulk fuel Activities, provide the total gallons of wet tank storage space instead of net cubic feet of covered storage space.

Total Net Cubic Ft of Covered Storage Space as of 30 Sep 03	
Total Gals of Wet Tank Storage Space as of 30 Sep 03 (For Bulk Fuels)	

** 17. For fiscal year 2003, provide the actual operations and maintenance costs for the Supply and Storage Activity. Do not include costs for the actual purchase of inventory and materials managed, stored, and issued to customer organizations.

Actual Annual Cost of Operations ($K)	**FY03**

18. For each of the fiscal years identified below (FY01, FY02, and FY03), provide the total number of issues processed by the Supply and Storage Activity each day. The issue process begins with receipt of a material release order (MRO) and ends when material is offered to transportation for distribution to customers. The process includes picking or pulling material from storage or directly from transportation; inspection; cleaning; preserving; packaging; palletizing; preparation for shipment; preparation of any required documentation; and data entry. For supply and storage activities at the "installation" level, the issue process may end when material is placed in customer bins for pickup or handed directly to a customer when the storage facility is co-located with the customer, instead of when it is offered to transportation.

Total No. of Issues Processed	**FY01**	**FY02**	**FY03**

19. For each of the fiscal years identified in the table below (FY01, FY02, and FY03), provide the Supply and Storage Activity's average time required to complete an issue. The time required to complete an issue is defined as the elapsed time in hours from receipt of an MRO until items of supply are offered to transportation, or are offered for issue to customer organizations. For supply and storage activities at the "installation" level, the issue process may end when material is placed in customer bins for pickup or handed directly to a customer when the storage facility is co-located with the customer, instead of when it is offered to transportation.

Avg. Time Required to	**FY01**	**FY02**	**FY03**

Complete an Issue			

Formula = Total Issue Processing Time in hours over the fiscal year / Total Number of Issues processed over the fiscal year

20. For the Supply and Storage Activity, for the fiscal years identified in the following table (FY01, FY02, and FY03), provide the number of issues processed per person. The issue process begins with receipt of a material release order (MRO) and ends when material is offered to transportation for distribution to customers. The number of issues processed per person is defined as the number of issues processed over the time period given divided by the number of personnel performing issuing functions. In determining number of personnel performing issuing functions, include the total of all Government civilian, military and support contractor personnel assigned to perform issuing tasks. Express the number of personnel as full-time equivalents (FTEs) based on 2080 man-hours.

No. of Issues Processed per Person	**FY01**	**FY02**	**FY03**

Formula = Total Number of Issues processed over the time period / Number of personnel (FTEs) performing issuing functions over the same time period

AMPLIFICATION: To determine issuing section personnel, consider those personnel involved in the issue process, which begins with receipt of a material release order (MRO) and ends when material is offered to transportation for distribution to customers. The process includes picking or pulling material from storage or directly from transportation; inspection; cleaning; preserving; packaging; palletizing; preparation for shipment; preparation of any required documentation; and data entry.

21. For the Supply and Storage Activity, for the fiscal years shown in the table below (FY01, FY02, and FY03), provide the tons of material shipped per person. The tons of material shipped per person is defined as the total tons of material shipped over the time period divided by the number of personnel performing shipping functions over the same time period. In determining number of personnel performing shipping functions, include the total of all Government civilian, military and support contractor personnel. Express the number of personnel as full-time equivalents (FTEs) based on 2080 man-hours. Shipping functions include planning, physically assembling, consolidating, documenting, and arranging for movement of material.

Tons Shipped per Person	**FY01**	**FY02**	**FY03**

Formula = Total Tons shipped over the time period / Number of personnel (FTEs) performing shipping functions over the same time period

AMPLIFICATION: For bulk fuels, compute tons using 7 pounds per gallon, regardless of type of product. 2000 pounds equates to one ton.

22. For the fiscal years shown in the table below (FY01, FY02, and FY03), provide the total quantity of line items shipped by the Supply and Storage Activity. For bulk fuels, provide the information in gallons (not line items).

No. of line items Shipped	**FY01**	**FY02**	**FY03**
For bulk fuels, gallons shipped			

AMPLIFICATION:

How to compute quantity shipped:

NSN 1234-01-567-8900

One shipment for 10 each
Second shipment for 1 each
Third shipment for 3 each

NSN 1111-01-222-3456

One shipment for 3 each
Second shipment for 4 each

If this were the entire universe of shipments by the Supply and Storage Activity, the quantity of items shipped equals 5. Include all shipments to include serviceable and unserviceable items (items ready for issue and not ready for issue)

23. For the Supply and Storage Activity, for each of the fiscal years identified below (FY01, FY02, and FY03), provide the number of personnel performing shipping functions. In determining number of personnel performing shipping functions, include the total of all Government civilian, military and support contractor personnel assigned to perform shipping tasks. Express the number of personnel as full-time equivalents (FTEs) based on 2080 man-hours. Shipping functions include planning, physically assembling, consolidating, documenting, and arranging for movement of material.

No. of Employees Engaged in Shipping Functions (FTEs)	**FY01**	**FY02**	**FY03**

24. List the name and number of all distribution nodes for each transportation mode within a 50-mile radius (as the crow flies) of the Supply and Storage Activity. List no more than the names of 5 nodes per mode. An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. 2000 pounds equates to one ton. Tons per day are based on a 24-hour period. For bulk fuels, compute tons using 7 pounds per gallon, regardless of product type. This question is not limited to distribution nodes on the Supply and Storage Activity's installation; it is requesting capacity for those nodes used by the Supply and Storage Activity. The key to determining maximum throughput capacity is identifying the constraint that limits throughput for each distribution node (e.g. limited number of loading docks, maximum aircraft on ground, or pipeline size) or the transportation mode (e.g. no interstate highways near the installation, weight limit on existing roadways, or travel through congested areas). **(TF)**

Provide the number of distribution nodes			
Air	**Water**	**Rail**	**Pipeline**
List names of the distribution nodes (up to 10)			
Air Node Names	**Water Node Names**	**Rail Node Names**	**Pipeline Node Names**

25. What is the distance in miles from the Supply and Storage Activity's most frequently used distribution node (from the main gate of your Installation): air, water, rail, and pipeline (pipeline for bulk fuel Activities only)? An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. If the distribution node is located on your installation, distance entered should be 0 miles. **(TF)**

Distribution Nodes	**Distance in Miles**
Air Node	
Water Node	
Rail Node	
Pipeline (Bulk Fuels Only) Node	

26. As of 31 May 04, what was the throughput capacity in tons per day for each of the Supply and Storage Activity's most frequently used distribution nodes. The distribution nodes are air, water, rail, pipeline, and ground (pipeline for bulk fuel Activities only). An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. A ground node is simply an area designed to load and unload tractor trailer trucks. 2000 pounds equates to one ton. Tons per day are based on a 24-hour period. For bulk fuels, compute tons using 7 pounds per gallon, regardless of product type. The key to determining maximum throughput capacity is identifying the constraint that limits throughput for each distribution node (e.g. limited number of loading docks, maximum aircraft on

ground, or pipeline size) or the transportation mode (e.g. no interstate highways near the installation, weight limit on existing roadways, or travel through congested areas). **(TF)**

Distribution Nodes	Throughput in Tons per Day
Air Node	
Water Node	
Rail Node	
Pipeline (Bulk Fuels Only) Node	
Ground Node	

27. As of 31 May 04, what is the current bandwidth capacity of the internal information technology (IT) infrastructure (backbone) within the Supply and Storage Activity? Express bandwidth in megabits per second (Mbps).

Bandwidth in Mbps	

28. As of 31 May 04, what is the current bandwidth capacity of the external information technology (IT) infrastructure (data transmission capacity) at the Supply and Storage Activity? Express bandwidth in megabits per second (Mbps).

Bandwidth in Mbps	

29. For each Government building controlled and operated by the Supply and Storage Activity as of 30 Sep 03, provide the building number, the total gross square feet and the condition code. For condition code, each service or agency should respond with their service or agency-unique codes as shown below:
Army: Green, amber or red.
Navy and Marine Corps: Adequate, substandard or inadequate.
Air Force: 1, 2 or 3.
DLA: Adequate, substandard or inadequate (or Host Unit's condition code if applicable)

Bldg No.	Gross Square Feet	Condition Code

30. As of 30 Sep 03, how many gross square feet of workspace did the Supply and Storage Activity occupy for inventory management functions? Inventory management functions include the management, cataloging, requirements determination, procurement, and determination of overhaul, stock distribution and disposal requirements. Include space occupied by Government civilians, military and support contractor personnel.

Gross Square Feet of Workspace	

31. For the Supply and Storage Activity, for FY03, provide the number of personnel performing inventory management functions. The number of personnel should be expressed as full-time equivalents (FTEs) based on 2080 man-hours, and should include Government civilians, military, and support contractor personnel. Inventory management is defined as the management, cataloging, requirements determination, procurement, and determination of overhaul, stock distribution and disposal requirements.

No. of Employees Engaged in Inventory Management Functions (FTEs)	FY03

** 32. For the Supply and Storage Activity, as of 30 Sep 03, provide the maximum number of personnel your inventory management workspace could support using a space standard of 162 gross square feet per person. Inventory management workspace includes those areas that house inventory management functions to include the management, cataloging, requirements determination, procurement, and determination of overhaul, stock distribution and disposal requirements.

Maximum No. of Personnel	

** 33. For each of the fiscal years shown in the table below (FY01, FY02, and FY03), provide the total number of individual retrievals performed by the Supply and Storage Activity's automated material retrieval system. An individual retrieval is a single removal of supplies from a storage location. An individual retrieval could involve removal of a single item, 1 box containing a dozen items, or 1 package containing 2 items.

No. of Individual Retrievals	FY01	FY02	FY03

34. For each of the fiscal years shown in the table below (FY01, FY02, and FY03), provide the total number of individual retrievals performed by the Supply and Storage Activity's automated material retrieval system. An individual retrieval is a single removal of supplies from a storage location. An individual retrieval could involve removal of a single item, 1 box containing a dozen items, or 1 package containing 2 items.

No. of Individual Retrievals	FY01	FY02	FY03

35. For each of the fiscal years identified in the table below (FY01, FY02, and FY03), provide the number of employees operating the Supply and Storage Activity's automated material retrieval system. The number of personnel should be expressed as full-time equivalents (FTEs) based on 2080 man-hours, and should include Government civilians, military, and support contractor personnel.

No. of Employees (FTEs)	FY01	FY02	FY03

36. As of 30 Sep 03, provide the maximum possible number of individual retrievals the Supply and Storage Activity's automated material retrieval system could perform in one day. An individual retrieval is a single removal of supplies from a storage location. An individual retrieval could involve removal of a single item, 1 box containing a dozen items, or 1 package containing 2 items. A day in this case is equal to a 24-hour shift.

Maximum Possible No. of Retrievals in One Day	

37. As of 31 May 04, indicate with a "yes" or "no" those distribution nodes that are available to the Supply and Storage Activity for distribution of supplies and materiel. Consider only those distribution nodes in operational condition and located on the installation where the Activity resides. An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is

defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. A ground node is simply an area designed to load and unload tractor trailer trucks. **(TF)**

Distribution Node	Available to Activity? (Yes or No)
Air Node	
Water Node	
Rail Node	
Pipeline (Bulk Fuels Only) Node	
Ground Node	

AMPLIFICATION: In the case of two or more adjacent DoD installations: If you do not have to leave DoD property to gain access to an adjacent installation's distribution node(s), you may include the nodes of the adjacent installation in your answer.

38. As of 31 May 04, for each distribution node available to the Supply and Storage Activity provide the maximum shipping capacity in tons per day. A day is defined as a 24-hour period. Consider only those distribution nodes in operational condition and located on the installation where the Activity resides. For listed distribution nodes that do not meet the above criteria, respond with N/A. An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. A ground node is simply an area designed to load and unload tractor trailer trucks. **(TF)**

Available Distribution Node	Max Tons per Day
Air Node	
Water Node	
Rail Node	
Pipeline (Bulk Fuels Only) Node	
Ground Node	

AMPLIFICATION: In the case of two or more adjacent DoD installations: If you do not have to leave DoD property to gain access to the distribution node(s) on the adjacent installation, you may include the nodes of the adjacent installation in your answer. For bulk fuels, compute tons using 7 pounds per gallon, regardless of product type. 2000 pounds equates to one ton. The key to determining maximum shipping capacity is identifying the constraint that limits throughput for each distribution node (e.g. limited number of loading docks, maximum aircraft on ground, or pipeline size) or the transportation mode (e.g. no interstate highways near the installation, weight limit on existing roadways, or travel through congested areas).

39. For each of the distribution nodes available to the Supply and Storage Activity provide the average tons shipped per day for FY01, FY02 and FY03. A day is defined as a 24-hour period. Consider only those distribution nodes located on the installation where the Activity resides. An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. A ground node is simply an area designed to load and unload tractor trailer trucks. **(TF)**

Available Distribution Nodes	Tons per Day - FY01	Tons per Day - FY02	Tons per Day - FY03
Air Node			
Water Node			
Rail Node			
Pipeline (Bulk Fuels Only) Node			
Ground Node			

AMPLIFICATION: In the case of two or more adjacent DoD installations: If you do not have to leave DoD property to gain access to the distribution node(s) on the adjacent installation, you may include the nodes of the adjacent installation in your answer. For bulk fuels, compute tons using 7 pounds per gallon, regardless of product type.

* 40. As of 31 May 04, for each distribution node available to the Supply and Storage Activity provide the maximum shipping capacity in tons per day. A day is defined as a 24-hour period. Consider only those nodes in operational condition and located on the installation where the Activity resides. For listed distribution nodes that do not meet the above criteria, respond with N/A. An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. A ground node is simply an area designed to load and unload tractor trailer trucks. **(TF)**

Available Distribution Nodes	Max Tons per Day
Air Node	
Water Node	
Rail Node	
Pipeline (Bulk Fuels Only) Node	
Ground Node	

AMPLIFICATION: In the case of two or more adjacent DoD installations: If you do not have to leave DoD property to gain access to the distribution node(s) on the adjacent installation, you may include the nodes of the adjacent installation in your answer. For bulk fuels, compute tons using 7 pounds per gallon, regardless of product type. 2000 pounds equates to one ton. The key to determining maximum shipping capacity is identifying the constraint that limits throughput for each distribution node (e.g. limited number of loading docks, maximum aircraft on ground, or pipeline size) or the transportation mode (e.g. no interstate highways near the installation, weight limit on existing roadways, or travel through congested areas).

41. As of 31 May 04, for the Supply and Storage Activity, what is the average number of years of government service per government employee? Include Government civilian and military personnel (do not include support contractor personnel).

Avg. Years Government Service per Government Employee	

42. As of 31 May 04, for the Supply and Storage Activity, provide the percentage of the total government workforce that has attained a four-year college degree.

% of the total government workforce that has attained a four-year college degree	

43. Provide the March 04 unemployment rate for the county in which the Supply and Storage Activity resides. Use a weighted average of county unemployment rates if more than 20% of your workforce resides in an adjacent county or counties. Use Department of Labor, not seasonally adjusted statistics.

Unemployment Rate	

AMPLIFICATION: Department of Labor has scheduled the release of the local area unemployment numbers for March 04 on 5 May 04. Use Department of Labor data from http://data.bls.gov

44. What percentage of the Supply and Storage Activity's total dollars programmed in the FY04 Program Objective Memorandum (POM) for FY06-07 are dedicated to information technology (IT) capital expenditures for inventory management? Capital expenditures in this case are defined as expenditures for IT equipment, technology, software and infrastructure. Inventory management is defined as the management, cataloging, requirements determination, procurement, and determination of overhaul, stock distribution and disposal requirements. The calculation is shown below:

$$\frac{\text{Supply and Storage Activity FY06 -07 POM dollars programmed for IT capital expenditures for inventory management}}{\text{Supply and Storage Activity Total FY06-07 POM dollars programmed}} \times 100$$

% of Supply and Storage Activity POM Dollars for IT Capital Expenditures For Inventory Management	

45. For the Supply and Storage Activity, provide the anticipated return on investment for all the dollars programmed in the FY04 Program Objective Memorandum (POM) for FY06-07, which are dedicated to information technology (IT) capital expenditures for inventory management. Capital expenditures in this case are defined as expenditures for IT equipment, technology, software and infrastructure. Return on investment is defined as the total anticipated savings from IT capital expenditures divided by the total dollar value of IT capital expenditures. Inventory management is defined as the management, cataloging, requirements determination, procurement, and determination of overhaul, stock distribution and disposal requirements.

Supply and Storage Activity Return on Investment for IT Capital Expenditures for Inventory Management	

46. What percentage of the Supply and Storage Activity's total dollars programmed in the FY04 Program Objective Memorandum (POM) for FY06-07 are dedicated to information technology (IT) capital expenditures for storage functions? Capital expenditures in this case are defined as expenditures for IT equipment, technology, software and infrastructure. Storage functions include the receipt, holding, protection and issue of supplies, material and end items. The calculation is shown below:

$$\frac{\text{Supply and Storage Activity FY06 -07 POM dollars programmed for IT capital expenditures for storage functions}}{\text{Supply and Storage Activity Total FY06-07 POM dollars programmed}} \times 100$$

% of Supply and Storage Activity POM Dollars for IT Capital Expenditures for Storage Functions	

47. For the Supply and Storage Activity, provide the anticipated return on investment for all the dollars programmed in the FY04 Program Objective Memorandum (POM) for FY06-07, which are dedicated to information technology (IT) capital expenditures for storage functions. Capital expenditures in this case are defined as expenditures for IT equipment, technology, software and infrastructure. Return on investment is defined as the total anticipated savings from IT capital expenditures divided by the total dollar value of IT capital expenditures. Storage functions include the receipt, holding, protection and issue of supplies, material and end items.

Supply and Storage Activity Return on Investment for IT Capital Expenditures for Storage Functions	

48. What is the Supply and Storage Activity's total dollar value of programmed Military Construction (MILCON) projects for FY06-07 as identified in the FY04 POM?

Supply and Storage Activity's FY06-07 Programmed MILCON Dollars	

49. What is the total square footage for all programmed Supply and Storage Activity Military Construction (MILCON) projects for FY06-07 as identified in the FY04 POM? For bulk fuels, substitute total gallons for square footage as the unit of measure.

FY06-07 Programmed MILCON Total SqFt	
For Bulk Fuels; FY06-07 Programmed MILCON Total Gallons	

50. As of 31 May 04, provide an estimate of the total square feet of available commercial warehouse space within a 25-mile radius of the Supply and Storage Activity. For bulk fuels, substitute total gallons for square footage as the unit of measure.

Total Sq Ft of Available Commercial Warehouse Space	
For Bulk Fuels; total gallons of commercial storage space	

51. What percentage of the Supply and Storage Activity's total dollars programmed in the FY04 Program Objective Memorandum (POM) for FY06-07 are dedicated to information technology (IT) capital expenditures for distribution functions? Capital expenditures in this case are defined as expenditures for IT equipment, technology, software and infrastructure. Distribution includes the functions of shipping, material handling, traffic management, and quality assurance. The calculation is shown below:

$$\frac{\text{Supply and Storage Activity FY06 -07 POM dollars programmed for IT capital expenditures for Distribution functions}}{\text{Supply and Storage Activity Total FY06-07 POM dollars programmed}} \times 100$$

% of Supply and Storage Activity POM Dollars for IT Capital Expenditures for Distribution Functions	

52. For the Supply and Storage Activity, provide the anticipated return on investment for all the dollars programmed in the FY04 Program Objective Memorandum (POM) for FY06-07, which are dedicated to information technology (IT) capital expenditures for distribution functions. Capital expenditures in this case are defined as expenditures for IT equipment, technology, software and infrastructure. Return on investment is defined as the total anticipated savings from IT capital

expenditures divided by the total dollar value of IT capital expenditures. Distribution includes the functions of shipping, material handling, traffic management, and quality assurance.

Supply and Storage Activity Return on Investment for IT Capital Expenditures for Distribution Functions	

53. List the name and number of all distribution nodes for each transportation mode within a 50-mile radius (as the crow flies) of the Supply and Storage Activity. List no more than the names of 5 nodes per mode. An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. 2000 pounds equates to one ton. Tons per day are based on a 24-hour period. For bulk fuels, compute tons using 7 pounds per gallon, regardless of product type. This question is not limited to distribution nodes on the Supply and Storage Activity's installation; it is requesting capacity for those nodes used by the Supply and Storage Activity. The key to determining maximum throughput capacity is identifying the constraint that limits throughput for each distribution node (e.g. limited number of loading docks, maximum aircraft on ground, or pipeline size) or the transportation mode (e.g. no interstate highways near the installation, weight limit on existing roadways, or travel through congested areas). **(TF)**

Provide the number of distribution nodes			
Air	**Water**	**Rail**	**Pipeline**
List names of the distribution nodes (up to 10)			
Air Node Names	**Water Node Names**	**Rail Node Names**	**Pipeline Node Names**

54. As of 31 May 04, what was the throughput capacity, in tons per day, for each of the distribution nodes most frequently used by the Supply and Storage Activity? The distribution nodes are air, rail, ground, water and pipeline (pipeline for bulk fuel Activities only). An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. A ground node is simply an area designed to load and unload tractor trailer trucks. 2000 pounds equates to one ton. Tons per day are based on a 24-hour period. For bulk fuels, compute tons using 7 pounds per gallon, regardless of product type. This question is not limited to distribution nodes on the Supply and Storage Activity's installation; it is requesting capacity for those nodes used by the Supply and Storage Activity. The key to determining maximum throughput capacity is identifying the constraint that limits throughput for each distribution node (e.g. limited number of loading docks, maximum aircraft on ground, or pipeline size) or the transportation mode (e.g. no interstate highways near the installation, weight limit on existing roadways, or travel through congested areas). **(TF)**

Distribution Nodes	**Throughput Capacity in Tons per Day**
Air Node	

Water Node	
Rail Node	
Pipeline (Bulk Fuels Only) Node	
Ground Node	

55. For the Supply and Storage Activity, provide the highest number of line items shipped in a single day for the two fiscal year period of FY02 and FY03. Consider all transportation modes to include air, rail, ground and water (exclude pipeline).

Max Line Items Shipped via All Transportation Modes in One Day	

* 56. As of 31 May 04, what is the distance in miles from the Supply and Storage Activity (from the main gate of your Installation) to each of the most frequently used distribution nodes: air, water, rail, and pipeline (pipeline for bulk fuel Activities only)? An air distribution node is defined as an airfield capable of handling, at a minimum, one of these types of aircraft: C-17, C-5, C-141 or equivalent. The water node is defined as a port providing access to major waterways and having containerized cargo capability. A rail node is defined as a railhead capable of on-loading and off-loading multiple rail cars simultaneously. The pipeline node refers to pipelines used for distribution of bulk POL. If the distribution node is located on your installation, distance entered should be 0 miles. **(TF)**

Distribution Nodes	Distance in Miles
Air Node	
Water Node	
Rail Node	
Pipeline (Bulk Fuels Only) Node	

* 57. As of 31 May 04, what is the maximum possible tonnage per day the Supply and Storage Activity can ship considering all the transportation modes (excluding pipeline) available? Transportation modes include air, rail, ground and water. The key to determining maximum throughput capacity is identifying the constraint that limits throughput for each distribution node (e.g. limited number of loading docks, maximum aircraft on ground, or pipeline size) or the transportation mode (e.g. no interstate highways near the installation, weight limit on existing roadways, or travel through congested areas (excluding pipeline)). **(TF)**

Max Tonnage per Day Possible to Ship via All Transportation Modes	

* 58. For the Supply and Storage Activity, provide the highest number of line items shipped in a single day for the two fiscal year period of FY02 and FY03. Consider all transportation modes to include air, rail, ground and water (exclude pipeline). **(TF)**

Max Line Items Shipped via All Transportation Modes in One Day	

59. For each of the fiscal years identified in the following table (FY01, FY02, and FY03), provide the cost per person of the Supply and Storage Activity's inventory management function. For costs, use the actual operations and maintenance costs for the Supply and Storage Activity over the time period. The number of inventory management personnel should be expressed as full-time equivalents (FTEs) based on 2080 man-hours, and should include Government civilians, military, and support contractor personnel. Inventory management is defined as the management, cataloging, requirements determination, procurement, and determination of

overhaul, stock distribution and disposal requirements. Do not include costs for the actual purchase of inventory and materials managed, stored, and issued to customer organizations.

Cost per Person of Inventory Management Function	**FY01**	**FY02**	**FY03**

Formula = Actual Operations and Maintenance Costs for the Supply and Storage Activity over the time period / Total number of inventory management personnel (FTEs) over the same time period

60. What is the calendar year 2004 locality pay percentage for Government civilian personnel at the Supply and Storage Activity's location?

CY04 Locality Pay Percentage for Government Civilian Personnel	

61. For each of the fiscal years shown in the table below (FY01, FY02, and FY03), provide the repair and maintenance costs (in actual dollars) for real property facilities used by the Supply and Storage Activity.

Facility Repair and Maintenance Costs	**FY01**	**FY02**	**FY03**

62. For each of the fiscal years shown in the table below (FY01, FY02, and FY03), what was the gross square footage of real property facilities used for Supply and Storage Activity functions?

Gross Sq Ft of Real Property Facilities	**FY01**	**FY02**	**FY03**

63. For each FY03, provide the length of time (in days) needed to fill the five longest Government civilian job openings within the Supply and Storage Activity. This measurement begins when the position is announced and ends when the hiring official has formally notified the personnel office of a selection of an individual.

	FY03
Days to fill personnel position (longest)	
Days to fill personnel position (2nd longest)	
Days to fill personnel position (3rd longest)	
Days to fill personnel position (4th longest)	
Days to fill personnel position (5th longest)	

* 64. Provide the number of NSNs managed by the Supply and Storage Activity at the end of the fiscal years shown below (FY01, FY02, and FY03). Include stocked and non-stocked items in the number of NSNs managed.

	30 Sep 01	**30 Sep 02**	**30 Sep 03**
No. of NSNs Managed			

AMPLIFICATION: Stocked items have authorized stockage levels. For Navy, stocked items are carried, and non-stocked items are not-carried.

65. Provide the number of personnel (actual Government civilian, military, and contractor support personnel) assigned to the Supply and Storage Activity at the end of the fiscal years shown below (30 Sep 01, 02, and 03). This is a count of people, not a conversion to full-time equivalents.

No. of People Assigned to Supply and Storage Activity	**30 Sep 01**	**30 Sep 02**	**30 Sep 03**

APPENDIX F: ACTIVITY "TARGETING" RECOMMENDATIONS

For all Services and the Defense Logistics Agency all activities determined to be "Above the installation" in accordance with guidance provided in the OSD BRAC Library of Definitions should respond to the S&S JCSG's Military Value Analysis questions.

Whether on not those activities determined to be "at or below the installation" should respond to these questions is much less clear-cut. In general, those activities that are operational or deployable are considered "below the installation" and they should not respond to the questions. As a general rule these organizations deal exclusively with retail level stocks.

Activities "at the installation level" which are both retail and wholesale, or exclusively wholesale, in nature should respond to the questions. A recommended list of these activities, by Service/Agency is provided. However, the JCSG emphasizes that this list is merely a recommendation and that the final determination should rest with the respective Service BRAC offices. The results of the capacity analysis data call were not available for review in compiling this list.

ARMY:

- All non-deployable Supply and Storage Activities at an Installation that support customers in Classes of supply I, II/IV, III (B) and III (P), V, VII, VIII, IX and X on a direct and area support basis
- Supply and Storage activities that store and maintain War Reserve Stocks

AIR FORCE:

- Logistics Readiness Squadrons
- Regional Supply Squadrons

MARINE CORPS:

- Marine Corps Air Stations

NAVY:

- Naval Air Stations
- Naval Bases

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MEMORANDUM FOR CHAIRMAN, TECHNICAL JOINT CROSS-SERVICE GROUP

SUBJECT: Technical Joint Cross-Service Group (TJCSG) Report on Military Value Analysis

The Infrastructure Steering Group (ISG) has reviewed the Technical JCSG Military Value report submitted to it on March 25, 2004. The ISG appreciates the dedicated effort and military judgment that your members, as the experts in the field, put into revising this report in response to our initial comments. As part of the process to review issues raised by the Military Departments, the ISG tasked the BRAC Deputy Assistant Secretaries (DASs) to develop recommendations for resolving issues with the military value reports. The BRAC DASs met to review the issues pertaining to your JCSG. Representatives from the TJCSG participated in the discussion with the DASs to ensure the issues were well understood and potential solutions were implementable and reasonable. Subject to incorporation of the comments expressed herein, the ISG approves your report as the basis for your military value analysis.

In its report, the Technical JCSG proposes the use of out-year spending data as an indicator of the "Future Warfighting Capability." The use of out-year dollars is not appropriate for assessing the military value of facilities where your functions are currently being performed. The metric "Future Warfighting Capability" should be limited as follows:

$$S(fwc) = [.9X(FTFEi/MTFEi_i) + .1X(FTFEe/MTFEe) + (FTFEf/MTFEf) + (FFTEs/MFFTEs)]/3$$

FTFEi = funding executed internally by the technical facility (includes personnel salaries) over the last three years (FY01-03)

MTFEi= maximum funding executed internally by any like-facility (includes personnel salaries) over the last three years (FY01-03)

FTFEe = funding executed externally by the technical facility over the last three years (FY01-03)

MTFEe = maximum funding executed externally by any like technical facility over the last three years (FY01-03)

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FTFEf = funding **appropriated** ~~identified over the FYDP~~ in FY 04 ~~(FY04-FY10)~~ by the technical facility

MTFEf = maximum funding **appropriated** ~~identified over the FYDP~~ in FY 04 ~~(FY04-FY10)~~ by the technical facility

FFTEs = In house FTEs at the technical facility over the last three years (FY01-FY03)

MFFTEs = maximum # of FTEs at any like facility over the last three years (FY01-FY03)

In its report, the Technical JCSG asks for specific personnel names in addition to qualifications. The TJCSG said that the names were requested to assist in auditing the data. The facilities submitting the personnel qualification information must have source data indicating the specific individuals having the qualifications and this source data is sufficient to allow auditing of the input. The Military Departments and Defense Agencies have data certification procedures to prevent respondents from providing false information. The audit process is the method to ensure the integrity of this process. Therefore, revise the relevant questions to eliminate the request for specific personnel names.

The rationale for the weighting and scoring process proposed by the TJCSG must be included somewhere in the group's formal record. This can be in the Military Value report or in the group's deliberative meeting record. Please review the group's deliberative meeting minutes and revise the Military Value report as necessary to provide a complete record of the rationale for the weighting and scoring process in the TJCSG formal record.

The TJCSG's current Military Value scoring plan uses percentages instead of absolute numbers as a measure of value in certain people-related areas. Sensitivity analysis conducted on scoring plan has shown that this method produces irrational results in the analysis. Please revise your report to change the method of measurement to use absolute numbers.

Because of differences in the way the military departments apply the Defense Acquisition Workforce Improvement Act (DAWIA) certification requirements, please revise your report to only request DAWIA certification data for those employees who are at the grade level of GS-14/NH IV and above.

The TJCSG proposes to use the qualifications of on-site contractors in their military value calculation. Because of the Office of the Inspector General concern about the auditability of this contractor data as well as the concern that this data is not consistently available at all locations, the metrics and related questions that measure the

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qualifications of on-site contractor data need be stricken from the TJCSG military report. [NOTE: for the coordination of this memo. The OSD BRAC office requested a formal response from the DoD IG on the auditablity of qualification data associated with on-site contractor data. Unless the DoD IG ruling is different than what has been expressed verbally and in an email from the lead TJCSG auditor, this sentence will remain in the document]

After incorporation of the directed revisions above, please provide a final copy of your Military Value Analysis report to the OSD BRAC Office. If you have any questions regarding these comments, please contact Peter Potochney, Director, Base Realignment and Closure, at 614-5356.

Michael W. Wynne
Acting USD (Acquisition, Technology & Logistics)
Chairman, Infrastructure Steering Group

cc: Infrastructure Steering Group Members
MilDep BRAC DASs

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Appendix B

Weights for:

Selection Criteria

Attributes

Metrics

Questions

B.1 Air, Land, Sea & Space Research:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	32%	M1: Education	35%	M1: Question 1	100%	5.95%
				M2: Experience	25%	M2: Question 1	100%	4.25%
				M3: Certification	10%	M3: Questions 1 & 2	100%	1.70%
				M4: Patents/Publications/Awards	30%	M4: Question 1	100%	5.10%
		A2: Physical Environment	4%	M1 Special Features	50%	M1: Question 1	100%	1.00%
				M2: Encroachment	50%	M2: Question 1	100%	1.00%
		A3: Physical Structures & Equipment	13%	M1: Uniqueness	40%	M1: Question 1	100%	2.80%
				M2: Depth of Application	15%	M2: Question 1	100%	1.05%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.40%
				M4 Value Utilization	25%	M4: Questions 1&2	100%	1.75%
		A4: Operational Impact	28%	M1: Technology Transition	35%	M1: Question 1	100%	5.25%
				M2: Advance Tech Demos	25%	M2: Question 1	100%	3.75%
				M3: Rapid Responses	25%	M3: Question 1	100%	3.75%
				M4: Workload Focus	5%	M4: Question 1	100%	0.75%
				M5: Future Mil Val	10%	M5: Questions 1,2&3	100%	1.50%
		A5: Synergy	23%	M1: Multiple Functions	25%	M1: Question 1	100%	3.00%
				M2: Jointness	30%	M2: Questions 1&2	100%	3.60%
				M3: Proximity	35%	M3: Question 1	100%	4.20%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	1.20%
C2: Facilities	12%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publications/Awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	33%	M1 Special Features	50%	M1: Question 1	100%	2.00%
				M2: Encroachment	50%	M2: Question 1	100%	2.00%
		A3: Physical Structures & Equipment	67%	M1: Uniqueness	40%	M1: Question 1	100%	3.20%
				M2: Depth of Application	15%	M2: Question 1	100%	1.20%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.60%
				M4 Value Utilization	25%	M4: Questions 1&2	100%	2.00%
		A4: Operational Impact	0%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	0%	M3: Question 1	100%	0.00%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Workload Focus	0%	M4: Question 1	100%	0.00%
				M5: Future Mil Val	0%	M5: Question 1	100%	0.00%
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	25%	A1: People	40%	M1: Education	40%	M1: Question 1	100%	4.00%
				M2: Experience	20%	M2: Question 1	100%	2.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publications/Awards	40%	M4: Question 1	100%	4.00%
		A2: Physical Environment	4%	M1 Special Features	50%	M1: Question 1	100%	0.50%
				M2: Encroachment	50%	M2: Question 1	100%	0.50%
		A3: Physical Structures & Equipment	20%	M1: Uniqueness	40%	M1: Question 1	100%	2.00%
				M2: Depth of Application	10%	M2: Question 1	100%	0.50%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.00%
				M4 Value Utilization	30%	M4: Questions 1&2	100%	1.50%
		A4: Operational Impact	12%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	20%	M3: Question 1	100%	0.60%
				M4: Workload Focus	30%	M4: Question 1	100%	0.90%
				M5: Future Mil Val	50%	M5: Questions 1,2&3	100%	1.50%
		A5: Synergy	24%	M1: Multiple Functions	20%	M1: Question 1	100%	1.20%
				M2: Jointness	30%	M2: Questions 1&2	100%	1.80%
				M3: Proximity	40%	M3: Question 1	100%	2.40%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	0.60%
C4: Cost	10%	A1: People	30%	M1: Education	50%	M1: Question 1	100%	1.50%
				M2: Experience	50%	M2: Question 1	100%	1.50%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publications/Awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	0%	M3: Question 1	100%	0.00%
				M4 Value Utilization	100%	M4: Questions 1&2	100%	3.00%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A4: Operational Impact	20%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	0%	M3: Question 1	100%	0.00%
				M4: Workload Focus	60%	M4: Question 1	100%	1.20%
				M5: Future Mil Val	40%	M5: Questions 1,2&3	100%	0.80%
		A5: Synergy	20%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	40%	M2: Questions 1&2	100%	0.80%
				M3: Proximity	60%	M3: Question 1	100%	1.20%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%

B.2 Air, Land, Sea & Space Development & Acquisition:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	25%	M1: Education	25%	M1: Question 1	100%	3.25%
				M2: Experience	40%	M2: Question 1	100%	5.20%
				M3: Certification	25%	M3: Questions 1 & 2	100%	3.25%
				M4: Patents/Publications/Awards	10%	M4: Question 1	100%	1.30%
		A2: Physical Environment	9%	M1 Special Features	55%	M1: Question 1	100%	2.75%
				M2: Encroachment	45%	M2: Question 1	100%	2.25%
		A3: Physical Structures & Equipment	8%	M1: Uniqueness	25%	M1: Question 1	100%	1.00%
				M2: Depth of Application	35%	M2: Question 1	100%	1.40%
				M3: Value Building Conditions	10%	M3: Question 1	100%	0.40%
				M4 Value Utilization	30%	M4: Questions 1&2	100%	1.20%
		A4: Operational Impact	40%	M1 Systems Fielded/Current & In-works	45%	M1: Questions 1&2	100%	9.45%
				M2: Rapid Responses	35%	M3: Question 1	100%	7.35%
				M3: Workload Focus	10%	M4: Question 1	100%	2.10%
				M4: Future Mil Val	10%	M5: Questions 1,2&3	100%	2.10%
		A5: Synergy	19%	M1: Multiple Functions	35%	M1: Question 1	100%	3.50%
				M2: Jointness	40%	M2: Questions 1&2	100%	4.00%
				M3: Proximity	20%	M3: Question 1	100%	2.00%
				M4: Dual Use Capacity	5%	M4: Question 1	100%	0.50%
C2: Facilities	12%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publications/Awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	50%	M1 Special Features	50%	M1: Question 1	100%	3.00%
				M2: Encroachment	50%	M2: Question 1	100%	3.00%
		A3: Physical Structures & Equipment	50%	M1: Uniqueness	40%	M1: Question 1	100%	2.40%
				M2: Depth of Application	10%	M2: Question 1	100%	0.60%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.20%
				M4 Value Utilization	30%	M4: Questions 1&2	100%	1.80%
		A4: Operational Impact	0%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	0%	M3: Question 1	100%	0.00%
				M4: Future Mil Val	0%	M4: Question 1	100%	0.00%

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	25%	A1: People	20%	M1: Education	40%	M1: Question 1	100%	2.00%
				M2: Experience	30%	M2: Question 1	100%	1.50%
				M3: Certification	20%	M3: Questions 1 & 2	100%	1.00%
				M4: Patents/Publication/A/wards	10%	M4: Question 1	100%	0.50%
		A2: Physical Environment	4%	M1 Special Features	50%	M1: Question 1	100%	0.50%
				M2: Encroachment	50%	M2: Question 1	100%	0.50%
		A3: Physical Structures & Equipment	16%	M1: Uniqueness	40%	M1: Question 1	100%	1.60%
				M2: Depth of Application	10%	M2: Question 1	100%	0.40%
				M3: Value Building Conditions	20%	M3: Question 1	100%	0.80%
				M4 Value Utilization	30%	M4: Questions 1&2	100%	1.20%
		A4: Operational Impact	36%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	20%	M2: Question 1	100%	1.80%
				M3: Workload Focus	30%	M3: Question 1	100%	2.70%
				M4: Future Mil Val	50%	M4: Questions 1,2&3	100%	4.50%
		A5: Synergy	24%	M1: Multiple Functions	20%	M1: Question 1	100%	1.20%
				M2: Jointness	20%	M2: Questions 1&2	100%	1.20%
				M3: Proximity	40%	M3: Question 1	100%	2.40%
				M4: Dual Use Capacity	20%	M4: Question 1	100%	1.20%
C4: Cost	10%	A1: People	30%	M1: Education	50%	M1: Question 1	100%	1.50%
				M2: Experience	50%	M2: Question 1	100%	1.50%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publications/Awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	0%	M3: Question 1	100%	0.00%
				M4 Value Utilization	100%	M4: Questions 1&2	100%	3.00%
		A4: Operational Impact	20%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	80%	M3: Question 1	100%	1.60%

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Future Mil Val	20%	M4: Questions 1,2&3	100%	0.40%
		A5: Synergy	20%	M1: Multiple Functions	30%	M1: Question 1	100%	0.60%
				M2: Jointness	20%	M2: Questions 1&2	100%	0.40%
				M3: Proximity	40%	M3: Question 1	100%	0.80%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	0.20%

B.3 Air, Land, Sea & Space Test & Evaluation:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	30%	M1: Education	25%	M1: Question 1	100%	4.00%
				M2: Experience	45%	M2: Question 1	100%	7.20%
				M3: Certification	25%	M3: Questions 1 & 2	100%	4.00%
				M4: Patents/Publications/Awards	5%	M4: Question 1	100%	0.80%
		A2: Physical Environment	13%	M1 Special Features	55%	M1: Question 1	100%	3.85%
				M2: Encroachment	45%	M2: Question 1	100%	3.15%
		A3: Physical Structures & Equipment	9%	M1: Uniqueness	30%	M1: Question 1	100%	1.50%
				M2: Depth of Application	30%	M2: Question 1	100%	1.50%
				M3: Value Building Conditions	10%	M3: Question 1	100%	0.50%
				M4 Value Utilization	30%	M4: Questions 1&2	100%	1.50%
		A4: Operational Impact	32%	M1: Direct Warfighting Support	45%	M1: Question 1	100%	7.65%
				M2: Urgent Material Release	35%	M2: Question 1	100%	5.95%
				M3: Workload Focus	10%	M3: Question 1	100%	1.70%
				M4: Future Mil Val	10%	M4: Questions 1,2&3	100%	1.70%
		A5: Synergy	15%	M1: Multiple Functions	35%	M1: Question 1	100%	2.80%
				M2: Jointness	35%	M2: Questions 1&2	100%	2.80%
				M3: Proximity	20%	M3: Question 1	100%	1.60%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	0.80%
C2: Facilities	18%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publications/Awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	28%	M1 Special Features	50%	M1: Question 1	100%	2.50%
				M2: Encroachment	50%	M2: Question 1	100%	2.50%
		A3: Physical Structures & Equipment	72%	M1: Uniqueness	40%	M1: Question 1	100%	5.20%
				M2: Depth of Application	10%	M2: Question 1	100%	1.30%
				M3: Value Building Conditions	20%	M3: Question 1	100%	2.60%
				M4 Value Utilization	30%	M4: Questions 1&2	100%	3.90%
		A4: Operational Impact	0%	M1: Direct Warfighting Support	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	0%	M3: Question 1	100%	0.00%
				M4: Future Mil Val	0%	M4: Question 1	100%	0.00%

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	19%	A1: People	11%	M1: Education	25%	M1: Question 1	100%	0.50%
				M2: Experience	50%	M2: Question 1	100%	1.00%
				M3: Certification	20%	M3: Questions 1 & 2	100%	0.40%
				M4: Patents/Publications/Awards	5%	M4: Question 1	100%	0.10%
		A2: Physical Environment	16%	M1 Special Features	50%	M1: Question 1	100%	1.50%
				M2: Encroachment	50%	M2: Question 1	100%	1.50%
		A3: Physical Structures & Equipment	26%	M1: Uniqueness	30%	M1: Question 1	100%	1.50%
				M2: Depth of Application	25%	M2: Question 1	100%	1.25%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.00%
				M4 Value Utilization	25%	M4: Questions 1&2	100%	1.25%
		A4: Operational Impact	37%	M1: Current Testing in Works	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	50%	M2: Question 1	100%	3.50%
				M3: Workload Focus	30%	M3: Question 1	100%	2.10%
				M4: Future Mil Val	20%	M4: Questions 1,2&3	100%	1.40%
		A5: Synergy	11%	M1: Multiple Functions	40%	M1: Question 1	100%	0.80%
				M2: Jointness	20%	M2: Questions 1&2	100%	0.40%
				M3: Proximity	30%	M3: Question 1	100%	0.60%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	0.20%
C4: Cost	10%	A1: People	30%	M1: Education	25%	M1: Question 1	100%	0.75%
				M2: Experience	75%	M2: Question 1	100%	2.25%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publications/Awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	0%	M3: Question 1	100%	0.00%
				M4 Value Utilization	100%	M4: Questions 1&2	100%	3.00%
		A4: Operational Impact	20%	M1: Direct Warfighting Support	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	70%	M3: Question 1	100%	1.40%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Future Mil Val	30%	M4: Questions 1,2&3	100%	0.60%
		A5: Synergy	20%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	20%	M2: Questions 1&2	100%	0.40%
				M3: Proximity	80%	M3: Question 1	100%	1.60%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%

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B.4 C4ISR Research:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	32%	M1: Education	35%	M1: Question 1	100%	5.95%
				M2: Experience	35%	M2: Question 1	100%	5.95%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	30%	M4: Question 1	100%	5.10%
		A2: Physical Environment	4%	M1 Special Features	40%	M1: Question 1	100%	0.80%
				M2: Encroachment	60%	M2: Question 1	100%	1.20%
		A3: Physical Structures & Equipment	13%	M1: Uniqueness	50%	M1: Question 1	100%	3.50%
				M2: Depth of Application	10%	M2: Question 1	100%	0.70%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.40%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	1.40%
		A4: Operational Impact	28%	M1: Technology Transition	25%	M1: Question 1	100%	3.75%
				M2: Advance Tech Demos	25%	M2: Question 1	100%	3.75%
				M3: Rapid Responses	15%	M3: Question 1	100%	2.25%
				M4: Workload Focus	15%	M4: Question 1	100%	2.25%
				M5: Future Mil Val	20%	M5: Questions 1,2&3	100%	3.00%
		A5: Synergy	23%	M1: Multiple Functions	40%	M1: Question 1	100%	4.80%
				M2: Jointness	25%	M2: Questions 1&2	100%	3.00%
				M3: Proximity	25%	M3: Question 1	100%	3.00%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	1.20%
C2: Facilities	12%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	33%	M1 Special Features	40%	M1: Question 1	100%	1.60%
				M2: Encroachment	60%	M2: Question 1	100%	2.40%
		A3: Physical Structures & Equipment	67%	M1: Uniqueness	50%	M1: Question 1	100%	4.00%
				M2: Depth of Application	10%	M2: Question 1	100%	0.80%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.60%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	1.60%
		A4: Operational Impact	0%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	0%	M3: Question 1	100%	0.00%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Workload Focus	0%	M4: Question 1	100%	0.00%
				M5: Future Mil Val	0%	M5: Question 1	100%	0.00%
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	25%	A1: People	40%	M1: Education	35%	M1: Question 1	100%	3.50%
				M2: Experience	35%	M2: Question 1	100%	3.50%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/A/wards	30%	M4: Question 1	100%	3.00%
		A2: Physical Environment	4%	M1 Special Features	40%	M1: Question 1	100%	0.40%
				M2: Encroachment	60%	M2: Question 1	100%	0.60%
		A3: Physical Structures & Equipment	20%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	100%	M3: Question 1	100%	5.00%
				M4 Value Utilization	0%	M4: Question 1	100%	0.00%
		A4: Operational Impact	12%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	25%	M3: Question 1	100%	0.75%
				M4: Workload Focus	25%	M4: Question 1	100%	0.75%
				M5: Future Mil Val	50%	M5: Questions 1,2&3	100%	1.50%
		A5: Synergy	24%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	100%	M3: Question 1	100%	6.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C4: Cost	10%	A1: People	30%	M1: Education	50%	M1: Question 1	100%	1.50%
				M2: Experience	50%	M2: Question 1	100%	1.50%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publications/Awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	100%	M3: Question 1	100%	3.00%
				M4 Value Utilization	0%	M4: Question 1	100%	0.00%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A4: Operational Impact	20%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	0%	M3: Question 1	100%	0.00%
				M4: Workload Focus	60%	M4: Question 1	100%	1.20%
				M5: Future Mil Val	40%	M5: Questions 1,2&3	100%	0.80%
		A5: Synergy	20%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	100%	M3: Question 1	100%	2.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%

B.5 C4ISR D&A:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	25%	M1: Education	20%	M1: Question 1	100%	2.60%
				M2: Experience	40%	M2: Question 1	100%	5.20%
				M3: Certification	40%	M3: Questions 1 & 2	100%	5.20%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	9%	M1 Special Features	40%	M1: Question 1	100%	2.00%
				M2: Encroachment	60%	M2: Question 1	100%	3.00%
		A3: Physical Structures & Equipment	8%	M1: Uniqueness	50%	M1: Question 1	100%	2.00%
				M2: Depth of Application	10%	M2: Question 1	100%	0.40%
				M3: Value Building Conditions	20%	M3: Question 1	100%	0.80%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	0.80%
		A4: Operational Impact	40%	M1 Systems Fielded/Current & In-works	40%	M1: Questions 1&2	100%	8.40%
				M2: Rapid Responses	30%	M3: Question 1	100%	6.30%
				M3: Workload Focus	15%	M4: Question 1	100%	3.15%
				M4: Future Mil Val	15%	M5: Questions 1,2&3	100%	3.15%
		A5: Synergy	19%	M1: Multiple Functions	35%	M1: Question 1	100%	3.50%
				M2: Jointness	30%	M2: Questions 1&2	100%	3.00%
				M3: Proximity	25%	M3: Question 1	100%	2.50%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	1.00%
C2: Facilities	12%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	50%	M1 Special Features	40%	M1: Question 1	100%	2.40%
				M2: Encroachment	60%	M2: Question 1	100%	3.60%
		A3: Physical Structures & Equipment	50%	M1: Uniqueness	50%	M1: Question 1	100%	3.00%
				M2: Depth of Application	10%	M2: Question 1	100%	0.60%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.20%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	1.20%
		A4: Operational Impact	0%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	0%	M3: Question 1	100%	0.00%
				M4: Future Mil Val	0%	M4: Question 1	100%	0.00%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	25%	A1: People	20%	M1: Education	20%	M1: Question 1	100%	1.00%
				M2: Experience	40%	M2: Question 1	100%	2.00%
				M3: Certification	40%	M3: Questions 1 & 2	100%	2.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	4%	M1 Special Features	40%	M1: Question 1	100%	0.40%
				M2: Encroachment	60%	M2: Question 1	100%	0.60%
		A3: Physical Structures & Equipment	16%	M1: Uniqueness	40%	M1: Question 1	100%	1.60%
				M2: Depth of Application	20%	M2: Question 1	100%	0.80%
				M3: Value Building Conditions	20%	M3: Question 1	100%	0.80%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	0.80%
		A4: Operational Impact	36%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	50%	M2: Question 1	100%	4.50%
				M3: Workload Focus	25%	M3: Question 1	100%	2.25%
				M4: Future Mil Val	25%	M4: Questions 1,2&3	100%	2.25%
		A5: Synergy	24%	M1: Multiple Functions	35%	M1: Question 1	100%	2.10%
				M2: Jointness	30%	M2: Questions 1&2	100%	1.80%
				M3: Proximity	25%	M3: Question 1	100%	1.50%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	0.60%
C4: Cost	10%	A1: People	30%	M1: Education	50%	M1: Question 1	100%	1.50%
				M2: Experience	50%	M2: Question 1	100%	1.50%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	100%	M3: Question 1	100%	3.00%
				M4 Value Utilization	0%	M4: Question 1	100%	0.00%
		A4: Operational Impact	20%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	70%	M3: Question 1	100%	1.40%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Future Mil Val	30%	M4: Questions 1,2&3	100%	0.60%
		A5: Synergy	20%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	100%	M3: Question 1	100%	2.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%

B.6 C4ISR T&E:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	30%	M1: Education	20%	M1: Question 1	100%	3.20%
				M2: Experience	50%	M2: Question 1	100%	8.00%
				M3: Certification	30%	M3: Questions 1 & 2	100%	4.80%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	13%	M1 Special Features	40%	M1: Question 1	100%	2.80%
				M2: Encroachment	60%	M2: Question 1	100%	4.20%
		A3: Physical Structures & Equipment	9%	M1: Uniqueness	30%	M1: Question 1	100%	1.50%
				M2: Depth of Application	20%	M2: Question 1	100%	1.00%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.00%
				M4 Value Utilization	30%	M4: Questions 1&2	100%	1.50%
		A4: Operational Impact	32%	M1: Direct Warfighting Support	35%	M1: Question 1	100%	5.95%
				M2: Urgent Material Release	35%	M2: Question 1	100%	5.95%
				M3: Workload Focus	15%	M3: Question 1	100%	2.55%
				M4: Future Mil Val	15%	M4: Questions 1,2&3	100%	2.55%
		A5: Synergy	15%	M1: Multiple Functions	35%	M1: Question 1	100%	2.80%
				M2: Jointness	40%	M2: Questions 1&2	100%	3.20%
				M3: Proximity	15%	M3: Question 1	100%	1.20%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	0.80%
C2: Facilities	18%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	28%	M1 Special Features	40%	M1: Question 1	100%	2.00%
				M2: Encroachment	60%	M2: Question 1	100%	3.00%
		A3: Physical Structures & Equipment	72%	M1: Uniqueness	30%	M1: Question 1	100%	3.90%
				M2: Depth of Application	20%	M2: Question 1	100%	2.60%
				M3: Value Building Conditions	20%	M3: Question 1	100%	2.60%
				M4 Value Utilization	30%	M4: Questions 1&2	100%	3.90%
		A4: Operational Impact	0%	M1: Direct Warfighting Support	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	0%	M3: Question 1	100%	0.00%
				M4: Future Mil Val	0%	M4: Question 1	100%	0.00%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	19%	A1: People	11%	M1: Education	20%	M1: Question 1	100%	0.40%
				M2: Experience	50%	M2: Question 1	100%	1.00%
				M3: Certification	30%	M3: Questions 1 & 2	100%	0.60%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	16%	M1 Special Features	40%	M1: Question 1	100%	1.20%
				M2: Encroachment	60%	M2: Question 1	100%	1.80%
		A3: Physical Structures & Equipment	26%	M1: Uniqueness	30%	M1: Question 1	100%	1.50%
				M2: Depth of Application	20%	M2: Question 1	100%	1.00%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.00%
				M4 Value Utilization	30%	M4: Questions 1&2	100%	1.50%
		A4: Operational Impact	37%	M1: Current Testing in Works	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	25%	M2: Question 1	100%	1.75%
				M3: Workload Focus	25%	M3: Question 1	100%	1.75%
				M4: Future Mil Val	50%	M4: Questions 1,2&3	100%	3.50%
		A5: Synergy	11%	M1: Multiple Functions	35%	M1: Question 1	100%	0.70%
				M2: Jointness	40%	M2: Questions 1&2	100%	0.80%
				M3: Proximity	15%	M3: Question 1	100%	0.30%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	0.20%
C4: Cost	10%	A1: People	30%	M1: Education	25%	M1: Question 1	100%	0.75%
				M2: Experience	75%	M2: Question 1	100%	2.25%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	100%	M3: Question 1	100%	3.00%
				M4 Value Utilization	0%	M4: Question 1	100%	0.00%
		A4: Operational Impact	20%	M1: Direct Warfighting Support	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	70%	M3: Question 1	100%	1.40%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Future Mil Val	30%	M4: Questions 1,2&3	100%	0.60%
		A5: Synergy	20%	M1: Multiple Functions	35%	M1: Question 1	100%	0.70%
				M2: Jointness	40%	M2: Questions 1&2	100%	0.80%
				M3: Proximity	15%	M3: Question 1	100%	0.30%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	0.20%

B.7 Innovative Research:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	32%	M1: Education	45%	M1: Question 1	100%	7.65%
				M2: Experience	15%	M2: Question 1	100%	2.55%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	40%	M4: Question 1	100%	6.80%
		A2: Physical Environment	4%	M1 Special Features	80%	M1: Question 1	100%	1.60%
				M2: Encroachment	20%	M2: Question 1	100%	0.40%
		A3: Physical Structures & Equipment	13%	M1: Uniqueness	50%	M1: Question 1	100%	3.50%
				M2: Depth of Application	20%	M2: Question 1	100%	1.40%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.40%
				M4 Value Utilization	10%	M4: Questions 1&2	100%	0.70%
		A4: Operational Impact	28%	M1: Technology Transition	40%	M1: Question 1	100%	6.00%
				M2: Advance Tech Demos	20%	M2: Question 1	100%	3.00%
				M3: Rapid Responses	20%	M3: Question 1	100%	3.00%
				M4: Workload Focus	0%	M4: Question 1	100%	0.00%
				M5: Future Mil Val	20%	M5: Questions 1,2&3	100%	3.00%
		A5: Synergy	23%	M1: Multiple Functions	25%	M1: Question 1	100%	3.00%
				M2: Jointness	15%	M2: Questions 1&2	100%	1.80%
				M3: Proximity	35%	M3: Question 1	100%	4.20%
				M4: Dual Use Capacity	25%	M4: Question 1	100%	3.00%
C2: Facilities	12%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	33%	M1 Special Features	60%	M1: Question 1	100%	2.40%
				M2: Encroachment	40%	M2: Question 1	100%	1.60%
		A3: Physical Structures & Equipment	67%	M1: Uniqueness	40%	M1: Question 1	100%	3.20%
				M2: Depth of Application	10%	M2: Question 1	100%	0.80%
				M3: Value Building Conditions	30%	M3: Question 1	100%	2.40%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	1.60%
		A4: Operational Impact	0%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	0%	M3: Question 1	100%	0.00%

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Workload Focus	0%	M4: Question 1	100%	0.00%
				M5: Future Mil Val	0%	M5: Question 1	100%	0.00%
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	25%	A1: People	40%	M1: Education	40%	M1: Question 1	100%	4.00%
				M2: Experience	10%	M2: Question 1	100%	1.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	50%	M4: Question 1	100%	5.00%
		A2: Physical Environment	4%	M1 Special Features	10%	M1: Question 1	100%	0.10%
				M2: Encroachment	90%	M2: Question 1	100%	0.90%
		A3: Physical Structures & Equipment	20%	M1: Uniqueness	50%	M1: Question 1	100%	2.50%
				M2: Depth of Application	10%	M2: Question 1	100%	0.50%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.00%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	1.00%
		A4: Operational Impact	12%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	25%	M3: Question 1	100%	0.75%
				M4: Workload Focus	25%	M4: Question 1	100%	0.75%
				M5: Future Mil Val	50%	M5: Questions 1,2&3	100%	1.50%
		A5: Synergy	24%	M1: Multiple Functions	25%	M1: Question 1	100%	1.50%
				M2: Jointness	15%	M2: Questions 1&2	100%	0.90%
				M3: Proximity	35%	M3: Question 1	100%	2.10%
				M4: Dual Use Capacity	25%	M4: Question 1	100%	1.50%
C4: Cost	10%	A1: People	30%	M1: Education	50%	M1: Question 1	100%	1.50%
				M2: Experience	50%	M2: Question 1	100%	1.50%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	0%	M3: Question 1	100%	0.00%
				M4 Value Utilization	100%	M4: Questions 1&2	100%	3.00%

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A4: Operational Impact	20%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	0%	M3: Question 1	100%	0.00%
				M4: Workload Focus	70%	M4: Question 1	100%	1.40%
				M5: Future Mil Val	30%	M5: Questions 1,2&3	100%	0.60%
		A5: Synergy	20%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	100%	M3: Question 1	100%	2.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%

B.8 Innovative D&A:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	25%	M1: Education	20%	M1: Question 1	100%	2.60%
				M2: Experience	40%	M2: Question 1	100%	5.20%
				M3: Certification	30%	M3: Questions 1&2	100%	3.90%
				M4: Patents/Publication/awards	10%	M4: Question 1	100%	1.30%
		A2: Physical Environment	9%	M1 Special Features	50%	M1: Question 1	100%	2.50%
				M2: Encroachment	50%	M2: Question 1	100%	2.50%
		A3: Physical Structures & Equipment	8%	M1: Uniqueness	25%	M1: Question 1	100%	1.00%
				M2: Depth of Application	40%	M2: Question 1	100%	1.60%
				M3: Value Building Conditions	15%	M3: Question 1	100%	0.60%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	0.80%
		A4: Operational Impact	40%	M1 Systems Fielded/Current & In-works	50%	M1: Questions 1&2	100%	10.50%
				M2: Rapid Responses	20%	M3: Question 1	100%	4.20%
				M3: Workload Focus	15%	M4: Question 1	100%	3.15%
				M4: Future Mil Val	15%	M5: Questions 1,2&3	100%	3.15%
		A5: Synergy	19%	M1: Multiple Functions	30%	M1: Question 1	100%	3.00%
				M2: Jointness	30%	M2: Questions 1&2	100%	3.00%
				M3: Proximity	30%	M3: Question 1	100%	3.00%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	1.00%
C2: Facilities	12%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	50%	M1 Special Features	70%	M1: Question 1	100%	4.20%
				M2: Encroachment	30%	M2: Question 1	100%	1.80%
		A3: Physical Structures & Equipment	50%	M1: Uniqueness	40%	M1: Question 1	100%	2.40%
				M2: Depth of Application	25%	M2: Question 1	100%	1.50%
				M3: Value Building Conditions	15%	M3: Question 1	100%	0.90%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	1.20%
		A4: Operational Impact	0%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	0%	M3: Question 1	100%	0.00%
				M4: Future Mil Val	0%	M4: Question 1	100%	0.00%

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	25%	A1: People	20%	M1: Education	40%	M1: Question 1	100%	2.00%
				M2: Experience	40%	M2: Question 1	100%	2.00%
				M3: Certification	10%	M3: Questions 1&2	100%	0.50%
				M4: Patents/Publication/awards	10%	M4: Question 1	100%	0.50%
		A2: Physical Environment	4%	M1 Special Features	10%	M1: Question 1	100%	0.10%
				M2: Encroachment	90%	M2: Question 1	100%	0.90%
		A3: Physical Structures & Equipment	16%	M1: Uniqueness	40%	M1: Question 1	100%	1.60%
				M2: Depth of Application	20%	M2: Question 1	100%	0.80%
				M3: Value Building Conditions	20%	M3: Question 1	100%	0.80%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	0.80%
		A4: Operational Impact	36%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	25%	M3: Question 1	100%	2.25%
				M4: Future Mil Val	75%	M4: Questions 1,2&3	100%	6.75%
		A5: Synergy	24%	M1: Multiple Functions	40%	M1: Question 1	100%	2.40%
				M2: Jointness	20%	M2: Questions 1&2	100%	1.20%
				M3: Proximity	20%	M3: Question 1	100%	1.20%
				M4: Dual Use Capacity	20%	M4: Question 1	100%	1.20%
C4: Cost	10%	A1: People	30%	M1: Education	50%	M1: Question 1	100%	1.50%
				M2: Experience	50%	M2: Question 1	100%	1.50%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	100%	M3: Question 1	100%	3.00%
				M4 Value Utilization	0%	M4: Question 1	100%	0.00%
		A4: Operational Impact	20%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	100%	M3: Question 1	100%	2.00%

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Future Mil Val	0%	M4: Question 1	100%	0.00%
		A5: Synergy	20%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	100%	M3: Question 1	100%	2.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%

B.9 Innovative T&E:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	30%	M1: Education	40%	M1: Question 1	100%	6.40%
				M2: Experience	42%	M2: Question 1	100%	6.72%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	18%	M4: Question 1	100%	2.88%
		A2: Physical Environment	13%	M1 Special Features	60%	M1: Question 1	100%	4.20%
				M2: Encroachment	40%	M2: Question 1	100%	2.80%
		A3: Physical Structures & Equipment	9%	M1: Uniqueness	40%	M1: Question 1	100%	2.00%
				M2: Depth of Application	10%	M2: Question 1	100%	0.50%
				M3: Value Building Conditions	15%	M3: Question 1	100%	0.75%
				M4 Value Utilization	35%	M4: Questions 1&2	100%	1.75%
		A4: Operational Impact	32%	M1: Direct Warfighting Support	35%	M1: Question 1	100%	5.95%
				M2: Urgent Material Release	35%	M2: Question 1	100%	5.95%
				M3: Workload Focus	15%	M3: Question 1	100%	2.55%
				M4: Future Mil Val	15%	M4: Questions 1,2&3	100%	2.55%
		A5: Synergy	15%	M1: Multiple Functions	35%	M1: Question 1	100%	2.80%
				M2: Jointness	30%	M2: Questions 1&2	100%	2.40%
				M3: Proximity	20%	M3: Question 1	100%	1.60%
				M4: Dual Use Capacity	15%	M4: Question 1	100%	1.20%
C2: Facilities	18%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	28%	M1 Special Features	50%	M1: Question 1	100%	2.50%
				M2: Encroachment	50%	M2: Question 1	100%	2.50%
		A3: Physical Structures & Equipment	72%	M1: Uniqueness	40%	M1: Question 1	100%	5.20%
				M2: Depth of Application	25%	M2: Question 1	100%	3.25%
				M3: Value Building Conditions	15%	M3: Question 1	100%	1.95%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	2.60%
		A4: Operational Impact	0%	M1: Direct Warfighting Support	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	0%	M3: Question 1	100%	0.00%
				M4: Future Mil Val	0%	M4: Question 1	100%	0.00%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	19%	A1: People	11%	M1: Education	25%	M1: Question 1	100%	0.50%
				M2: Experience	75%	M2: Question 1	100%	1.50%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	16%	M1 Special Features	50%	M1: Question 1	100%	1.50%
				M2: Encroachment	50%	M2: Question 1	100%	1.50%
		A3: Physical Structures & Equipment	26%	M1: Uniqueness	35%	M1: Question 1	100%	1.75%
				M2: Depth of Application	15%	M2: Question 1	100%	0.75%
				M3: Value Building Conditions	40%	M3: Question 1	100%	2.00%
				M4 Value Utilization	10%	M4: Questions 1&2	100%	0.50%
		A4: Operational Impact	37%	M1: Current Testing in Works	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	30%	M2: Question 1	100%	2.10%
				M3: Workload Focus	20%	M3: Question 1	100%	1.40%
				M4: Future Mil Val	50%	M4: Questions 1,2&3	100%	3.50%
		A5: Synergy	11%	M1: Multiple Functions	40%	M1: Question 1	100%	0.80%
				M2: Jointness	35%	M2: Questions 1&2	100%	0.70%
				M3: Proximity	15%	M3: Question 1	100%	0.30%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	0.20%
C4: Cost	10%	A1: People	30%	M1: Education	20%	M1: Question 1	100%	0.60%
				M2: Experience	50%	M2: Question 1	100%	1.50%
				M3: Certification	30%	M3: Questions 1&2	100%	0.90%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	30%	M1: Question 1	100%	0.90%
				M2: Depth of Application	30%	M2: Question 1	100%	0.90%
				M3: Value Building Conditions	15%	M3: Question 1	100%	0.45%
				M4 Value Utilization	25%	M4: Questions 1&2	100%	0.75%
		A4: Operational Impact	20%	M1: Direct Warfighting Support	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	100%	M3: Question 1	100%	2.00%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Future Mil Val	0%	M4: Question 1	100%	0.00%
		A5: Synergy	20%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	100%	M3: Question 1	100%	2.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%

B.10 Weapons & Armaments Research:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	32%	M1: Education	40%	M1: Question 1	100%	6.80%
				M2: Experience	36%	M2: Question 1	100%	6.12%
				M3: Certification	6%	M3: Questions 1 & 2	100%	1.02%
				M4: Patents/Publication/awards	18%	M4: Question 1	100%	3.06%
		A2: Physical Environment	4%	M1 Special Features	50%	M1: Question 1	100%	1.00%
				M2: Encroachment	50%	M2: Question 1	100%	1.00%
		A3: Physical Structures & Equipment	13%	M1: Uniqueness	28%	M1: Question 1	100%	1.96%
				M2: Depth of Application	30%	M2: Question 1	100%	2.10%
				M3: Value Building Conditions	15%	M3: Question 1	100%	1.05%
				M4 Value Utilization	27%	M4: Questions 1&2	100%	1.89%
		A4: Operational Impact	28%	M1: Technology Transition	28%	M1: Question 1	100%	4.20%
				M2: Advance Tech Demos	18%	M2: Question 1	100%	2.70%
				M3: Rapid Responses	21%	M3: Question 1	100%	3.15%
				M4: Workload Focus	18%	M4: Question 1	100%	2.70%
				M5: Future Mil Val	15%	M5: Questions 1,2&3	100%	2.25%
		A5: Synergy	23%	M1: Multiple Functions	30%	M1: Question 1	100%	3.60%
				M2: Jointness	25%	M2: Questions 1&2	100%	3.00%
				M3: Proximity	20%	M3: Question 1	100%	2.40%
				M4: Dual Use Capacity	25%	M4: Question 1	100%	3.00%
C2: Facilities	12%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	33%	M1 Special Features	45%	M1: Question 1	100%	1.80%
				M2: Encroachment	55%	M2: Question 1	100%	2.20%
		A3: Physical Structures & Equipment	67%	M1: Uniqueness	28%	M1: Question 1	100%	2.24%
				M2: Depth of Application	30%	M2: Question 1	100%	2.40%
				M3: Value Building Conditions	15%	M3: Question 1	100%	1.20%
				M4 Value Utilization	27%	M4: Questions 1&2	100%	2.16%
		A4: Operational Impact	0%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	0%	M3: Question 1	100%	0.00%

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Workload Focus	0%	M4: Question 1	100%	0.00%
				M5: Future Mil Val	0%	M5: Question 1	100%	0.00%
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	25%	A1: People	40%	M1: Education	40%	M1: Question 1	100%	4.00%
				M2: Experience	36%	M2: Question 1	100%	3.60%
				M3: Certification	6%	M3: Questions 1 & 2	100%	0.60%
				M4: Patents/Publication/awards	18%	M4: Question 1	100%	1.80%
		A2: Physical Environment	4%	M1 Special Features	45%	M1: Question 1	100%	0.45%
				M2: Encroachment	55%	M2: Question 1	100%	0.55%
		A3: Physical Structures & Equipment	20%	M1: Uniqueness	28%	M1: Question 1	100%	1.40%
				M2: Depth of Application	30%	M2: Question 1	100%	1.50%
				M3: Value Building Conditions	15%	M3: Question 1	100%	0.75%
				M4 Value Utilization	27%	M4: Questions 1&2	100%	1.35%
		A4: Operational Impact	12%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	30%	M3: Question 1	100%	0.90%
				M4: Workload Focus	30%	M4: Question 1	100%	0.90%
				M5: Future Mil Val	40%	M5: Questions 1,2&3	100%	1.20%
		A5: Synergy	24%	M1: Multiple Functions	30%	M1: Question 1	100%	1.80%
				M2: Jointness	25%	M2: Questions 1&2	100%	1.50%
				M3: Proximity	20%	M3: Question 1	100%	1.20%
				M4: Dual Use Capacity	25%	M4: Question 1	100%	1.50%
C4: Cost	10%	A1: People	30%	M1: Education	50%	M1: Question 1	100%	1.50%
				M2: Experience	50%	M2: Question 1	100%	1.50%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	20%	M3: Question 1	100%	0.60%
				M4 Value Utilization	80%	M4: Questions 1&2	100%	2.40%

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A4: Operational Impact	20%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	0%	M3: Question 1	100%	0.00%
				M4: Workload Focus	60%	M4: Question 1	100%	1.20%
				M5: Future Mil Val	40%	M5: Questions 1,2&3	100%	0.80%
		A5: Synergy	20%	M1: Multiple Functions	25%	M1: Question 1	100%	0.50%
				M2: Jointness	20%	M2: Questions 1&2	100%	0.40%
				M3: Proximity	30%	M3: Question 1	100%	0.60%
				M4: Dual Use Capacity	25%	M4: Question 1	100%	0.50%

B.11 Weapons & Armaments D&A:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	25%	M1: Education	30%	M1: Question 1	100%	3.90%
				M2: Experience	42%	M2: Question 1	100%	5.46%
				M3: Certification	18%	M3: Questions 1 & 2	100%	2.34%
				M4: Patents/Publication/awards	10%	M4: Question 1	100%	1.30%
		A2: Physical Environment	9%	M1 Special Features	50%	M1: Question 1	100%	2.50%
				M2: Encroachment	50%	M2: Question 1	100%	2.50%
		A3: Physical Structures & Equipment	8%	M1: Uniqueness	28%	M1: Question 1	100%	1.12%
				M2: Depth of Application	30%	M2: Question 1	100%	1.20%
				M3: Value Building Conditions	15%	M3: Question 1	100%	0.60%
				M4 Value Utilization	27%	M4: Questions 1&2	100%	1.08%
		A4: Operational Impact	40%	M1 Systems Fielded/Current & In-works	35%	M1: Questions 1&2	100%	7.35%
				M2: Rapid Responses	30%	M3: Question 1	100%	6.30%
				M3: Workload Focus	20%	M4: Question 1	100%	4.20%
				M4: Future Mil Val	15%	M5: Questions 1,2&3	100%	3.15%
		A5: Synergy	19%	M1: Multiple Functions	30%	M1: Question 1	100%	3.00%
				M2: Jointness	25%	M2: Questions 1&2	100%	2.50%
				M3: Proximity	20%	M3: Question 1	100%	2.00%
				M4: Dual Use Capacity	25%	M4: Question 1	100%	2.50%
C2: Facilities	12%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	50%	M1 Special Features	45%	M1: Question 1	100%	2.70%
				M2: Encroachment	55%	M2: Question 1	100%	3.30%
		A3: Physical Structures & Equipment	50%	M1: Uniqueness	28%	M1: Question 1	100%	1.68%
				M2: Depth of Application	30%	M2: Question 1	100%	1.80%
				M3: Value Building Conditions	15%	M3: Question 1	100%	0.90%
				M4 Value Utilization	27%	M4: Questions 1&2	100%	1.62%
		A4: Operational Impact	0%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	0%	M3: Question 1	100%	0.00%
				M4: Future Mil Val	0%	M4: Question 1	100%	0.00%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	25%	A1: People	20%	M1: Education	30%	M1: Question 1	100%	1.50%
				M2: Experience	42%	M2: Question 1	100%	2.10%
				M3: Certification	18%	M3: Questions 1 & 2	100%	0.90%
				M4: Patents/Publication/awards	10%	M4: Question 1	100%	0.50%
		A2: Physical Environment	4%	M1 Special Features	45%	M1: Question 1	100%	0.45%
				M2: Encroachment	55%	M2: Question 1	100%	0.55%
		A3: Physical Structures & Equipment	16%	M1: Uniqueness	28%	M1: Question 1	100%	1.12%
				M2: Depth of Application	30%	M2: Question 1	100%	1.20%
				M3: Value Building Conditions	15%	M3: Question 1	100%	0.60%
				M4 Value Utilization	27%	M4: Questions 1&2	100%	1.08%
		A4: Operational Impact	36%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	40%	M3: Question 1	100%	3.60%
				M4: Future Mil Val	60%	M4: Questions 1,2&3	100%	5.40%
		A5: Synergy	24%	M1: Multiple Functions	30%	M1: Question 1	100%	1.80%
				M2: Jointness	25%	M2: Questions 1&2	100%	1.50%
				M3: Proximity	20%	M3: Question 1	100%	1.20%
				M4: Dual Use Capacity	25%	M4: Question 1	100%	1.50%
C4: Cost	10%	A1: People	30%	M1: Education	50%	M1: Question 1	100%	1.50%
				M2: Experience	50%	M2: Question 1	100%	1.50%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	20%	M3: Question 1	100%	0.60%
				M4 Value Utilization	80%	M4: Questions 1&2	100%	2.40%
		A4: Operational Impact	20%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	60%	M3: Question 1	100%	1.20%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Future Mil Val	40%	M4: Questions 1,2&3	100%	0.80%
		A5: Synergy	20%	M1: Multiple Functions	25%	M1: Question 1	100%	0.50%
				M2: Jointness	20%	M2: Questions 1&2	100%	0.40%
				M3: Proximity	30%	M3: Question 1	100%	0.60%
				M4: Dual Use Capacity	25%	M4: Question 1	100%	0.50%

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B.12 Weapons & Armaments T&E:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	30%	M1: Education	25%	M1: Question 1	100%	4.00%
				M2: Experience	50%	M2: Question 1	100%	8.00%
				M3: Certification	21%	M3: Questions 1 & 2	100%	3.36%
				M4: Patents/Publication/awards	4%	M4: Question 1	100%	0.64%
		A2: Physical Environment	13%	M1 Special Features	50%	M1: Question 1	100%	3.50%
				M2: Encroachment	50%	M2: Question 1	100%	3.50%
		A3: Physical Structures & Equipment	9%	M1: Uniqueness	28%	M1: Question 1	100%	1.40%
				M2: Depth of Application	30%	M2: Question 1	100%	1.50%
				M3: Value Building Conditions	15%	M3: Question 1	100%	0.75%
				M4 Value Utilization	27%	M4: Questions 1&2	100%	1.35%
		A4: Operational Impact	32%	M1: Direct Warfighting Support	35%	M1: Question 1	100%	5.95%
				M2: Urgent Material Release	25%	M2: Question 1	100%	4.25%
				M3: Workload Focus	25%	M3: Question 1	100%	4.25%
				M4: Future Mil Val	15%	M4: Questions 1,2&3	100%	2.55%
		A5: Synergy	15%	M1: Multiple Functions	30%	M1: Question 1	100%	2.40%
				M2: Jointness	25%	M2: Questions 1&2	100%	2.00%
				M3: Proximity	20%	M3: Question 1	100%	1.60%
				M4: Dual Use Capacity	25%	M4: Question 1	100%	2.00%
C2: Facilities	18%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	44%	M1 Special Features	45%	M1: Question 1	100%	3.60%
				M2: Encroachment	55%	M2: Question 1	100%	4.40%
		A3: Physical Structures & Equipment	56%	M1: Uniqueness	28%	M1: Question 1	100%	2.80%
				M2: Depth of Application	30%	M2: Question 1	100%	3.00%
				M3: Value Building Conditions	15%	M3: Question 1	100%	1.50%
				M4 Value Utilization	27%	M4: Questions 1&2	100%	2.70%
		A4: Operational Impact	0%	M1: Direct Warfighting Support	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	0%	M3: Question 1	100%	0.00%
				M4: Future Mil Val	0%	M4: Question 1	100%	0.00%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	19%	A1: People	11%	M1: Education	25%	M1: Question 1	100%	0.50%
				M2: Experience	50%	M2: Question 1	100%	1.00%
				M3: Certification	21%	M3: Questions 1 & 2	100%	0.42%
				M4: Patents/Publication/awards	4%	M4: Question 1	100%	0.08%
		A2: Physical Environment	16%	M1 Special Features	45%	M1: Question 1	100%	1.35%
				M2: Encroachment	55%	M2: Question 1	100%	1.65%
		A3: Physical Structures & Equipment	26%	M1: Uniqueness	28%	M1: Question 1	100%	1.40%
				M2: Depth of Application	30%	M2: Question 1	100%	1.50%
				M3: Value Building Conditions	15%	M3: Question 1	100%	0.75%
				M4 Value Utilization	27%	M4: Questions 1&2	100%	1.35%
		A4: Operational Impact	37%	M1: Current Testing in Works	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	40%	M2: Question 1	100%	2.80%
				M3: Workload Focus	30%	M3: Question 1	100%	2.10%
				M4: Future Mil Val	30%	M4: Questions 1,2&3	100%	2.10%
		A5: Synergy	11%	M1: Multiple Functions	30%	M1: Question 1	100%	0.60%
				M2: Jointness	25%	M2: Questions 1&2	100%	0.50%
				M3: Proximity	20%	M3: Question 1	100%	0.40%
				M4: Dual Use Capacity	25%	M4: Question 1	100%	0.50%
C4: Cost	10%	A1: People	30%	M1: Education	25%	M1: Question 1	100%	0.75%
				M2: Experience	75%	M2: Question 1	100%	2.25%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	20%	M3: Question 1	100%	0.60%
				M4 Value Utilization	80%	M4: Questions 1&2	100%	2.40%
		A4: Operational Impact	20%	M1: Direct Warfighting Support	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	60%	M3: Question 1	100%	1.20%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Future Mil Val	40%	M4: Questions 1,2&3	100%	0.80%
		A5: Synergy	20%	M1: Multiple Functions	25%	M1: Question 1	100%	0.50%
				M2: Jointness	20%	M2: Questions 1&2	100%	0.40%
				M3: Proximity	30%	M3: Question 1	100%	0.60%
				M4: Dual Use Capacity	25%	M4: Question 1	100%	0.50%

B.13 Enabling Research:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	32%	M1: Education	35%	M1: Question 1	100%	5.95%
				M2: Experience	25%	M2: Question 1	100%	4.25%
				M3: Certification	15%	M3: Questions 1&2	100%	2.55%
				M4: Patents/Publication/awards	25%	M4: Question 1	100%	4.25%
		A2: Physical Environment	4%	M1 Special Features	100%	M1: Question 1	100%	2.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	13%	M1: Uniqueness	40%	M1: Question 1	100%	2.80%
				M2: Depth of Application	20%	M2: Question 1	100%	1.40%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.40%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	1.40%
		A4: Operational Impact	28%	M1: Technology Transition	30%	M1: Question 1	100%	4.50%
				M2: Advance Tech Demos	30%	M2: Question 1	100%	4.50%
				M3: Rapid Responses	20%	M3: Question 1	100%	3.00%
				M4: Workload Focus	10%	M4: Question 1	100%	1.50%
				M5: Future Mil Val	10%	M5: Questions 1,2&3	100%	1.50%
		A5: Synergy	23%	M1: Multiple Functions	40%	M1: Question 1	100%	4.80%
				M2: Jointness	20%	M2: Questions 1&2	100%	2.40%
				M3: Proximity	30%	M3: Question 1	100%	3.60%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	1.20%
C2: Facilities	12%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	33%	M1 Special Features	90%	M1: Question 1	100%	3.60%
				M2: Encroachment	10%	M2: Question 1	100%	0.40%
		A3: Physical Structures & Equipment	67%	M1: Uniqueness	40%	M1: Question 1	100%	3.20%
				M2: Depth of Application	20%	M2: Question 1	100%	1.60%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.60%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	1.60%
		A4: Operational Impact	0%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	0%	M3: Question 1	100%	0.00%

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Workload Focus	0%	M4: Question 1	100%	0.00%
				M5: Future Mil Val	0%	M5: Question 1	100%	0.00%
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	25%	A1: People	40%	M1: Education	30%	M1: Question 1	100%	3.00%
				M2: Experience	40%	M2: Question 1	100%	4.00%
				M3: Certification	10%	M3: Questions 1& 2	100%	1.00%
				M4: Patents/Publication/awards	20%	M4: Question 1	100%	2.00%
		A2: Physical Environment	4%	M1 Special Features	100%	M1: Question 1	100%	1.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	20%	M1: Uniqueness	40%	M1: Question 1	100%	2.00%
				M2: Depth of Application	20%	M2: Question 1	100%	1.00%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.00%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	1.00%
		A4: Operational Impact	12%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	40%	M3: Question 1	100%	1.20%
				M4: Workload Focus	25%	M4: Question 1	100%	0.75%
				M5: Future Mil Val	35%	M5: Questions 1,2&3	100%	1.05%
		A5: Synergy	24%	M1: Multiple Functions	40%	M1: Question 1	100%	2.40%
				M2: Jointness	20%	M2: Questions 1&2	100%	1.20%
				M3: Proximity	30%	M3: Question 1	100%	1.80%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	0.60%
C4: Cost	10%	A1: People	30%	M1: Education	45%	M1: Question 1	100%	1.35%
				M2: Experience	55%	M2: Question 1	100%	1.65%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	100%	M3: Question 1	100%	3.00%
				M4 Value Utilization	0%	M4: Question 1	100%	0.00%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A4: Operational Impact	20%	M1: Technology Transition	0%	M1: Question 1	100%	0.00%
				M2: Advance Tech Demos	0%	M2: Question 1	100%	0.00%
				M3: Rapid Responses	0%	M3: Question 1	100%	0.00%
				M4: Workload Focus	60%	M4: Question 1	100%	1.20%
				M5: Future Mil Val	40%	M5: Questions 1,2&3	100%	0.80%
		A5: Synergy	20%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	100%	M3: Question 1	100%	2.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%

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B.14 Enabling D&A:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	25%	M1: Education	25%	M1: Question 1	100%	3.25%
				M2: Experience	35%	M2: Question 1	100%	4.55%
				M3: Certification	25%	M3: Questions 1&2	100%	3.25%
				M4: Patents/Publication/awards	15%	M4: Question 1	100%	1.95%
		A2: Physical Environment	9%	M1 Special Features	85%	M1: Question 1	100%	4.25%
				M2: Encroachment	15%	M2: Question 1	100%	0.75%
		A3: Physical Structures & Equipment	8%	M1: Uniqueness	40%	M1: Question 1	100%	1.60%
				M2: Depth of Application	20%	M2: Question 1	100%	0.80%
				M3: Value Building Conditions	20%	M3: Question 1	100%	0.80%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	0.80%
		A4: Operational Impact	40%	M1 Systems Fielded/Current & In-works	40%	M1: Questions 1&2	100%	8.40%
				M2: Rapid Responses	40%	M3: Question 1	100%	8.40%
				M3: Workload Focus	10%	M4: Question 1	100%	2.10%
				M4: Future Mil Val	10%	M5: Questions 1,2&3	100%	2.10%
		A5: Synergy	19%	M1: Multiple Functions	30%	M1: Question 1	100%	3.00%
				M2: Jointness	30%	M2: Questions 1&2	100%	3.00%
				M3: Proximity	30%	M3: Question 1	100%	3.00%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	1.00%
C2: Facilities	12%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	50%	M1 Special Features	90%	M1: Question 1	100%	5.40%
				M2: Encroachment	10%	M2: Question 1	100%	0.60%
		A3: Physical Structures & Equipment	50%	M1: Uniqueness	40%	M1: Question 1	100%	2.40%
				M2: Depth of Application	20%	M2: Question 1	100%	1.20%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.20%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	1.20%
		A4: Operational Impact	0%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	0%	M3: Question 1	100%	0.00%
				M4: Future Mil Val	0%	M4: Question 1	100%	0.00%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	25%	A1: People	20%	M1: Education	25%	M1: Question 1	100%	1.25%
				M2: Experience	35%	M2: Question 1	100%	1.75%
				M3: Certification	25%	M3: Questions 1&2	100%	1.25%
				M4: Patents/Publication/awards	15%	M4: Question 1	100%	0.75%
		A2: Physical Environment	4%	M1 Special Features	85%	M1: Question 1	100%	0.85%
				M2: Encroachment	15%	M2: Question 1	100%	0.15%
		A3: Physical Structures & Equipment	16%	M1: Uniqueness	40%	M1: Question 1	100%	1.60%
				M2: Depth of Application	20%	M2: Question 1	100%	0.80%
				M3: Value Building Conditions	20%	M3: Question 1	100%	0.80%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	0.80%
		A4: Operational Impact	36%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	30%	M3: Question 1	100%	2.70%
				M4: Future Mil Val	70%	M4: Questions 1,2&3	100%	6.30%
		A5: Synergy	24%	M1: Multiple Functions	30%	M1: Question 1	100%	1.80%
				M2: Jointness	30%	M2: Questions 1&2	100%	1.80%
				M3: Proximity	30%	M3: Question 1	100%	1.80%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	0.60%
C4: Cost	10%	A1: People	30%	M1: Education	45%	M1: Question 1	100%	1.35%
				M2: Experience	55%	M2: Question 1	100%	1.65%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	100%	M3: Question 1	100%	3.00%
				M4 Value Utilization	0%	M4: Question 1	100%	0.00%
		A4: Operational Impact	20%	M1 Systems Fielded/Current & In-works	0%	M1: Question 1	100%	0.00%
				M2: Rapid Responses	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	70%	M3: Question 1	100%	1.40%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Future Mil Val	30%	M4: Questions 1,2&3	100%	0.60%
		A5: Synergy	20%	M1: Multiple Functions	40%	M1: Question 1	100%	0.80%
				M2: Jointness	20%	M2: Questions 1&2	100%	0.40%
				M3: Proximity	30%	M3: Question 1	100%	0.60%
				M4: Dual Use Capacity	10%	M4: Question 1	100%	0.20%

B.15 Enabling T&E:

Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
C1: Mission	53%	A1: People	30%	M1: Education	25%	M1: Question 1	100%	4.00%
				M2: Experience	40%	M2: Question 1	100%	6.40%
				M3: Certification	25%	M3: Questions 1&2	100%	4.00%
				M4: Patents/Publication/awards	10%	M4: Question 1	100%	1.60%
		A2: Physical Environment	13%	M1 Special Features	80%	M1: Question 1	100%	5.60%
				M2: Encroachment	20%	M2: Question 1	100%	1.40%
		A3: Physical Structures & Equipment	9%	M1: Uniqueness	40%	M1: Question 1	100%	2.00%
				M2: Depth of Application	20%	M2: Question 1	100%	1.00%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.00%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	1.00%
		A4: Operational Impact	32%	M1: Direct Warfighting Support	40%	M1: Question 1	100%	6.80%
				M2: Urgent Material Release	40%	M2: Question 1	100%	6.80%
				M3: Workload Focus	10%	M3: Question 1	100%	1.70%
				M4: Future Mil Val	10%	M4: Questions 1,2&3	100%	1.70%
		A5: Synergy	15%	M1: Multiple Functions	30%	M1: Question 1	100%	2.40%
				M2: Jointness	30%	M2: Questions 1&2	100%	2.40%
				M3: Proximity	20%	M3: Question 1	100%	1.60%
				M4: Dual Use Capacity	20%	M4: Question 1	100%	1.60%
C2: Facilities	18%	A1: People	0%	M1: Education	0%	M1: Question 1	100%	0.00%
				M2: Experience	0%	M2: Question 1	100%	0.00%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	28%	M1 Special Features	80%	M1: Question 1	100%	4.00%
				M2: Encroachment	20%	M2: Question 1	100%	1.00%
		A3: Physical Structures & Equipment	72%	M1: Uniqueness	40%	M1: Question 1	100%	5.20%
				M2: Depth of Application	20%	M2: Question 1	100%	2.60%
				M3: Value Building Conditions	20%	M3: Question 1	100%	2.60%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	2.60%
		A4: Operational Impact	0%	M1: Direct Warfighting Support	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	0%	M3: Question 1	100%	0.00%
				M4: Future Mil Val	0%	M4: Question 1	100%	0.00%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
		A5: Synergy	0%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	0%	M3: Question 1	100%	0.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%
C3: Contingency	19%	A1: People	11%	M1: Education	25%	M1: Question 1	100%	0.50%
				M2: Experience	40%	M2: Question 1	100%	0.80%
				M3: Certification	25%	M3: Questions 1&2	100%	0.50%
				M4: Patents/Publication/awards	10%	M4: Question 1	100%	0.20%
		A2: Physical Environment	16%	M1 Special Features	80%	M1: Question 1	100%	2.40%
				M2: Encroachment	20%	M2: Question 1	100%	0.60%
		A3: Physical Structures & Equipment	26%	M1: Uniqueness	40%	M1: Question 1	100%	2.00%
				M2: Depth of Application	20%	M2: Question 1	100%	1.00%
				M3: Value Building Conditions	20%	M3: Question 1	100%	1.00%
				M4 Value Utilization	20%	M4: Questions 1&2	100%	1.00%
		A4: Operational Impact	37%	M1: Current Testing in Works	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	30%	M2: Question 1	100%	2.10%
				M3: Workload Focus	25%	M3: Question 1	100%	1.75%
				M4: Future Mil Val	45%	M4: Questions 1,2&3	100%	3.15%
		A5: Synergy	11%	M1: Multiple Functions	30%	M1: Question 1	100%	0.60%
				M2: Jointness	30%	M2: Questions 1&2	100%	0.60%
				M3: Proximity	20%	M3: Question 1	100%	0.40%
				M4: Dual Use Capacity	20%	M4: Question 1	100%	0.40%
C4: Cost	10%	A1: People	30%	M1: Education	45%	M1: Question 1	100%	1.35%
				M2: Experience	55%	M2: Question 1	100%	1.65%
				M3: Certification	0%	M3: Question 1	100%	0.00%
				M4: Patents/Publication/awards	0%	M4: Question 1	100%	0.00%
		A2: Physical Environment	0%	M1 Special Features	0%	M1: Question 1	100%	0.00%
				M2: Encroachment	0%	M2: Question 1	100%	0.00%
		A3: Physical Structures & Equipment	30%	M1: Uniqueness	0%	M1: Question 1	100%	0.00%
				M2: Depth of Application	0%	M2: Question 1	100%	0.00%
				M3: Value Building Conditions	100%	M3: Question 1	100%	3.00%
				M4 Value Utilization	0%	M4: Question 1	100%	0.00%
		A4: Operational Impact	20%	M1: Direct Warfighting Support	0%	M1: Question 1	100%	0.00%
				M2: Urgent Material Release	0%	M2: Question 1	100%	0.00%
				M3: Workload Focus	70%	M3: Question 1	100%	1.40%

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Criteria		Attributes		Metrics		Questions		
Name	Weight	Name	Weight	Name	Weight	Name	Weight	Points
				M4: Future Mil Val	30%	M4: Questions 1,2&3	100%	0.60%
		A5: Synergy	20%	M1: Multiple Functions	0%	M1: Question 1	100%	0.00%
				M2: Jointness	0%	M2: Question 1	100%	0.00%
				M3: Proximity	100%	M3: Question 1	100%	2.00%
				M4: Dual Use Capacity	0%	M4: Question 1	100%	0.00%

TECHNICAL

JOINT CROSS SERVICE GROUP

Military Value Analysis Report

Transformation Through Base Realignment and Closure

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Technical Joint Cross Service Group

Military Value Analysis Report

Section 1 Introduction

This report responds to a memorandum dated December 23, 2003 from the Acting Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) as the Chairman of the Infrastructure Steering Group (ISG). This report, from the Technical JCSG (TJCSG) to the Infrastructure Steering Group, summarizes the approach proposed for determining the military value of DoD technical facilities relative to each of three technical functions. The product of the answers to the questions supporting the proposed approach will be 39 lists of technical facilities ordered by their military value.

This report provides for each technical function:

- Selection Criteria, the weighting of each criterion, and a rationale for the criteria a weighting scheme
- Attributes corresponding to each of the four military value selection criterion, the weighting of each attribute, and a rationale for the attributes weighting scheme
- Metrics used in quantitatively measuring the military value of each attribute, the weighting for each metric, and a rationale for the metrics weighting scheme
- Questions whose answers quantify each metric and the weighting of each question towards computing the quantitative value of the metric the question supports.

1.1 Military Value, Technical Facilities, Technical Capability Areas & Technical Functions

The TJCSG is tasked to determine the military value of technical facilities in each of three functions. The technical functions are research (R), development & acquisition (D&A), test & evaluation (T&E), commonly referred to as Research, Development, Test and Evaluation (RDT&E).

The Research function includes Basic Research, Exploratory Development, and Advanced Development. The D&A function includes System Development and Demonstration; System Modifications; Experimentation and Concept Demonstration; and Product/In-Service Life Cycle Support.

The T&E function includes Developmental Test and Evaluation (DT&E) and Operational Test and Evaluation (OT&E). Test & Evaluation (T&E) includes six test resource categories: installed system test resources, measurement resources, digital modeling and simulation resources, hardware in the loop resources, integration laboratory resources, and open air ranges. The Infrastructure Steering Group (ISG) directed that the Ranges subgroup of the Education & Training JCSG, in

addition to being responsible for scoring the military value of their training ranges, also be responsible for scoring the sixth T&E resource category, open air ranges. The TJCSG will receive the score for the open air ranges to support TJCSG analysis of the T&E function.

The E&T JCSG Ranges Subgroup will score ranges. A T&E Sub-working Group within the Ranges Subgroup will represent the TJCSG. The TJCSG CIT reviewed the T&E Ranges Sub-working Group Military Value scoring plan to assure compatibility with the TJCSG Military Value plans. The TJCSG CIT and T&E Ranges Sub-working Group shall cooperatively identify scenarios; they will coordinate on all scenarios sent to either the E&T JCSG principals or the TJCSG principals that involve open air ranges used for RDAT&E.

The TJCSG does military value scoring analysis for all RDAT&E technical facilities, except for open air ranges. The T&E Ranges Sub-working Group does military value scoring analysis for RDAT&E open air ranges. Each scoring group will coordinate with each other before each JCSG chair approves their analysis.

The Technical Joint Cross Service Group use of the term "technical facility" is defined as follows:

Technical facility: a collection of people and physical infrastructure that performs a technical function (or functions) in a specific technical capability area (there are 13 technical capability areas) at a specific installation. (Note: the accepted definition of "facility", meaning a building or collection of buildings, was used in our Capacity Data Call, but we subsequently redefined this as "physical structures").

Like-facility: all technical facilities that can be used to perform a function in the same technical capability area. There are 39 sets of like-facilities distributed across the 13 technical capability areas and 3 technical functions (see Table 1).

The diversity of technology used by the Department of Defense is broad. The Department's technical capability areas are defined in the Defense Technology Area Plan (DTAP) of 2003. The DTAP accounts for 100% of DoD technology areas and supports the Quadrennial Defense Review (QDR) transformational goals. The DTAP has twelve capability areas. The TJCSG has thirteen technical capability areas because it is useful for the purpose of Base Realignment and Closure (BRAC) analysis to separate the single "land and sea vehicles" DTAP area into two separate technical capability areas (see column headings, Table 1).

The technical diversity is so varied and broad as to render it impractical for the TJCSG to combine the military value of every technical facility at an installation in order to derive a single military value for each technical function at an installation. Rather the TJCSG will assign a military value for each technical facilities at an installation engaged in the same technology area and function (the like-facilities at an installation). The like-facilities on the same installation will be assigned a military value. The military value of like-facilities at each installation will be calculated. All the like-facilities at all the installations will be placed on one list, ordered by military value.

Since there are 3 functions and 13 technical capability areas, there will be 39 lists of like-facilities distributed across the DoD, ordered by their military value. There will be one list for each technical capability area (there are 13) in each technical function (there are 3).

1.2 Decisions Used for Developing the Attributes and Metrics

The TJCSG decided that the three functions (Research, D&A, and T&E) will be considered by the five technical subgroups used during capacity analysis data call. These subgroups are:

1. Air, Land, Sea & Space Systems (ALSS)
2. Weapons & Armaments (Wpn)
3. Command, Control, Communications, Computers, Intelligence, Surveillance & Reconnaissance (C4ISR)
4. Enabling Technology (ET)
5. Innovative Systems (IS)

Four subgroups assumed responsibility for analysis of technical facilities in a fixed number of technical capability areas (Air, Land, Sea, Space—4 technical capability areas, Weapons—2 technical capability areas, Enabling Technology—5 technical capability areas, and C4ISR—2 technical capability areas). The specific technical capability areas analyzed by each group are depicted on Table 1.

For simplicity, each intersection of the 13 technical capability areas with each of the 3 functions will be called a bin throughout this report. There are 39 bins. There will be one list ordering, by military value, the complete set of technical facilities in each bin depicted in Table 1. The same facility might receive different military value scores if it appears in more than one of the 39 bins.

Technical Capability Areas

Function	Air Platforms	Ground Vehicles	Sea Vehicles	Space Platforms	Weapons	Nuclear Technology	Materials & Processes	Biomedical	Human Systems	Battlespace Environment	Chemical & Bio Defense	Sensors, Electronics	Information Systems
T&E	**ALSS**	**ALSS**	**ALSS**	**ALSS**	**Wpn**	**Wpn**	**ET**	**ET**	**ET**	**ET**	**ET**	**C4ISR**	**C4ISR**
D&A	**ALSS**	**ALSS**	**ALSS**	**ALSS**	**Wpn**	**Wpn**	**ET**	**ET**	**ET**	**ET**	**ET**	**C4ISR**	**C4ISR**
Res	**ALSS**	**ALSS**	**ALSS**	**ALSS**	**Wpn**	**Wpn**	**ET**	**ET**	**ET**	**ET**	**ET**	**C4ISR**	**C4ISR**

Table 1. Assignment of DTAP areas to the subgroups

Four subgroups (ALSS, Weapons, Enabling Technology and C4ISR) took responsibility for creating a scoring plan to measure the military value of the technical facilities as they exist today. Each subgroup used the same scoring plan, assigning different weights to the individual elements of the scoring plan. Within each subgroup, the weights applied to each element of the scoring plan were the same for each technical capability area the subgroup analyzed.

The TJCSG created an ad hoc Future Warfighting Capability (FWC) team composed of the Innovative Systems subgroup and others appointed by the TJCSG. Since the Innovative Systems group was central to the FWC team, it did not create a scoring plan for the current military value of technical facilities. The Innovative Systems subgroup focused on the process of innovation and how innovation and technology contribute to future warfighting capability. The Innovative Systems

group made recommendations to the TJCSG on which technologies are likely to contribute to the transformation of United States military operations during the 20 year period being considered by this BRAC.

The team considered transformational warfighting capabilities defined in the follow sources as they identified future high value technologies likely to contribute to future military value:

a) *Transformation Planning Guidance 2003*
b) The *Joint Operations Concept*, November 2003
c) 2003 *Joint Warfighting Science and Technology Plan*,
d) 2003 *Defense Technology Area Plan (DTAP)*
e) 2003 Defense Technology Objectives
f) DoD 2003 *Advanced Technology Capability Demonstration Master Plan*
g) *T*he *OSD Master Acquisition Plan*
h) *Strategic Plan for Department of Defense Test and Evaluation Resources.*

From these sources, the team identified a specific set of technologies to be used as surrogates for all new technologies that may be needed by DoD in the next twenty years. The team recommended a metric and scoring plan awarding military value credit to technical facilities already working and planning to work on these technologies. The surrogate technologies are:

Advanced Detection and Mitigation of Chemical, Biological, Nuclear, Radiological, & Explosives
Advanced Guided Weapons
Advanced Propulsion
Anti-Materiel Weapons
Directed Energy Weapons
Distributed Netted Sensors
EM Guns and Accelerators
Fast, Survivable Sealift
Hypersonics
Information Warfare
Integrated Warrior
Laser Communication
Network Centric Info Management
Next Generation Stealth Enhanced Vehicles
Non-Lethal Weapons and Effects
Space (Enhanced Domain)
Unmanned Vehicles

1.3 Organizational Structure

The TJCSG organizational structure (Figure 1) for the military value phase is almost the same as during the capacity analysis phase. The TJCSG has five subgroups, composed of technical experts that span the technical capabilities of the Department of Defense. The subgroups recommended the attributes, metrics, questions, and weights to the TJCSG. The capability integration team (CIT) is chaired by its OSD member and is comprised of a representative of the Army, Navy and Air Force TJCSG principal members and the leader of each of the subgroups. The CIT when augmented by the Joint Staff, Marine Corps, Analytic Team, and Service BRAC offices is referred to as the extended CIT. The CIT facilitated the integration of the work of the subgroups. The analytic team (AT) supported the subgroups as needed. The TJCSG also coordinates with other JCSGs as shown in Figure 1.

The TJCSG has been tasked by the ISG to support and coordinate its activities with the Education & Training, Medical, Headquarters & Support Activities, and the Intelligence JCSGs. A memorandum of agreement has been drafted for each.

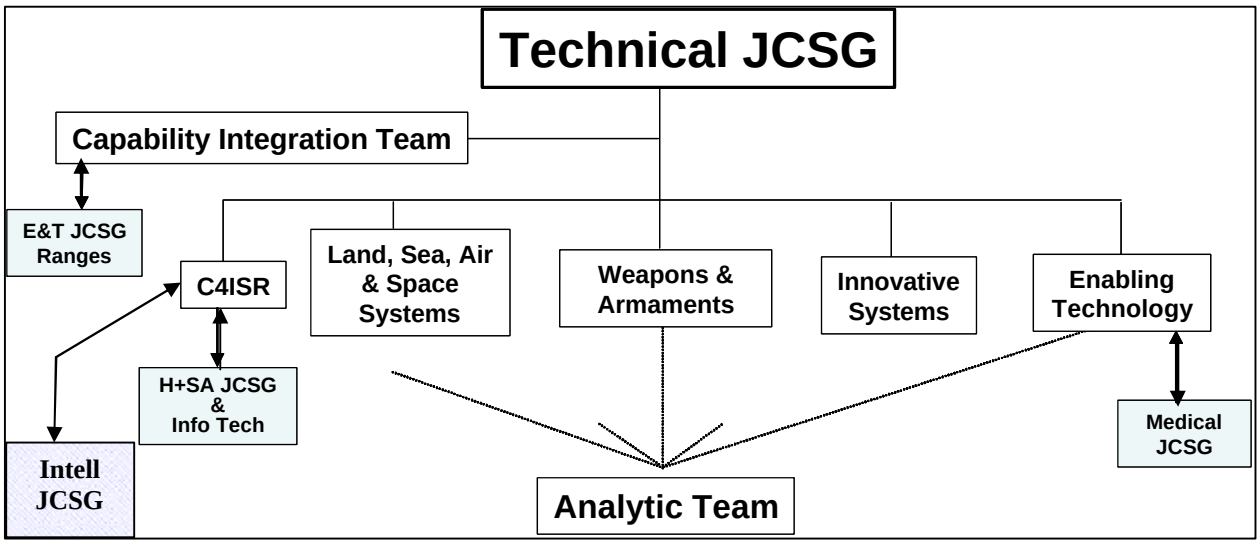

Figure 1. TJCSG organizational structure

Section 2 Military Value Approach and Scoring Plan

2.1 Guidance of TJCSG to the Subgroups

The TJCSG seeks to use BRAC to not only reduce unnecessary DoD technical infrastructure, but to realign the infrastructure so as to assure it has the agility to provide a technical future (for the next twenty years through 2025) which will be able to provide technology beyond anything that

might be imagined today. The goal is to assemble infrastructure capable of agile response to both the Department's current and future known technical needs (planned and programmed in the Future Year Defense Program, e.g., hypersonics) and the Department's future unknown technical needs as they are realized in the next 20 years.

The realignment sought is notionally depicted in Figure 2. The green (lower left) box represents the research, development & acquisition, and test & evaluation (RDAT&E) capacity and capability as it exists today. The upper right portion (above and to right of dotted line) of the green box represents the current DoD technical needs. The rest of the green box represents current infrastructure which may not be needed unless it is to support future capabilities. The TJCSG must take into consideration the future military needs as technical infrastructure is realigned. The infrastructure which will not support current and future capabilities is the infrastructure that should be realigned or closed during BRAC.

The TJCSG considered the level at which military value will be scored. The TJCSG instructed the subgroups that technical facilities in each bin will be the lowest level scored for the purpose of assigning military value.

2.2 Selection Criteria, Attributes, Metrics, and Weights

Anticipating that TJCSG BRAC analysis would take place at the technical facility level, the subgroups sought a rationale for weighting the four selection criteria relative to technical facilities. The subgroups used a process that combined a bottom-up and top-down approach to develop the attributes, metrics, questions and weighting schema. The subgroups also used military judgment and subject matter experts in these decisions. The metric definitions, questions, and scoring plan methodology can be found at Appendix A. The entire set of weights for the selection criteria, attributes, metrics, and questions can be found at Appendix B. Appendix C is a consolidated list of questions, without the metric definitions and scoring plan. Appendix D is a list of abbreviations and acronyms.

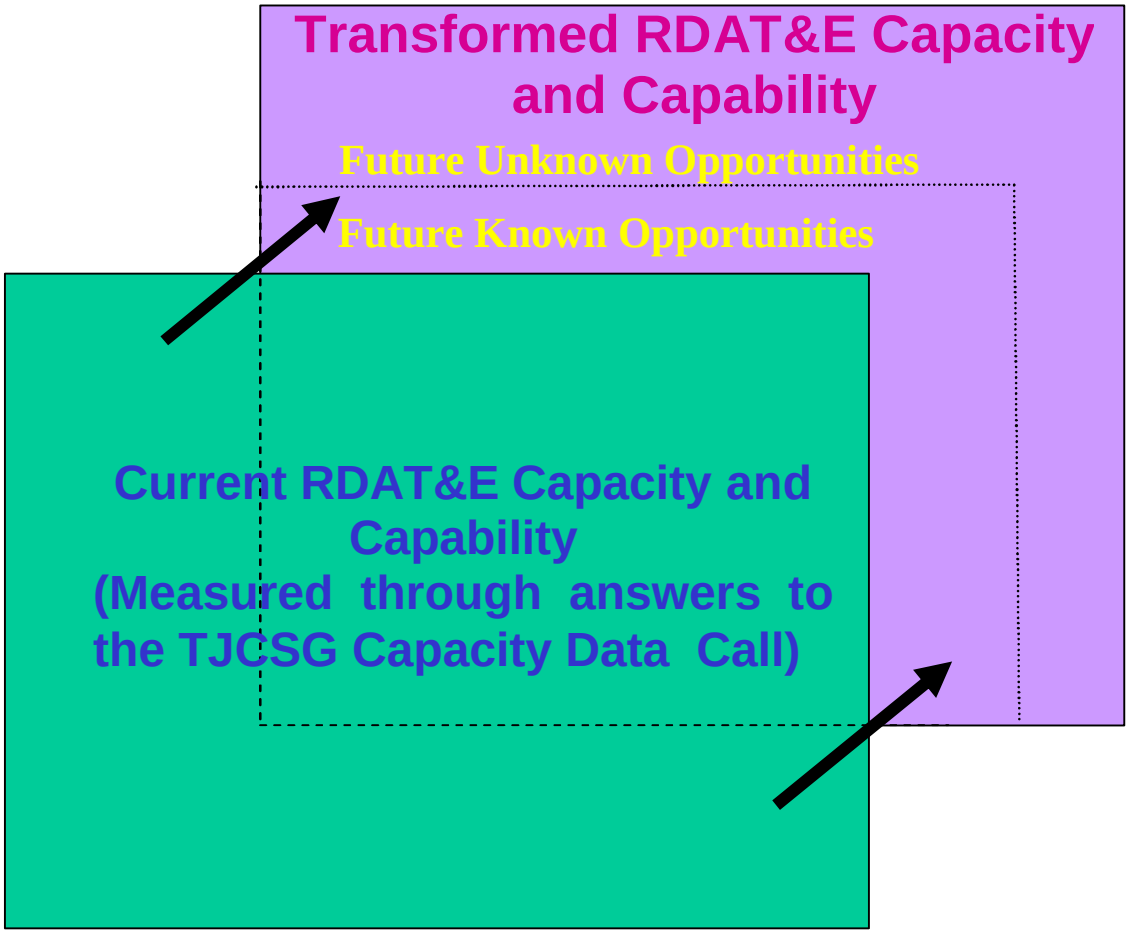

Figure 2. Notional depiction of technical infrastructure, current and future

a. Selection Criteria

The BRAC 2005 selection criteria are:

1. The current and future mission capabilities and the impact on operational readiness of the Department of Defense's total force, including the impact on joint warfighting, training, and readiness.

2. The availability and condition of land, facilities and associated airspace (including training areas suitable for maneuver by ground, naval, or air forces throughout a diversity of climate and terrain areas and staging areas for the use of the Armed Forces in homeland defense at both existing and potential receiving locations.

3. The ability to accommodate contingency, mobilization, and future total force requirements at both existing and potential receiving locations to support operations and training.

4. The cost of operations and the manpower implications.

The TJCSG assumed that criterion 1 includes technical capabilities that are necessary to ensure operational readiness; criterion 2 facilities includes technical facilities; criterion 3 includes technical capability giving support to future requirements and operations; and criterion 4 manpower implications include impact on technical intellectual capital.

b. Attributes

The five subgroups selected five attributes.

People - measures intellectual capital through education, experience, certifications, and patents, publications and awards
Physical environment - measures unique characteristics and value of DoD technical facilities and encroachment
Physical structures and equipment - measures the presence of facilities which are special to DoD
Operational impact - measures output of the RDAT&E functions through the number and size of their projects
Synergy - measures factors like working on multiple functions and multiple technical capability areas, proximity to customer, jointness, and dual-use

c. Metrics

The subgroups selected 21 metrics. These metrics and their definitions can be found at the Metrics and Scoring Plan at Appendix A.

d. Selection Criteria Weights and Rationale

The subgroups independently weighted the selection criteria against each of the three technical functions. The subgroups determined that the weighting for each selection criterion are the same across all the technical capability areas for the research function and for the development & acquisition function (Table 2). The subgroups also determined that the weighting for each selection criterion is the same across all the technical capability areas for the test & evaluation function. The weighting for T&E differs from the weightings for research and D&A.

selection criterion / technical functions	Criteria 1 Current & future mission capabilities	Criteria 2 Availability & condition of land & facilities	Criteria 3 Future requirements	Criteria 4 Operating cost and manpower implications
Research				
Development &				

Acquisition				
Test & Evaluation				

Table 2. Weighting of technical functions relative to each selection criterion

The consensus was that technical functions make their greatest impact through contributions to current and future mission capabilities and their impact on operational readiness. Indeed the United States military has weapons superior to its adversaries due to the superior use of technology. Because the intellectual capital of people provide the scientific insights from which new weapons concepts are born, developed, tested, evaluated, and acquired, the first selection criterion was weighted over %. The test & evaluation function is more dependent on the availability and condition of land than either the research function or development & acquisition function. T&E assigned a weight to criterion #2 that was % larger than the weight assigned by the R and D&A functions.

The subgroups agreed that the TJCSG's desire that the infrastructure resulting from BRAC additionally provide for future technical needs that are unknown and unimagined today is best reflected in criterion #3 (ability to accommodate contingency and…future…requirements). For that reason criterion #3 received the second largest weighting for each function.

e. Attribute Weights and Rationale

The subgroups agreed to a common set of weights for each of the five attributes. There was a different common weight for each attribute for each of the three technical functions. The common weightings for the attributes are shown in Table 3. The first number in each column (selection criterion) is the weight of each row (attribute) for research (R) functions. The second number in each column is development & acquisition (D&A) weight. The third number in each column is the test & evaluation (T&E) weight. Observe that the sum of the five numbers in each column (selection criterion) equals the weight of the selection criteria with which the column corresponds.

The last column of the table gives an indication of the relative importance of each attribute to each technical function. Research rates its people (intellectual capital) as the single most important attribute (%). D&A rates operational impact (output of RDAT&E functions) to the Military Services as most important (%). T&E also rates operational impact as the most important attribute (%).

The subgroups determined that some attributes were unrelated to a selection criterion. When that was the determination, the weighting for the attribute became zero. For selection criterion 2, three attributes were determined not to relate to the selection criterion.

The rationale for the attribute weights selection was through discussion among the subgroups members and successive pair wise comparisons of the attributes.

selection criterion / attributes	Criteria 1 Current & future mission capabilities	Criteria 1 Current & future mission capabilities	Criteria 3 Future requirements	Criteria 4 Operating cost and manpower implications	Weight for each attribute, for each function, summed over selection criteria
People					
Physical Environment					
Physical Structures and Equipment					
Operational Impact					
Synergy					
Sum of columns by function					100%/100%/100%
Technical function	R / D&A / T&E	R / D&A / T&E	R / D&A / T&E	R / D&A / T&E	R / D&A / T&E

Table 3. Common weights for the five attributes

f. Metric Weights and Rationale

The weights of each metric are found in Appendix B.

The equation for research military value may have up to thirteen components (one for each technical capability area). The equation for development and acquisition military value may have up to thirteen components. The equation for test and evaluation military value may have up to thirteen components. Consequently the Technical JCSG may have up to 39 distinct military

value components.

The weighting of metrics varies among each of the five subgroups. For example, a metric may have greater importance (be given greater weight) to the military value of a technical capability area being evaluated by the weapons subgroup than to a technical capability area being evaluated by the C4ISR subgroup. The weighting of the metrics also varies among the functions.

g. Scoring Plan

The mathematical basis for scoring Military Value (MV) uses the following equations. First an equation will be shown for a specific combination of technical function and technical capability area (sea vehicle research or land vehicle research or air platform research or space platform research-- since they each have the same weights). Then a generalized equation for any combination of function and capability area will be given. The military value has components for each of the four selection criterion:

$$MV_{\text{ALSS research function technical facility}} = MV_{\text{criterion 1}} + MV_{\text{criterion 2}} + MV_{\text{criterion 3}} + MV_{\text{criterion 4}}.$$

The military value of each criterion has components due to each of its attributes:

$$MV_{\text{criterion 1}} = MV_{\text{people}} + MV_{\text{physical environment}} + MV_{\text{structures \& equipment}} + MV_{\text{operational impact}} + MV_{\text{synergy}}.$$

There are three more similar equations for the other three selection criterion. The military value of each attribute has components due to each of its metrics:

$$MV_{\text{people}} = MV_{\text{education}} + MV_{\text{experience}} + MV_{\text{certifications}} + MV_{\text{patents, publications, awards}}$$

The military value of each metric is from the scoring plan (Appendix A). There are four more similar equations for the other four attributes.

These equations can be written in the more general form of

$$MV_{\text{technical capability area}} = \Sigma W_i (\Sigma w_m (\Sigma \omega_p \mu_p))$$

Where: W_i, w_m, ω_p are the Weights of the selection criteria, attributes, and metrics
μ_p are the normalized values of the scored data

h. Scoring technical facilities supporting multiple technical capability areas or functions

Answers to the capacity data call will enable the TJCSG to determine technical facilities working in more than one technical capability area or function. For the purpose of assigning military value, only bins in which the technical facility does more than 5% of its work will be scored. The criteria for determining the 5% threshold will be based on the full time equivalent capacity data or the funding capacity data. If either exceeds 5%, the bin will be scored.

Section 3: Data Call #2

The data call #2 includes 24 military value questions. In addition to these questions, the analysis will use responses to some capacity data call questions. All questions and the scoring plan are

found in Appendix A. The weights applied to each question and metric are in Appendix B. The questions, without the scoring plan, are in Appendix C.

Section 4: Issues Impacting Analysis

Overlaps with other JCSGs

The Technical JCSG has overlaps with three other JCSG groups (Headquarters & Support Activities with respect to information technology, Intelligence with respect to C4ISR, and Medical with respect to medical R&D). The TJCSG has drafted MOAs with each of the other JCSGs to clarify roles and responsibilities. The MOAs are being coordinated with the other JCSGs. The TJCSG military value analysis questions will be coordinated with these three groups. The results of the TJCSG complete analysis of the technical infrastructure, including the TJCSG use of military values computed by other JCSGs for technical infrastructure, will be coordinated with the staff of the four JCSGs with whom the TJCSG has overlaps.

Cost of operations

A cost efficiency metric for selection criteria 4 will be added to the TJCSG operational impact attribute and the scoring plan. The military value ascribed to that metric and the sum of all other metrics in all the attributes of selection criteria 4 will equal % of the overall military value of a TJCSG facility. The efficiency metric will be based on the amount of work accomplished by a technical facility divided by the personnel and other operating costs of that facility normalized to the highest value achieved by any facility for the metric.

Section 5: Battle Plan and Closing Remarks

The TJCSG completed the design of its capacity data call in December 2003. The data call was sent to the Military Services and Defense Agencies in January 2004. The TJCSG now moves into the military value phase of Base Realignment and Closure (BRAC). This is depicted on the simple battle plan (Figure 3).

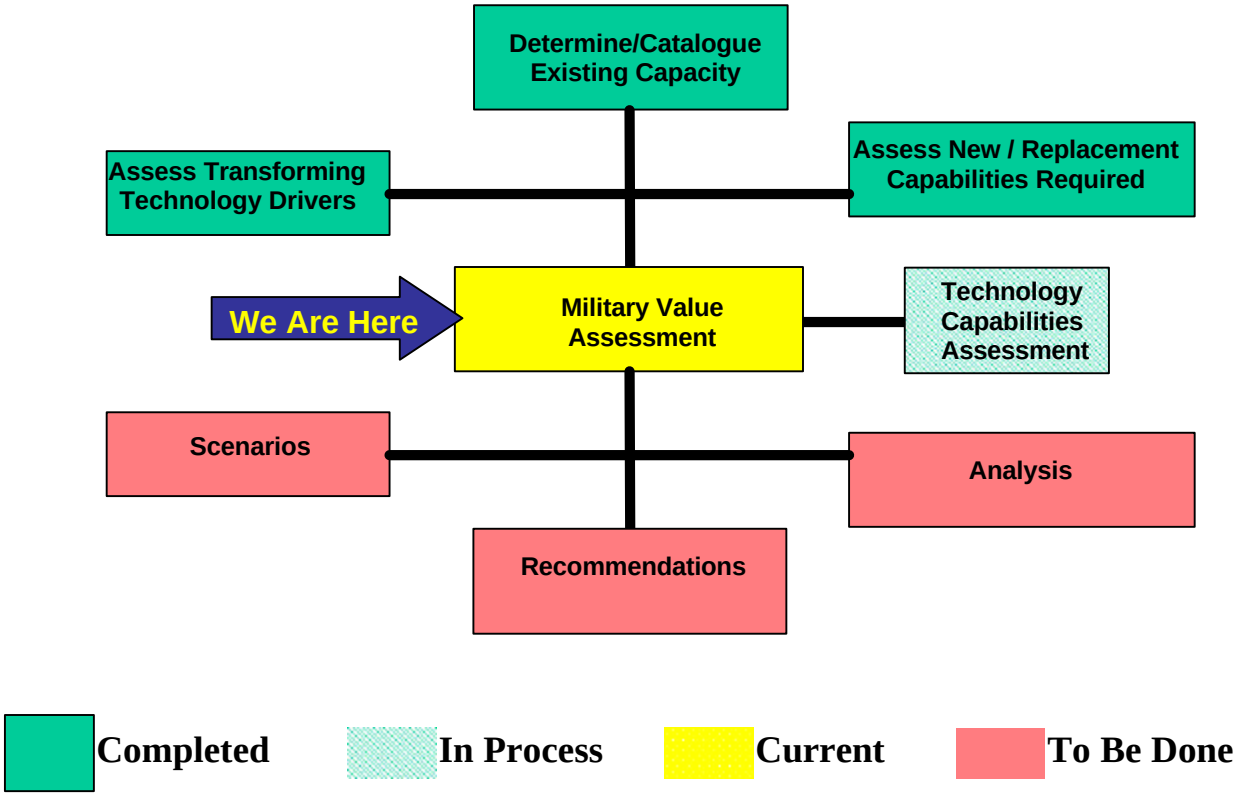

Figure 3. Battle Plan

The TJCSG created a subcommittee called the Future Warfighting Concepts team, to make recommendations to the TJCSG on which technologies are likely to contribute to the transformation of United States military operations during the 20 year period being considered by this BRAC. The team considered the new and replacement military capabilities based on transformational technologies. Their studies, done after the capacity data call was designed and while the military value data call was being designed, resulted in a military value metric intended to measure the future warfighting technical activities being conducted at each technical facility.

Each technical facility, a collection of people and physical infrastructure, is dependent upon both tangible assets and intangible assets to deliver warfighting capability. Tangible assets can be seen and counted.

People can be counted and their workload can be measured in dollars and full time equivalents (FTE). The people produce output, using the infrastructure available to them, in the form of products such as Advanced Technology Demonstrations, technology transitions and response to urgent military needs from S&T; ACAT programs being worked on and fielded for D&A; and test hours executed for T&E.

Facilities and equipment can be cataloged and dollar values attached to them. Natural resources can be listed. The condition of land, facilities and airspace with a diversity of climate and terrain can be characterized. Each of these is a tangible asset that contributes military value to DoD

technical functions.

Intangible assets such as the intellectual capital of people are difficult to see and count. The TJCSG believes it important to include military value attributes relating to intangible assets. The valuation of intangible assets such as the intellectual capacity of people remains more art than application of generally acceptable accounting practices. Intangible assets, such as the intellectual capital available from our technical workforce, are critical to the execution of the technical mission, but are very difficult to see and measure.

While people can be counted, the true value of the people associated with our technical facilities is based in what they know and what they have experienced, in execution of the technical mission. We have determined that a means of measuring intellectual capital is to measure work experience, education levels, certification levels and finally the contribution of the workforce to the technical mission, measured in patents, formal publications and awards received. We have considered many other characteristics of the professional and technical workforce and have concluded that these measures are good intellectual measures. Another important aspect of intellectual capital is associated with the technical infrastructure's ability to access local talent. We have developed a means to assess the availability and use of local business partners who are invested in the business base of the particular technical facility.

The TJCSG is using the combined judgment of subgroup members (technical experts responsible for the future use of technology in the defense of the United States) to rationally weight the military value of intangible assets and tangible assets

In conclusion, the Technical Joint Cross Service Group has constructed a robust Military Value Analysis Plan which will ensure the necessary capacity of the best elements of our technical facilities is preserved and strengthened to support all future warfighting requirements.

Appendix A

Metric Definitions & Scoring Plan (DRAFT) Version

Definitions

a. The coefficients, k_j, are the weights assigned by TJCSG subgroups for the metric.

b. S(xxx) is the score for the metric of interest.

Additional Definitions will be added as required

People (4 metrics & 5 questions)

S(p) for a facility = [k_1S(edu) + k_2S(exp) + k_3S(cert) + k_4S(ppa)]/ MAX [k_1S(edu) + k_2S(exp) + k_3S(cert) + k_4S(ppa)] for the like facility with the highest score

Where:

S(p) is the attribute score establishing a military value of people in executing a particular function in a specific Capability Area. This score relates to the total on-site facility workforce (i.e., CIV, MIL, FFRDC, IPA, SETA/A&AS and other on-site contractors).

1. Education* – S(edu): Educational level of the Professional/Technical (P&T categories of the PATCOB) workforce expressed in terms of highest degree attained (Associates Degree, Bachelors, Masters, PhD, MD, DVM).

S(edu) = [Sum (F_i X ELi)/MAX Sum of (F_i X EL_i) for the like facility with the highest score], where i = 1/2 to 3

Sort Facility professional and technical workforce by highest degree attained

F_i EL_i

1/2X% of Professional/Technical (P&T categories of the PATCOB) workforce with an Associates Degree

1X% of Professional/Technical (P&T categories of the PATCOB) workforce with a BS

2X% of Professional/Technical (P&T categories of the PATCOB) workforce with an MS

3X% of Professional/Technical (P&T categories of the PATCOB) workforce with a PhD, MD, DVM

Question– Each reporting facility shall breakout the answer provided in response to question #690 of the capacity data call by function (i.e., R, D&A, T&E) and technical capability area. Time frame in question is the end of FY03 (September 30, 2003). Individual personnel shall be reported by the function and technical capability area in which they do the majority of their work (In the absence of a majority use plurality).

Rationale:	Education beyond high school contributes to military value. Scoring points are awarded based on the highest degree earned. * On-site contractors may be excluded from the analysis if the OSD BRAC office issues a finding that education (or experience) of on-site contractors cannot be used to score military value.

<u>2. Experience*</u> – S(exp): Experience level of the professional/technical workforce expressed in terms of years, measured in years since first degree attained, or from service computation date, whichever is earlier.

S(exp) = Sum of (F_i X EXP_i)/MAX Sum of (F_i X EXP_i) for the like facility with the highest score

Sort the Professional/Technical (P&T categories of the PATCOB) workforce by years of experience since receipt of first degree, or by service computation date, whichever is earlier.

F_i EXP_i

1 X % of Professional/Technical (P&T categories of the PATCOB) workforce with greater than 0 years and less than or equal to 10 years of experience

2 X % of Professional/Technical (P&T categories of the PATCOB) workforce with greater than 10 years and less than or equal to 20 years of experience

3 X % of Professional/Technical (P&T categories of the PATCOB) workforce with greater than 20 years of experience

Question- Report by function (i.e., R, D&A, T&E) and technical capability area, the number of Professional and Technical (P&T categories of the PATCOB) workforce (military, government civilian, and others) falling into the following experience categories - less than or equal to 10 years, greater than 10 and less than or equal to 20 years, greater than 20 (Measured from date of receipt of first degree, or from Service Computation Date, whichever is earlier) at the end of FY03.

Other means non-government personnel (e.g., all on-site contractors such as SETA, A&AS, A76, all on-site FFRDC personnel, Intergovernmental Personnel Act appointees, etc.) for which the technical facility is obliged to provide space.

Rationale:	Experience contributes to military value. Scoring points are awarded based on the number of years of experience. * On-site contractors may be excluded from the analysis if the OSD BRAC office issues a finding that experience (or education) of on-site contractors cannot be used to score military value.

<u>3. Certification</u> – S(cert): Government (military & civilian) Professional/Technical (P&T categories of the PATCOB) workforce who hold the following professional certifications: DAWIA, Software Engineering Certification (i.e., IEEE Certified Software Development Professional Program, International Institute for Software Testing for Certified Software Test Professionals), or who are Test Pilot School graduates.

S(cert) = [Sum of (F_i X CL_i) + Sum of (3 X OC_j)]/ MAX [Sum of (F_i X CL_i) + Sum of (3 X OC_j)] for the like facility with the highest score

F_i CL_i

1 X % of Professional/Technical (P&T categories of the PATCOB) workforce whose highest DAWIA Certification is Level 1

2 X % of Professional/Technical (P&T categories of the PATCOB) workforce whose highest DAWIA Certification is Level 2

3 X % of Professional/Technical (P&T categories of the PATCOB) workforce whose highest DAWIA Certification is Level 3

There are additional points for those with multiple level 3 certifications:

3 X % of Professional/Technical (P&T categories of the PATCOB) workforce with multiple Level 3 DAWIA Certifications

OC_j

3 X % of Professional/Technical (P&T categories of the PATCOB) workforce that are Test pilot School graduates

3 X % of Professional/Technical (P&T categories of the PATCOB) workforce that hold any of the approved Software Certifications

If employees have more than one of these "other certifications", all instances are to be counted.

Question- Report by function (i.e., R, D&A, T&E) and technical capability area, the number of Government (military & civilian) Professional and Technical (P&T categories of the PATCOB) workforce that have as their highest DAWIA certification levels as Level 1, Level 2, Level 3 or multiple Level 3 certifications at the end of FY03. (Reference responses to questions #691 and 692 of the capacity data call in amplification section).

Question Rationale:	Education, training and experience requirements are establish for the DoD civilian and military workforce. The requirements are based on the complexities of the job. Requirements associated with complex jobs contribute to military value.
Scoring Rationale:	The scoring is designed to (1) give more MV to facilities with higher average quality workforces as measured by DAWIA level and (2) give more MV to the levels that are both more difficult to achieve and of more value to the RDAT&E community. The specific weights assigned to the DAWIA levels are the result of collective Professional Military Judgment.

Question- Report by function (i.e., R, D&A, T&E) and technical capability area, the number of Government (military & civilian) Professional and Technical (P&T categories of the PATCOB) workforce that are Test Pilot School graduates, or have a Software Engineering Certification from the following sources as of the end of FY03: IEEE Certified Software Development Professional Program, International Institute for Software Testing for Certified Software Test Professionals, Rational Unified Process (RUP) Certification, Software Engineering Institute Certification Program.

Question Rationale:	Certifications in addition to DAWIA certifications contribute to military value. This question was designed to capture two additional categories – Test Pilot graduates due to their value to T&E and software certifications due to the major role software plays in DoD RADT&E
Scoring Rationale:	The scoring is designed to (1) give more MV to facilities with higher average quality workforces as measured by test pilot school graduation and software certification and (2) give more MV to the levels that are both more difficult to achieve and of more value to the RDAT&E community. The specific weights assigned to the DAWIA levels are the result of collective Professional Military Judgment.

<u>4. Patents, Publication, Awards</u> – S(ppa): Report by function (i.e., R, D&A, T&E) and technical capability area, the number of military, Government civilian & other Professional and Technical (P&T categories of the PATCOB) workforce on staff on September 30, 2003 (see answers to capacity data call question #693-#731) that had in the past three years: patents granted, patents licensed, software

licenses awarded, technical publications (each book, book chapter, paper in a refereed journal), given invited presentations at a national or international technical society conferences, been named as a fellow of a technical society .

Report by function (i.e., R, D&A, T&E) and technical capability area, the number of Government (military & civilian) Professional and Technical (P&T categories of the PATCOB) workforce on staff on September 30, 2003 who have ever received an Elite National or International Technical Award.

S(ppa) = {[Sum of (NP + PL + SLA + PUB + IP + Fellows + EASM + PASM)]/Facility Professional/Technical Workforce (P&T categories of the PATCOB)} /MAX{[Sum of (NP + PL + SLA + PUB + IP + Fellows + EASM + PASM)]/ Facility Professional/Technical Workforce (P&T categories of the PATCOB)} for the like-facility with the highest score

Over the last 3 FYs (01-03)

NP = 1X number of Patents awarded at the facility

PL = 2X number of Patents licensed by the facility

SLA = 1X number of government created Software Licenses awarded by the facility

PUB = 1X number of Technical Publications (each book, book chapter, citations of papers in those journals listed at http://www.isinet.com/cgi-bin/jrnlst/jlresults.cgi?PC=MASTER)

IP = 1X number of Invited Presentations (limited to National or International Meetings of a National or International Technical Society)

EASM = 30X number of Elite National and International Technical Awards (if for an individual, individual must be on staff as of September 30, 2003; indicate name of individual; name of award; and year awarded) (e.g., Nobel Prize, Robert J. Collier Trophy, National Medal of Science, National Medal of Technology, Draper Prize, Bower Award for Achievement in Science), member of National Academy of Sciences, member of National Academy of Engineering

PASM = 10X number of Prestigious National and International Technical Awards (if for an individual, individual must be currently on staff as of September 30, 2003; indicate name of individual; name of award; and year awarded) (e.g., Stellar Award, Goddard Astronautics Award, A.T. Waterman Award, William Streifer Award, Lord Rank Award, National Inventors Hall of Fame, Space Technology Hall of Fame)

Fellows = 5X number society fellows

Other means non-government personnel (e.g., all on-site contractors such as SETA, A&AS, A76, all on-site FFRDC personnel, Intergovernmental Personnel Act appointees, etc.) for which the location is obliged to provide space.

Question - By technical capability and function, for the military & Government civilian & other (P&T categories of the PATCOB) workforce on staff on September 30, 2003 (see answers to capacity data call question #693-#731), during the period FY01- FY03,

List each occurrence of: patent awarded, patent licensed, software license awarded, technical publications (each book, book chapter, paper in a refereed journal listed at http://www.isinet.com/cgi-bin/jrnlst/jlresults.cgi?PC=MASTER), receipt of a national or international technical awards, and invited presentations at a national or international technical society conference.

Note: where one of the above was an individual or group accomplishment, the individual or at least one of the group must be on staff as of September 30, 2003 to be reported.

Note: refereed journal papers must be identified separately with author's name, journal, and total number of citations. A software license award refers to proprietary ownership of a software code.

List each national and international technical award (as defined below) and name of recipient.

National and international technical awards are the Nobel Prize, Robert J. Collier Trophy, National Medal of Science, National Medal of Technology, Draper Prize, Bower Award for Achievement in Science, Stellar Award, Goddard Astronautics Award, A.T. Waterman Award, William Streifer Award, Lord Rank Award, National Inventors Hall of Fame, Space Technology Hall of Fame; member of National Academy of Sciences or member of National Academy of Engineering.

If you wish an award to be considered that is not listed above provide the name of the award and award date.

List (name of staff members and name of society) fellows of technical societies listed below.

If you wish fellows to be considered of a society not listed below provide the name of the society and its web site.

AAAI American Association for Artificial Intelligence (http://www.aaai.org/)
Acoustical Society of America (http://asa.aip.org/)
American Association of Immunologists (http://www.aai.org/)
American Astronautical Society (http://www.astronautical.org/)
American Helicopter Society (http://www.vtol.org/index.html)
American Institute of Chemical Engineers (http://www.aiche.org/)

American Nuclear Society (http://www.ans.org/)
American Society for Microbiology (http://www.asm.org/)
American Society for Photobiology (http://www.pol-us.net/ASP_Home/)
American Society of Naval Engineers (http://www.navalengineers.org/)
American Association for the Advancement of Science (http://www.aaas.org/
American Ceramics Society (http://www.ceramics.org/)
American Chemical Society (http://www.acs.org/)
American Geophysical Union (http://www.agu.org/)
American Institute of Aeronautics and Astronautics (http://www.aiaa.org/)
American Institute of Biological Sciences (http://www.aibs.org/core/index.html)
American Institute of Physics (http://www.aip.org/)
American Mathematical Society (http://www.ams.org/)
American Medical Association (http://pubs.ama-assn.org/)
American Meteorological Society (http://www.ametsoc.org/)
American Physical Society (http://www.aps.org/
American Society for Biochemistry and Molecular Biology
(http://www.asbmb.org/ASBMB/site.nsf)
American Society for Limnology and Oceanography (http://aslo.org/lo/toc/index.html)
American Society for Pharmacology and Experimental Therapeutics (http://www.aspet.org/)
American Society of Mechanical Engineers (http://www.asme.org/)
American Statistical Association (http://www.amstat.org/)
Applied Probability Trust (http://www.shef.ac.uk/uni/companies/apt/)
American Society for Microbiology (http://www.asm.org/)
Association of Computing Machinery (http://www.acm.org/)
Association of Old Crows (http://www.crows.org/)
AVS Science and Technology Society (http://www.avs.org)
Audio Engineering Society (http://www.aes.org/)
Biophysical Society (http://www.biophysics.org)
Electrochemical Society (http://www.electrochem.org/)
FASEB: Federation of American Societies for Experimental Biology (http://www.faseb.org/)
Geological Society of America (http://www.geosociety.org/)
Institute of Electrical and Electronics Engineers (IEEE) (http://www.ieee.org/portal/index.jsp)
Institute of Electronics, Information and Communication Engineers (IECIE)
(http://www.ieice.org/eng/index.html)
Institute of Materials, Minerals and Mining (IOM3) (http://www.iom3.org/)
Institute of Mathematical Statistics (http://www.imstat.org/)
Institute of Physics (http://www.iop.org/)
Institute of Electrical Engineers (IEE) (http://www.iee.org/)
International Academy of Astronautics (http://www.iaanet.org/
International Biometric Society (http://www.tibs.org/index.html)
International Union for Pure and Applied Biophysics (http://www.iupab.org/welcome.html)
International Cognitive Linguistics Association (http://www.cognitivelinguistics.org)
International Society for Optical Engineering (SPIE) (http://www.spie.org/)
International Union of Crystallography (http://www.iucr.org/
International Union of Pure and Applied Chemistry (http://www.iupac.org/dhtml_home.html)
Mathematical Association of America (http://www.maa.org/
Materials Research Society (MRS) (http://www.mrs.org/)
National Academy of Sciences (http://www4.nationalacademies.org/nas/nashome.nsf)
Optical Society of America (OSA) (http://www.osa.org/)
Sigma Xi (http://www.sigmaxi.org/)
Society for Applied Spectroscopy (http://www.s-a-s.org/)
Society for Automotive Engineering (http://www.sae.org/)
Society for General Microbiology (http://www.socgenmicrobiol.org.uk/)
Society for Industrial and Applied Mathematics (SIAM) (http://www.siam.org/)

Society for Modeling and Simulation International (http://www.scs.org/)
Society of Exploration Geophysicists (http://seg.org/)
Society of Naval Architects & Marine Engineers (http://www.sname.org/)
Society of Plastics Engineers (http://www.4spe.org)
Society for Experimental Mechanics (http://www.sem.org/)
Society for Information Display (http://www.sid.org/)
Society for Neuroscience (http://web.sfn.org)
Society of Tribologists and Lubrication Engineers (http://www.stle.org/)
The Minerals, Metal & Materials Society (TMS) (http://www.tms.org/TMSHome.html)
The National Academy of Engineering
The National Academy of Medicine

Rational:	Awards relating to technical achievements contribute to the military value of technical organizations. The value of certain of these achievements is enduring and lifelong; the value of others disappears with the passage of time.

PHYSICAL ENVIRONMENT (2 metrics & 2 questions)

S(pe) for a facility = [k_1S(sfea) + k_2S(enc)]/MAX [k_1S(sfea) + k_2S(enc)] for the like facility with the highest score

Where:

S(pe) is the total score establishing a military value of the physical environment associated with the technical infrastructure of the facility.

5. Special Features- S(sfea): Special features of the facility space (e.g., ground vehicles, live-ordnance capability, chem-bio capability, directed energy weapons (high power microwave and high energy laser) capability)

S(sfea) = Sum of (GV + SV + SP + WP + MP + BIO + HS + CB + SE)/MAX Sum of (GV + SV + SP + WP + MP + BIO + HS + CB + SE) of the like facility with the highest score

Question: *Please identify the special features at your technical facility.*	Y/N	
Ground Vehicles (GV)		
Ability detonate projectiles in excess of 120mm		Score 1.0
Sea Vehicles (SV)		
Ability to operate, measure signatures, and control surface or sub-surface vessels at 20% full scale and above		Score 0.7
Ability to operate, measure signatures, and control surface or sub-surface vessels at less than 20% full scale		Score 0.2

Space Platforms (SP)		
Ability to monitor and control orbital and/or sub-orbital vehicles through the full spectrum of operations (launch, flight, and recovery)		Score 0.5
Weapons (WP)		
Ability to handle and detonate live ordnance in excess of 500 pounds HE.		Score 1.0
Ability to operate high power laser and high power microwaves in a non open air range environment		Score 1.0
Materials and Processes (MP)		
Ability to develop, use and implement new materials and process in military equipment		Score 1.0
Biomedical (Data from Medical Capacity data Call) (BIO)		
Biosafety level 3 labs with Aerosol Capability		Score 0.5
Biosafety level 4 labs with Aerosol Capability		Score 1.0
Hypobaric man rated chambers, occupancy for two weeks or more		Score 0.7
AAALAC Accredited Animal Facilities (non human primate holding capacity >25)		Score 0.7
Human Systems (HS)		
Ability to experiment and demonstrate new capabilities to reduce manning, promote unmanned operations, or enhance situational awareness in realistic environments		Score 1.0
Chem-Bio Defense (CB)		
Ability to disperse and analyze Chemical-Biological simulants over a square mile		Score 1.0
Sensors, Electronics & Electronic Warfare (SE)		
Indoor radiating facility no less than 100 feet long X 30 feet wide X 10 feet tall		Score 1.0

Rational:	Technical operations in support of the military sometimes need special features. Presence of special features at a location contributes to military value.

<u>6. Encroachment</u> – S(enc): Loss during FY01 – FY03 of operating envelop due to change in available operating space, frequency spectrum, licenses; and availability of buildable land.

S(enc) = [S(env) + S(lic) + S(bl)]/max [S(env) + S(lic) + S(bl)] for the largest like facility

Where

S(env) = [S(end) + S(cul) + S(uxo) + S (freq) + S(maritime) + S(air) + S(restrictions) + S(water) + S(wetlands) + S(noise) + S(urban) at a facility]/ MAX [S(end) + S(cul) + S(uxo) + S (freq) + S(maritime) + S(air) + S(restrictions) + S(water) + S(wetlands) + S(noise) + S(urban) of the like facility with highest score]

S(xxx): totally precludes = 0, can do with limitations = 1, no impact =2

Where:

S(end) = the constraint placed by threatened/endangered species and critical habitat. (Capacity data questions 259-264)

S(cul) = the cultural constraint placed on use by the presence of national historic sites, archeological sites and Native American asserted interest. (Capacity data questions 201, 229-237)

S(uxo) = the constraint placed by the presence or generation of unexploded ordinance. (Capacity data questions 201, 242)

S(freq) = the frequency spectrum constraint placed on electromagnetic radiation and emissions. (Capacity data questions 201, 238)

S(maritime) = the constraint resulting from the Marine Mammal Protection Act, Marine Sanctuaries, presence of marine animals or other marine restrictions. (Capacity data questions 201, 248-250, 252)

S(air) = the clean air quality constraint based on air quality controls, emissions, or permits. (Capacity data questions 210-225)

S(restrictions) = the constraint by laws, regulations, and policies. (Capacity data questions 199, 201)

S(water) = the constraint based upon ground water conservation or contamination requirements. (Capacity data questions 273-281, 293)

S(wetlands) = the constraint resulting from jurisdictional wetlands. (Capacity data question 257)

S(noise) = the constraint which prohibits, limits, delays, alters or cause modifications of operations. (Capacity data questions 200-203)

S(urban) = the constraint as a result of urbanization and encroachment. (Capacity data question 201)

Where

S(lic) = Facility score/2

Scoring: Lost more than 1 operating license = 0; Lost 1 operating license = 1; Lost no operating Licenses =2

Where

S(bl) = Facility Score/2

Scoring: No available buildable land = 0; If you've lost = 1% of buildable land = 1; If your buildable land has not been reduced = 2

Question- Identify all environmental constraints restricting mission related operations within your facility in effect during FY01 through FY03.

Include all loss of licenses (local, state, federal, etc.) required for operations and any reduction = 1% of buildable land that would limit facility expansion. "Buildable" land is considered any land not currently the site of a structure but could reasonable be used in that manner. It is free of unusual hazards and not in need of clean up or mitigation efforts.

Rationale:	Environmental constraints can restrict technical operations. Absence of constraints contributes to military value.

PHYSICAL STRUCTURE & EQUIPMENT

(4 metrics, 4 questions)

S(pse) for a facility = [k_1S(unq) + k_2 S(doa) + k_3S(vbc) + k_4S(vu)]/MAX [k_1S(unq) + k_2S(doa) + k_3(vbc) +k_4S(vu)] for the like facility with the highest score

Where:

S(pse) is the total score establishing the military value for a facility's physical structures and equipment. Only use in these calculations facilities (physical structures) or equipment (e.g., office building, laboratory, wind tunnel, pilot plant, etc.) with replacement value greater than or equal to $3M. The totality of the facilities and equipment was reported in capacity data call questions #686 & #687.

7. Uniqueness – S(unq): Facilities (physical structures) and equipment which offers the only such technical capability within the DoD and the replacement cost exceeds $3M.

S(unq) = Sum of (all facility's UC)/MAX Sum of (all facility's UC) for the like facility with the most unique capabilities

UC = number of facilities (physical structures) and equipment that offer a DoD unique technical capability with a replacement cost of >$3M

Question: See value utilization question

Rationale:	Costly physical structures and equipment used to do technical functions contribute to military value

8. Depth of Application— S(doa): The aggregate use of people, physical environment, infrastructure and equipment by a technical facility performing integration/testing for each of the following above the component level: sub-systems, systems and system-of-systems, with an aggregate annual funding level >$10M for each reported level (sub-systems, systems and system-of-systems). System-of-system level refers to large-scale integration of actual or simulated systems such as weapons systems/platforms with other actual or simulated

systems.

S(doa) = Reported Level/3

1 point for demonstrated ability to support subsystem, or system, or system-of-system level

2 points for demonstrated ability to support two of the levels

3 points for demonstrated ability to support all three levels

Question- Viewed from a network-centric warfare (NCW) perspective, by technical capability and functional area; identify efforts whose funding exceeds $10M and whose FTEs exceed 30 aggregated over the period FY01-03, by these levels: system of systems, system, or subsystem.

Note: NCW generates increased combat power by networking sensors, decision makers, and shooters to achieve shared awareness, increased speed of command, high tempo of operations, greater lethality, increased survivability, and a degree of self-synchronization. Network Centric Warfare focuses on desired effect than what is used to get effect (i.e. putting rounds on target as opposed to what platform puts the rounds on target).

Rationale:	Network-centric warfare allows the warfighter to take advantage of all available information and bring all available to bring subsystems, systems, and systems of systems to meet a challenge in a rapid and flexible manner. Significant application of resources to network-centric systems contributes to military value.

9. Value & Building Condition—S(vbc): Measured by the Facility Condition Index (FCI), square footage and value of the facility space using the three equations below.

Metric: Value & Building Condition (VBC)
Attribute: Physical Plant: Condition
BRAC Selection Criterion
Data Required: Building Facility Condition Index (FCI); Square Footage & Value

Formula:

$$S(vbc) = \frac{S(bc) + S(vpp)}{2}$$

where

$$S(bc) = [1 - \sum_{n=1}^{m} \frac{(C_n)(SF_n)}{\text{Square Feet}_{Total}}] \text{ / Maximum sum for the like facility by function and technical capability area with the highest score}$$

$$S(vpp) = [1 - \sum_{n=1}^{m} \frac{(C_n)(Value_n)}{Value_{Total}}] \text{ /Maximum sum for the like facility by function and technical capability area with the highest score}$$

Physical Plant Value – S(vpp): Monetary sum of all facilities (physical structures) identified with replacement value of over $3M by function and technical capability area times the FCI factor for each element/ MAX Sum for the like facility by function and technical capability area with the highest score.

where C_n is a factor related to the FCI of the nth building (C = 0.0, 0.33, 0.67, or 1.0 for FCI = C-1, C-2, C-3, or C-4, respectively),

SF_n is the square footage of the nth building,

SF_{Total} is the combined total square footage of all buildings for the technical facility, and

$Value_n$ is the current replacement value of the nth building

$Value_{Total}$ is the combined replacemant value of all buildings for the technical facility

Rationale/Comments: Value is based on the weighted average condition across all buildings occupied by the activity, with weighting based on square footage. The condition score, C, is derived directly from the FCI, a four point scale based on the ratio of current capital investment required for a building to meet required/desired mission performance to the total replacement value of the building. A building with a low ratio (<.25, C-1) is in good condition and requires little or no investment, while a building in poor condition has a high ratio (>.75, C-4).

Question- Referencing capacity data call question #11, for each item having an entry in

the "If used for RDTE&A functions, occupancy on September 30, 2003?" cell provide the function and technical capability area most used in FY03.

10. Value Utilization—S(vu): Measure of the Value of structures and physical equipment multiplied by their utilization.

Metric Value Utilization (vu)
Attribute: Physical Plant: Value and Utilization
BRAC Selection Criterion:
Data Required: Value of Physical Structures and Equipment, Utilization thereof
Formula: $$S(vu) = \frac{\sum_{i=1}^{N}(V_i * U_i)}{Max_VU}$$ Where N is the number of structures and equipment as reported in the capacity call (questions #686, #687) Where V_i is the Replacement Cost of the ith physical structure or equipment, Where U_i is the Utilization in days of the ith physical structure or equipment Where Max_VU is the Maximum Value*Utilization value reported by a like-facility.
Rationale: The military value of the physical structure and equipment is related to both the cost of the equipment & to its utilization. Costly infrastructure has military value which increases with the frequency the infrastructure is used.

Question- For all equipment listed in capacity call question #686, provide the estimated FY03 replacement cost, to the nearest million dollars. Additionally, for each combination of function and technical capability area, provide the days used in FY01, FY02, and FY03.
Question- For all facilities listed in capacity call question #687, provide the estimated FY03 replacement cost, to the nearest million dollars. Additionally, for each combination of function and technical capability area, provide the days used in FY01,

FY02, and FY03.

Physical Plant Value and Utilization Estimate
Sample Tables:

Equipment Name	Replacement Cost Estimate	FY03 days used	FY 02 days used	FY 01 days used

Facility Name	Replacement Cost Estimate	FY 03 days used	FY 02 days used	FY 01days used

OPERATIONAL IMPACT (7[5,4,4] metrics & 8 questions)

S(oi) R = [k_1S(ttda) + k_2S(actd) + k_3S(qrc) + k_4S(foc) + k_5S(fwc)]/ MAX [k_1S(ttda) + k_2S(actd) + k_3S(qrc) + k_4S(foc) + k_5S(fwc)] for the like facility with the highest score

S(oi) D&A = [k_1S(acat) + k_2S(qrc) + k_3S(foc) + k_4S(fwc)]/ MAX [k_1S(acat) + k_2S(qrc) + k_3S(foc) + k_4S(fwc)] for the like facility with the highest score

S(oi) T&E = [k_1S(tiw) + k_2S(qrc) + k_3(foc) + k_4S(fwc)]/ MAX [k_1S(tiw) + k_2S(qrc) + k_3S(foc) + k_4S(fwc)] for the like facility with the highest score

Where:

S(oi): is the total score establishing a military value of the operational impact of the technical infrastructure of a facility.

S(oi) R

11. Technology Transition—S(ttda): Technologies transitioned into Development and Acquisition over the past three years.

S(ttda) = Sum of (technologies transitioned into development and acquisition by an R facility)/Sum of (technologies transitioned into development and acquisition) for the like facility with the highest number of transitions

Total of all technologies transitioned by a facility into Development and Acquisition over last 3 years (i.e., 2001 – 2003)

Question- List by name each funded technology, including 6.1, 6.2 and 6.3, (hardware, software and processes) that has transitioned to development and acquisition during FY01, FY02 and FY03, including the name of the development and acquisition program(s) that received the technology.

Question Rationale:	A recent history of the transition of technology contributes to military value
Scoring Rationale:	The scoring is designed to give more MV to those facilities that deliver more Operationally relevant products. As the value of a specific technology transition is subjective, all are treated equally.

12. Advanced Technology Demos Currently in work—S(actd): ACTD, ATD, DTO (Defense Technology Objective), and TTA (Technology Transition Agreement) currently in work.

S(actd) = Sum of total funding for FY01-02-03 (total of all ACTD/ATD/DTO/TTA by technical capability)/Max Sum of total funding for FY01-02-03 (total of all ACTD/ATD/DTO/TTA) for the like facility with the highest total funding of transitions

Total FY01-FY03 value of all ACTDs, ATDs, DTOs, and TTAs ongoing in FY-03 by a technical facility

Question- List by name and total funding for FY01-02-03 of each ACTD, ATD, DTO, TTA that was currently in work at the end of FY03. Indicate one technical capability area and function with which to associate each. Do not include TTAs for reported ACTDs, ATDs, or DTOs.

Rational:	Ongoing technology demonstrations contribute to military value

13. Rapid Response—S(qrc): Capabilities delivered in rapid response to meet operational deficiencies over the past three years

S(qrc) = Sum of total funding for FY01-02-03 for all rapid fieldings by the technical facility)/Max Sum of total funding for FY01-02-03 for all rapid fieldings) for the like facility with the highest total funding of rapid responses to operational deficiencies

Each rapid response or fielding to meet operational deficiencies over last 3 years

Question- List by name and total funding for FY01-02-03, broken down by technical capability area and function, each rapid response capability (e.g. Urgent Need Statement) delivered to the war fighter during the time frame FY01-03 that was

delivered in less than 12 months from identification of operational need to the reporting facility. In addition, identify the operational command/unit that requested and received the capability along with the quantity/number of items fielded.

Rational:	A recent history of a response to an Urgent Need Statement accepted by the operational command contributes to military value

14. Workload Focus— S(foc): The magnitude of work effort at a technical facility compared to the work effort of like technical facilities

$$S(foc) = [.9X(FTFEi/MTFEi_i) + .1X(FTFEe/MTFEe) + (FFTEs/MFFTEs)]/2$$

FTFEi = funding executed internally by the technical facility (includes personnel salaries) over the last three years (FY01-03)

MTFEi= maximum funding executed internally by any like-facility (includes personnel salaries) over the last three years (FY01-03)

FTFEe = funding executed externally by the technical facility over the last three years (FY01-03)

MTFEe = maximum funding executed externally by any like technical facility over the last three years (FY01-03)

FFTEs = In house FTEs at the technical facility over the last three years (FY01-FY03)

MFFTEs = maximum # of FTEs at any like facility over the last three years (FY01-FY03)

Question- Refer to Capacity Data Call Questions 693 to 731 for counting FTEs for each technical capability area. Refer to Capacity Data Call Questions to define the funding executed by the facility.

Rational:	The relative magnitude of the work effort at a technical facility is proportional to its military value

15. Future Warfighting Capability—S(fwc): The measure of a technical facility to meet the needs of the future warfighter. The following areas have been identified

by as future high value warfighting capabilities/technologies that will be needed:

Advanced Detection and Mitigation of CBNRE
Advanced Guided Weapons
Advanced Propulsion
Anti-Materiel Weapons
Directed Energy Weapons
Distributed Netted Sensors
EM Guns and Accelerators
Fast, Survivable Sealift
Hypersonics
Information Warfare
Integrated Warrior
Laser Communication
Network Centric Info Management
Next Generation Stealth Enhanced Vehicles
Non-Lethal Weapons and Effects
Space (Enhanced Domain)
Unmanned Vehicles

$S(fwc) = [.9X(FTFEi/MTFEi_i) + .1X(FTFEe/MTFEe) + (FTFEf/MTFEf) + (FFTEs/MFFTEs)]/3$

FTFEi = funding executed internally by the technical facility (includes personnel salaries) over the last three years (FY01-03)

MTFEi= maximum funding executed internally by any like-facility (includes personnel salaries) over the last three years (FY01-03)

FTFEe = funding executed externally by the technical facility over the last three years (FY01-03)

MTFEe = maximum funding executed externally by any like technical facility over the last three years (FY01-03)

FTFEf = funding identified over the FYDP (FY04-FY10) by the technical facility

MTFEf = maximum funding identified over the FYDP (FY04-FY10) by any like technical facility

FFTEs = In house FTEs at the technical facility over the last three years (FY01-FY03)

MFFTEs = maximum # of FTEs at any like facility over the last three years (FY01-FY03)

Rational:	

Question- Referencing capacity data call questions #734 through #746, broken out by function, indicate the items appearing on the list below and identify the total funding that has been executed in each item by year for FY01, FY02, and FY03. If none, enter "not applicable".

Question- Referencing capacity data call questions #693 to #731, broken out by function, indicate items appearing on the list below and report the number of FTEs in each item by year for FY01, FY02, and FY03. If none, enter "not applicable".

Question- Referencing capacity data call questions #734 through #746, broken out by function, indicate items appearing on the list below and identify the total funding planned to be executed in each item over the FY05 President's Budget Request (FY04-FY10). If none, enter "not applicable".

Advanced Detection and Mitigation of CBNRE
Advanced Guided Weapons
Advanced Propulsion
Anti-Materiel Weapons
Directed Energy Weapons
Distributed Netted Sensors
EM Guns and Accelerators
Fast, Survivable Sealift
Hypersonics
Information Warfare
Integrated Warrior
Laser Communication
Network Centric Info Management
Next Generation Stealth Enhanced Vehicles
Non-Lethal Weapons and Effects
Space (Enhanced Domain)
Unmanned Vehicles

S(oi) D&A

16. Systems Fielded/Currently in Work—S(acat): Each ACAT I, II, III and IV system fielded (IOC) in the last 3 years or currently in work

S(acat) = Sum of (AFIII/IV + 2X AFII + 3X AFI)/MAX Sum of (AFIII/IV + 2X AFII + 3X AFI) for the like facility with the highest total score

Include all products delivered to operational use in the last 3 years

AFIII/IV = number of ACAT III and ACAT IV products fielded or in work

AFII = number of ACAT II products fielded or in work

AFI = number of ACAT I products fielded or in work

Question Rationale:	A recent history of fielding products valued by Under Secretary of Defense (Acquisition and Technology) or DoD Component Head or DoD Component Acquisition Executive contributes to military value.
Scoring Rationale:	The scoring is designed to give more MV to those facilities that deliver more Operationally relevant products. Since ACAT levels are well defined across the DoD and there is recognition that ACAT level 1 is more challenging than ACAT level II which is more challenging than ACAT levels III & IV. Each is weighted, the result of Professional Military Judgment. The 5% minimum is the result of designing the question to only address those facilities with D&A responsibility rather than participation, with the 5% value the result of collective Professional Military Judgment.

Question- Referencing your response provided in capacity data call questions #693-731, broken down by technical capability area, identify the number of ACAT I, ACAT II, ACAT III and ACAT IV programs that have been fielded during FY01-03. Report the program if you are the executive agent or if at least 5% of your technical or professional workforce was involved in the program.

Question- Referencing your response provided in capacity data call questions #693-731, broken down by technical capabilities, list the ACAT I, ACAT II, ACAT III and ACAT IV programs that were in work at your facility at the end of FY03. Report only if you are the executive agent or if at least 5% of your technical or professional workforce was involved in the program.

13. Rapid Response—S(qrc): Capabilities delivered in rapid response to meet operational deficiencies over the past three years

S(qrc) = Sum of total funding for FY01-02-03 for all rapid fieldings by the technical facility)/Max Sum of total funding for FY01-02-03 for all rapid fieldings) for the like facility with the highest total funding of rapid responses to operational deficiencies

Each rapid response or fielding to meet operational deficiencies over last 3 years

Question- List by name and total funding for FY01-02-03, broken down by technical capability area and function, each rapid response capability (e.g. Urgent Need Statement) delivered to the war fighter during the time frame FY01-03 that was delivered in less than 12 months from identification of operational need to the reporting facility. In addition, identify the operational command/unit that requested and received the capability along with the quantity/number of items fielded.

Rational:	A recent history of a response to an Urgent Need Statement accepted by the operational command contributes to military value

<u>14. Workload Focus</u>—S(foc): The magnitude of work effort at a technical facility compared to the work effort of like technical facilities

$S(foc) = [.8X(FTFEi/MTFEi_i) + .2X(FTFEe/MTFEe) + (FFTEs/MFFTEs)]/2$

FTFEi = funding executed internally by the technical facility (includes personnel salaries) over the last three years (FY01-03)

MTFEi= maximum funding executed internally by any like-facility (includes personnel salaries) over the last three years (FY01-03)

FTFEe = funding executed externally by the technical facility over the last three years (FY01-03)

MTFEe = maximum funding executed externally by any like technical facility over the last three years (FY01-03)

FFTEs = In house FTEs at the technical facility over the last three years (FY01-03)

MFFTEs = maximum # of FTEs at any like facility over the last three years (FY01-03)

Question- Refer to Capacity Data Call Questions 693 to 731 for counting FTEs for each TECHNICAL CAPABILITY area. Refer to Capacity Data Call Questions to define the funding executed by the facility.

Rational:	The relative magnitude of the work effort at a technical facility is proportional to its military value

<u>15. Future Warfighting Capability</u>—S(fwc): The measure of a technical facility to meet the needs of the future warfighter. The following areas have been identified by as future high value warfighting capabilities/technologies that will be needed:

Advanced Detection and Mitigation of CBNRE
Advanced Guided Weapons
Advanced Propulsion
Anti-Materiel Weapons
Directed Energy Weapons
Distributed Netted Sensors
EM Guns and Accelerators
Fast, Survivable Sealift
Hypersonics
Information Warfare
Integrated Warrior
Laser Communication
Network Centric Info Management
Next Generation Stealth Enhanced Vehicles
Non-Lethal Weapons and Effects
Space (Enhanced Domain)
Unmanned Vehicles

$$S(fwc) = [.8X(FTFEi/MTFEi_i) + .2X(FTFEe/MTFEe) + (FTFEf/MTFEf) + (FFTEs/MFFTEs)]/3$$

FTFEi = funding executed internally by the technical facility (includes personnel salaries) over the last three years (FY01-03)

MTFEi= maximum funding executed internally by any like-facility (includes personnel salaries) over the last three years (FY01-03)

FTFEe = funding executed externally by the technical facility over the last three years (FY01-03)

MTFEe = maximum funding executed externally by any like technical facility over the last three years (FY01-03)

FTFEf = funding identified over the FYDP (FY04-FY10) by the technical facility

MTFEf = maximum funding identified over the FYDP (FY04-FY10) by any like technical facility

FFTEs = In house FTEs at the technical facility over the last three years (FY01-03)

MFFTEs = maximum # of FTEs at any like facility over the last three years (FY01-03)

Rational:	

Question- Referencing capacity data call questions #734 through #746, broken out by function, indicate the items appearing on the list below and identify the total funding that has been executed in each item by year for FY01, FY02, and FY03. If none, enter "not applicable".

Question- Referencing capacity data call questions #693 to #731, broken out by function, indicate items appearing on the list below and report the number of FTEs in each item by year for FY01, FY02, and FY03. If none, enter "not applicable".

Question- Referencing capacity data call questions #734 through #746, broken out by function, indicate items appearing on the list below and identify the total funding planned to be executed in each item over the FY05 President's Budget Request (FY04-FY10). If none, enter "not applicable".

Advanced Detection and Mitigation of CBNRE
Advanced Guided Weapons
Advanced Propulsion
Anti-Materiel Weapons
Directed Energy Weapons
Distributed Netted Sensors
EM Guns and Accelerators
Fast, Survivable Sealift
Hypersonics
Information Warfare
Integrated Warrior
Laser Communication
Network Centric Info Management
Next Generation Stealth Enhanced Vehicles
Non-Lethal Weapons and Effects
Space (Enhanced Domain)
Unmanned Vehicles

S(oi) T&E

<u>17. Current Testing in Work</u>—S(tiw): Total testing workload in test hours over the last three years (FY01-03).

S(tiw) = [Sum(test hours) for a facility/Max Sum(test hours) for the largest like facility

Question- Use Capacity Question 748 as the source of executed test hours and events.

Rational:	

<u>13. Rapid Response</u>—S(qrc): Capabilities delivered in rapid response to meet operational deficiencies over the past three years

S(qrc) = Sum of total funding for FY01-02-03 for all rapid fieldings by the technical facility)/Max Sum of total funding for FY01-02-03 for all rapid fieldings) for the like facility with the highest total funding of rapid responses to operational deficiencies

Each rapid response or fielding to meet operational deficiencies over last 3 years

Question- List by name and total funding for FY01-02-03, broken down by technical capability area and function, each rapid response capability (e.g. Urgent Need Statement) delivered to the war fighter during the time frame FY01-03 that was delivered in less than 12 months from identification of operational need to the reporting facility. In addition, identify the operational command/unit that requested and received the capability along with the quantity/number of items fielded.

Rational:	A recent history of a response to an Urgent Need Statement accepted by the operational command contributes to military value

<u>14. Workload Focus</u>—S(foc): The magnitude of work effort at a technical facility compared to the work effort of like technical facilities

$S(foc) = [(FTFEi/MTFEi_i) + (FFTEs/MFFTEs)]/2$

FTFEi = funding executed internally by the technical facility (includes personnel salaries) over the last three years (FY01-03)

MTFEi= maximum funding executed internally by any like-facility (includes personnel salaries) over the last three years (FY01-03)

FFTEs = In house FTEs at the technical facility over the last three years (FY01-03)

MFFTEs = maximum # of FTEs at any like facility over the last three years (FY01-03)

Question- Refer to Capacity Data Call Questions 693 to 731 for counting FTEs for each technical capability areas. Refer to Capacity Data Call Questions to define the funding executed by the facility.

Rational:	The relative magnitude of the work effort at a technical facility is proportional to its military value

15. Future Warfighting Capability—S(fwc): The measure of a technical facility to meet the needs of the future warfighter. The following areas have been identified by as future high value warfighting capabilities/technologies that will be needed:

Advanced Detection and Mitigation of CBNRE
Advanced Guided Weapons
Advanced Propulsion
Anti-Materiel Weapons
Directed Energy Weapons
Distributed Netted Sensors
EM Guns and Accelerators
Fast, Survivable Sealift
Hypersonics
Information Warfare
Integrated Warrior
Laser Communication
Network Centric Info Management
Next Generation Stealth Enhanced Vehicles
Non-Lethal Weapons and Effects
Space (Enhanced Domain)
Unmanned Vehicles

$S(fwc) = [(FTFEi/MTFEi_i) + (FTFEf/MTFEf) + (FFTEs/MFFTEs)]/3$

FTFEi = funding executed internally by the technical facility (includes personnel salaries) over the last three years (FY01-03)

MTFEi= maximum funding executed internally by any like technical facility (includes personnel salaries) over the last three years (FY01-03)

FTFEf = funding identified over the FYDP (FY04-FY10) by the technical facility

MTFEf = maximum funding identified over the FYDP (FY04-FY10) by any like technical facility

FFTEs = In house FTEs at the technical facility over the last three years (FY01-03)

MFFTEs = maximum # of FTEs at any like facility over the last three years (FY01-03)

Rational:	

Question- Referencing capacity data call questions #734 through #746, broken out by function, indicate the items appearing on the list below and identify the total funding that has been executed in each item by year for FY01, FY02, and FY03. If none, enter "not applicable".

Question- Referencing capacity data call questions #693 to #731, broken out by function, indicate items appearing on the list below and report the number of FTEs in each item by year for FY01, FY02, and FY03. If none, enter "not applicable".

Question- Referencing capacity data call questions #734 through #746, broken out by function, indicate items appearing on the list below and identify the total funding planned to be executed in each item over the FY05 President's Budget Request (FY04-FY10). If none, enter "not applicable".

Advanced Detection and Mitigation of CBNRE
Advanced Guided Weapons
Advanced Propulsion
Anti-Materiel Weapons
Directed Energy Weapons
Distributed Netted Sensors
EM Guns and Accelerators
Fast, Survivable Sealift

Hypersonics
Information Warfare
Integrated Warrior
Laser Communication
Network Centric Info Management
Next Generation Stealth Enhanced Vehicles
Non-Lethal Weapons and Effects
Space (Enhanced Domain)
Unmanned Vehicles

SYNERGY (4 metrics & 5 questions)

S(syn) for a facility = [k_1S(mfc) + k_2S(jnt) + k_3S(prox) + k_4S(duc)]/ MAX [k_1S(mfd) + k_2S(jnt) + k_3S(prox) + k_4S(duc)] for the like facility with the highest score

Where:

S(syn) is the total score establishing a military value of synergy of the technical infrastructure of a facility.

18. Multiple Functions/Capability Areas—S(mfc): accomplishment of more than one function or capability area at a facility

S(mfc) = Sum of (F + C)/ MAX Sum of (F + C) of the like facility with the highest score

F =

1 point if 10% or more of funded work is in another function (i.e., R, D&A, T&E)

2 points if 10% or more of funded work is in all the functions

C =

1 point if 10% or more of funded work is in another technical capability area

2 points if 10% or more of funded work is in two or three other technical capability areas

3 points if 10% or more of funded work is in four or more other technical capability areas

Question- Data for this question will be derived from analysis of the results of

Capacity questions 734 through 746 inclusive (Note: Must confirm these questions are answered: "What is the total value of the funded work executed by this facility?" and " What percentage of the funded work done at this facility is in each of the following categories - R, D&A and T&E?")

(734-746: For the function identified provide the funding for three years (FY01, FY02, FY03) and the peak funding year (from FY94 through FY03) for RDTE&A funding received at the location. The peak funding year could be FY01 or FY02 or FY03.)

Rational:	

19. Jointness—S(jnt): Executing a joint program at your facility, use of your facility's physical structure and/or personnel by other services/OSD, or another service's personnel assigned to your facility

S(jnt) = Sum of the total Joint $ at your facility / MAX Spent at the like facility with the highest score

Rational:	

Question- Identify by function and technical capability area all programs in which your facility participated (managed and/or executed), along with associated funding levels, that supported joint Service (DoD), other domestic government, or international mission requirements during the period FY01 through FY03.

Question- Identify by function and technical capability area all other Services' programs (including international and other government agencies) and funding that were executed at your facility during the FY01 through FY03.

20. Proximity—S(prox): Proximity of facility to customers/users, other functions (R, D&A, T&E), industry, governmental and academic institutions that add value to the facility's product.

S(prox) = Sum of (CUST + OF + IP + GA + AI)/MAX Sum of (CUST + OF + IP + GA + AI) for the like facility with the highest score

Proximity benefits only accrue to entities participating in the facility's capability area, in the last three years

CUST = 1 point for customer/user co-located or located within 60 miles from the outside physical border of the facility

OF = 1 point for each other function (R, D&A, T&E) co-located or located within 60 miles from the outside physical border of the facility

IP = 1 point if an industry partner co-located or located within 60 miles from the outside physical border of the facility

GA = 1 point if another non-DoD government agency co-located or located within 60 miles from the outside physical border of the facility

AI = 1 point if academic institutions are co-located or located within 60 miles from the outside physical border of the facility

Question- Identify by function and technical capability area all customer/user, other function (R, D&A, or T&E), industry partners, non-DoD agency, and academic institution that were operating in your facility at the end of FY03 and were either co-located or located within 60 miles of your facility's outer most boundaries.

Question Rationale:	This question is designed to identify business partners that provide synergistic support to the reporting activity's primary mission – the 60 mile limit is a nominal hour's driving time representing a distance a reasonable person might travel to collaborate.
Scoring Rationale:	The scoring is designed to give more military value to those facilities with more partners involved in their mission. As there was no basis for giving one partner more military value than another, all partners were treated equally.

<u>21. Dual Use Capacity</u>—S(duc): Use of a facility's technical infrastructure by academia, industry or international (non military) activities

S(duc) = Sum of (the score)/MAX Sum of (the score) of the like facility with the highest score

1 point for each use of a facility's technical infrastructure by academia, industry, or international activities

Question- Identify by name and funding levels, broken down by technical capability and function, all academia, industry, or non-military international programs/activities that used your facility through formal agreement during FY01-03.

Rational:	

Appendix C

Military Value Data Call Questions

Question #1– **Question**– Each reporting facility shall breakout the answer provided in response to question #690 of the capacity data call by function (i.e., R, D&A, T&E) and technical capability area. Time frame in question is the end of FY03 (September 30, 2003). Individual personnel shall be reported by the function and technical capability area in which they do the majority of their work (In the absence of a majority use plurality).

Question- Question- Report by function (i.e., R, D&A, T&E) and technical capability area, the number of Professional and Technical (P&T categories of the PATCOB) workforce (military, government civilian, and others) falling into the following experience categories - less than or equal to 10 years, greater than 10 and less than or equal to 20 years, greater than 20 (Measured from date of receipt of first degree, or from Service Computation Date, whichever is earlier) at the end of FY03.

Other means non-government personnel (e.g., all on-site contractors such as SETA, A&AS, A76, all on-site FFRDC personnel, Intergovernmental Personnel Act appointees, etc.) for which the technical facility is obliged to provide space.

Question- Report by function (i.e., R, D&A, T&E) and technical capability area, the number of Government (military & civilian) Professional and Technical (P&T categories of the PATCOB) workforce that have as their highest DAWIA certification levels as Level 1, Level 2, Level 3 or multiple Level 3 certifications at the end of FY03. (Reference responses to questions #691 and 692 of the capacity data call in amplification section).

Question- Report by function (i.e., R, D&A, T&E) and technical capability area, the number of Government (military & civilian) Professional and Technical (P&T categories of the PATCOB) workforce that are Test Pilot School graduates, or have a Software Engineering Certification from the following sources as of the end of FY03: IEEE Certified Software Development Professional Program, International Institute for Software Testing for Certified Software Test Professionals, Rational Unified Process (RUP) Certification, Software

Engineering Institute Certification Program.

Question #5 - By technical capability and function, for the military & Government civilian & other (P&T categories of the PATCOB) workforce on staff on September 30, 2003 (see answers to capacity data call question #693-#731), during the period FY01- FY03:

List each occurrence of: patent awarded, patent licensed, software license awarded, technical publications (each book, book chapter, paper in a refereed journal listed at http://www.isinet.com/cgi-bin/jrnlst/jlresults.cgi?PC=MASTER), receipt of a national or international technical awards, and invited presentations at a national or international technical society conference.

Note: where one of the above was an individual or group accomplishment, the individual or at least one of the group must be on staff as of September 30, 2003 to be reported.

Note: refereed journal papers must be identified separately with author's name, journal, and total number of citations. A software license award refers to proprietary ownership of a software code.

List each national and international technical award (as defined below) and name of recipient.

National and international technical awards are the Nobel Prize, Robert J. Collier Trophy, National Medal of Science, National Medal of Technology, Draper Prize, Bower Award for Achievement in Science, Stellar Award, Goddard Astronautics Award, A.T. Waterman Award, William Streifer Award, Lord Rank Award, National Inventors Hall of Fame, Space Technology Hall of Fame; member of National Academy of Sciences or member of National Academy of Engineering.

If you wish an award to be considered that is not listed above provide the name of the award and award date.

List (name of staff members and name of society) fellows of technical societies listed below.

If you wish fellows to be considered of a society not listed below provide the name of the society and its web site.

AAAI American Association for Artificial Intelligence (http://www.aaai.org/)
Acoustical Society of America (http://asa.aip.org/)
American Association of Immunologists (http://www.aai.org/)
American Astronautical Society (http://www.astronautical.org/)
American Helicopter Society (http://www.vtol.org/index.html)
American Institute of Chemical Engineers (http://www.aiche.org/)
American Nuclear Society (http://www.ans.org/)
American Society for Microbiology (http://www.asm.org/)

American Society for Photobiology (http://www.pol-us.net/ASP_Home/)
American Society of Naval Engineers (http://www.navalengineers.org/)
American Association for the Advancement of Science (http://www.aaas.org/
American Ceramics Society (http://www.ceramics.org/)
American Chemical Society (http://www.acs.org/)
American Geophysical Union (http://www.agu.org/)
American Institute of Aeronautics and Astronautics (http://www.aiaa.org/)
American Institute of Biological Sciences (http://www.aibs.org/core/index.html)
American Institute of Physics (http://www.aip.org/)
American Mathematical Society (http://www.ams.org/)
American Medical Association (http://pubs.ama-assn.org/)
American Meteorological Society (http://www.ametsoc.org/)
American Physical Society (http://www.aps.org/
American Society for Biochemistry and Molecular Biology
(http://www.asbmb.org/ASBMB/site.nsf)
American Society for Limnology and Oceanography (http://aslo.org/lo/toc/index.html)
American Society for Pharmacology and Experimental Therapeutics
(http://www.aspet.org/)
American Society of Mechanical Engineers (http://www.asme.org/)
American Statistical Association (http://www.amstat.org/)
Applied Probability Trust (http://www.shef.ac.uk/uni/companies/apt/)
American Society for Microbiology (http://www.asm.org/)
Association of Computing Machinery (http://www.acm.org/)
Association of Old Crows (http://www.crows.org/)
AVS Science and Technology Society (http://www.avs.org)
Audio Engineering Society (http://www.aes.org/)
Biophysical Society (http://www.biophysics.org)
Electrochemical Society (http://www.electrochem.org/)
FASEB: Federation of American Societies for Experimental Biology
(http://www.faseb.org/)
Geological Society of America (http://www.geosociety.org/)
Institute of Electrical and Electronics Engineers (IEEE)
(http://www.ieee.org/portal/index.jsp)
Institute of Electronics, Information and Communication Engineers (IECIE)
(http://www.ieice.org/eng/index.html)
Institute of Materials, Minerals and Mining (IOM3) (http://www.iom3.org/)
Institute of Mathematical Statistics (http://www.imstat.org/)
Institute of Physics (http://www.iop.org/)
Institute of Electrical Engineers (IEE) (http://www.iee.org/)
International Academy of Astronautics (http://www.iaanet.org/
International Biometric Society (http://www.tibs.org/index.html)
International Union for Pure and Applied Biophysics (http://www.iupab.org/welcome.html)
International Cognitive Linguistics Association (http://www.cognitivelinguistics.org)
International Society for Optical Engineering (SPIE) (http://www.spie.org/)
International Union of Crystallography (http://www.iucr.org/
International Union of Pure and Applied Chemistry
(http://www.iupac.org/dhtml_home.html)
Mathematical Association of America (http://www.maa.org/
Materials Research Society (MRS) (http://www.mrs.org/)
National Academy of Sciences (http://www4.nationalacademies.org/nas/nashome.nsf)
Optical Society of America (OSA) (http://www.osa.org/)
Sigma Xi (http://www.sigmaxi.org/)
Society for Applied Spectroscopy (http://www.s-a-s.org/)
Society for Automotive Engineering (http://www.sae.org/)

Society for General Microbiology (http://www.socgenmicrobiol.org.uk/)
Society for Industrial and Applied Mathematics (SIAM) (http://www.siam.org/)
Society for Modeling and Simulation International (http://www.scs.org/)
Society of Exploration Geophysicists (http://seg.org/)
Society of Naval Architects & Marine Engineers (http://www.sname.org/)
Society of Plastics Engineers (http://www.4spe.org)
Society for Experimental Mechanics (http://www.sem.org/)
Society for Information Display (http://www.sid.org/)
Society for Neuroscience (http://web.sfn.org)
Society of Tribologists and Lubrication Engineers (http://www.stle.org/)
The Minerals, Metal & Materials Society (TMS) (http://www.tms.org/TMSHome.html)
The National Academy of Engineering
The National Academy of Medicine

Question: *Please identify the special features at your technical facility.*

	Y/N
Ground Vehicles (GV)	
Ability detonate projectiles in excess of 120mm	
Sea Vehicles (SV)	
Ability to operate, measure signatures, and control surface or sub-surface vessels at 20% full scale and above	
Ability to operate, measure signatures, and control surface or sub-surface vessels at less than 20% full scale	
Space Platforms (SP)	
Ability to monitor and control orbital and/or sub-orbital vehicles through the full spectrum of operations (launch, flight, and recovery)	
Weapons (WP)	
Ability to handle and detonate live ordnance in excess of 500 pounds HE.	
Ability to operate high power laser and high power microwaves in a non open air range environment	
Materials and Processes (MP)	
Ability to develop, use and implement new materials and process in military equipment	
Biomedical (Data from Medical Capacity data Call) (BIO)	
Biosafety level 3 labs with Aerosol Capability	
Biosafety level 4 labs with Aerosol Capability	
Hypobaric man rated chambers, occupancy for two weeks or more	

AAALAC Accredited Animal Facilities (non human primate holding capacity >25)	
Human Systems (HS)	
Ability to experiment and demonstrate new capabilities to reduce manning, promote unmanned operations, or enhance situational awareness in realistic environments	
Chem-Bio Defense (CB)	
Ability to disperse and analyze Chemical-Biological simulants over a square mile	
Sensors, Electronics & Electronic Warfare (SE)	
Indoor radiating facility no less than 100 feet long X 30 feet wide X 10 feet tall	

Question- Identify all environmental constraints restricting mission related operations within your facility in effect during FY01 through FY03.

Include all loss of licenses (local, state, federal, etc.) required for operations and any reduction = 1% of buildable land that would limit facility expansion. "Buildable" land is considered any land not currently the site of a structure but could reasonable be used in that manner. It is free of unusual hazards and not in need of clean up or mitigation efforts.

Question- Viewed from a network-centric warfare (NCW) perspective, by technical capability and functional area; identify efforts whose funding exceeds $10M and whose FTEs exceed 30 aggregated over the period FY01-03, by these levels: system of systems, system, or subsystem.

Note: NCW generates increased combat power by networking sensors, decision makers, and shooters to achieve shared awareness, increased speed of command, high tempo of operations, greater lethality, increased survivability, and a degree of self-synchronization. Network Centric Warfare focuses on desired effect than what is used to get effect (i.e. putting rounds on target as opposed to what platform puts the rounds on target).

Question- Referencing capacity data call question #11, for each item having an entry in the "If used for RDTE&A functions, occupancy on September 30, 2003?" cell provide the function and technical capability area most used in FY03.

Question #10- For all equipment listed in capacity call question #686, provide the estimated FY03 replacement cost, to the nearest million dollars. Additionally, for each combination of function and technical capability area, provide the days used in FY01, FY02, and FY03.

Question- For all facilities listed in capacity call question #687, provide the estimated FY03 replacement cost, to the nearest million dollars. Additionally, for

each combination of function and technical capability area, provide the days used in FY01, FY02, and FY03.

Sample Tables:

Equipment Name	Replacement Cost Estimate	FY03 days used	FY 02 days used	FY 01 days Used

Facility Name	Replacement Cost Estimate	FY 03 days used	FY 02 days used	FY 01days used

Question- List by name each funded technology, including 6.1, 6.2 and 6.3, (hardware, software and processes) that has transitioned to development and acquisition during FY01, FY02 and FY03, including the name of the development and acquisition program(s) that received the technology.

Question- : List by name and total funding for FY01-02-03 of each ACTD, ATD, DTO, TTA that was currently in work at the end of FY03. Indicate one technical capability area and function with which to associate each. Do not include TTAs for reported ACTDs, ATDs, or DTOs.

Question: List by name and total funding for FY01-02-03, broken down by technical capability area and function, each rapid response capability (e.g. Urgent Need Statement) delivered to the war fighter during the time frame FY01-03 that was delivered in less than 12 months from identification of operational need to the reporting facility. In addition, identify the operational command/unit that requested and received the capability along with the quantity/number of items fielded.

Question #15- Referencing capacity data call questions #734 through #746, broken out by function, indicate the items appearing on the list below and identify the total funding that has been executed in each item by year for FY01, FY02, and FY03. If none, enter “not applicable”.

Question- Referencing capacity data call questions #693 to #731, broken out by function, indicate items appearing on the list below and report the number of FTEs in each item by year for FY01, FY02, and FY03. If none, enter “not

applicable".

Question- Referencing capacity data call questions #734 through #746, broken out by function, indicate items appearing on the list below and identify the total funding planned to be executed in each item over the FY05 President's Budget Request (FY04-FY10). If none, enter "not applicable".

Advanced Detection and Mitigation of CBNRE
Advanced Guided Weapons
Advanced Propulsion
Anti-Materiel Weapons
Directed Energy Weapons
Distributed Netted Sensors
EM Guns and Accelerators
Fast, Survivable Sealift
Hypersonics
Information Warfare
Integrated Warrior
Laser Communication
Network Centric Info Management
Next Generation Stealth Enhanced Vehicles
Non-Lethal Weapons and Effects
Space (Enhanced Domain)
Unmanned Vehicles

Question- Referencing your response provided in capacity data call questions #693-731, broken down by technical capability area, identify the number of ACAT I, ACAT II, ACAT III and ACAT IV programs that have been fielded during FY01-03. Report the program if you are the executive agent or if at least 5% of your technical or professional workforce was involved in the program.

Question- Referencing your response provided in capacity data call questions #693-731, broken down by technical capabilities, list the ACAT I, ACAT II, ACAT III and ACAT IV programs that were in work at your facility at the end of FY03. Report only if you are the executive agent or if at least 5% of your technical or professional workforce was involved in the program.

Question #20- Identify by function and technical capability area all programs in which your facility participated (managed and/or executed), along with associated funding levels, that supported joint Service (DoD), other domestic government, or international mission requirements during the period FY01 through FY03.

Question- Identify by function and technical capability area all other Services' programs (including international and other government agencies) and funding that were executed at your facility during the FY01 through FY03.

Question- Identify by function and technical capability area all customer/user,

other function (R, D&A, or T&E), industry partners, non-DoD agency, and academic institution that were operating in your facility at the end of FY03 and were either co-located or located within 60 miles of your facility's outer most boundaries.

Question #23- Identify by name and funding levels, broken down by technical capability and function, all academia, industry, or non-military international programs/activities that used your facility through formal agreement during FY01-03.