

Department of the Navy



INFRASTRUCTURE ANALYSIS TEAM

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IAT/JAN
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MEMORANDUM FOR THE INFRASTRUTURE EVALUATION GROUP (IEG)

Subj: REPORT OF IEG DELIBERATIONS OF 20 MAY 2004

- Encl:
- (1) IAT HSA DON Specific Recruiting Districts/Stations Revised Military Value Evaluation Scoring Statement and Question for PS-8
 - (2) IAT HSA DON Specific Recruiting Districts/Stations Military Value Summary
 - (3) IAT HSA DON Specific Recruiting Military Value Attribute Selection Criteria Weighting
 - (4) IAT HSA DON Specific Recruiting Military Value Ranking of Attribute Components By Weight
 - (5) IAT HSA DON Specific Reserve Centers Military Value Summary
 - (6) IAT HSA DON Specific Reserve Centers Military Value Attribute Selection Criteria Weighting
 - (7) IAT HSA DON Specific Reserve Centers Military Value Ranking of Attribute Components By Weight
 - (8) IAT Aviation Universe Brief of 20 May 2004
 - (9) IAT Analysis of "Other" Activities Brief of 20 May 2004
 - (10) IAT BRAC Overview Brief of 20 May 2004
 - (11) IAT Optimization Brief of 20 May 2004

1. The twelfth deliberative session of the Department of the Navy (DON) Infrastructure Evaluation Group (IEG) convened at 0947 on 20 May 2004 in the CNI conference room located at Crystal Plaza 5, 4th floor. The following members of the IEG were present: Mr. H. T. Johnson, Chair; Ms. Anne R. Davis, Vice Chair; VADM Charles W. Moore, Jr., USN, Member; Mr. Mark H. Anthony, alternate for VADM Albert H. Konetzni, USN, Member; Dr. Michael F. McGrath, Member; Mr. Robert T. Cali, Member; Mr. Ronnie J. Booth, Navy Audit Service, Representative; and, Mr. Thomas N. Ledvina, Navy Office of General Counsel, Representative. The following members of the IAT were present when the deliberative session commenced: Mr. Dennis Biddick; Mr. David W. LaCroix; Dr. Ron H. Nickel, CNA; CAPT Jason A. Leaver, USN; CAPT Christopher T. Nichols, USN; CAPT Matthew R. Beebe, CEC, USN; CDR Robert E. Vincent II, JAGC, USN; CDR Lee Jaenichen, USN; CDR Edward J. Fairbairn, USN; CDR Jennifer R.

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Flather, SC, USN; Mr. Michael D. Bowes, CNA; Maj Stanley Sober, USMCR; LCDR Robert A. Dews, USN; LCDR Majella D. Stevenson, CEC, USN; Capt James A. Noel, USMC; and Ms. Christina E. Richardson.

2. Ms. Davis provided a synopsis of IEG decisions concerning the two HSA DON specific functions. At the 13 May 2004 deliberative session the IEG had directed the IAT to reassess whether driving distance or time was the most appropriate measurement for question PS-8a in the Personnel Support Attribute for the DON HSA Recruiting Districts/Stations Function. The IAT recommended that the appropriate measurement was time, specifically, a one-hour commute. The IEG approved the modified question as recommended by the IAT. See enclosure (1).

3. The IEG proceeded to finalize the military value scoring plan for the HSA DON Specific Recruiting Districts/Stations Function. The IAT recommended changes to two areas to rectify inconsistencies in the assignment of the scoring statements to the four military value selection criteria. See enclosure (2). The IEG approved the following IAT recommendations:

a. Efficiency of Operation. Scoring statement 9, (HD-9) proximity to Military Entrance Processing Station (MEPS), was not previously assigned to the Surge Capabilities (SC) selection criteria. Scoring statement 8 (HD-8), proximity to recruiting stations/sub-stations, was previously assigned to the SC selection criteria. The IAT recommended that scoring statement 9 (HD-9) be assigned to the SC selection criteria, since proximity to MEPS is as applicable to the SC selection criteria as is proximity to recruiting stations/sub-stations.

b. Quality of Facilities. Scoring statement 13 (HD-13) Facility Condition Code, was not previously assigned to the Cost and Manpower (C) selection criteria. Noting that improvement to facility condition codes impacts cost, the IAT recommended that scoring statement 13 (HD-13) be assigned to the C selection criteria.

4. The IAT presented proposed attribute weighting to the selection criteria and accompanying ranking of attribute components by weight for the HSA DON Specific Recruiting Districts/Stations Function. See enclosures (3) and (4). The IEG noted that the attribute weight applied for the Quality of Facilities Attribute to the SC selection criteria was "0", and the attribute weights applied for the Personnel Support Attribute to the Facilities and SC selection criteria were "0",

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since there was no assignment of scoring statements to the selection criteria for these attributes. The IEG further noted that the ranking of attribute components was appropriate. The IEG approved the attribute weighting to the selection criteria as recommended by the IAT.

5. The IEG proceeded to finalize the military value scoring plan for the HSA DON Specific Reserve Centers Function. In the Efficiency of Operation Attribute, the IAT recommended that scoring statement 17 (HR-17), Usage rate: drill weekends per month, be applied to the Facilities selection criteria. The IEG approved the recommendation of the IAT. See enclosure (5).

6. The IAT presented proposed attribute weighting to the selection criteria and accompanying ranking of attribute components by weight for the HSA DON Reserve Centers Function. See enclosures (6) and (7). The IEG noted that the ranking of attribute components was appropriate. The IEG approved the attribute weighting to the selection criteria as recommended by the IAT. CAPT Beebe, Maj Sober, LCDR Dews, and LCDR Stevenson departed from the session at 0958.

7. The IAT presented enclosure (8) to the IEG. At the 6 May 2004 deliberative session, the IEG had directed the IAT to review the DON Aviation Operations Function screening criteria prior to finalizing the DON Aviation Operations Function Universe. DON established the following screening criteria for rotary wing aviation activities: (1) DOD owned/controlled runway greater than or equal to 3000 feet long and 150 feet wide, (2) latitudinal and longitudinal location within 50 nautical miles of a coastline, and (3) hangar size greater than 30,000 square feet. DON established the following screening criteria for fixed wing aviation activities: (1) DOD owned/controlled runway greater than or equal to 8000 feet long and 150 feet wide, (2) latitudinal and longitudinal location within 550 nautical miles of a coastline, and (3) hangar size greater than 30,000 square feet.

8. Based upon these screening criteria, the IAT identified 35 activities at which DON active and reserve aviation squadrons operate. The Department of the Army (DA) provided a list of 13 bases for possible addition to the DON Aviation Universe. The Department of the Air Force (DAF) provided a list of 92 bases for possible addition to the DON Aviation Universe. After review, the IAT determined that a number of these bases were Air National Guard sites outside of the control of DOD. The IEG approved the IAT recommendation that the Air National Guard

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sites be deleted from consideration. The IEG approved the addition of 13 DA and 64 DAF bases that met the screening criteria to the DON Aviation Operations Functions Universe. The IEG will conduct analysis of an Aviation Universe that encompasses 112 DOD activities with runways capable of supporting operational squadrons. The IEG noted that this universe allows for a broader look than any previous BRAC round and has the potential for revealing greater opportunities for joint basing. Ms. Davis informed the IEG that DA and DAF will conduct similar analyses. CAPT Beebe returned to the deliberative session at 1007.

9. The IAT presented an analysis of "other" activities within the DON universe using enclosure (9). This "other" category includes 217 DON activities that are not functionally aligned with a JCSG or DON specific function. The IAT proposed categories, definitions, and activity lists that will continue to be refined for future approval by the IEG. These activities were categorized as follows: Organizational Followers, Dependent Activities, Stand-Alone Activities, Specialized Function Activities, and Regional Support Activities. As noted below, the IEG conceptually approved the approaches for analysis recommended by the IAT.

a. Organizational Followers are directly tied to their locations due to current operations and are subject to move if operational units are relocated. Since these activities are in effect, subsumed by the analysis of operational functions and will follow the operational units for realignment or closure scenarios, the IAT recommended that activities identified in this category not be evaluated independently for capacity analysis or military value, unless specific data becomes necessary for scenario alternatives development.

b. Dependent Activities exist to perform a specific function at a specific location and would close/consolidate if the operation they supported is closed/relocated. The IAT recommended that activities identified in this category be treated like Organizational Followers.

c. Stand Alone Activities have no apparent location nexus to an operational unit and could be relocated regardless of existing operational units in their current location. These units are not sufficiently similar to group for analysis, but some are similar enough to consider for co-location. The IAT recommended developing a short set of military value evaluation questions that could be utilized in refining scenarios developed

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for JCSG and DON specific functions. For instance, it could be possible to replace an activity removed from an installation by a JCSG recommendation with a Stand Alone Activity. Additionally, the developed questions will provide useful information to evaluate the benefit of an activity's location.

d. Specialized Functions Activities are groups that perform similar functions but are not functionally equivalent. The IAT recommended determining the capacity requirement, conducting a targeted data call, and performing capacity analysis. If the activity is determined to have no excess, it will be treated as a tenant activity. Military value analysis will be conducted if excess capacity exists to consider closure and realignment alternatives.

e. Regional Support Activities are various geographic shore support activities not tied to a specific location or set of operational forces. The IAT recommended analyzing Regional Support Management to assess geographic responsibilities, span of control, and alignment.

10. The IEG approved the IAT's recommendation to release a "mini" data call to all "other" activities. The "mini" data call will ensure that the IEG understands the activity's mission and that it is properly categorized. The IEG directed the IAT to continue refining the list of activities.

11. Ms. Davis informed the IEG that future deliberative sessions would include a series of briefs to familiarize the IEG with proposed BRAC 2005 analytical tools. She used enclosure (10) to provide the IEG with an overview of the BRAC 2005 process. Ms. Davis informed the IEG that Capacity Analysis, the next step in the analytic process, is critical in that it is the mechanism to link closure and realignment recommendations to the 20-year Force Structure Plan (FSP) as required by statute. Ms. Davis continued with an overview of military value analysis, configuration analysis, scenario development, scenario analysis, and recommendation development. CDR Flather and CDR Fairbairn departed from the session at 1122. CAPT Beebe, Mr. Bowes, and CDR Jaenichen departed from the session at 1133.

12. Dr. Ron Nickel used enclosure (11) to brief the IEG on the Optimization methodology. OSD has assigned DON the lead for developing the Optimization methodology for use by the JCSGs and the Services for BRAC 2005. The methodology was developed by DON in BRAC 1993, and refined in BRAC 1995. The Optimization framework will provide a guideline for the creation of specific

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optimization models for use in generating multiple alternative solutions that will serve as starting points in the development of closure and/or realignment scenarios. Ms. Davis noted that the IEG will be required to make policy determinations concerning the constraints/parameters applied to the model, which will determine the solutions for which the model will solve. Ms. Davis reminded the IEG that the model will produce mathematically feasible alternatives and not answers. Exercising their military judgment, the IEG will refine the alternatives for the scenario development process.

13. The deliberative session adjourned at 1200.



JAMES A. NOEL
CAPTAIN, U.S. Marine Corps
Recorder, IAT

TAB 1

Navy & Marine Corps Recruiting – Military Value Evaluation Questions

Component: MWR / MCCS / Fleet and Family Services

PS-7. Relative availability of base services.

PS-7 (Mod 1). Which support services/facilities are located at an installation within 50 miles of your activity? If you are not located on or within 50 miles of an installation, answer N/A.

FACILITY	Available (yes/no)	Value
Commissary		0.4
Exchange		0.2
Family Service Center		0.2
Legal Services		0.1
Religious Support Services		0.1
TOTAL		1.00

Source: Capacity Data Call

Binary values.

PS-8a-b. Relative availability of child development services.

PS-8a (Mod 1). (0.5) What is the average wait to enroll (in days) for on-base child care centers? (Count: days) If you are not located within a 1-hour commute of an installation, answer N/A.

Source: Data Call II

Based on responses received, analyst will apply a function for zero credit to a maximum credit.

PS-8b. (0.5) How many licensed and/or accredited child care centers do you have in your community (MHA)?

Source: Data Call II (Criterion 7)

Based on responses received, analyst will apply a function for zero credit to a maximum credit. Normalize total population.

Component: Metropolitan Area Characteristics

PS-12. Relative proximity to the nearest commercial airport that offers regularly scheduled service by a major airline carrier.

PS-12. What is the distance in miles to the nearest commercial airport that offers regularly scheduled service by a major airline carrier?

Source: Data Call II (Criterion 7)

Based on responses received, analyst will apply a function for zero credit to a maximum credit.

TAB 2

Navy & Marine Corps Recruiting – Military Value Evaluation Questions

Attribute: Effectiveness of Operation

Component: Recruiting Mission/Goal Requirements

HD-1.c. Assigned Enlistment/Officer Goals

HD-1a. (0.30) What was your assigned enlistment goal or mission during the past five fiscal years (FY-99 through FY-03)?

Source: Data Call II

Analyst will apply zero credit for the lowest value and maximum credit for the highest value.

HD-1b. (0.40) What was your assigned shipping goal or mission during the past five fiscal years (FY-99 through FY-03)?

Source: Data Call II

Analyst will apply zero credit for the lowest value and maximum credit for the highest value.

HD-1c. (0.30) What was your assigned officer goal during the past five fiscal years (FY99 through FY-03)?

Source: Data Call II

Analyst will apply zero credit for the lowest value and maximum credit for the highest value.

HD-2.c. Accomplishment of Enlistment/Officer Goals

HD-2a. (0.30) How many times did the NRD/MCRS achieve fiscal year enlistment goal during the past five fiscal years (FY-99 through FY-03)?

Source: Data Call II

Analyst will apply zero credit for the lowest value and maximum credit for the highest value.

HD-2b. (0.40) How many times did the NRD/MCRS achieve fiscal year shipping goal during the past five fiscal years (FY-99 through FY-03)?

Source: Data Call II

Analyst will apply zero credit for the lowest value and maximum credit for the highest value.

HD-2c. (0.30) How many times did the NRD/MCRS achieve fiscal year officer goal during the past five fiscal years (FY-99 through FY-03)?

Source: Data Call II

Analyst will apply zero credit for the lowest value and maximum credit for the highest value.

Navy & Marine Corps Recruiting – Military Value Evaluation Questions

Component: Recruiting Demographics

HD-3. Recrutable population in area of responsibility.

HD-3. What is the recruitable population within the NRD/MCRS area of responsibility?

Source: Data Call II

Analyst will apply zero credit for the lowest value and maximum credit for the highest value.

HD-4. Total square miles covered by NRD/MCRS

HD-4. What is total area in square miles assigned to the NRD/MCRS?

Source: Data Call II

Analyst will apply zero credit for the lowest value and maximum credit for the highest value.

HD-5. Number of high schools in area of responsibility.

HD-5. How many high schools are located in area of responsibility?

Source: Data Call II

Analyst will apply zero credit for the lowest value and maximum credit for the highest value.

Component: Scope of Responsibility

HD-6. Number of recruiting offices assigned to NRD/MCRS.

HD-6. How many recruiting offices (USN)/sub-stations are assigned to the NRD/MCRS?

Source: Data Call II

Analyst will apply zero credit for the lowest value and maximum credit for the highest value.

HD-7. Number of recruiter billets authorized.

HD-7. How many authorized recruiter billets (officer and enlisted) are assigned to NRD/MCRS?

Source: Data Call II

Analyst will apply zero credit for the lowest value and maximum credit for the highest value.

Navy & Marine Corps Recruiting - Military Value Evaluation Questions

Attribute: Efficiency of Operations

Component: *Proximity & Control*

HD-8. Proximity to recruiting stations/sub stations

HD-8. What is your distance in miles to your recruiting offices? (cumulative total of distance in miles to all stations divided by the number of stations).

Source: Data Call II

Analyst will apply zero credit for the highest value and maximum credit for the lowest value.

HD-9. Proximity to Military Entrance Processing Station

HD-9. What is your distance in miles to the nearest military entrance processing station?

Source: Data Call II

Analyst will apply zero credit for the highest value and maximum credit for the lowest value.

Component: *Cost*

HD-10. Proportion of leased space assigned to the NRD/MCRS headquarters section

HD-10. What is the cost per square foot of the leased space assigned to the NRD/MCRS headquarters section (for leased and owned facilities)?

Sources: Capacity Data Call: Question DoD 303/DoN 1.2.0c for owned facilities GSF, DoD 313/1.2.1.c for leased space SF.

Analyst will apply zero credit for the highest value and maximum credit for the lowest value.

HD-11. Co-located with other military recruiting services

HD-11. Is the activity co-located with other military recruiting services (e.g. NRD, MCRS, Army Recruiting Battalion HQ, etc.)?

Source: Data Call II

Binary Value

HD-12. Located on military installation

HD-12. Is the activity located on a military installation?

Source: Capacity Data Call; Question DoD 303/DoN 1.2.0.c and DoD 313/1.2.1.c

Binary Value

Navy & Marine Corps Recruiting – Military Value Evaluation Questions

Attribute: Quality of Facilities

Component: *Facility Condition*

HD-13. Facility Condition Code

HD-13. What is the Condition Code of your facility?

Source: Capacity Data Call; Question DoD 11/ DoN 1.2.0.f

Analyst will apply zero credit for the lowest value and maximum credit for the highest value.

Component: *Security*

HD-14a-b. Relative security posture of the activity

HD-14a (0.75) Is the activity located on a military installation?

Source: Capacity Data Call; Question DoD 303/ DoN 1.2.0.c and DoD 313/ 1.2.1.c

Binary Value

HD-14b (0.25) Is the activity located in a facility with guarded entry control points?

Source: Data Call II

Binary Value

Navy & Marine Corps Recruiting -- Military Value Evaluation Questions

Attribute: Personnel Support

Component: *Medical*

PS-1. Located within the medical catchment area of an in-patient military medical treatment facility.

PS-1. Is your activity located within the medical catchment area of an in-patient military medical treatment facility?
(yes/no)

Source: Data Call II

Binary.

Component: *Housing*

PS-3a-c. Relative value of community housing availability, affordability and proximity.

PS-3a (0.33) What is the community rental vacancy rate?

Source: Data Call II (Criteria 7 question)

Based on responses received, analyst will apply a function for zero to maximum credit.

PS-3b. (0.33) What is the BAH (E-5 without dependents) for the locality as of 1 Jan 2004?

Source: Data Call II (Criteria 7 question)

Based on responses received, analyst will apply a function for zero to maximum credit

PS-3c. (0.33) What is the BAH (E-5 with dependents) for the locality as of 1 Jan 2004?

Source: Data Call II (Criteria 7 question)

Based on responses received, analyst will apply a function for zero to maximum credit

Component: *Employment*

PS-6a-b. Relative opportunity for dependent/off-duty employment

PS-6a. (0.5) What were the annual unemployment rates for the 5-year period of 1999-2003? (%)

Source: Data Call II (Criterion 7)

Based on responses received, analyst will apply a function for zero credit to a maximum credit.

PS-6b. (0.5) What was the annual covered employment (job growth) for periods 1998-2003? (%).

Source: Data Call II (Criterion 7)

Based on responses received, analyst will apply a function for zero credit to a maximum credit.

Navy & Marine Corps Recruiting – Military Value Evaluation Questions

Component: MWR / MCCS / Fleet and Family Services

PS-7. Relative availability of base services.

PS-7 (Mod 1). Which support services/facilities are located at an installation within 50 miles of your activity? If you are not located on or within 50 miles of an installation, answer N/A.

FACILITY	Available (yes/no)	Value
Commissary		0.4
Exchange		0.2
Family Service Center		0.2
Legal Services		0.1
Religious Support Services		0.1
TOTAL		1.00

Source: Capacity Data Call

Binary values.

PS-8a-b. Relative availability of child development services.

PS-8a (Mod 1). (0.5) What is the average wait to enroll (in days) for on-base child care centers? (Count: days) If you are not located within a 1-hour commute of an installation, answer N/A.

Source: Data Call II

Based on responses received, analyst will apply a function for zero credit to a maximum credit.

PS-8b. (0.5) How many licensed and/or accredited child care centers do you have in your community (MHA)?

Source: Data Call II (Criterion 7)

Based on responses received, analyst will apply a function for zero credit to a maximum credit. Normalize total population.

Component: Metropolitan Area Characteristics

PS-12. Relative proximity to the nearest commercial airport that offers regularly scheduled service by a major airline carrier.

PS-12. What is the distance in miles to the nearest commercial airport that offers regularly scheduled service by a major airline carrier?

Source: Data Call II (Criterion 7)

Based on responses received, analyst will apply a function for zero credit to a maximum credit.

Navy & Marine Corps Recruiting – Military Value Evaluation Questions

PS-13. Relative local crime rate.

PS-13. What is the FBI Crime Index for your activity's location (MHA)? (source: FBI Crime Index 2002;
<http://www.fbi.gov/ucr/ucr.htm>) (Numeric)

Source: Data Call II

Based on responses received, analyst will apply a function for zero credit to a maximum credit.

TAB 3

**DON SPECIFIC RECRUITING MILITARY VALUE
ATTRIBUTE SELECTION CRITERIA WEIGHTING**

Attribute	Components	Selection Criteria (SC)							TOTAL	
		Readiness	Facilities	Surge Capabilities	Cost	Weighting				
		50	15	15	20			100		
Effectiveness of Operation	Recruiting Mission/Goal Recruiting Demographics Scope of Responsibility	60	25	70	35					
		30.00	3.75	10.50	7.00			51.25		
Efficiency of Operation	Proximity and Control Cost of Operation	25	60	30	45					
		12.50	9.00	4.50	9.00			35.00		
Quality of Facilities	Facility Condition Security	5	15	0	5					
		2.50	2.25	0.00	1.00			5.75		
Personnel Support	Medical Housing Employment MW/R/MCCS/Fleet & Family Metropolitan Area	10	0	0	15					
		5.00	0.00	0.00	3.00			8.00		
		100	50.00	100	15.00	100	15.00	100	20.00	100.00

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TAB 4

**DON SPECIFIC RECRUITING MILITARY VALUE
RANKING OF ATTRIBUTE COMPONENTS BY WEIGHT**

<u>Component</u>	<u>Attribute</u>	<u>Weight</u>	<u>Rank</u>
Proximity and Control	EF	21.41	1
Recruiting Demographics	OP	19.23	2
Scope of Responsibility	OP	17.36	3
Recruiting Mission/Goal	OP	14.66	4
Cost of Operation	EF	13.59	5
Facility Condition	QF	2.85	6
Housing	PS	2.69	7
MWR/MCCS/Fleet and Family Services	PS	2.69	7
Security	QF	1.90	9
Medical	PS	1.88	10
Metropolitan Area Characteristics	PS	0.50	11
Employment	PS	0.25	12

ATTRIBUTES

Effectiveness of Operations	OP
Efficiency of Operations	EF
Quality of Facilities	QF
Personnel Support	PS

TAB 5

RESERVE CENTER MILVAL

MV Supporting Data DC Quest(s)
 Matrix # Question(s) Call

LAT Band

Matrix Scoring Statement

ATTRIBUTE - Attribute Weight

EFFECTIVENESS OF OPERATION (OP)

56.8

Component	SC	IEG	Score	OP	EF	QF	PS	Weight													
Population Served																					14.59
1 HR-1			8	1				1				1				1					8.34
2 HR-2a-c			6	1				1				1				1					6.25
Reserve Center Density																					12.04
3 HR-3			4	1				1				1				1					4.17
4 HR-4			8	0				1				1				1					2.94
5 HR-5a-b			5	1				1				0				1					4.92
Training / special responsibilities																					16.18
6 HR-6			9	1				1				1				1					9.38
7 HR-7			7	1				1				1				1					6.56
8 HR-8			4	0				0				1				0					0.23
Potential for expanding mission																					13.94
9 HR-9			4	1				1				0				1					3.94
10 HR-10			4	1				1				1				1					3.75
11 HR-11			6	1				1				1				1					6.25
Attribute Total																					56.75

EFFICIENCY OF OPERATION (EP)

20.5

Component	SC	IEG	Score	OP	EF	QF	PS	Weight													
Cost of operation																					14.52
12 HR-12			10	0				1				0				1					2.85
13 HR-13			6	0				1				0				1					1.71
14 HR-14			8	1				0				1				1					4.11
15 HR-15a-b			4	0				0				0				1					0.53
16 HR-16			8	1				1				1				1					5.32
Efficient use of facilities																					5.98
17 HR-17			9	1				1				1				1					5.98
Attribute Total																					20.50

QUALITY OF FACILITIES (QP)

16.5

Component	SC	IEG	Score	OP	EF	QF	PS	Weight													
Condition of facility																					12.65
18 HR-18a-c			7	1				1				1				1					8.98
19 HR-19			5	0				0				1				1					3.67
Security																					3.85
20 HR-20a-b			3	1				1				1				1					3.85
Attribute Total																					16.50

PERSONNEL SUPPORT/ROL (PS)

6.3

Component	SC	IEG	Score	OP	EF	QF	PS	Weight													
Medical																					1.27
21 PS-1			4	1				1				0				1					1.27
Housing																					1.27
22 PS-3a-d			4	1				1				0				1					1.27
MWR/MCCS/Fleet and Family Services																					1.38
23 PS-7			5	1				1				0				1					1.38
Metropolitan Area Characteristics																					2.34
24 PS-12			7	1				1				0				1					2.22
25 PS-13			3	1				1				0				1					0.13
Attribute Total																					6.25

RESERVES CENTERS FUNCTION

TOTAL

Attribute	OP	EF	QF	PS	OP	EF	QF	PS	OP	EF	QF	PS	OP	EF	QF	PS	OP	EF	QF	PS	Weight	
Readiness	35.8	8.3	5.5	5.5	12.5	5.0	7.5	-	3.3	1.3	0.5	-	5.3	6.0	3.0	0.8					100	
Facilities																						
Surge Capabilities																						
Cost																						
All Questions Total	35.8	8.3	5.5	5.5	12.5	5.0	7.5	-	3.3	1.3	0.5	-	5.3	6.0	3.0	0.8					100	

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Navy & Marine Corps Reserve Centers
Military Value Evaluation Questions

Attribute: Effectiveness of Operation

Component: *Population served.*

HR-1: Number of drilling reserves

HR-1. How many SELRES drill at the center?

Source: Capacity Data Call question 4.1.2.d (DoD 629)

Analyst will apply zero credit for the lowest value and maximum credit for the highest value.

HR-2a-c: Adjacent population.

HR-2a. (0.70) What is the population within 25 miles of the RESCEN?

HR-2b. (0.20) What is the population within 50 miles of the RESCEN?

HR-2c. (0.10) What is the population within 75 miles of the RESCEN?

Source: Census Data

Based on census data. Analyst will apply credit so closer proximity to higher population densities get higher scores.

Component: *Reserve Center Density.*

HR-3: Centers per 1,000,000 state population

HR-3: How many RESCENs for your branch of service are in your state per million residents?

Source: Data Call II

Analyst will apply credit so a lower ratio receives higher score.

HR-4: One center in state

HR-4. Is this the only reserve center in the State for your branch of service? (y/n)

Source: Data Call II

Binary value based on DoN Imperative. Yes receives higher value, and center will only receive analysis for relocation options.

Navy & Marine Corps Reserve Centers-Military Value Evaluation Questions

HR-5a-b: Proximity to other centers:

HR-5a. (0.75) How many other Navy OR Marine Corps RESCENs are within 50 miles of your RESCEN? What is the name and location?

Source: Data Call II

Analyst will apply zero credit for highest value and maximum credit for lowest value.

HR-5b. (0.25) How many other RESCENs regardless of branch of service are within 50 miles of your RESCEN? What is the name and location?

Source: Data Call II

Analyst will apply zero credit for highest value and maximum credit for lowest value.

Component: Training/Special Responsibilities

HR-6: Proximity to training facilities

HR-6. How many miles is it from the reserve center to the most frequently used training range/site? If all training is done at the RESCEN, respond with a zero.

Source: Data Call II

Analyst will apply zero credit for highest value and maximum credit for lowest value.

HR-7: Special facilities

HR-7. Does the RESCEN have specialized facilities that are required for training? (Amplification: parachute maintenance/storage facilities, maintenance facility for large military vehicles or equipment, fire fighter training facilities, firing ranges, etc.) If yes, state the name, purpose of, and distance to the facility.

Source: Data Call II

Binary value. Yes receives higher score.

HR-8: Potential surge responsibilities.

HR-8. Does the RESCEN have additional mobilization missions beyond SELRES unit mobilization, such as IRR mobilization? If yes, state the mobilization mission.

Source: Data Call II

Binary value. Yes receives higher score.

Navy & Marine Corps Reserve Centers-Military Value Evaluation Questions

Component: *Potential for Expanding Mission*

HR-9: Future capabilities planned or additional units to be assigned.

HR-9. Are there any new military units planned for this center? If yes, list them.

Source: Capacity Data Call question 1.1.h (DoD 592)

Binary value. Yes receives higher score.

HR-10a-b: Availability of space

HR-10a. (0.5) How many acres of buildable (legally unencumbered) land does the reserve center control/own?

Source: Capacity Data Call question 1.4.a (DoD 30)

Analyst will apply zero credit for lowest value and maximum credit for highest value.

HR-10b. (0.5) What is the ratio of square footage and the BFR (Basic Facility Requirement based on NAVFAC P-80)?

Source: Data Call II

Analyst will apply zero credit for lowest value and maximum credit for highest value.

HR-11: Community compatibility.

HR-11. What is the standoff distance between your center's training areas/buildings and the nearest residential structures?

Source: Data Call II

Analyst will apply zero credit for lowest value and maximum credit for highest value.

Navy & Marine Corps Reserve Centers-Military Value Evaluation Questions

Attribute: Efficiency of Operation

Component: *Cost of operation.*

HR-12: Costs shared with other services

HR-12. List units that share RESCEN costs at your facility regardless of military branch/service.

Source: Data Call II

Analyst will apply zero credit for lowest value and maximum credit for highest value.

HR-13: Facilities costs

HR-13. What is the city cost index for your facility?

Source: Data Call II

Analyst will apply zero credit for highest value and maximum credit for lowest value.

HR-14: Ratio of SELRES to support staff?

HR-14 What is the ratio of SELRES to Active Duty Support staff?

Source: Capacity Data Call question 4.1.2.d (DoD 629)

Analyst will apply zero credit for lowest value and maximum credit for highest value.

HR-15a-b: Billeting costs

HR-15a. (0.5) What is your RESCEN's billeting rate per individual?

Source: Data Call II

Analyst will apply zero credit for highest value and maximum credit for lowest value.

HR-15b. (0.5) How many of your drilling reservists rate government provided billeting due to the commuting distance, per DoD Instruction 1215.18 (50 miles or 1.5 hours driving)?

Source: Data Call II

Analyst will apply zero credit for highest value and maximum credit for lowest value.

Navy & Marine Corps Reserve Centers-Military Value Evaluation Questions

HR-16: Type of installation

HR-16. On what kind of an installation does your RESCEN reside?

Source: Data Call II

Based on 4 choices in order of importance. 1) Active Duty Facilities, 2) Joint Reserve Facilities, 3) Stand-alone Reserve Facilities, 4) Leased Facilities

Component: *Efficient use of facilities*

HR-17: Usage rate: drill weekends per month

HR-17. How many weekends per month is the RESCEN used for drill? Include all units regardless of branch/service.

Source: Data Call II

Analyst will apply zero credit for lowest value and maximum credit for highest value.

Navy & Marine Corps Reserve Centers-Military Value Evaluation Questions

Attribute: Quality of Facilities

Component: Condition of facility.

HR-18a-c: Current condition

HR-18a. (0.45) What is the overall Facility Condition Code for admin spaces?

Source: Capacity Data Call question 1.2.f (DoD 11)

Based on 3 choices.

HR-18b. (0.35) What is the overall Facility Condition Code for training/classroom spaces?

Source: Capacity Data Call question 1.2.f (DoD 11)

Based on 3 choices.

HR-18c (0.20) What is the age of the main training/admin facility?

Source: Data Call II

Analyst will apply zero credit for highest value and maximum credit for lowest value.

HR-19: Cost to restore

HR-19. What is the dollar value of your Annual Inspection Summary (AIS) as was reported for fiscal year 2003 in the Installation Readiness Reporting System (IRRS) for Navy and Commanding Officer's Readiness Reporting System (CORRS) for Marine Corps?

Source: Data Call II

Analyst will apply zero credit for highest value and maximum credit for lowest value.

Component: Security.

HR-20a-b: AT/FP considerations

HR-20a. (0.5) What is the standoff distance between your center's fenceline and the nearest non-DoD structure?

Source: Data Call II

Analyst will apply zero credit for lowest value and maximum credit for highest value.

HR-20b. (0.5) Can your facility meet THREATCON CHARLIE requirements per OPNAVINST 5530.15a using current on-hand assets?

Source: Data Call II

Binary value. Yes receives higher score.

Navy & Marine Corps Reserve Centers-Military Value Evaluation Questions

Attribute: Personnel Support

Component: *Medical*

PS-1. Located within the medical catchment area of an in-patient military medical treatment facility.

PS-1. Is your activity within the medical catchment area of an in-patient military medical treatment facility?
(yes/no)

Source: Data Call II

Binary.

Component: *Housing*

PS-3a-d. Relative value of community housing availability, affordability and proximity.
(Amplification: Applies for active duty staff only.)

PS-3a (0.25) What is the community rental vacancy rate?

Source: Data Call II (Criteria 7 question)

Based on responses received, analyst will apply a function for zero to maximum credit.

PS-3b. (0.25) What is the BAH (E-5 without dependents) for the locality as of 1 Jan 2004?

Source: Data Call II (Criteria 7 question)

Based on responses received, analyst will apply a function for zero to maximum credit

PS-3c. (0.25) What is the BAH (E-5 with dependents) for the locality as of 1 Jan 2004?

Source: Data Call II (Criteria 7 question)

Based on responses received, analyst will apply a function for zero to maximum credit

PS-3d. (0.25) What is the average commute time?(source: Census Bureau)? (Time: minutes)

Source: Data Call II

Based on responses received, analyst will apply a function for zero to maximum credit.

Navy & Marine Corps Reserve Centers-Military Value Evaluation Questions

Component: MWR / MCCS / Fleet and Family Services

PS-7. Relative availability of base services.

PS-7. (Mod 1) Which Support Services facilities are located at an installation within 50 miles of your activity?

FACILITY	Available (yes/no)	Value
Commissary		0.4
Exchange		0.2
Family Service Center		0.2
Convenience Store		0.1
Religious Support Services		0.1
TOTAL		1.00

Source: Capacity Data Call

Binary values.

Component: Metropolitan Area Characteristics

PS-12. Relative proximity to the nearest commercial airport that offers regularly scheduled service by a major airline carrier.

PS-12. What is the distance in miles to the nearest commercial airport that offers regularly scheduled service by a major airline carrier?

Source: Data Call II (Criterion 7)

Based on responses received, analyst will apply a function for zero credit to a maximum credit.

PS-13. Relative local crime rate. (Amplification: Applies to active duty staff only.)

PS-13. What is the FBI Crime Index for your activity's location (MHA)? (source: FBI Crime Index 2002; <http://www.fbi.gov/ucr/ucr.htm>) (Numeric)

Source: Data Call II

Based on responses received, analyst will apply a function for zero credit to a maximum credit.

TAB 6

**DON RESERVE CENTER MILITARY VALUE
ATTRIBUTE SELECTION CRITERIA WEIGHTING**

Attribute	Components	Selection Criteria (SC)							TOTAL	
		Readiness	Facilities	Surge Capabilities	Cost	Weighting				
		55	25	5	15	100	100	100	100.00	
Effectiveness of Operation	Population Served Training / Special Responsibilities Potential for Expanding Mission	65	50	65	35					
		35.75	12.50	3.25	5.25				56.75	
Efficiency of Operation	Cost of Operation Efficient use of Facilities	15	20	25	40					
		8.25	5.00	1.25	6.00				20.50	
Quality of Facilities	Condition of Facilities Security	10	30	10	20					
		5.50	7.50	0.50	3.00				16.50	
Personnel Support	Medical Housing MMWR/Fleet & Family Services Metropolitan Area	10	0	0	5					
		5.50	0.00	0.00	0.75				6.25	
		100	55.00	100	25.00	100	5.00	100	15.00	100.00

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TAB 7

**DON SPECIFIC PME MILITARY VALUE
RANKING OF ATTRIBUTE COMPONENTS BY WEIGHT**

<u>Component</u>	<u>Attribute</u>	<u>Weight</u>	<u>Rank</u>
Training / special responsibilities	OP	16.18	1
Population Served	OP	14.59	2
Cost of operation	EF	14.52	3
Potential for expanding mission	OP	13.94	4
Condition of facility	QF	12.65	5
Reserve Center Density	OP	12.04	6
Efficient use of facilities	EF	5.98	7
Security	QF	3.85	8
Metropolitan Area Characteristics	PS	2.34	9
MWR/MCCS/Fleet and Family Services	PS	1.38	10
Medical	PS	1.27	11
Housing	PS	1.27	11

ATTRIBUTES

Effectiveness of Operations	OP
Efficiency of Operations	EF
Quality of facilities	QF
Personnel Support	PS

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TAB 8



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Infrastructure Analysis Team

Aviation Universe
to Infrastructure Evaluation Group (IEG)
20 May 2004

5/20/04

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DON Aviation Universe

- MCAS Beaufort SC
 - MCAS Cherry Point NC*
 - MCB Hawaii (Kaneohe Bay) HI*
 - MCAS Camp Pendleton CA*
 - MCAS Miramar CA*
 - MCAF Quantico VA
 - MCAS New River NC*
 - MCAS Yuma AZ
 - NAF El Centro CA
 - NAS Key West FL
 - NAS Fallon NV
 - NAS Atlanta GA
 - NAS JRB Ft Worth TX
 - NAS JRB New Orleans LA
 - NAF Washington DC (MD)
 - NAS JRB Willow Grove PA
 - NAWC (WD) China Lake CA
 - NAES Lakehurst NJ
 - NAWC (AD) Patuxent River MD
- NAS Corpus Christi TX
 - NAS Kingsville TX
 - NAS Meridian MS
 - NAS Pensacola FL
 - NAS Whiting Field FL
 - NAS Brunswick ME
 - NB Coronado (North Island) CA*
 - NAS Jacksonville FL*
 - NAS Lemore CA*
 - NS Mayport FL*
 - NS Norfolk VA*
 - NAS Oceana VA*
 - NB Ventura County (Pt Mugu) CA*
 - NAS Whidbey Island WA*
 - John Murtha Johnstown PA
 - Stewart Intl NY
- 35**

- * FRS base
- Added Marine Reserve Airfields



Aviation Screen

- **Helio:**

- (1) DoD owned/controlled runway greater than or equal to 3000 feet long and 150 feet wide, and
- (2) If the installation's lat/long within 50 nm of the coast, and
- (3) Hangar size greater than 30,000 square feet.

- **Fixed Wing:**

- (1) DoD owned/controlled runway greater than or equal to 8000 feet long and 150 feet wide, and
- (2) If the installation's lat/long is within 550 nm of the coast, and
- (3) Hangar size greater than 30,000 square feet.



Army Response

- Aberdeen Proving Ground MD
- Fort Benning GA
- Fort Bliss TX
- Fort Campbell KY
- Fort Drum NY
- Fort Hood TX
- Fort Huachuca AZ
- Fort Lewis WA
- Fort Irwin (Barstow) CA
- Fort Polk LA
- Fort Stewart GA
- Fort Wainwright AK
- Wheeler AAF HI

13 DA

+35 DON

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Air Force Response

- ALTUS AFB OK
- ANDERSEN AB GQ
- ANDREWS AFB MD
- BARKSDALE AFB LA
- BEALE AFB CA
- BIRMINGHAM INTL AGS AL
- BOISE AIR TERMINAL ID
- BURLINGTON INTL VT
- CANNON AFB NM
- CHARLESTON AFB/INTL SC
- COLUMBUS AFB MS
- DANNELLEY FIELD AGS AL
- DAVIS MONTHAN AFB AZ
- DOBBINS ARB GA
- DOVER AFB DE
- DYESS AFB TX
- EDWARDS AFB CA
- EGLIN AFB FL
- EIELSON AFB AK
- ELLINGTON FIELD TX
- ELMENDORF AFB AK
- FAIRCHILD AFB WA
- FT SMITH REGIONAL AR
- FT WAYNE INTL AGS IN
- FRESNO AIR TERMINAL AGS
- GABRESKI APT AGS NY
- GREAT FALLS INTL AGS MT
- GRISSOM ARB IN
- HANCOCK (SYRACUSE) NY
- HANSCOM FLD MA
- HICKAM AFB HI
- HILL AFB UT
- HOLLOWMAN AFB NM
- HOMESTEAD ARB FL
- HURLBURT FIELD FL
- INDIAN SPRINGS AFS NV
- JACKSON INTL MS
- JACKSONVILLE INTL FL
- KEESLER AFB MS
- KEY FIELD MS
- KIRTLAND AFB NM
- KLAMATH FALLS INTL OR
- LACKLAND AFB TX
- LANGLEY AFB VA
- LAUGHLIN AFB TX
- LITTLE ROCK AFB AR
- LUKE AFB AZ
- MACDILL AFB FL
- MANSFIELD AGS OH
- MARCH ARB CA

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Department of the Navy Air Force Response (cont)
Infrastructure Analysis Team

- MARTIN STATE MD
- MAXWELL AFB AL
- MCCHORD AFB WA
- MCCONNELL AFB KS
- MCGENTIRE ANG S SC
- MCGUIRE AFB NJ
- MOFFETT FED AFLD CA
- MOODY AFB GA
- MOUNTAIN HOME AFB ID
- NASHVILLE INTL AGS TN
- NIAGARA FALLS INTL NY
- NELLIS AFB NV
- OTIS ANGB MA
- PATRICK AFB FL
- PEASE INTL TRADEPORT NH
- PHOENIX INTL AZ
- PITTSBURGH INTL ARS PA
- PORTLAND INTL OR
- QUONSET STATE RI
- RANDOLPH AFB TX
- RICKENBACKER INTL OH
- RENO TAHOE INTL AGS CA
- RICHMOND INTL AGS VA
- ROBINS AFB GA
- SALT LAKE INTL AGS UT

- SCOTT AFB IL
- SELFRIIDGE ANGB MI
- SEYMOUR JOHNSON AFB NC
- SHAW AFB SC
- SHEPPARD AFB TX
- TINKER AFB OK
- TOLEDO EXPRESS OH
- TRAVIS AFB CA
- TUCSON INTL AZ
- TYNDALL AFB FL
- VANCE AFB OK
- VANDENBERG AFB CA
- WESTOVER ARB MA
- WHITEMAN AFB MO
- WILL ROGERS WORLD APT AGS OK
- WRIGHT PATTERSON AFB OH
- YOUNGSTOWN RGNL OH

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Civilian Rec Changes

- BIRMINGHAM INTL AGS AL
- BOISE AIR TERMINAL ID
- BURLINGTON INTL VT
- DANDELLEY FIELD AGS AL
- ELLINGTON FIELD TX
- FORT IRWIN (BARSTOW) CA-Army
- FORT SMITH RGNL AR
- FT WAYNE INTL AGS IN
- FRESNO AIR TERMINAL AGS
- GABRESKI APT AGS NY
- GREAT FALLS INTL AGS MT
- HANCOCK (SYRACUSE INTL) NY
- JACKSON INTL MS
- JACKSONVILLE INTL FL
- KEY FIELD MS
- KLAMATH FALLS INTL OR
- MANSFIELD AGS OH
- MARTIN STATE MD
- MOFFETT FED AFLD CA
- NASHVILLE INTL AGS TN
- NIAGARA FALLS INTL NY
- PHOENIX INTL AZ
- PITTSBURGH INTL ARS PA
- PORTLAND INTL OR
- QUONSET STATE RI
- RENO TAHOE INTL AGS CA
- RICHMOND INTL AGS VA
- RICKENBACKER INTL OH
- SALT LAKE INTL AGS UT
- TOLEDO EXPRESS OH
- TUCSON INTL AZ
- WILL ROGERS WORLD APT AGS OK
- YOUNGSTOWN RGNL OH

➤ **RED ARE GUARD SITES
RECOMMENDED FOR DELETION**

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Air Force Revised

- ALTUS AFB OK
- ANDERSEN AB GQ
- ANDREWS AFB MD
- BARKSDALE AFB LA
- BEALE AFB CA
- CANNON AFB NM
- CHARLESTON AFB/INTL SC
- COLUMBUS AFB MS
- DAVIS MONTHAN AFB AZ
- DOBBINS ARB GA
- DOVER AFB DE
- DYESS AFB TX
- EDWARDS AFB CA
- EGLIN AFB FL
- EIELSON AFB AK
- ELMENDORF AFB AK
- FAIRCHILD AFB WA
- GRISSOM ARB IN
- HANSCOM FLD MA
- HICKAM AFB HI
- HILL AFB UT
- HOLLOWAN AFB NM
- HOMESTEAD ARB FL
- HURLBURT FIELD FL
- INDIAN SPRINGS AFS NV
- KEESLER AFB MS
- KIRTLAND AFB NM
- LACKLAND AFB TX
- LANGLEY AFB VA
- LAUGHLIN AFB TX
- LITTLE ROCK AFB AR
- LUKE AFB AZ
- MACDILL AFB FL
- MARCH ARB CA
- MAXWELL AFB AL
- MCCHORD AFB WA
- MCCONNELL AFB KS
- MCENTIRE ANG SC
- MCGUIRE AFB NJ
- MOODY AFB GA

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Air Force Revised (cont)

- MOUNTAIN HOME AFB ID
- NIAGARA FALLS INTL NY
- NELLIS AFB NV
- OTIS ANGB MA
- PATRICK AFB FL
- PEASE INTL TRADEPORT NH
- PITTSBURGH IAP ARS PA
- PORTLAND INTL OR
- RANDOLPH AFB TX
- ROBINS AFB GA
- SCOTT AFB IL
- SELFRRIDGE ANGB MI
- SEYMOUR JOHNSON AFB NC
- SHAW AFB SC
- SHEPPARD AFB TX
- TINKER AFB OK
- TRAVIS AFB CA
- TYNDALL AFB FL
- VANCE AFB OK
- VANDENBERG AFB CA
- WESTOVER ARB MA
- WHITEMAN AFB MO
- WRIGHT PATTERSON AFB OH
- YOUNGSTOWN REGNL OH

64 DAF

13 DA

+35 DON

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Summary

- **All DoD activities with runways capable of supporting operational squadrons**
- **Active duty and reserve operations**
- **Fleet Readiness Squadrons included**
- **Total 112 activities/installations**

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TAB 9



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**Infrastructure Evaluation
Group
Deliberative Session
Analysis of “Other”
Activities
20 May 2004**

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Issue

- **Data Call 1 established DON universe of 779 activities functionally aligned:**
 - **JCSG Function**
 - **DON Specific Function**
- **217 Activities (“others”) not functionally aligned**
- **Issue: How do we consider the activities not (yet) functionally aligned in BRAC 2005 military value analysis?**



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Analysis Concern

- **Have obtained capacity data**
 - for all Navy activities (part of universe)
 - for all Marine Corps activities (by installation)
- **There is a need to understand “impact” of these activities under the larger construct of BRAC.**
- **Doing Military Value analysis in the same format as established for DON specific functions is problematic:**
 - Difficult to compare on a functional level – many are unique or one of only a few.
 - Impractical since these smaller activities will not drive **BRAC scenarios, but may be impacted by them.**

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“Other” Activity Categories

- **Organizational Followers (35)**
- **Dependent Activities (29)**
- **Stand-Alone Activities (44)**
- **Specialized Function Activities (29)**
- **Regional Support Activities (75)**

Definition, List(s) and Recommendation(s) for each “Other” Activity Category follow:



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Organizational Followers (46)

- **Definition: Activities that are currently directly tied to their location due to current operations. These activities would move if the current operational units relocate.**
- **Aligned to Operational Functions:**
 - **Surface/Subsurface Operations: SURFGRUS, SUBGRUS**
 - **Ground Operations: SPECWARGRUS**
 - **Aviation Operations: Typewings**



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Organizational Followers

- **Surface/Subsurface Operations Function (14):**
 - **COMPHIBGRU THREE (NAS NORTH ISLAND CA)**
 - **COMPHIBGRU TWO (NAVPHIBASE LITTLE CREEK VA)**
 - **COMSUBGRU 9 (SUBASE BANGOR WA)**
 - **COMSUBGRU TEN (SUBASE KINGS BAY GA)**
 - **COMSUBGRU TWO (SUBASE NEW LONDON CT)**
 - **NAVAL COASTAL WARFARE GROUP ONE (NAS NORTH ISLAND CA)**
 - **NAVAL COASTAL WARFARE GROUP TWO (NAVSHIPYD NORFOLK VA)**
 - **NAVSURFGRU TWO (NAVSTA MAYPORT FL)**
 - **SWFLANT KINGS BAY GA (SUBASE)**
 - **SWFPAC BANGOR WA (SUBASE)**
 - **COMNAVSURFGRU MIDPAC (NAVSTA PEARL HARBOR HI)**
 - **COMNAVSURFGRU PACNORWEST (NAVSTA EVERETT WA)**
 - **COMINEWARCOM CORPUS CHRISTI TX (NAVSTA INGLESIDE TX)**
 - **COMTHIRDFLT (SUBASE SAN DIEGO CA)**



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Organizational Followers

- **Ground Operations Function(10):**

- **NAVAL SPECIAL WARFARE COMMAND, SAN DIEGO, CA**
- **NAVAL SPECIAL WARFARE DEVELOP GROUP, DAMNECK, VA**
- **NAVAL SPECIAL WARFARE GROUP FOUR, NORFOLK, VA**
- **NAVAL SPECIAL WARFARE GROUP ONE, SAN DIEGO, CA**
- **NAVAL SPECIAL WARFARE GROUP THREE, SAN DIEGO, CA**
- **NAVAL SPECIAL WARFARE GROUP TWO, NORFOLK, VA**
- **COMEOGGRU ONE (NAS NORTH ISLAND)**
- **COMEOGGRU TWO (NAVPHIBASE LITTLE CREEK VA)**
- **COMMANDER, THIRTY-FIRST SEABEE READINESS GROUP
(NAVSTA VENTURA COUNTY PT MUGU CA)**
- **COMMANDER, TWENTIETH SEABEE READINESS GROUP (CBC
GULFPORT MS)**



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Organizational Followers

- **Aviation Operations Function(21):**

- COMCABEAST (MCAS CHERRY PT NC)
- COMCABWEST (MCAS MIRAMAR CA)
- COMAEWINGLANT NORFOLK VA
- COMAEWINGPAC POINT MUGU CA
- COMFITWINGLANT OCEANA VA
- COMHEL TACWINGLANT NORFOLK VA
- COMHEL TACWINGPAC SAN DIEGO CA
- COMHSLWINGLANT MAYPORT FL
- COMHSLWINGPAC SAN DIEGO CA
- COMHSWINGLANT JACKSONVILLE FL
- COMHSWINGPAC SAN DIEGO CA
- COMPATRECONGRU NORFOLK VA
- COMPATRECONWING TEN WHIDBEY ISLAND WA
- COMSEACONWINGLANT JACKSONVILLE FL
- COMSEACONWINGPAC SAN DIEGO CA
- COMSTRATCOMMWING ONE TINKER AFB OK
- COMSTRKFIGHTWINGLANT OCEANA VA
- COMSTRKFIGHTWINGPAC LEMOORE CA
- COMVAQWINGPAC WHIDBEY ISLAND, OAK HARBOR, WA
- PATRECONWING ELEVEN (NAS JACKSONVILLE FL)
- PATRECONWING FIVE (NAS BRUNSWICK ME)

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Organizational Followers

- **Recommendation:**
 - **Treat as pure followers. If the operational forces relocate, they relocate.**
 - **Ask questions to ensure that we understand their mission and that they are properly categorized.**
 - **Use certified responses to validate as true organizational followers.**
 - **No further evaluation unless determined by IEG.**



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Dependent Activities (30)

- **Definition: Activities that exist to perform a specific function at a specific location. These would close / consolidate if the operation they support is closed / relocated:**
 - **Fleet Support, Installation Management, SUPSHIP**



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Dependent Activities

- **Fleet Support (9)**
 - **RSO SAN DIEGO**
 - **NAVSUBSUPPCEN PEARL HARBOR HI**
 - **SOUTHWEST RMC SAN DIEGO CA**
 - **FTSPAC SAN DIEGO CA**
 - **CDU SAN DIEGO CA**
 - **COMREGSUPPGRU INGLESIDE TX**
 - **COMREGSUPPGRU MAYPORT FL**
 - **COMREGSUPPGRU NORFOLK VA**
 - **FTSCLANT NORFOLK VA**



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Dependent Activities

- **Installation Management (12)**
 - **NAS PATUXENT RIVER MD**
 - **NAVAIRENGSTA LAKEHURST NJ**
 - **NAVSTA NEWPORT RI**
 - **NAVSUPPACT CORONA CA**
 - **NAVSUPPACT CRANE IN**
 - **NAVSUPPACT MECHANICSBURG PA**
 - **NAVSUPPACT MID SOUTH MILLINGTON TN**
 - **NAVSUPPACT NEW ORLEANS LA**
 - **NAVSUPPACT NORFOLK VA**
 - **NAVSUPPACT ORLANDO FL**
 - **NAVSUPPACT PANAMA CITY FL**
 - **NAVSUPPU SARATOGA SPRINGS NY**

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Dependent Activities

- **SUPSHIP (8)**
 - **Primarily New Construction**
 - SUPSHIP BATH ME
 - SUPSHIP GROTON CT
 - SUPSHIP GULF COAST MS
 - SUPSHIP NEWPORT NEWS VA
 - **Primarily Repair**
 - SUPSHIP PORTSMOUTH VA
 - SUPSHIP JACKSONVILLE FL
 - SUPSHIP PUGET SOUND WA
 - SUPSHIP SAN DIEGO CA



Dependent Activities

- **Recommendation:**
 - **Treat as pure followers. If the operation(s) they support is/are closed / realigned they would close / consolidate.**
 - **Ask questions to ensure that we understand their mission and that they are properly categorized.**
 - **Use certified responses to validate as true dependent activities.**
 - **No further evaluation unless determined by IEG.**



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Stand Alone Activities (44)

- **Definition: Activities not directly tied to their location by operational units. They could be relocated regardless of existing operational units in their current location.**
 - **NAVSAFECEN, FLTSURVSUPPCOM, INSURV, NAVMAC, JWAC and many others**
- **May or may not have specific infrastructure which affects their ability to relocate.**



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Infrastructure Analysis Team

Stand Alone Activities

- **DANTES PENSACOLA FL**
- **HUMAN PERFORMANCE CENTER DAM NECK VA**
- **NAVFLTDEMRON (BLUE ANGELS)**
- **NAVPERSEVCOM NORFOLK VA**
- **NETPDTC PENSACOLA FL**
- **NETSAFA PENSACOLA FL**
- **NSTC GREAT LAKES IL**
- **ASIAN PACIFIC CENTER HONOLULU HI**
- **CG MARCORLOGCOM ALBANY GA**
- **COMNAVVAIRESFOR NEW ORLEANS**
- **COMNAVNETWARCOM NORFOLK VA**
- **COMNAVSAFECEN NORFOLK VA**
- **COMNAVWARDEVCOM NEWPORT RI**
- **COMSURFWARDEVDRU LITTLE CREEK VA**
- **COMUSNAVAK JUNEAU AK**
- **FLTIMAGCOMPAC**
- **JOINT INTER-AGENCY TASK FORCE WEST**
- **MARCORSUPACT KANSAS CITY MO**

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Stand Alone Activities

- **NAVY CRANE CENTER LESTER PA**
- **NAVY MANPOWER ANALYSIS CENTER MILLINGTON TN**
- **NAVSUPINFOSYACT MECHANICSBURG PA**
- **NEXCOM NORFOLK VA**
- **PRESIDENT BOARD OF INPECTION AND SURVEY NORFOLK VA**
- **SUBMEPP PORTSMOUTH NH**
- **NAVOPTHALSUPTRACT YORKTOWN VA**
- **USUHS BETHESDA MD**
- **FLTINFOWARCEN NORFOLK VA**
- **FLEET SURVEILLANCE SUPPORT COMMAND NORTHWEST VA**
- **JOINT WARFARE ANALYSIS CENTER**
- **NAVAL SPECIAL WARFARE CENTER, SAN DIEGO, CA**
- **NAVAL SPACE OPERATIONS CENTER PT MUGU CA**
- **COMFIRSTNCD/COMNAVCONFORCOM LITTLE CREEK VA**



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Stand Alone Activities

Stand Alone Activities included in HSA JCSG review of administrative footprint in the DC area.

- **CG MCCDC QUANTICO VA**
- **NAVMEDINFOMGTCCEN BETHESDA MD**
- **NAVMEDLOGCOM FT DETRICK MD**
- **NAVCIVLAWSUPPACT WASHINGTON DC**
- **NAMARA JAG WASHINGTON DC**
- **MARBKS WASHINGTON DC**
- **BCNR WASHINGTON DC**
- **DIRNCPB WASHINGTON DC**
- **HQ JPRA FT BELVOIR VA**
- **NAVHISTCEN WASHINGTON DC**
- **NAVMEDIACEN WASHINGTON DC**
- **NAVSEALOGCEN MECHANICSBURG PA**



Stand Alone Activities

- **Recommendation: develop a short set of questions which can be tied to the Military Value Selection Criteria with the following objectives:**
 - **Allow for calculation of a generic military value which will be useful in refining the scenarios developed for DON specific and JCSG functions.**
 - **Provide useful information on these activities to ensure that the impact of BRAC scenario is fully understood – and thereby prevent unintended consequences of a scenario.**
- **Also ask the questions to ensure that we understand their mission and that they are properly categorized.**



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Specialized Functions Activities (29)

- **Definition: Groups (therefore not stand alone) performing similar functions, yet not all functionally equivalent.**
 - **Communications (8)**
 - **METOC (9)**
 - **Training COEs (7)** *(possibly be stand alone)*
 - **IUSS (2)**
 - **MSC Offices (3)**
- **Currently not functionally aligned**
 - **No capacity or Military Value plan exists for these functional groups for BRAC 2005**



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Specialized Functions Activities

- **Communications (8)**

- CDRJCS MACDILL AFB FL
- NAVCOMTELSTA
 - GUAM
 - JACKSONVILLE FL
 - PUGET SOUND WA
 - SAN DIEGO CA
 - WASHINGTON DC
- NCTAMS LANT NORFOLK VA
- NCTAMS PAC HONOLULU HI

- **METOC (9)**

- NAVPACMETOCFAC WHIDBEY ISLAND WA
- FLENUMMETOCEN MONTEREY CA
- NAVICECEN SUITLAND MD
- NAVLANTMETOCEN NORFOLK VA
- NAVLANTMETOCFAC JACKSONVILLE FL
- NAVOCEANO STENNIS SPACE CENTER MS
- NAVPACMETOCEN PEARL HARBOR HI
- NAVPACMETOCEN SAN DIEGO CA
- NAVTRAMETOCFAC PENSACOLA FI

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Specialized Functions Activities

- **Training COEs (7)**

- CENINFOTECH SAN DIEGO CA
- CENNAVAVENTECHTRA PENSACOLA FL
- CENNAVENGINEERING NORFOLK VA
- CENNAVLEADERSHIP NORFOLK VA
- CENNODIVE PANAMA CITY FL
- CENSEABEEFACENG PORT HUENEME CA
- CENSUBLEARNING GROTON CT

- **IUSS (2)**

- NAVAL OCEAN PROCESSING FACILITY DAM NECK VA
- NAVOCEANPROCFAC WHIDBEY ISLAND WA

- **MSC Offices (3)**

- MSC LANT NORFOLK VA
- MSC PAC SAN DIEGO CA
- MSC O GU

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Specialized Functions Activities

- **Recommendation –**
 - Determine the Capacity Requirement, conduct targeted data call and perform capacity analysis.
 - If no excess exists, treat as tenant activities where appropriate.
 - If excess exists do a military value analysis.
 - Ask questions to ensure that we understand their mission and that they are properly categorized.



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Regional Support Activities(75)

- **Definition - Various geographic shore support activities not tied to a specific location or set of operational forces.**

–	Navy Installation Management Regions	11
–	Engineering Field Activities/Divisions/OICC	11
–	Navy Public Works Centers	7
–	Navy Reserve Readiness Commands	7
–	Navy Legal Service Office	7
–	Marine Corps Districts (Recruiting)	6
–	<i>Human Resource Service Centers *</i>	6
–	Navy Trial Service Offices	5
–	<i>Fleet and Industrial Supply Centers *</i>	5
–	Navy Recruiting Regions	4
–	<i>Health Care Support Organizations *</i>	3
–	<i>Navy Personnel Support Activities *</i>	2
–	Marine Corps National Capital Region Command	1

Activities included in JCSG analysis for operational function



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Regional Support Activities

COMNAVIST WASHINGTON DC	NAVFAC OICG MARIANAS GU	SIXTH MCD PARRIS ISLAND SC
COMNAV MARIANAS GU	NAVLEGSVCOFF CENTRAL PENSACOLA FL	TWELTH MCD SAN DIEGO CA
COMNAVREG GULF COAST PENSACOLA FL	NAVLEGSVCOFF MIDLANT NORFOLK VA	TRISVCOFF EAST NORFOLK VA
COMNAVREG HAWAII PEARL HARBOR HI	NAVLEGSVCOFF NORTHCENT WASHINGTON DC	TRISVCOFF NE WASHINGTON DC
COMNAVREG MIDLANT NORFOLK VA	NAVLEGSVCOFF NORTHWEST BREMERTON WA	TRISVCOFF PAC PEARL HARBOR HI
COMNAVREG MW GREAT LAKES IL	NAVLEGSVCOFF PAC DET PEARL HARBOR HI	TRISVCOFF SE MAYPORT FL
COMNAVREG NE GROTON CT	NAVLEGSVCOFF SE JACKSONVILLE FL	TRISVCOFF WEST SAN DIEGO CA
COMNAVREG NW SEATTLE WA	NAVLEGSVCOFF SOUTHWEST SAN DIEGO CA	CG MCNCRC WASHINGTON DC
COMNAVREG SE JACKSONVILLE FL	NAVRESREDCOM MIDATLANTIC	HLTHCARE SUPPO JACKSONVILLE FL
COMNAVREG SOUTH CORPUS CHRISTI TX	NAVRESREDCOM MIDWEST	HLTHCARE SUPPO NORFOLK VA
COMNAVREG SW SAN DIEGO CA	NAVRESREDCOM NORTHEAST	HLTHCARE SUPPO SAN DIEGO CA
ENGLDACT MW GREAT LAKES IL	NAVRESREDCOM NORTHWEST	HRSC PEARL HARBOR HI
ENGLDACT WEST SAN BRUNO CA	NAVRESREDCOM SOUTH	HRSC PHILADELPHIA PA
NAVCRUITREG CENTRAL GREAT LAKES IL	NAVRESREDCOM SOUTHEAST	HRSC PORTSMOUTH VA
NAVCRUITREG NORTH SCOTIA NY	NAVRESREDCOM SOUTHWEST	HRSC SAN DIEGO CA
NAVCRUITREG SOUTH MACON GA	PWC GREAT LAKES IL	HRSC SILVERDALE WA
NAVCRUITREG WEST OAKLAND CA	PWC GU	HRSC STENNIS, MS
NAVFAC EFA CHESAPEAKE WASHINGTON DC	PWC JACKSONVILLE FL	PERSUPPACT LANT
NAVFAC EFA NORTHEAST PHILADELPHIA PA	PWC NORFOLK VA	PERSUPPACT WEST
NAVFAC EFA NORTHWEST POULSBO WA	PWC PEARL HARBOR HI	FISC SAN DIEGO CA
NAVFAC EFA SOUTHEAST JACKSONVILLE FL	PWC SAN DIEGO CA	FISC JACKSONVILLE FL
NAVFAC EFD ATLANTIC NORFOLK VA	PWC WASHINGTON DC	FISC PEARL HARBOR HI
NAVFAC EFD ATLANTIC NORFOLK VA	EIGHTH MCD NEW ORLEANS LA	FISC NORFOLK VA
NAVFAC EFD PACIFIC PEARL HARBOR HI	FIRST MCD GARDEN CITY LI NY	FISC PUGET SOUND WA
NAVFAC EFD SOUTH CHARLESTON SC	FOURTH MCD CUMBERLAND PA	
NAVFAC EFD SOUTHWEST SAN DIEGO CA	NINTH MCD KANSAS CITY MO	

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Regional Support Activities

- **Recommendation – Analyze Regional Support Management to assess geographic responsibilities, span of control, and alignment.**
 - **Effectiveness:**
 - **Scope of responsibility**
 - **Criticality of location**
 - **Alignment to established regional boundaries**
 - **Interaction with other DoD and federal agencies**
 - **Efficiency:**
 - **Overhead staff ratio**
 - **Proximity to subordinate units & customers**



Next Step

- **Approve release of information gathering “mini” data call to all “other” activities.**
 - **Ensure accurate understanding the mission with certified data.**
 - **Ensure proper categorization**
 - **Enhance military value questions where appropriate**
- **Pursue capacity analysis requirements for known “specialized functions” and regional activities.**



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Proposed Data Call Questions

- Describe your mission.
- Is your activity located on a military installation?
- Is your activity located in leased space?
- Is your current location mandated by a statutory requirement? List and explain the requirement.
- Is your location critical to accomplishing your mission? Explain.
- List the collocated commands (by UIC) with which you have a collaborative relationship. Explain the nature of the relationship.
 - Is collocation with these commands critical to your unit's mission accomplishment? Explain
- Do you have specially configured facilities or fixed assets essential to your mission? Explain
 - (If yes) Can your activity function be accomplished by co-locating or combining with another DON or DoD facility. Explain.
- Identify other activities (by UIC) within your fence line(s)

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Infrastructure Evaluation Group Deliberative Session

Analysis of “Other” Activities

20 May 2004

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Issue

- **Data Call 1 established DON universe of 779 activities functionally aligned:**
 - **JCSG Function**
 - **DON Specific Function**
- **217 Activities (“others”) not functionally aligned**
- **Issue: How do we consider the activities not (yet) functionally aligned in BRAC 2005 military value analysis?**



Analysis Concern

- **Have obtained capacity data**
 - for all Navy activities (part of universe)
 - for all Marine Corps activities (by installation)
- **There is a need to understand “impact” of these activities under the larger construct of BRAC.**
- **Doing Military Value analysis in the same format as established for DON specific functions is problematic:**
 - **Difficult to compare on a functional level – many are unique or one of only a few.**
 - **Impractical since these smaller activities will not drive BRAC scenarios, but may be impacted by them.**



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“Other” Activity Categories

- **Organizational Followers (35)**
- **Dependent Activities (29)**
- **Stand-Alone Activities (44)**
- **Specialized Function Activities (29)**
- **Regional Support Activities (75)**

Definition, List(s) and Recommendation(s) for each “Other” Activity Category follow:



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Organizational Followers (46)

- **Definition: Activities that are currently directly tied to their location due to current operations. These activities would move if the current operational units relocate.**
- **Aligned to Operational Functions:**
 - **Surface/Subsurface Operations: SURFGRUS, SUBGRUS**
 - **Ground Operations: SPECWARGRUS**
 - **Aviation Operations: Typewings**



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Organizational Followers

- **Surface/Subsurface Operations Function (14):**
 - **COMPHIBGRU THREE (NAS NORTH ISLAND CA)**
 - **COMPHIBGRU TWO (NAVPHIBASE LITTLE CREEK VA)**
 - **COMSUBGRU 9 (SUBASE BANGOR WA)**
 - **COMSUBGRU TEN (SUBASE KINGS BAY GA)**
 - **COMSUBGRU TWO (SUBASE NEW LONDON CT)**
 - **NAVAL COASTAL WARFARE GROUP ONE (NAS NORTH ISLAND CA)**
 - **NAVAL COASTAL WARFARE GROUP TWO (NAVSHIPYD NORFOLK VA)**
 - **NAVSURFGRU TWO (NAVSTA MAYPORT FL)**
 - **SWFLANT KINGS BAY GA (SUBASE)**
 - **SWFPAC BANGOR WA (SUBASE)**
 - **COMNAVSURFGRU MIDPAC (NAVSTA PEARL HARBOR HI)**
 - **COMNAVSURFGRU PACNORWEST (NAVSTA EVERETT WA)**
 - **COMINWARCOM CORPUS CHRISTI TX (NAVSTA INGLESIDE TX)**
 - **COMTHIRDFLT (SUBASE SAN DIEGO CA)**



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Organizational Followers

- **Ground Operations Function(10):**

- NAVAL SPECIAL WARFARE COMMAND, SAN DIEGO, CA
- NAVAL SPECIAL WARFARE DEVELOP GROUP, DAMNECK, VA
- NAVAL SPECIAL WARFARE GROUP FOUR, NORFOLK, VA
- NAVAL SPECIAL WARFARE GROUP ONE, SAN DIEGO, CA
- NAVAL SPECIAL WARFARE GROUP THREE, SAN DIEGO, CA
- NAVAL SPECIAL WARFARE GROUP TWO, NORFOLK, VA
- COMEODGRU ONE (NAS NORTH ISLAND)
- COMEODGRU TWO (NAVPHIBASE LITTLE CREEK VA)
- COMMANDER, THIRTY-FIRST SEABEE READINESS GROUP (NAVSTA VENTURA COUNTY PT MUGU CA)
- COMMANDER, TWENTIETH SEABEE READINESS GROUP (CBC GULFPORT MS)



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Organizational Followers

- **Aviation Operations Function(21):**

- COMCABEAST (MCAS CHERRY PT NC)
- COMCABWEST (MCAS MIRAMAR CA)
- COMAEWWINGLANT NORFOLK VA
- COMAEWWINGPAC POINT MUGU CA
- COMFITWINGLANT OCEANA VA
- COMHEL TACWINGLANT NORFOLK VA
- COMHEL TACWINGPAC SAN DIEGO CA
- COMHSLWINGLANT MAYPORT FL
- COMHSLWINGPAC SAN DIEGO CA
- COMHSWINGLANT JACKSONVILLE FL
- COMHSWINGPAC SAN DIEGO CA
- COMPATRECONGRU NORFOLK VA
- COMPATRECONWING TEN WHIDBEY ISLAND WA
- COMSEACONWINGLANT JACKSONVILLE FL
- COMSEACONWINGPAC SAN DIEGO CA
- COMSTRATCOMMWING ONE TINKER AFB OK
- COMSTRKFIGHTWINGLANT OCEANA VA
- COMSTRKFIGHTWINGPAC LEMOORE CA
- COMVAQWINGPAC WHIDBEY ISLAND, OAK HARBOR, WA
- PATRECONWING ELEVEN (NAS JACKSONVILLE FL)
- PATRECONWING FIVE (NAS BRUNSWICK ME)

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Organizational Followers

- **Recommendation:**
 - **Treat as pure followers. If the operational forces relocate, they relocate.**
 - Ask questions to ensure that we understand their mission and that they are properly categorized.
 - Use certified responses to validate as true organizational followers.
 - No further evaluation unless determined by IEG.



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Dependent Activities (30)

- **Definition: Activities that exist to perform a specific function at a specific location. These would close / consolidate if the operation they support is closed / relocated:**
 - **Fleet Support, Installation Management, SUPSHIP**



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Dependent Activities

- **Fleet Support (9)**
 - **RSO SAN DIEGO**
 - **NAVSUBSUPPCEN PEARL HARBOR HI**
 - **SOUTHWEST RMC SAN DIEGO CA**
 - **FTSCPAC SAN DIEGO CA**
 - **CDU SAN DIEGO CA**
 - **COMREGSUPPGRU INGLESIDE TX**
 - **COMREGSUPPGRU MAYPORT FL**
 - **COMREGSUPPGRU NORFOLK VA**
 - **FTSCLANT NORFOLK VA**

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Dependent Activities

- **Installation Management (12)**
 - **NAS PATUXENT RIVER MD**
 - **NAVAIRENGSTA LAKEHURST NJ**
 - **NAVSTA NEWPORT RI**
 - **NAVSUPPACT CORONA CA**
 - **NAVSUPPACT CRANE IN**
 - **NAVSUPPACT MECHANICSBURG PA**
 - **NAVSUPPACT MID SOUTH MILLINGTON TN**
 - **NAVSUPPACT NEW ORLEANS LA**
 - **NAVSUPPACT NORFOLK VA**
 - **NAVSUPPACT ORLANDO FL**
 - **NAVSUPPACT PANAMA CITY FL**
 - **NAVSUPPU SARATOGA SPRINGS NY**



Dependent Activities

- **SUPSHIP (8)**
 - **Primarily New Construction**
 - SUPSHIP BATH ME
 - SUPSHIP GROTON CT
 - SUPSHIP GULF COAST MS
 - SUPSHIP NEWPORT NEWS VA
 - **Primarily Repair**
 - SUPSHIP PORTSMOUTH VA
 - SUPSHIP JACKSONVILLE FL
 - SUPSHIP PUGET SOUND WA
 - SUPSHIP SAN DIEGO CA



Dependent Activities

- **Recommendation:**
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Stand Alone Activities (44)

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Stand Alone Activities

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- **NAVPERSDEVCOM NORFOLK VA**
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- **NETSAFA PENSACOLA FL**
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- **CG MARCORLOGCOM ALBANY GA**
- **COMNAVVAIRESFOR NEW ORLEANS**
- **COMNAVNETWARCOM NORFOLK VA**
- **COMNAVSAFECEN NORFOLK VA**
- **COMNAVWARDEVCOM NEWPORT RI**
- **COMSURFWARDEVDRU LITTLE CREEK VA**
- **COMUSNAVAK JUNEAU AK**
- **FLTIMAGCOMPAC**
- **JOINT INTER-AGENCY TASK FORCE WEST**
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Stand Alone Activities

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- **NAVY MANPOWER ANALYSIS CENTER MILLINGTON TN**
- **NAVSUPINFOSYACT MECHANICSBURG PA**
- **NEXCOM NORFOLK VA**
- **PRESIDENT BOARD OF INSPECTION AND SURVEY NORFOLK VA**
- **SUBMEPP PORTSMOUTH NH**
- **NAVOPTHALSUPTRACT YORKTOWN VA**
- **USUHS BETHESDA MD**
- **FLTINFOWARCEN NORFOLK VA**
- **FLEET SURVEILLANCE SUPPORT COMMAND NORTHWEST VA**
- **JOINT WARFARE ANALYSIS CENTER**
- **NAVAL SPECIAL WARFARE CENTER, SAN DIEGO, CA**
- **NAVAL SPACE OPERATIONS CENTER PT MUGU CA**
- **COMFIRSTNCD/COMNAVCONFORCOM LITTLE CREEK VA**

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Stand Alone Activities

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- **NAVMEDLOGCOM FT DETRICK MD**
- **NAVCIVLAWSUPPACT WASHINGTON DC**
- **NAMARA JAG WASHINGTON DC**
- **MARBKS WASHINGTON DC**
- **BCNR WASHINGTON DC**
- **DIRNCPB WASHINGTON DC**
- **HQ JPRA FT BELVOIR VA**
- **NAVHISTCEN WASHINGTON DC**
- **NAVMEDIACEN WASHINGTON DC**
- **NAVSEALOGCEN MECHANICSBURG PA**



Stand Alone Activities

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 - **IUSS (2)**
 - **MSC Offices (3)**
- **Currently not functionally aligned**
 - **No capacity or Military Value plan exists for these functional groups for BRAC 2005**



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Specialized Functions Activities

- **Communications (8)**

- CDRJCS MACDILL AFB FL
- NAVCOMTELSTA
 - GUAM
 - JACKSONVILLE FL
 - PUGET SOUND WA
 - SAN DIEGO CA
 - WASHINGTON DC
- NCTAMS LANT NORFOLK VA
- NCTAMS PAC HONOLULU HI

- **METOC (9)**

- NAVPACMETOCFAC WHIDBEY ISLAND WA
- FLENUMMETOCEN MONTEREY CA
- NAVICEEN SUITLAND MD
- NAVLANTMETOCEN NORFOLK VA
- NAVLANTMETOCFAC JACKSONVILLE FL
- NAVOCEANO STENNIS SPACE CENTER MS
- NAVPACMETOCEN PEARL HARBOR HI
- NAVPACMETOCEN SAN DIEGO CA
- NAVTRAMETOCFAC PENSACOLA FL

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Specialized Functions Activities

- **Training COEs (7)**

- CENINFOTECH SAN DIEGO CA
- CENNAVAVNTECHTRA PENSACOLA FL
- CENNAVENGINEERING NORFOLK VA
- CENNAVLEADERSHIP NORFOLK VA
- CENNODIVE PANAMA CITY FL
- CENSEABEEFACENG PORT HUENEME CA
- CENSUBLEARNING GROTON CT

- **IUSS (2)**

- NAVAL OCEAN PROCESSING FACILITY DAM NECK VA
- NAVOCEANPROCFAC WHIDBEY ISLAND WA

- **MSC Offices (3)**

- MSC LANT NORFOLK VA
- MSC PAC SAN DIEGO CA
- MSC O GU

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Specialized Functions Activities

- **Recommendation –**
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- Navy Reserve Readiness Commands 7
- Navy Legal Service Office 7
- Marine Corps Districts (Recruiting) 6
- Human Resource Service Centers * 6
- Navy Trial Service Offices 5
- Fleet and Industrial Supply Centers * 5
- Navy Recruiting Regions 4
- Health Care Support Organizations * 3
- Navy Personnel Support Activities * 2
- Marine Corps National Capital Region Command 1

Activities included in JCSG analysis for operational function



Department of the Navy
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Regional Support
Activities

COMNAVDIST WASHINGTON DC	NAVFAC OICC MARIANAS GU	SIXTH MCD PARRIS ISLAND SC
COMNAV MARIANAS GU	NAVLEGSVCOFF CENTRAL PENSACOLA FL	TWELTH MCD SAN DIEGO CA
COMNAVREG GULF COAST PENSACOLA FL	NAVLEGSVCOFF MIDLANT NORFOLK VA	TRISVCOFF EAST NORFOLK VA
COMNAVREG HAWAII PEARL HARBOR HI	NAVLEGSVCOFF NORTHCENT WASHINGTON DC	TRISVCOFF NE WASHINGTON DC
COMNAVREG MIDLANT NORFOLK VA	NAVLEGSVCOFF NORTHWEST BREMERTON WA	TRISVCOFF PAC PEARL HARBOR HI
COMNAVREG MW GREAT LAKES IL	NAVLEGSVCOFF PAC DET PEARL HARBOR HI	TRISVCOFF SE MAYPORT FL
COMNAVREG NE GROTON CT	NAVLEGSVCOFF SE JACKSONVILLE FL	TRISVCOFF WEST SAN DIEGO CA
COMNAVREG NW SEATTLE WA	NAVLEGSVCOFF SOUTHWEST SAN DIEGO CA	CG MCNCR WASHINGTON DC
COMNAVREG SE JACKSONVILLE FL	NAVRESREDCOM MIDATLANTIC	HLTHCARE SUPPO JACKSONVILLE FL
COMNAVREG SOUTH CORPUS CHRISTI TX	NAVRESREDCOM MIDWEST	HLTHCARE SUPPO NORFOLK VA
COMNAVREG SW SAN DIEGO CA	NAVRESREDCOM NORTHEAST	HLTHCARE SUPPO SAN DIEGO CA
ENGLDACT MW GREAT LAKES IL	NAVRESREDCOM NORTHWEST	HRSC PEARL HARBOR HI
ENGLDACT WEST SAN BRUNO CA	NAVRESREDCOM SOUTH	HRSC PHILADELPHIA PA
NAVCRUITREG CENTRAL GREAT LAKES IL	NAVRESREDCOM SOUTHEAST	HRSC PORTSMOUTH VA
NAVCRUITREG NORTH SCOTIA NY	NAVRESREDCOM SOUTHWEST	HRSC SAN DIEGO CA
NAVCRUITREG SOUTH MACON GA	PWC GREAT LAKES IL	HRSC SILVERDALE WA
NAVCRUITREG WEST OAKLAND CA	PWC GU	HRSC STENNIS, MS
NAVFAC EFA CHESAPEAKE WASHINGTON DC	PWC JACKSONVILLE FL	PERSUPPACT LANT
NAVFAC EFA NORTHEAST PHILADELPHIA PA	PWC NORFOLK VA	PERSUPPACT WEST
NAVFAC EFA NORTHWEST POULSBO WA	PWC PEARL HARBOR HI	FISC SAN DIEGO CA
NAVFAC EFA SOUTHEAST JACKSONVILLE FL	PWC SAN DIEGO CA	FISC JACKSONVILLE FL
NAVFAC EFD ATLANTIC NORFOLK VA	PWC WASHINGTON DC	FISC PEARL HARBOR HI
NAVFAC EFD ATLANTIC NORFOLK VA	EIGHTH MCD NEW ORLEANS LA	FISC NORFOLK VA
NAVFAC EFD PACIFIC PEARL HARBOR HI	FIRST MCD GARDEN CITY LI NY	FISC PUGET SOUND WA
NAVFAC EFD SOUTH CHARLESTON SC	FOURTH MCD CUMBERLAND PA	
NAVFAC EFD SOUTHWEST SAN DIEGO CA	NINTH MCD KANSAS CITY MO	

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Regional Support Activities

- **Recommendation – Analyze Regional Support Management to assess geographic responsibilities, span of control, and alignment.**
 - **Effectiveness:**
 - **Scope of responsibility**
 - **Criticality of location**
 - **Alignment to established regional boundaries**
 - **Interaction with other DoD and federal agencies**
 - **Efficiency:**
 - **Overhead staff ratio**
 - **Proximity to subordinate units & customers**



Next Step

- **Approve release of information gathering “mini” data call to all “other” activities.**
 - **Ensure accurate understanding the mission with certified data.**
 - **Ensure proper categorization**
 - **Enhance military value questions where appropriate**
- **Pursue capacity analysis requirements for known “specialized functions” and regional activities.**



Proposed Data Call Questions

- Describe your mission.
- Is your activity located on a military installation?
- Is your activity located in leased space?
- Is your current location mandated by a statutory requirement? List and explain the requirement.
- Is your location critical to accomplishing your mission? Explain.
- List the collocated commands (by UIC) with which you have a collaborative relationship. Explain the nature of the relationship.
 - Is collocation with these commands critical to your unit's mission accomplishment? Explain
- Do you have specially configured facilities or fixed assets essential to your mission? Explain
 - (If yes) Can your activity function be accomplished by co-locating or combining with another DON or DOD facility. Explain.
- Identify other activities (by UIC) within your fence line(s)

TAB 10



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BRAAC Overview

Infrastructure Evaluation Group

20 May 2004

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BRAC Overview

- **Process created – not dictated by law**
 - Based on lessons learned, criticisms
 - Developed to undergo Commission, community scrutiny
 - Requires both data analysis & documented deliberations
- **Designed to show compliance with law**
 - All installations treated equally
 - Certified data
 - Force structure plan
 - Selection criteria

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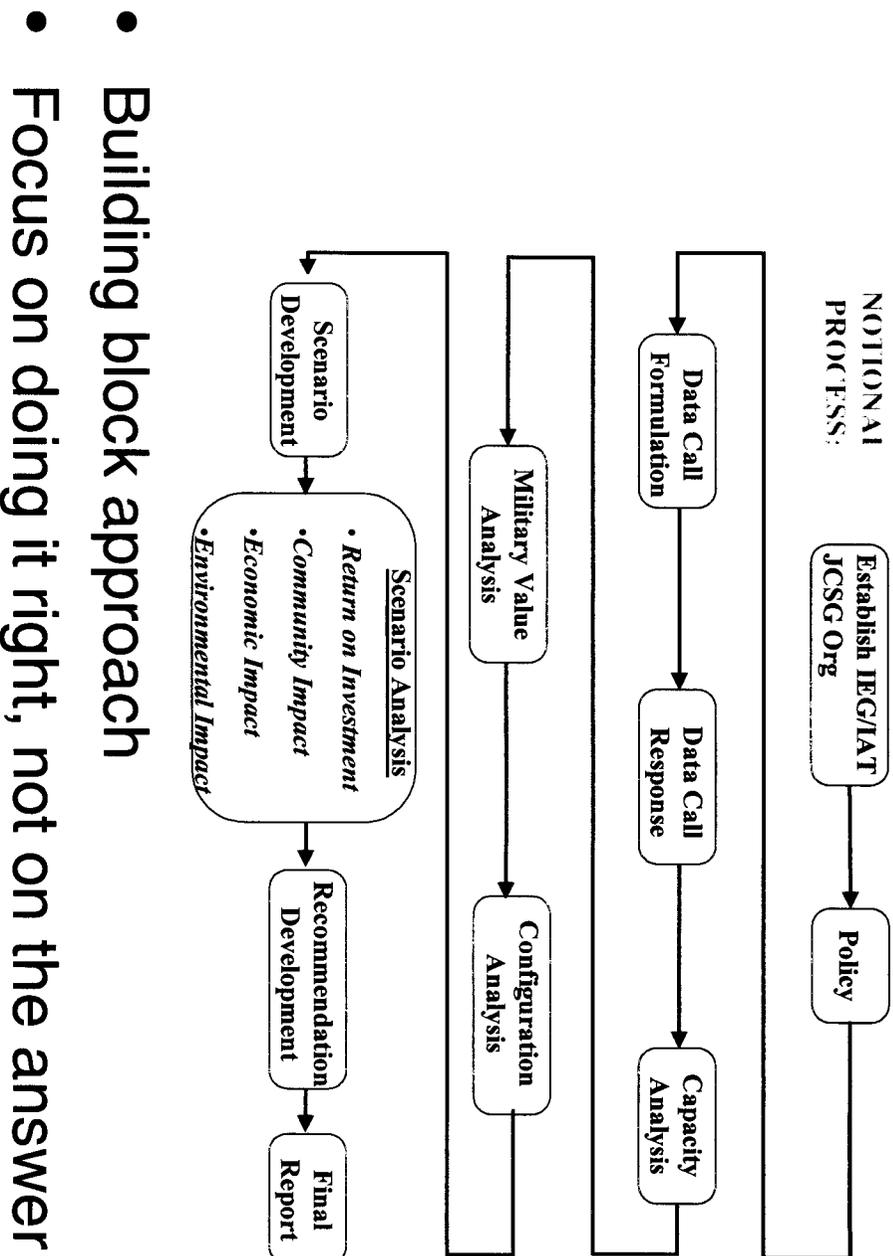
BRAC Overview

- **Process linkages**
 - All installations treated equally = like data/analyses for like installations
 - Certified data = analytical methods for capacity, military value & scenario development
 - Force structure plan = requirements
 - Selection criteria = military value, COBRA (costs), and impacts
- **Each part has a distinct purpose**
 - Separately – to show it was done
 - Together – to produce solutions
 - Interwoven – can't pull threads & unravel

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BRAC Overview





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Capacity Analysis

- Critical underpinning to the BRAC process
 - Necessary data point to conduct subsequent analysis (in aggregate and separately)
- Statutory requirement: recommendations must be based on 20 year force structure plan
 - DON Position: Capacity analysis is mechanism to tie force structure to recommendations
 - Potential Excess Capacity = Total Current Capacity – Future Required Capacity
 - Measures used to indicate capacity at each place in configuration analysis/scenario development
 - OSD Position: FSP will be used during scenario development
- Force Structure Plan
 - Enables DoD to articulate the necessary future capacity
 - Requires extrapolation for many functions/bases
 - No one-to-one relationship
 - Concept of employment

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Military Value Analysis - Purpose

- **Compliance with law and process**
 - Use of certified data
 - Tie to military value selection criteria
 - Like comparison only to like
- **Display what is considered important for each function**
 - Articulation of military judgment/operational needs
 - Articulation of what constitutes critical differences
 - Issues identified by outside commenters
- **Make quantitative and objective what could be perceived as subjective**
 - Defined analytical methodologies
 - Documented deliberations
 - Reproducible results

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Military Value Analysis

- **Analysis based on selection criteria 1-4**
 - Mission capabilities & operational readiness
 - Availability/condition of land, facilities, airspace
 - Ability to accommodate contingency, mobilization and future missions
 - Cost of operations & manpower implications
- **Results in score for a particular activity/facility on ability to perform a function**
 - Relevant only in comparison to other activities performing that function
 - Scores combined with capacity measures in configuration analysis to find where is the best place to do what

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Configuration Analysis

- Optimization methodology that uses linear programming model
 - Identifies solution set(s) that meet the decision makers' expressed goals
 - Inputs:
 - Capacity
 - Military Value
 - Imperatives
 - Can produce multiple solution sets to explore trade-offs

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8



Configuration Analysis – Example

MV	90
(cap)	10

Base A

MV	75
(cap)	15

Base B

MV	85
(cap)	15

Base C

MV	80
(cap)	20

Base D

MV	70
(cap)	13

Base E

Capacity requirement = 23

Average MV = 80

- Objective:
 - Minimize excess capacity
- Subject to:
 - Maintain or improve average MV
 - Any other needed constraints



Scenario Development

- Decision makers develop scenarios based on:
 - Configuration analysis results
 - Transformational options
 - DoD Principles
- Apply military judgment to seek smart solutions that achieve goals
 - “Machine” solution isn’t enough
 - Experience sees what the math doesn’t



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Scenario Analysis

- **Based on Selection Criteria (5-8)**
 - Extent and timing of potential cost and savings (COBRA)
 - Economic Impact
 - Community Infrastructure Impact
 - Environmental Impact
- **Analysis process**
 - Develops greater detail on actual actions necessary to accomplish scenario
 - Determines scenario's net present value
 - Assesses potential impacts of action

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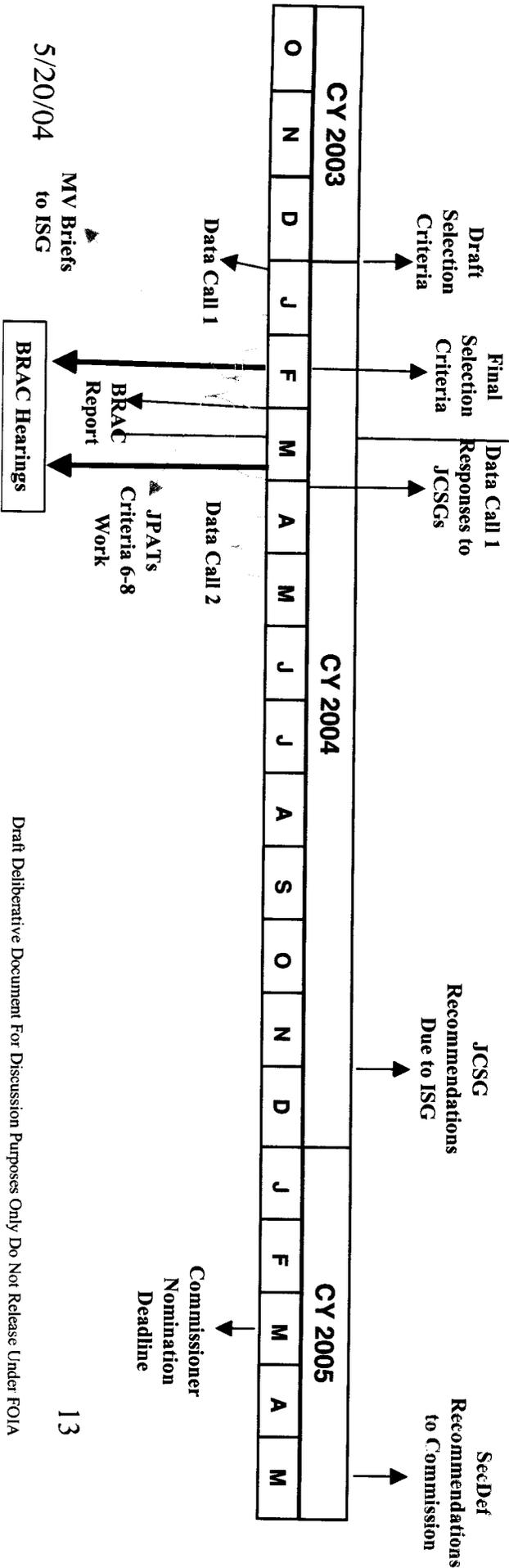
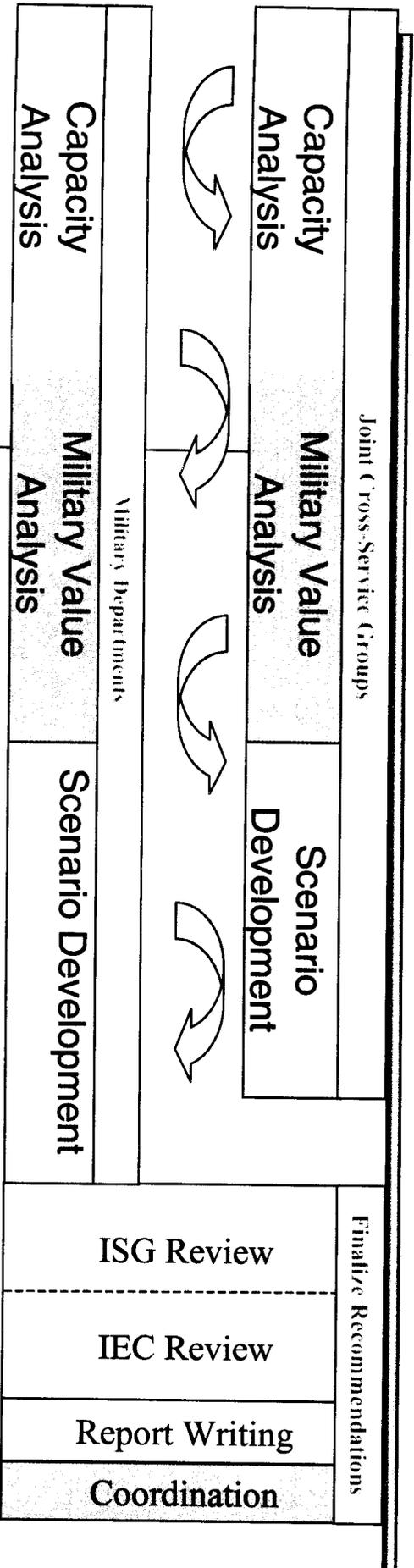


Recommendation Development

- Evaluation of scenario analysis results
 - What happens if we do this?
- Comparison to ensure
 - DoD Principles are upheld
 - Transformational goals are met
 - Warfighting capabilities and efficiency are maximized
- Selection of scenarios to recommend to ISG and IEC
 - Military value paramount consideration



OSD Process Overview



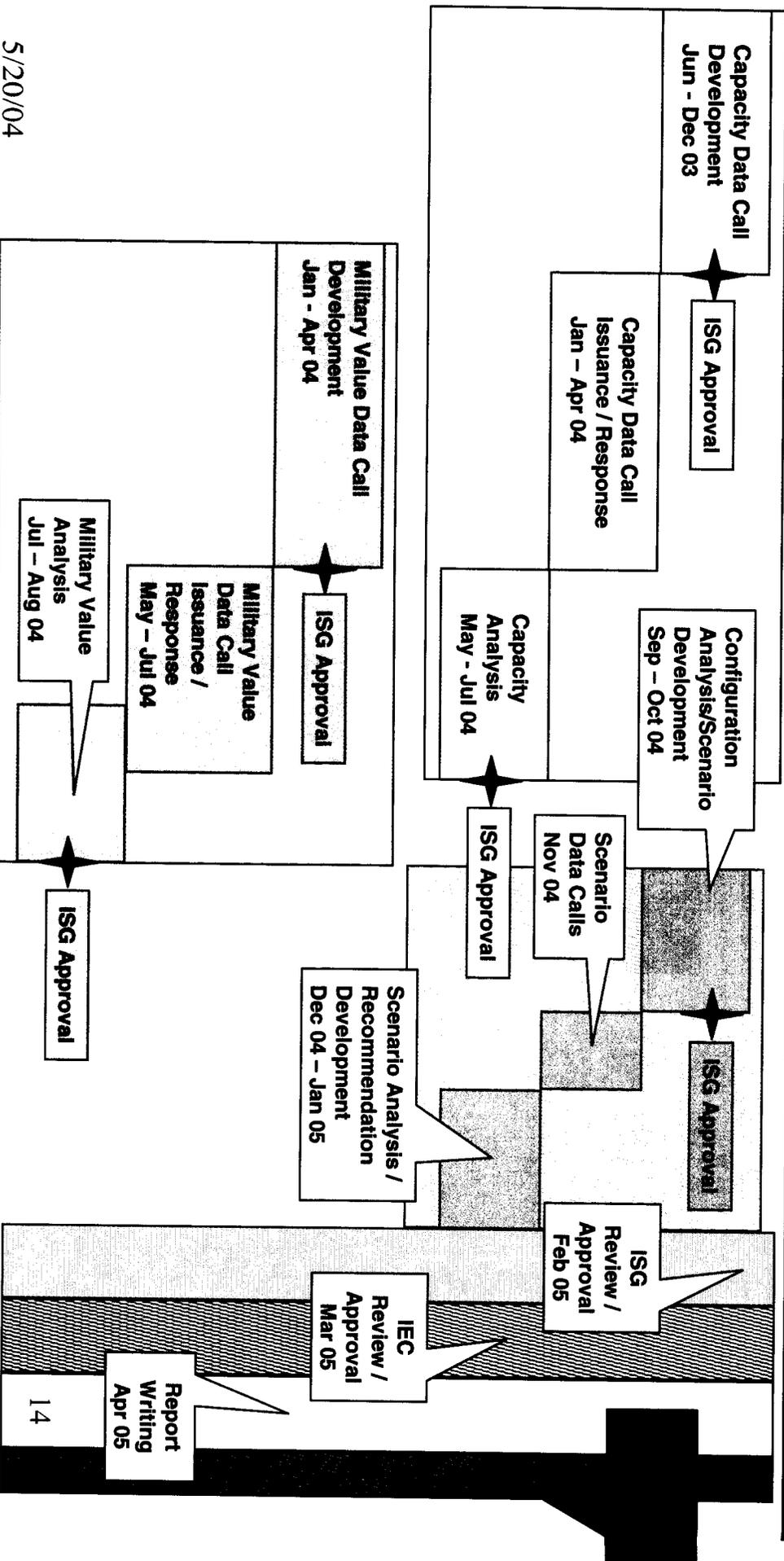
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DON Process Overview

2003												2004												2005											
O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M																



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TAB 11

Proposed IEG Optimization Framework: Generating Alternatives

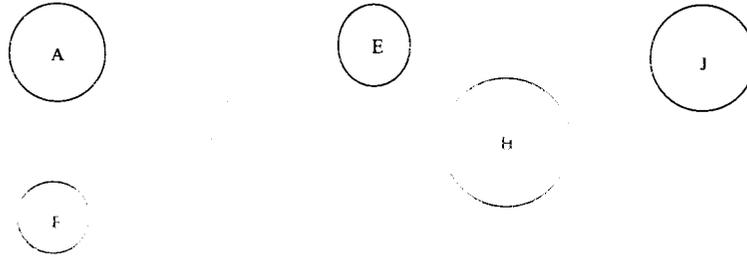
DON IAT

Infrastructure Evaluation Group
20 May 2004

This framework will provide a guideline for the creation of specific optimization models for use in generating multiple alternative solutions that will serve as starting points in the development of closure and/or realignment scenarios. The analysis and review of these scenarios will lead to final recommendations. This briefing describes a proposed optimization framework developed as a result of reviewing the BRAC '95 methodology.

Although not a formal part of the optimization framework, we have included a discussion of calculating military value in the backup section of this briefing. The optimization framework requires, among other things, military value assessments.

Optimization framework: filter alternatives



- Example: Given 10 activities, there are 175 alternatives that close 1, 2, or 3 activities
- Find a subset of the 175 possible alternatives for scenario development and in-depth analysis

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With even a small number of activities, the problem of developing good recommendations can be daunting. Given 10 activities, there are 175 alternatives that close one, two, or three of the ten activities. It is unlikely that the time and resources needed to do an in-depth analysis of each of these possible alternatives will be available. The optimization framework provides a means of filtering the alternatives to find a good subset of these alternatives that can be used to develop scenarios for in-depth analyses in a timely and efficient manner.

Outline

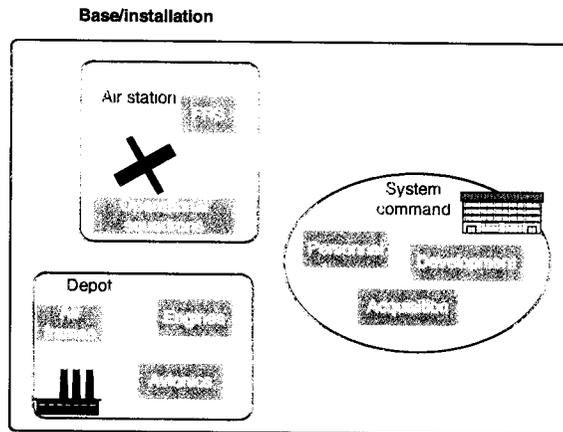
- Background
- Optimization methods
- Method choices
- Example
- Optimization model inputs and outputs

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3

Definitions



- **Activity:** the basic organizational unit
- **Functions:** partition of the activity

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A few distinctions must be highlighted to ensure clarity. An **activity** is the largest possible organizational unit used in the analyses. Typically, an activity will be a local command, such as a depot, hospital or military unit. It will normally be located at a single site, often as one activity of many at a base or installation. In OSD parlance, an activity is a “facility.”

Functions are rational partitions of the activity. They can be described in several ways. One way is to think of the functions as a partition into product lines—for example, airframe repairs and engine overhauls. Similarly, they can be thought of as outputs—for example, dental care and undergraduate pilot training. A third way to think of them is as a subordinate organization—for example, a technical center’s laboratory and fabrication shop are separate functions within the tech center. Because these are different ways of describing the concept of partitioning an activity, these examples naturally lead to parallel descriptions—the product line is associated with a specific output performed by a particular shop or subordinate organization.

The function and activity views provide two different levels for performing the analysis. We can think about which activities should be retained, or we can think about how the functions should be assigned to different activities (and thus close an activity when it is assigned no functions.).

Optimization approach

- Notionally:

Max (total retained MilVal) - ρ (retained "resources")

Subject to:

retained capacity \geq required capacity (each type)

satisfy policy imperatives

- Vary ρ to show different trade-offs

- Defined by JCSG:

- Military Value
- Resources
- Policy imperatives

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The general form of the optimization approach is as follows: we will maximize the total retained military value while penalizing the retention of resources. Total retained military value is the sum of the military values for the retained activities or activity/function combinations. Retained resources could be the number of activities retained, the sum of the resources at the retained activities, or any other meaningful measure of resources that are not going to be released for other uses. The penalty parameter, ρ , defines the tradeoff between retaining military value and retaining resources that could be used for other purposes. If ρ is set to zero, then all activities or activity/function combinations are retained since there is no penalty associated with retaining excess resources. As ρ is increased, the penalty for keeping excess resources increases in importance. The optimization model will tend to retain the higher military value activities or activity/function combinations that satisfy the constraints. If ρ is made very large, the solution found will be the feasible solution that uses the least amount of the available resources without regard to military value.

The constraints include making sure that the retained activities or activity/function combinations are capable of meeting the requirement. The constraints may also specify any policy imperatives or any other constraints necessary to assure that the solutions obtained are really capable of performing the required functions.

Optimization alternatives

Size reduction focus	Military value focus	
	Activity	Function
reducing activities	Method 1	Method 3
reducing resource capacity	Method 2	Method 4

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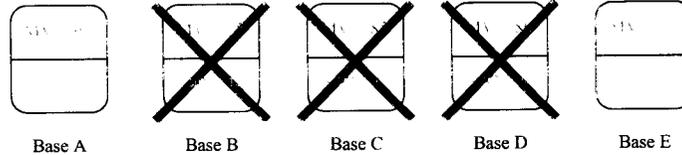
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The optimization methods proposed are closely related because the intent of each is to develop solutions to the trade-off between keeping military value and reducing the infrastructure. Choosing the focus of military value and the goal for reducing the infrastructure result in four different methods.

Each method emphasizes different features and can produce different configurations of activities and functions as solutions.

DoN BRAC 95 methodology



- Objective:
 - Minimize excess capacity
- Subject to:
 - Maintain or improve average MV
 - Any other needed constraints

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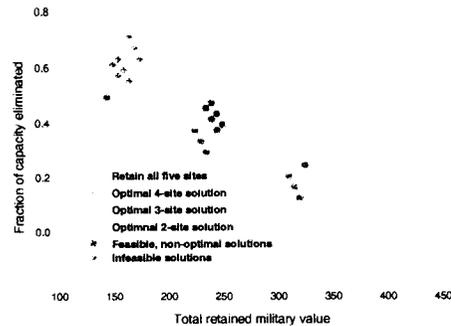
7

The optimization methodology used by the DoN for BRAC 95 was simple: minimize excess capacity while maintaining or improving the average military value of the retained installations. Five bases are shown in this example with the indicated military values and capacities. If only 23 units of capacity are required, the optimal solution retains bases A and E. This solution has zero excess capacity and an average military value of 80. The methodology also allowed us to generate the second-best and third-best solutions. In this example, the second-best solution retains bases A, C, and D having excess capacity equal to one and average military value equal to 85.

Other constraints could be added to this framework depending on the type of installations addressed, e.g., number of berthing spaces needed on each coast were added to the model created for looking at naval bases. A different model was created for each type of installation addressed.

Generating alternatives

- Explore trade-offs between:
 - Enhancing military value
 - Reducing infrastructure
- Enhance military value:
 - Maximize total retained military value
 - Activities
 - Functions
- Reduce infrastructure:
 - Penalize number of activities (functions) retained
 - Penalize retention of excess resources
- Generate 1st, 2nd, and 3rd best solutions



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The purpose of the optimization methods is to generate several alternatives that can then be evaluated by the IEG in more depth. There are a number of ways that alternatives can be generated.

First, varying the importance of reducing infrastructure provides different trade-offs between military value and infrastructure, which are associated with different solutions. The graph on this slide illustrates those tradeoffs for the BRAC 95 example presented in a previous slide. For example, the highest total retained military value is achieved with no infrastructure reduction, which corresponds to keeping everything open. At the other end, a solution with the most infrastructure reduction is associated with a much lower total retained military value. The different points are obtained by changing the penalty on retained infrastructure in the objective function. A number of alternatives are generated because each point represents a different solution. The graph on the right shows the 26 solutions that retain two or more sites for the BRAC 95 example of the previous slide.

Obtaining solutions using the different methods generates different alternatives. Each method is associated with a particular combination of retained military value (activity or function) and reduced infrastructure (numbers or retained resources).

Further, the optimization model can generate the 1st, 2nd and 3rd best solutions. This is accomplished by excluding the best (or best and 2nd best) solutions from the set of feasible solutions and running the optimization program again. The resulting solutions provide as set of high quality alternatives for consideration.

Finally, the proposed optimization methods provide a high degree of flexibility for generating alternatives.

Method choice

- Choice of method is a **policy** decision
 - Mathematically very similar
- Many alternatives nested within the framework
 - Maximizing average military value results from constraint on number of open sites
 - DON BRAC '95 approach is a special case of activity-based military value with goal of minimizing capacity
- Rank-order methods are a simplification of the different methods
 - But with restrictions on the alternatives considered

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The choices regarding military value and infrastructure concerns are **policy** issues. The choice reflects how the IEG perceives military value and the primary objective of BRAC to reduce infrastructure.

These choices actually encompass a number of different alternatives. Two in particular may be of interest. By adding a constraint on the number of sites that are open, the optimization will find the solution with the highest average value of sites for that number of sites. In addition, adding a constraint on average military value, and putting a high premium on reducing excess capacity is analogous to the optimization method employed by the in 1995.

An intuitive method based on rank-ordering activities by military value has been proposed. Activities are added to the solution in order of their military value ranking until the capacity requirement is met. (An analogous approach is to start with everything in the solution, and drop from the solution the lowest activity until dropping one violates the capacity constraint.) This “greedy” approach is relatively straightforward, but may result in a solution that can be improved on by having higher military value or lower excess capacity. This may happen because the stopping rule excludes consideration of potentially attractive alternatives. Because the solution can be improved using the other methods presented, we do not consider it further.

Hypothetical example

- Example illustrates the effects of different approaches
- Caution
 - Results are data-specific. Different values may lead to different conclusions
 - Decision should be based on understanding of issues
 - Example does not exhibit all capabilities

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We present a hypothetical example to illustrate the differences between the methods. We show how the choices for determining military value and infrastructure reduction can affect the outcome. However, as with any example, this is only illustrative and conclusions based on this example alone may be misleading. A different set of values could lead to different conclusions. Thus, the decision should be based on understanding the issues involved.

Depot allocations

Activity	Air frames	Tanks	Turbines	Electronics
Alpha	14		40	500
Bravo	10		84	405
Charlie	16		88	395
Delta		18	43	1,210
Echo		5	30	450
Foxtrot		9	15	440
Golf				1,100
Requirement	40	32	300	4,500
Max production	97	64	757	21,868

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In this example, we consider seven existing depots. This table shows the current workload allocations to the seven depots. The total assigned workload will serve as the requirement for this example. Also shown is the maximum production possible across all four product areas using the resources available and assuming the unit value of each product is inversely proportional to the requirement for that product. There is significant excess capacity in this example. The resources are described next.

Depot resources

Activity	Test ranges	Fabrication shops	Hangars	Test facilities
Alpha	2	1.2	12	0.9
Bravo	1	0.9	7	1.3
Charlie	1	1.6	3	2.3
Delta	2	2.1	0	1.7
Echo	1	3.0	0	0.7
Foxtrot	2	1.7	0	2.4
Golf	0	0	0	1.8

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Four resource types are used in the repair of the four product types. This slide shows the total of each type of resource available at each of the depots.

Resource requirements for production

Product	Test ranges	Fabrication shops	Hangars	Test facilities
Air frames	0.02	0.01	0.37	0.0023
Tanks	0.01	0.059	0	0.0047
Turbines	0	0.0067	0	0.0030
Electronics	0	0	0	0.0002

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This slide shows how much of each resource type is utilized by a depot to produce one unit of output of each product type. In this example, resources are shared across product types. Note that a given depot may not produce all four products.

Depot and function military values

Activity	Activity MV	Air frames MV	Tanks MV	Turbines MV	Electronics MV
Alpha	62	82		35	57
Bravo	61	50		62	89
Charlie	67	66		81	80
Delta	72		75	73	64
Echo	63		93	44	74
Foxtrot	75		54	54	85
Golf	55				92
Averages	65	67.13	74.00	62.28	79.30

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Military value can be measured and incorporated at the activity level or at the functional level. This slide specifies the military values of the existing depots. Here we can see how the activity/functional decision may affect the results. Activity Golf has a low military value because it only does electronics, even though it has the highest electronics military value.

Normalized and scaled functional military values

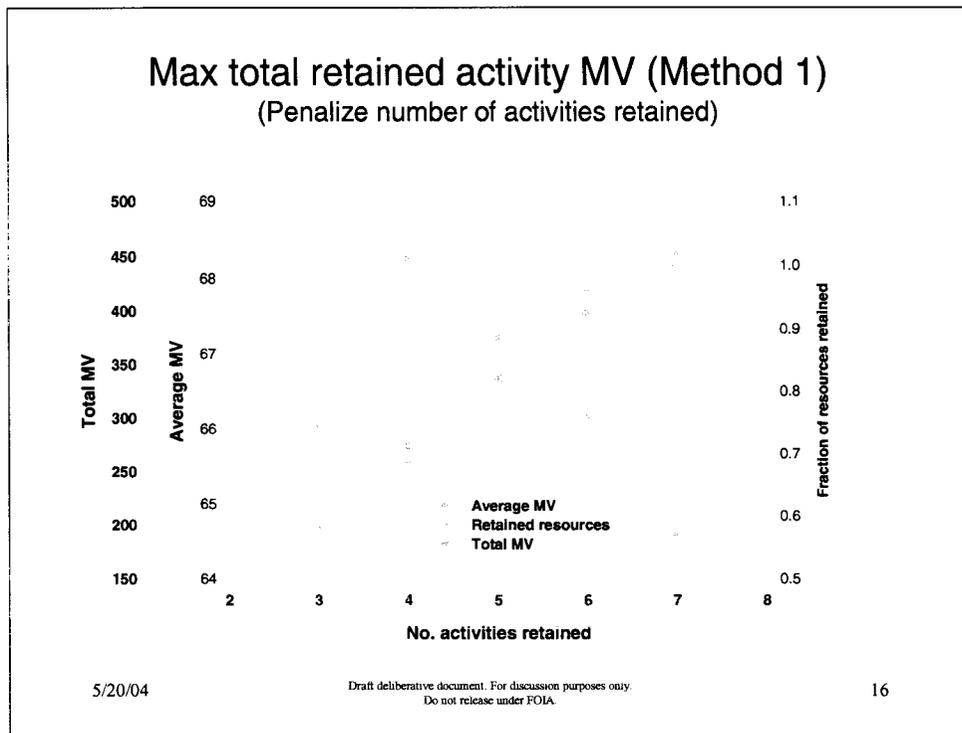
Activity	Air frames MV	Tanks MV	Turbines MV	Electronics MV
Alpha	200		43	62
Bravo	122		77	97
Charlie	161		100	87
Delta		161	90	70
Echo		200	54	80
Foxtrot		116	67	92
Golf				100

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In this table, we have normalized the functional military values for each product area and scaled the air frame and tank products as being twice as important as the turbine and electronics products. These are the values we used to obtain the results for methods 3 and 4 that are described in the slides that follow. Plotted results for total military value and average military values that are shown in the following slides use the original non-normalized, non-scaled military values.

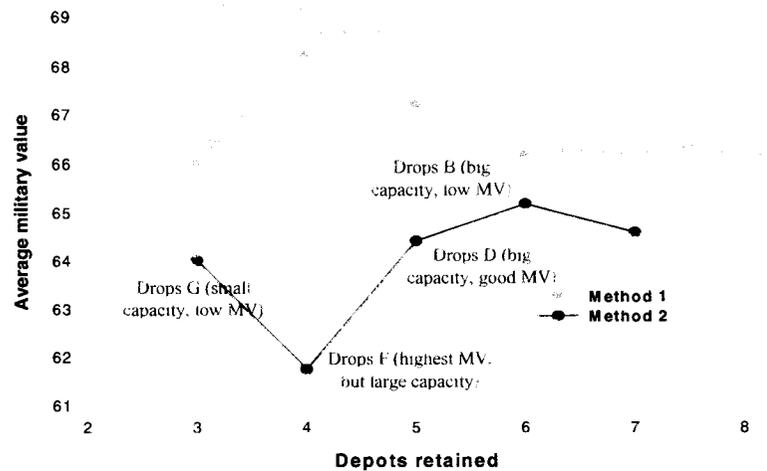


This slide presents a summary of the alternatives generated using method 1, which evaluated military value at the activity level and sought to penalize the number of sites retained. The summary for a particular solution shows the average military value, total military value retained, and excess capacity in terms of resources retained for a given number of retained activities. For example, the best solution that retains 3 excess capacity of about sites (which are Alpha, Charlie, and Delta) is summarized as having a total military value of about 201 for the retained sites, retaining more than 50 percent of the resources, and an average military value of about 67.

The different solutions are obtained by varying the penalty associated with the number of retained sites. The solution retaining 3 sites results from the highest penalty for retained sites, the configuration that retains 7 sites results from the lowest penalty for retained sites. Total military value (which is the sum of the military value of all retained sites) decreases as sites are closed. Average military value typically increases as sites with lower military value are closed first.

A set of alternatives that the IEG can choose to examine in more depth is created. The IEG can choose between solutions retaining 3 to 7 activities by considering the trade-off in reduced total military value for a reduction in excess capacity.

Methods 1 & 2: average MV



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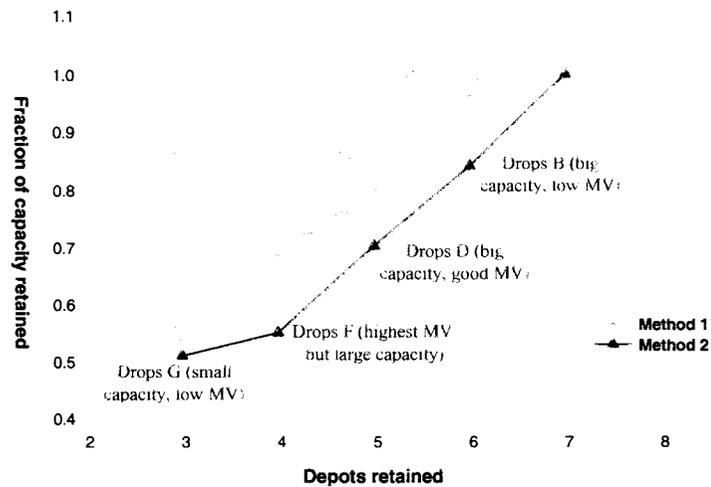
17

This slide provides details on the sites that are retained by the optimization model for methods 1 and 2. Note that the vertical axis displays average military value, so that the scale has changed between the previous slide and this one.

To compare these methods, start at the 7 depot solution, which retains all of the depots. As expected, the two methods have the same results for this solution. As the penalty on size increases, method 1 starts to drop low military value sites. First, activity G, with the lowest military value is dropped. As the penalty of the number of places retained increases, method 1 then drops activity B, which has the next lowest military value. Increasing the places retained penalty even more results in activity E being dropped. Depot E has a higher military value than A, but the capacity constraint is binding at this point. A is the lowest military value site remaining, but it must be retained to provide sufficient capacity. Thus, the model must drop a different site, which is E. While dropping G, B and E, average military value rises, because these activities are relatively low military value sites. Finally, as the penalty becomes very high, activity F is dropped. There are very few combinations of three sites that meet the capacity requirement. The highest average military value is A, C, D. Because F has high military value, the average falls.

In contrast, method 2, the red line, has a different solution set for each solution with six or fewer retained depots. Note that method 2 first drops activity B. It is a higher military value than G, but is also much larger. This combination of low military value and big size makes it the first to go in method 2. Again, average military value rises initially, as the first site dropped is a low military value site. However, as the size penalty increases, method 2 drops D and then F. These, again, are places with large capacity, which is being traded off against their higher military value. Finally, in the 3 site solution, method 2 drops the small

Methods 1 & 2: capacity retained



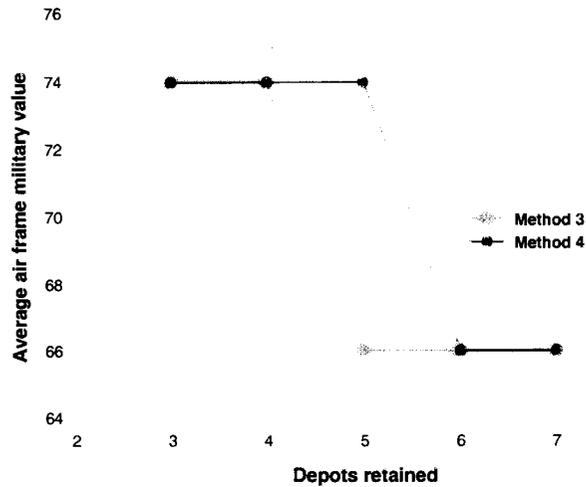
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This slide show how much capacity is retained as the two methods are applied. Note here that method 2, the red line, is always below the method 1 green line. Method 2 is reducing the infrastructure more, in that it is dropping big activities, not just low military value activities. The IEG may want to consider both sets of retained sites.

Methods 3 & 4: air frames



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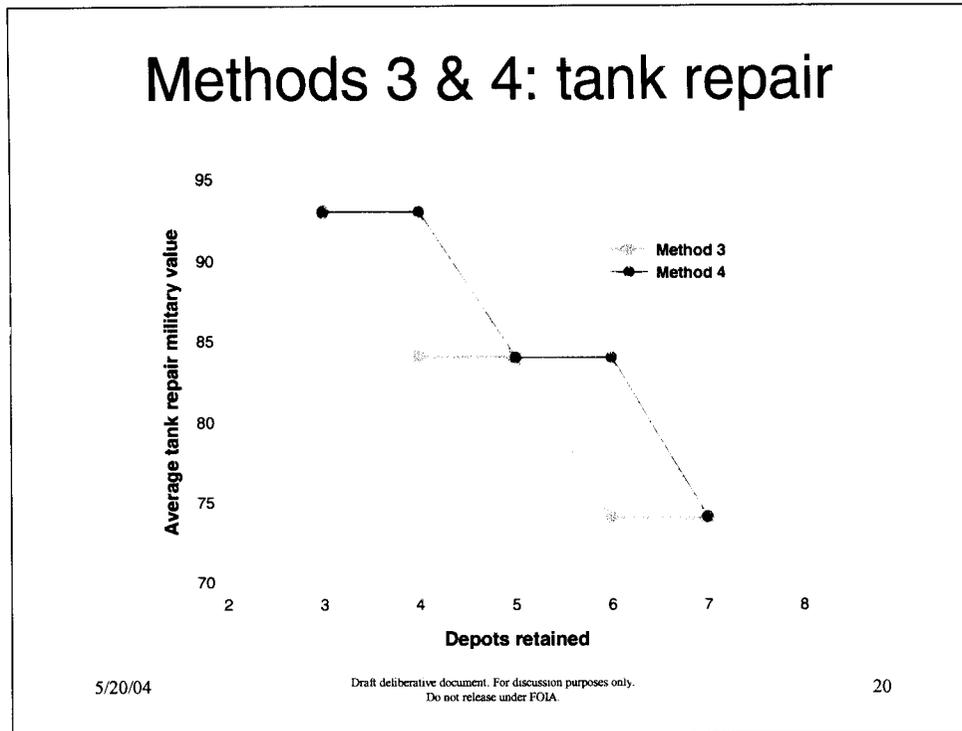
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In the next four slides, we compare the average military value of each commodity under methods 3 and 4. In air frames, as in most of the commodities, the difference is in when a site with the lower MV is first dropped. Here, both methods first drop activities that do not perform air frames, so there is no change. Then method 4 drops B, which is a lower military value air frame site, while method 4 drops F, which does not do airframes. Method 3 then drops B, and they have the same sites performing air frame work in the 4- and 3-site solutions.

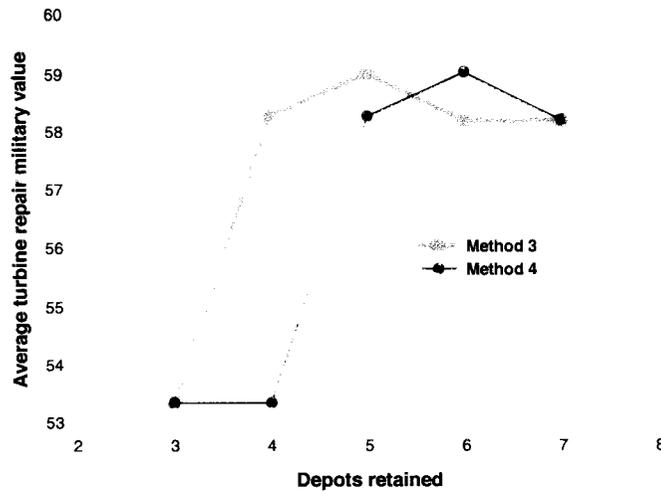
Note that average military value rises for airframes in both methods.

Methods 3 & 4: tank repair



Tank repair follows the same pattern as air frames, except that in the end, two tank repair sites are dropped. Method 4 drops them earlier than method 3. Again, average military value rose in this example, as the lower military value tank sites are dropped. The weighting of air frames and tanks as more important made it more likely that average military value increases for those commodities.

Methods 3 & 4: turbine repair



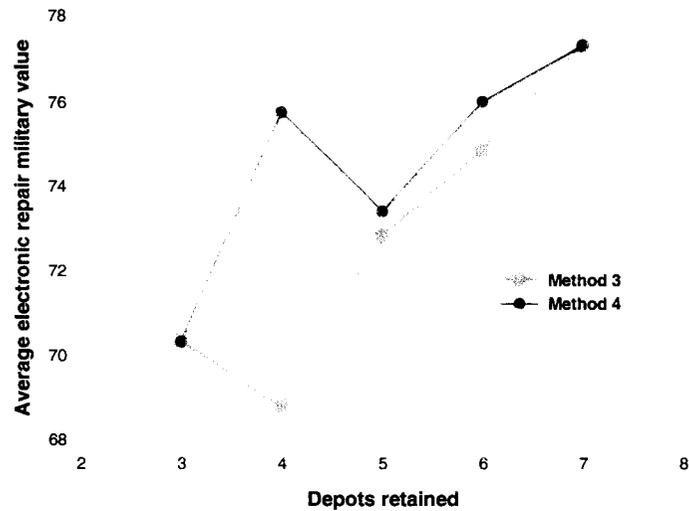
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Turbine repair also differs between methods 3 and 4 only in the timing of dropping the sites. However, the average military value falls. This is because the sites were selected to emphasize military value in air frames and tanks rather than turbines and electronics. Still, the first sites to drop were those with low military value in turbine repair, so military value initially increased in going from seven to six sites for method 4 and six to five sites for method 3. However, as the size penalty increases, a good turbine activity (D) is dropped.

Methods 3 & 4: electronics



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Electronics has an unusual pattern because all of the activities do electronics. Thus, the average for the sites will differ as the combinations of sites differ. The spike in method 4 at the four-site solution results from dropping D, which has a low electronics military value. Method 3 drops D at the three-site solution, so there is a rise in average military value from 4 sites to 3 sites. Method 4 drops G, the highest electronics military value site, last, explaining the very significant drop in method 3.

Depot expansion example

- Allow resource expansion
- Start from method 4 three-depot solution
- Use same settings, but allow expansion
- Obtain a two-depot solution

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The framework we propose will allow for an expansion of resources at a site. We use the depot example to illustrate this capability. We start with the three-depot solution from method 4. The solution retains depots Alpha, Charlie, and Echo. We can find a two-site solution, Alpha and Echo, by allowing expansion of resources shown in the next slide.

Resource expansion

Activity	Test ranges	Fabrication shops	Hangars	Test facilities
Alpha	0	0.1	3	0.5
Bravo	0	0.1	2	0.6
Charlie	0	0.1	1	0.7
Delta	0	0.2	0	0.4
Echo	0	0.3	0	0.6
Foxtrot	0	0.1	0	0.6
Golf	0	0	0	0.4

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When we ran the model, these were the additional resources that could be used. Only a small subset of these resources were needed for the optimal solution that retained two depots.

Allow expansion
Average FV and capacity reduction

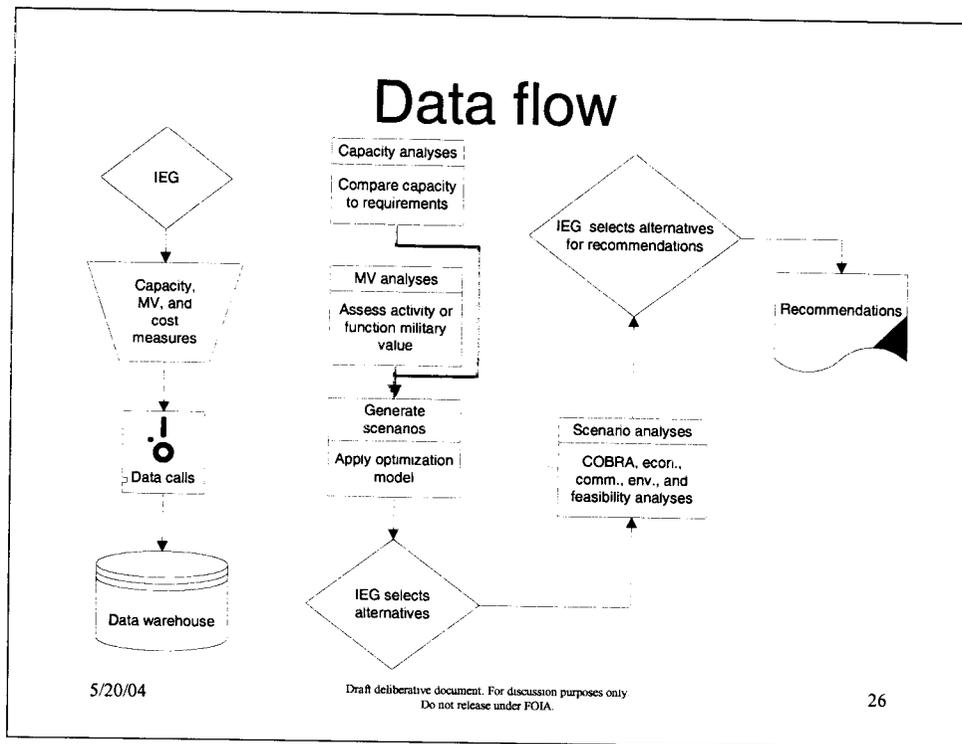
Product	No expansion	Expansion
	A, C, and E	A and E
Air frames	74.00	82.00
Tanks	93.00	93.00
Turbines	53.33	39.50
Electronics	70.33	65.50
Retained capacity	0.51	0.40

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By allowing for an expansion of resources, depots Alpha and Echo were retained. Even allowing for some increase in resource capacities, the retention of Alpha and Echo reduces the retained capacity by another 20 percent.



This slide presents an overview of the analytical process.

The IEG determines what data are needed for the process. Data calls are sent to installations and activities. The installations and activities will respond to the data calls. The responses will be maintained in a data warehouse that will feed the steps of the analytical process.

The first step is the capacity analysis. The second step is the military value analysis. The outputs of the capacity and military value analyses, along with other data from the data warehouse, will feed the scenario generation step. The scenario generation step will use the optimization framework to generate scenario alternatives.

The IEG will evaluate the scenario alternatives for feasibility and desirability. The analysis will assess the cost implications of the scenario using the COBRA model and also consider the community impact, economic impact, and environmental impact of the scenario.

The IEG will use these evaluations to select from these scenarios the ones they wish to put forward as recommendations.

Optimization model inputs

Model element	Inputs
Total capacity required	Required capacity type and quantity <ul style="list-style-type: none"> • Commodities/functions • Dimensions (e.g. workload, facility) • Routine/Surge from Forces Structure Plan?
Capacity available by site	Capacity types and quantity <ul style="list-style-type: none"> • Parallel required capacity
Military value	Values <ul style="list-style-type: none"> • Activity or function? • Weighting between functions/commodities?
Objective functions (multiple runs?)	Size definition <ul style="list-style-type: none"> • Site, resources, or both • Expansion?
Constraints	Policy imperatives and other restrictions on solutions

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In order to use this framework, analysts will have to provide several pieces of information. They must provide the overall capacity required for each function modeled, the capacity for each function at each site or activity in the same units of measure as used for the requirements, and any needed information on the sharing of resources that may apply. Analysts must be clear about what is to be modeled. Are surge or routine requirements based on the Force Structure Plan to be used?

They must provide the military values for sites or activities if using methods 1 or 2 and functional military values if using methods 3 or 4. If using methods 3 or 4, they should consider whether or not to scale the values for different functions.

They must specify which of the four methods are to be modeled. They must also specify whether or not to allow expansion of resources and, if so, provide the units of expansion to allow for each resource in the model.

Constraints on solutions must be specified. Any policy imperatives that impose constraints on the solutions must also be specified. Any other constraints relating to the feasibility of solutions must also be specified.

All of these inputs must be approved by the IEG.

Optimization model output

- Output of each model run is a possible scenario

Configuration data	Configuration characteristics
Sites retained	Total retained Military Value
Site/functions retained	Average retained Military Value
Workload assignment	Size reduction

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The output of each run of the model will represent a possible scenario. The output from the model will include the parameters used such as method and penalty parameter. Whether or not the second- or third-best solution was sought will be indicated. Details of the optimal solution will be given to include the sites or activities retained, the allocation of workload by function to retained sites or activities, and the overall military value and capacity results.

Backup Slides

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Capacity reduction

- Reduce the number of activities (Methods 1 & 3)
 - Concentrates capacity at fewer activities
 - Lowers overhead costs (?)
- Reduce resource capacity (Methods 2 & 4)
 - Releases more resources
 - Less reduction in number of activities (?)

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The optimization model examines the tradeoff between having high military value and smaller infrastructure. Implementing military value in the objective function is straightforward—we sum the military values determined in previous stages in the process for the retained activities or functions. Reducing infrastructure can be accomplished in two ways. The infrastructure goal might be to reduce the number of activities or functions or it might be to reduce the capacity. This depends in part on what drives costs: sites, or capacity. If maintaining several sites is costly (possibly because the overhead associated with sites is expensive), then reducing the number of sites might be a priority. Methods 1 and 3 penalize the number of retained sites as part of the optimization goal. An alternative way to incorporate infrastructure reduction makes reduction of retained resources part of the optimization goal. This might be appropriate if costs are mostly associated with maintaining resources rather than sites. This approach is embedded in methods 2 and 4.

A useful way to think about this choice is that the solution might retain more of whatever is not the goal. In other words, if the goal is to reduce sites, we might choose two large sites that combined have more excess capacity (or retain more resources) than a set of three medium sites.

Either method allows the relative importance of military value and infrastructure to vary. Varying the relative importance between military value and infrastructure may be used to generate different scenarios for consideration.

Military value focus

- Choice: What is military value?
 - Single value for an entire activity (Methods 1 & 2)
 - Different value for each function that could be performed by the activity (Methods 3 & 4)
- Considerations
 - Is distinguishing values among constituent functions needed to represent activities?
 - What is the data collection and analysis burden?
 - Should different functions be weighted differently?
 - Functional military values may be normalized and weighted.

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How military value is measured and enters the optimization model is another key decision. The choice is between determining a single military value for an activity or determining a military value that is specific to each activity and function combination.

This decision rests on multiple considerations. First, how important are the differences? If an activity-wide measure adequately captures the suitability of all the activity's functions, both within an activity and across different activities that it will be analyzed against, then a single value might be appropriate. On the other hand, if the activity is very well-suited for a particular function, but we want to consider it for performing some alternative function, then a function-specific military value might be important.

Second, how costly and difficult will it be to determine these military values? The burden of determining military values by functions is a consideration. It may be that determining a separate military value for every function requires so many resources that the cost of the analysis, and the quality of the resulting values is in doubt, while it might be more feasible to determine the overall value, resulting in a more defensible position. If the need for function specific values is high, then even if it is costly, it may be necessary to pay a high cost to derive the needed results.

Some functions may be more important than other functions. The framework allows the user to weight the functional military values so that the results are not driven by the less important functions. We also advocate normalizing the military values for each function across all activities so that the effects of different scoring methods between functions are reduced.

Common features

- Rules
 - Add constraints to meet strategic requirements
- Allow expansion
 - Increase resource capacities
- Meet requirements at different times
- Surge requirements/capacities

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These models can be customized to incorporate important features in generating alternatives.

Specific strategic requirements or policy imperatives can be addressed by adding constraints to the optimization program. For example, the Navy may have a policy imperative of ensuring that sizable fleets can be homeported on both coasts. Adding this as a constraint ensures that the solution meets that requirement.

Expansion can also be addressed. The models can be run with resources at the sites that reflect the current facilities, or they can be run with additional resources that represent potential facilities that the site could accommodate. It may be useful to allow small increases in capacities for resources to see if there are better solutions that require only small adjustments in the resources available at the retained sites or activities.

The model solutions are always constrained to meet certain minimal requirements. These requirements do not have to be a single set. There can be multiple sets of requirements corresponding to changing requirements over time. The resulting solution will accommodate all of the requirements through time. Similarly, higher capacity requirements can be established to ensure that the resulting configuration can meet surge requirements.

Methods 1 & 2 Depot Solutions Activity MV Focus

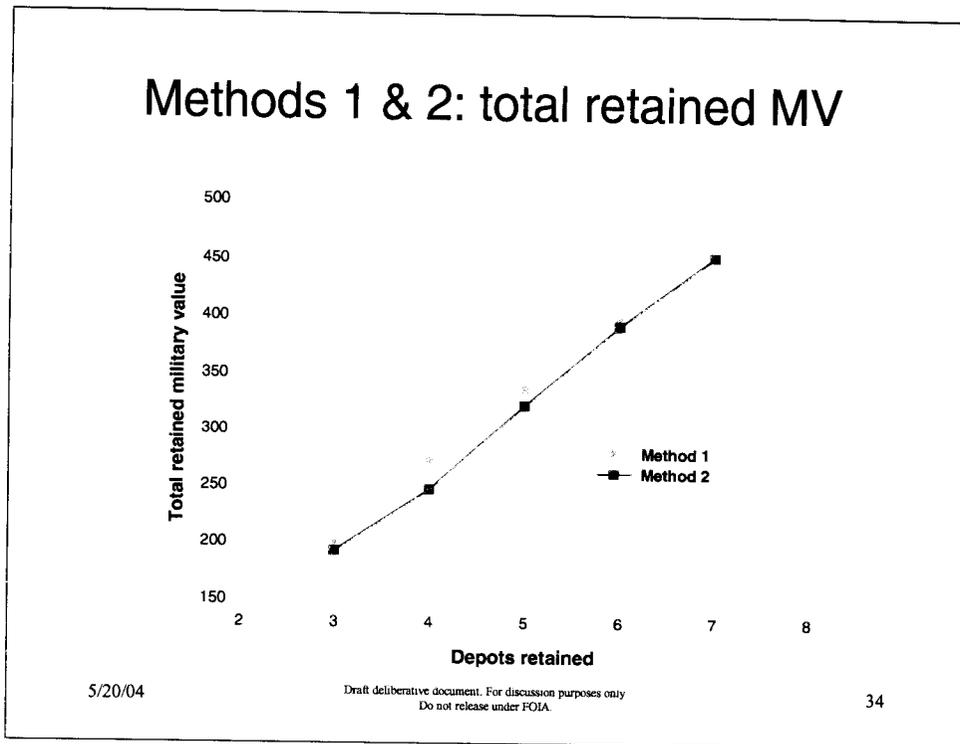
Method	Number of depots retained in solution				
	7	6	5	4	3
1 (reduce sites)	A-G	A-F	A, C-F	A, C, D, F	A, C, D
2 (reduce resources)	A-G	A, C-G	A, C, E-G	A, C, E, G	A, C, E

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This slide shows the depots retained in each different run of the optimization model for methods 1 and 2 for the activity military value focus. The six-depot solution for method 1 drops depot Golf while the six-depot solution for method 2 drops depot Bravo. We obtained the three-depot solution for method 1 (retain Alpha, Charlie, and Delta) by making the penalty parameter on the number of retained depots very large. Similarly, by making the penalty parameter on retained resources very large, we obtain the three-depot solution for method 2 (Alpha, Charlie, and Echo).



This figure provides a summary of the different solutions that methods 1 and 2 provide. The lines differ because the combination of activities retained are different in the two methods. For a given number of sites retained, method 1 will have a higher total military value than method 2. The “size penalty” in method 1 is based only on having a site open, so the model selects the sites with the highest military value, regardless of the size of the sites being retained. Method 2 incorporates the size of the activity, and thus might retain a lower military value site because closing the higher military value site also allows a larger reduction in resources retained. Note that in each case, we are giving up military value as we reduce the number of sites. The difference is in how much military value and how much size is being reduced. Method 2 is also reducing “bigger” activities.

Methods 3 & 4 Depot Solutions Functional MV Focus

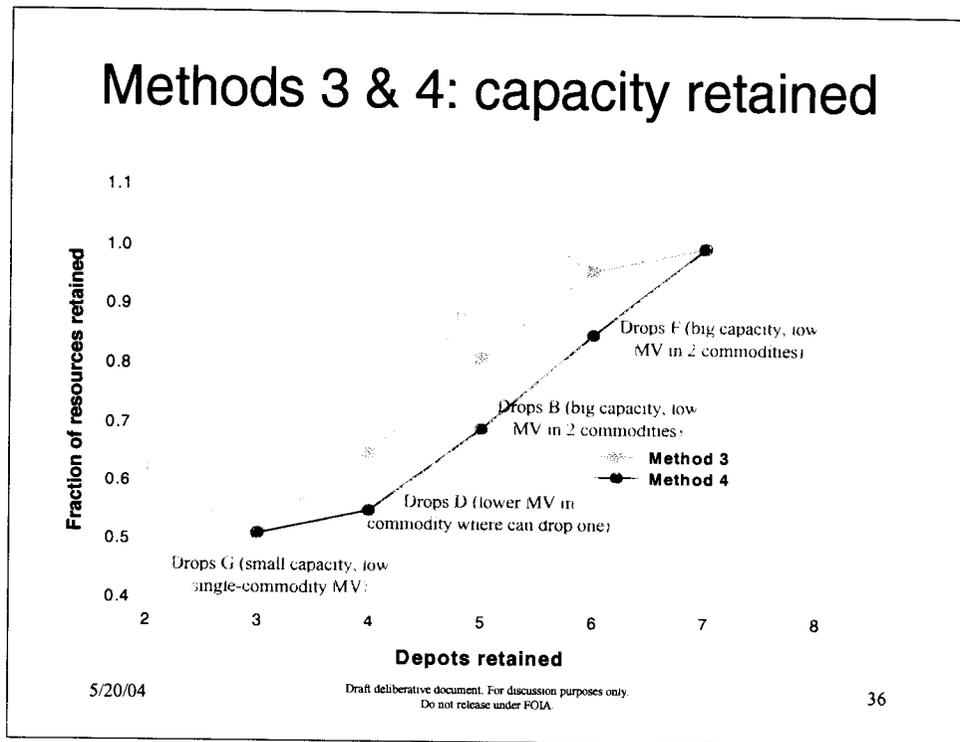
Method	Number of depots retained in solution				
	7	6	5	4	3
3 (reduce sites)	A-G	A-F	A-E	A, C-E	A, C, E
4 (reduce resources)	A-G	A-E, G	A, C-E, G	A, C, E, G	A, C, E

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This slide shows the depots retained in each different run of the optimization model for methods 3 and 4 for the functional military value focus. The six-depot solution for method 3 drops depot Golf while the six-depot solution for method 4 drops depot Foxtrot. We obtained the three-depot solution for method 3 (retain Alpha, Charlie, and Echo) by making the penalty parameter on the number of retained depots very large. Similarly, by making the penalty parameter on retained resources very large, we obtain the three-depot solution for method 4 (Alpha, Charlie, and Echo).



To conduct the analysis using functional military values, we add some additional factors. First, we assign an “importance” to the different commodities. For illustrative purposes, we assign tanks and airframes twice the importance of electronics and engines. In addition, we normalize the military value within a commodity. We do this so that the best functional value in an activity is the same regardless of the function. (This corrects for differences in military value scoring across functions. The best tank site will have a military value of 100 for tanks, and the best airframe site will have a military value of 100 for airframes.)

This slide shows the total retained capacity and sites under methods 3 and 4, much like the previous slide. In methods 3 and 4, the trade-off between resources and military value uses military value at the functional level. Thus, the order of dropping sites switches.

Going from the 7-site solution to the 6-site solution, method 3 still drops G first—it has a low total military value because it only produces a single product, which is in the lower weighted category. As the site penalty increases, method 3 drops F next. Depot F produces 3 products, but in the heavily weighted tanks, it has a relatively low military value. B is next to drop, as it also has a lower military value in the heavily weighted air frames. Again, at the 3-site solution, capacity constraints are important.

Method 4 seeks to drop bigger sites in addition to lower military value sites. Thus, it drops F early, and G late, because the size penalty on G is relatively low. In this case, the 3-site solution for both methods is the same.

Military value data example

Activity characteristic	Measure	Depot 1	Depot 2
water	mgd	3.5	3
Equipped machine shops	ft2	9	12
Equipped bench facilities	ft2	5	7
Foundry	# furnaces	4	6
Secure outdoor storage	K ft2	100	100
Number of shipping and receiving docks		8	7
Annual maintenance budget	Percent of PRV	1.5	2.3
Industrial facility condition adequacy	%	27	10
Size of local mfg labor market	annual mfg revenue, \$M	450	350
Local labor skills	% with 5+ trained years of experience	21	11
Distance to nearest commercial air trans terminal	nm	25	20
Distance to nearest railhead	nm	15	20
Distance to nearest interstate highway	nm	10	3
Distance to nearest sea water trans dock	nm	600	50
Crime rate	crimes/100k pop	4684	5002
Average commuting time	minutes	30	17
Monthly child care cost	\$	308	712
Average FH wait list time	weeks	6	14

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The methods proposed in this brief require that a military value be calculated for each activity or for each activity/function combination, depending on the focus chosen. The remaining slides illustrate a method for calculating military value that is an extension of the method used by the DoN in BRAC '95 that incorporates the procedures for calculating military value that OSD has mandated.

We use fictional data for two depot activities shown in this slide to illustrate the method. The slide shows the characteristics of interest, the units of measure used, and the values for each of the two activities. There are no "Yes/No" or "1/0" values in the table since binary measures should only be used if the measure associated with the characteristic cannot be quantified or if the metric of interest is inherently discrete.

Calculating MV

- Step function (0,1) may be inadequate:
 - Distance to range less than or equal to 500 miles earns a 1
 - Distance to range more than 500 miles earns a 0
- A nonlinear function offers an alternative:
 - Less than 100 earns a value of 1
 - More than 900 earns a value of 0
 - Intermediate values in between 100 and 900 miles earn values between 0 and 1

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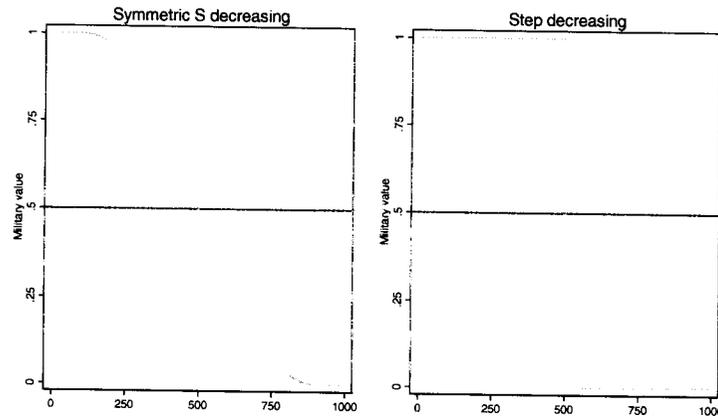
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Using a “Yes/No” or “1/0” measure is equivalent to saying the military value is a step function: less than or equal to a certain value gets a score of 1 while a greater value receives a 0. For example, the distance to a range could be a very important characteristic, but saying that a distance less than or equal to 500 miles should get a 1 while any distance greater than 500 miles should get a 0 is not a meaningful method to assess military value.

Rather than use the step function, we propose using a nonlinear function to obtain a score. Suppose we believe that we are indifferent to any distance less than or equal to 100 miles to the range, i.e., we really cannot distinguish any inherent “goodness” in being 50 miles from the range versus 100 miles from the range. In addition, suppose we believe a distance of 900 or more miles to the range is totally unacceptable and that distances in between are better or worse depending on close they are to the ideal of 100 miles. A nonlinear function addresses this situation.

A nonlinear scoring function Distance to range



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The function on the left gives a score between 0 and 1, depending on the distance to the range. This nonlinear function gives a score of 1 to any distance between 0 and 100 miles and a score of 0 for any distance greater than 900 miles. Distances between 100 and 900 miles receive intermediate values in a smooth manner. This avoids the obviously unrealistic simplification of using the step function on the right of giving a score of 1 to an activity that is 499 miles from the range and a score of 0 for one that is 501 miles from a range.

Measures for activities

Activity characteristic	Measure	Function shape	min	med	max	sym. axis
Equipment and facilities						
Equipped machine shops	K ft2	5	0	6	20	
Equipped bench facilities	K ft2	5	1	4	10	
Foundry	# furnaces	5	0	3	6	
Secure outdoor storage	K ft2	5	5	60	120	120
Water	mg/d	7	2	2.5	3	
Number of shipping and receiving docks	# docks	7	1	3	5	
Annual maintenance budget	% of PRV	5	1	3	4	
Location						
Size of local mfg labor market	annual mfg revenue, \$M	5	200	300	500	500
Local labor skills	% with 5+ trained years of experience	8	5	25	50	
Distance to nearest commercial air trans						
Distance to nearest railhead	nm	1	10	25	60	
Distance to nearest interstate highway	nm	1	10	25	75	
Distance to nearest interstate highway	nm	1	5	12	18	
Distance to nearest sea water trans dock	nm	1	20	30	100	
Quality of life						
Local crime rate	felonies/K people-year	1	1000	3500	6000	
Average one-way rush-hour commuting time	minutes	1	10	20	35	22

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Here, using characteristics from the depot activity case, we show how we specify the type of nonlinear function to be used in scoring the values for the two depots. The last five columns are used to specify the type of nonlinear function and the parameters needed to shape the function. Under quality of life, a crime rate of 1,000 or fewer felonies per person-year will receive a 1 while a rate of more than 6,000 per person-year will receive a score of 0. Rates greater than 1,000 and less than 6,000 will receive intermediate scores.

A detailed description of how to use these nonlinear functions, also known as fuzzy functions, are described in the DoN BRAC 2005 Analysis Handbook.

Weights for criteria and attributes

Weight	Criteria				Total
	R	F	M	C	
	50	15	20	15	100

Criteria	Attribute	Weight within criteria	Overall weight
R	Equipment capability	50	25
	Distance	30	15
	Skills	20	10
F	Equipment condition	60	9
	Security	40	6
M	Distance	55	11
	Skills	45	9
C	Quality of life	50	7.5
	Cost	50	7.5
Total			100

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In this slide, decision makers have distributed 100 points across the four military value *criteria*, readiness (R), facilities (F), mobilization (M), and cost (C). Each criteria has two or three *attributes* across which the points for the criteria must be distributed. The IEG will indicate to which attribute each military value question applies.

Calculating military value

Criteria	Readiness	Facility	Mobility	Cost									
	Equipment capability	Distance	Skills	Equipment condition	Security	Distance	Skills	Quality of life	Cost				
Attributes													
Criteria/attribute weight	25.0	15.0	10.0	9.0	6.0	11.0	9.0	7.5	7.5			Military Value	
Activity characteristic	Characteristic applies to criteria/attribute								Score	Weight	Depot 1	Depot 2	
Equipped machine shops	1	0	0	0	0	0	0	0	7	6.034	0.691	0.837	
Equipped bench facilities	1	0	0	0	0	0	0	0	7	6.034	0.653	0.875	
Foundry	1	0	0	0	0	0	0	0	10	8.621	0.778	1.000	
Secure outdoor storage	0	0	0	0	1	0	0	0	7	2.800	0.944	0.944	
Water	0	0	0	1	0	0	0	1	1	9.865	1.000	1.000	
Number of shipping and receiving docks	1	0	0	1	0	0	0	0	5	7.772	1.000	1.000	
Annual maintenance budget	0	0	0	1	0	0	0	0	1	2.538	0.031	0.211	
Size of local mfg labor market	0	0	1	0	0	0	1	0	1	12.365	0.969	0.719	
Local labor skills	0	0	1	0	0	0	1	0	5	9.500	0.400	0.150	
Distance to nearest commercial air trans terminal	0	1	0	0	0	1	0	0	7	6.067	0.500	0.778	
Distance to nearest railhead	0	1	0	0	0	1	0	0	5	4.333	0.944	0.778	
Distance to nearest interstate highway	0	1	0	0	0	1	0	0	6	5.200	0.745	1.000	
Distance to nearest sea water trans dock	0	1	0	0	0	1	0	0	4	3.467	0.000	0.255	
Local crime rate	0	0	0	0	0	0	0	1	0	2.250	0.139	0.080	
Average one-way rush-hour commuting time	0	1	0	0	1	1	0	1	0	8	13.133	0.056	0.755
	0.86	0.50	1.00	0.69	0.40	0.37	0.90	0.38	0.58	100.00	63.015	74.363	
										Rank	2	1	

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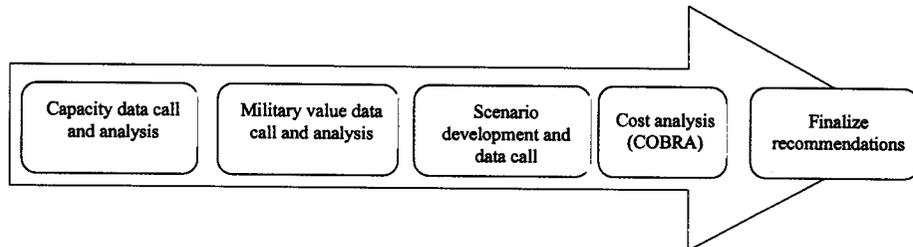
In the last two columns of this table, we show the numbers we obtained for each of the depot activities for the characteristics given in a previous slide. Notice that the calculated military value for each activity shown in the next-to-the-last row is not equal to the sum of these computed numbers. This is because we weight each characteristic according to its contribution to military value as defined by the criteria and attribute weights that the IEG uses to assess military value.

For each characteristic, the IEG also decides to which of the attributes the characteristic applies. A characteristic may apply to more than one of the attributes. Finally, the IEG gives a score between 1 and 10 to each characteristic indicating the importance of the characteristic. For example, the IEG has indicated that the distances to an air terminal and a sea terminal both are relevant to the distance attribute for readiness and the distance attribute for mobilization, but the distance to the air terminal is relatively more important since the air terminal distance is given a score of 7 and the distance to a seaport is given a score of 4.

Given this information, a fairly straight-forward calculation determines the weight of each characteristic as shown in the fourth column from the end of the table. The calculated military value of depot activity is obtained by summing the product of each characteristic's weight times the number given that depot activity for that characteristic.

Details of this computation are given in the DoN BRAC 2005 Analysis Handbook.

Context: BRAC process overview



- *Capacity and military value* data calls and analyses provide key inputs
- Optimization framework is part of the *scenario development and data call* stage

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The BRAC process overview defines the broad analytical framework to be employed in developing recommendations to the BRAC Commission. This brief proposes an optimization framework for developing alternative configurations that can help decision-makers formulate scenarios to be evaluated in detail with COBRA.

Before employing the optimization models, significant data collection and analyses will have taken place. JCSGs and Military Departments will use capacity data calls to establish the baseline for rationalizing infrastructure throughout the Department of Defense. This will be followed by a military value analysis in which measures of merit are used to quantify facility attributes.

These preceding stages provide essential inputs to the optimization framework. The optimization requires specific capacity and military value inputs, but does not dictate how the JCSGs determine those inputs.