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TRANSFORMATION PLANNING GUIDANCE

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Transformation Planning Guidance

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Secretary's Foreword

Some believe that with the United States in the midst of a dangerous war on terrorism, now is not the time to transform our armed forces. I believe that the opposite is true. Now is precisely the time to make changes. The war on terrorism is a transformational event that cries out for us to rethink our activities, and to put that new thinking into action.

Sept 11th taught us that the future holds many unknown dangers and that we fail to prepare for them at our own peril. Future threats may come from terrorists, but they also could be in the form of a cyber-war, a traditional state-on-state conflict or something entirely different.

As we prepare for the future, we must think differently and develop the kinds of forces and capabilities that can adapt quickly to new challenges and to unexpected circumstances. We must transform not only the capabilities at our disposal, but also the way we think, the way we train, the way we exercise and the way we fight. We must transform not only our armed forces, but also the Department that serves them by encouraging a culture of creativity and prudent risk-taking. We must promote an entrepreneurial approach to developing military capabilities, one that encourages people to be proactive, not reactive, and anticipates threats before they emerge.

This document provides a clear, concise approach for transforming the Department of Defense. It identifies the critical elements of transformation, assigns roles and responsibilities for promoting transformation, and describes how the Department will organize to implement transformational capabilities. It also depicts the outcome we must achieve: fundamentally joint, network-centric, distributed forces capable of rapid decision superiority and massed effects across the battlespace. Realizing these capabilities will require transforming our people, processes, and military forces.

There will be no moment at which the Department is "transformed." Rather, we are building a culture of continual transformation, so that our armed forces are always several steps ahead of any potential adversaries. To do so, we must envision and invest in the future today, so we can defend our homeland and our freedoms tomorrow. The Department of Defense is up to the task.

Donald H. Rumsfeld
Secretary of Defense

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"…a future force that is defined less by size and more by mobility and swiftness, one that is easier to deploy and sustain, one that relies more heavily on stealth, precision weaponry and information technologies."

George W. Bush

I. Introduction

The United States is transitioning from an industrial age to an information age military. This transition requires transformation in warfighting and the way we organize to support the warfighter. Although the end-state of transformation cannot be fully defined in advance, we do know some of the necessary prerequisites for transformation. In particular, we know that early transformation requires exploiting information technology to reform defense business practices and to create new combinations of capabilities, operating concepts, organizational relationships and training regimes.

Successful transformation of U.S. military forces and Department of Defense (DoD) processes requires a strategy with clear objectives. Effective implementation of the strategy requires commitment and attention from the Department's senior leadership and clearly assigned roles and responsibilities. This document communicates the Department's strategy for transformation and assigns senior leader roles and responsibilities to ensure implementation of the strategy. Senior leadership commitment to transformation will mobilize the rest of the Department and stimulate the bottom-up innovation required for successful transformation.

Effective implementation of the transformation strategy is an essential prerequisite for strategic management of the Defense program. It will allow the Department to define transformation investments that address future risk with enough specificity that they can be balanced against the other three primary risk areas identified in the Quadrennial Defense Review (QDR): force management, operational, and institutional risk.

What is Transformation?

Transformation is "a process that shapes the changing nature of military competition and cooperation through new combinations of concepts, capabilities, people and organizations that exploit our nation's advantages and protect against our asymmetric vulnerabilities to sustain our strategic position, which helps underpin peace and stability in the world."

Shaping the nature of military competition ultimately means redefining standards for military success by accomplishing military missions that were

previously unimaginable or impossible except at prohibitive risk and cost. The U.S. military understands current standards for success because it trains to exacting standards in the most realistic fashion possible. From this baseline, we can compare and assess new operating concepts that employ new organizational constructs, capabilities, and doctrine for achieving military objectives and determine whether they are sufficiently transformational to merit major investments. Eventually such efforts will render previous ways of warfighting obsolete and change the measures of success in military operations in our favor.

Why Transform?

Strategic Imperative: Transformation is necessary to ensure U.S. forces continue to operate from a position of overwhelming military advantage in support of strategic objectives. We cannot afford to react to threats slowly or have large forces tied down for lengthy periods. Our strategy requires transformed forces that can take action from a forward position and, rapidly reinforced from other areas, defeat adversaries swiftly and decisively while conducting an active defense of U.S. territory. Transformed forces also are essential for deterring conflict, dissuading adversaries, and assuring others of our commitment to a peaceful world. Over the long term, our security and the prospects for peace and stability for much of the rest of the world depend upon the success of transformation. Specifically, transformation is a key element of our defense strategy for five reasons:

- The Difficulty with the Status Quo: Some argue that the United States should not change what are demonstrably the world's best military forces. History and current trends suggest that merely attempting to hold on to existing advantages is a shortsighted approach and may prove disastrous. The United States already far outspends its potential rivals on defense, but cannot count on this spending disparity to produce commensurate military advantages in the future. As the distribution of economic wealth continues to flatten, as other countries begin to enjoy the benefits of growing, educated human resources, and most importantly, as the diffusion of information age technology and the rate of technological change continue to accelerate, U.S. military advantages could diminish comparatively.

- Growing Asymmetric Threats: Over the past decade, potential adversaries sought to compensate for U.S. conventional military superiority by developing asymmetric approaches and capabilities across the full range of military operations. Terrorists attacked non-combatants and other adversaries have used low-end indiscriminate weapons such as unmarked mines in international waters. Adversaries also invested heavily in weapons of mass destruction (chemical, biological, radiological, nuclear, and enhanced high explosive (CBRNE)) and a wide range of delivery

methods in hopes of deterring or frustrating the deployment and employment of U.S. combat capabilities. Both these trends present significant challenges, but also reflect the current U.S. advantages in large-scale conventional force-on-force combat.

- Rising Force-On-Force Challenges: Over the longer term, some adversaries hope the United States will become complacent. They hope that they will be able to better exploit diffusion of knowledge and information technology as the world moves from the industrial age to the information age, and thereby negate or leap ahead of current U.S. military advantages. Potential adversaries are developing the ability to confront U.S. advantages directly. They are developing new electronic and cyber warfare capabilities, means to counter or negate distinct U.S. advantages such as our space capabilities, and anti-access capabilities such as submarines, mines, and cruise and ballistic missiles. They also are investigating innovative operational and tactical concepts to better employ advanced asymmetric technologies.

- Historic Opportunity: The evolving threat environment and our strategic response reflect an underlying trend in technology development. Throughout history, warfare has assumed the characteristics and used the technology of its era. Today we are witnessing the transition from the industrial age, with its emphasis on mass, to the information age where the power of distributed networked forces and shared situational understanding will transform warfare. The Department must align itself with the on-going information revolution, not just by exploiting information technology, but by developing information-enabled organizational relationships and operating concepts. Victory in the Cold War opened an historic window of opportunity to do so, because we are no longer consumed by the requirement to face down a monolithic global threat to our way of life. That window remains open as long as U.S. forces are much more capable of conducting traditional military operations than our most likely regional adversaries.

- High Stakes: If the United States fails to transform, then our current military superiority and the relative peace, prosperity and stability it underwrites will erode. We will see the rapid emergence of regional competitors and a world prone to major conflict. Operations in such an environment would be conducted at much greater cost to the nation. At best, the United States would be forced to invest increasing shares of national wealth in forces with diminishing capabilities. At worst, we would eventually face the historic norm: a major battlefield reversal and the rapid rise of a major competitor. Therefore, the Department of Defense must move forward on transformation. Success in transforming U.S. military

forces will enable us to execute our defense strategy with high confidence and less risk in critical areas, and to shape the international environment so that it is less rather than more hostile to U.S. interests.

II. Scope of Transformation

The Department's transformation efforts will encompass three areas: how we fight, how we do business inside the Department, and how we work with our interagency and multinational partners.

Transforming How We Fight

The strategy for transformation presented in this document includes a detailed approach to force transformation, or transformation of how we fight. It hinges on development of future joint warfighting concepts and includes the full range of supporting military capability areas: doctrine, organization, training, materiel, leadership and education, personnel and facilities.

Transforming How We Do Business

Forces employing transformational warfighting concepts require transformed processes that produce the timely results demanded by 21st century security challenges. The Department currently is pursuing transformational business and planning practices such as adaptive planning, a more entrepreneurial, future-oriented capabilities-based resource allocation planning process, accelerated acquisition cycles built on spiral development, output-based management, and a reformed analytic support agenda. Senior leadership must take the lead in fostering innovation and adaptation of information age technologies and concepts within their organizations, and they must ensure that processes and practices that are antithetical to these goals are eliminated.

Many initiatives to transform the way the Department does business are already under way as a result of Defense Planning Guidance (DPG) and other direction. Several of these initiatives demand priority attention and follow-through from senior leadership. Among the most important is a set of proposed legislative reforms to eliminate duplicative reporting requirements, transform fiscal authorities, and enhance the Department's ability to hire and retain highly skilled personnel. Pay raises and housing improvements to improve quality of life for Service personnel and greater flexibility in managing the Department's human capital more generally are both critical steps for sustaining transformation momentum in the Department.

Another priority element of the Department's corporate transformation strategy is reform of the acquisition process. The Department is reducing

acquisition cycle time and aligning acquisition with a new capabilities-based resource allocation process built around joint operating concepts. Instead of building plans, operations and doctrine around individual military systems as often occurred in the past, henceforth the Department will explicitly link acquisition strategy to future joint concepts in order to provide the capabilities necessary to execute future operations.

Finally, as part of the larger effort to streamline processes, the Department already is moving from deliberate to adaptive war planning. Some reforms that accelerate the production of contingency plans have been enacted, but a more fundamental overhaul of the planning system is required. Contingency planning must become more responsive to rapid changes in planning conditions and assumptions by exploiting improving training of planners, automating time-intensive activities, and using collaborative environments for parallel rather than sequential development of component parts of plans.

In short, the Transformation Planning Guidance (TPG) supports and is consistent with a larger process reform effort mandated by the DPG. Some elements of the strategy for transformation implementation identified in following sections of the TPG, such as the requirement for joint concepts, will fundamentally reform the way the Department estimates and adjudicates future risks, but numerous other equally important process reforms are required and are in fact under way.

Transforming How We Work With Others

Transforming the way the Department integrates military power with other instruments of national power will help ensure that when we employ military power, we do so in the most effective way possible. Integration of national power is especially critical for overcoming terrorists or other unconventional adversaries that cannot be defeated by military means alone. Enhanced coordination among agencies and across all levels of government (federal, state, and local) will promote increased cooperation, more rapid response, and the ability to conduct seamless operations. Specifically, statutory and regulatory changes must be made to allow compartmented intelligence related to the war on terrorism and homeland defense to be shared.

Furthermore, DoD should work with other Departments to share information on its transformation programs in order to help guarantee compatibility and encourage other agencies to follow suit as appropriate. Some guidance on how DoD works with our interagency partners is provided in the Contingency Planning Guidance (CPG), and more will be forthcoming as a result

of experimentation and ongoing policy efforts, including deliberations currently underway in interagency fora.

The Security Cooperation Guidance provides instruction on implementing our new defense strategy through regional partnerships, however, more guidance is required with respect to multinational transformation cooperation (see tasking, appendix one). As the U.S. military transforms, it is in our interest to make arrangements for international military cooperation to ensure that rapidly transforming U.S. capabilities can be applied effectively with allied and coalition capabilities. U.S. transformation objectives should thus be used to shape and complement foreign military developments and priorities of likely partners, both in bilateral and multilateral contexts.

III. Strategy for Transforming

The Department's overall strategy for implementing transformation consists of three parts:

1. Transformed Culture Through Innovative Leadership: As transformation gathers pace, the Department must continue to encourage innovation. This will require a strong commitment from senior leaders, represented most visibly by the promotion of individuals who lead the way in innovation. History suggests that this is a decisive characteristic of innovative military organizations. Senior leaders also must be prepared to execute their responsibilities for implementing the Department's transformation strategy, and be equally ready to eliminate current practices that stifle innovation.

2. Transformed Processes—Risk Adjudication Using Future Operating Concepts: The Department must balance the requirements of current operations against the need to invest in capabilities needed to support future operating concepts. This portion of the strategy has two parts:

   - Reformed Capabilities-Identification Process: The Department must reform the requirements system to better identify and assess specific options for mitigating future risks. This will be accomplished by investing in transformational capabilities based on joint operating concepts.

   - Transformed Strategic Analysis: In addition to a reformed capabilities-identification process, the Department needs a transformed analytic capability that can identify and assess risks for strategic planning (see tasking, appendix one). DoD must be able to support a capabilities-based planning process that accounts for greater uncertainty in threats and capabilities, and must be capable of comparing risks across time and between multiple theater-level operations.

3. Transformed Capabilities Through Force Transformation: The supporting strategy for force transformation, as defined in the 2001 QDR, rests on four pillars, which are further explained in succeeding sections of this document:

   1) Strengthening joint operations

   2) Exploiting U.S. intelligence advantages

   3) Experimenting in support of new warfighting concepts

   4) Developing transformational capabilities.

This strategy for transformation implementation will permit the Department to manage better the two major transformation dilemmas that have stymied transformation progress in the past, both of which arise from the need to invest scarce resources in transformation.

The first transformation dilemma is the need to balance near-term, operational risk against future risk in investment decisions. Postponing major investments in transformation while devoting the bulk of resources to reducing near term operational needs raises the risk of being overtaken by our adversaries. Progress in transforming military forces requires significant investments in those aspects of transformation that we are confident have enduring benefits. Because of limited resources, this may mean making the difficult decision of foregoing currently planned systems and investing instead in capabilities that we believe will reduce future risk.

The second transformation dilemma is the need to invest now in specific technologies and concepts that are deemed transformational, while remaining open to other paths towards transformation. To transform the force we must commit resources, yet remain detached enough from these commitments to continue an iterative process of innovation and experimentation that permits new insights to guide future investment decisions.

The Department's transformation strategy helps manage the tension between the need to remain open to new ideas and the need to foreclose some debate and invest in programs deemed critical to progress in transformation. It also allows the Department to better balance operational and future risk. The strategy does so through activities that build new capabilities now, permitting better execution of the new defense strategy, while exploring other capabilities essential for further transformation.

Implementation of the Department's force transformation strategy will shift us from an industrial age to an information age military. Information age military

forces will be less platform-centric and more network-centric. They will be able to distribute forces more widely by increasing information sharing via a secure network that provides actionable information at all levels of command. This, in turn, will create conditions for increased speed of command and opportunities for self-coordination across the battlespace. The first step toward forces with these attributes is to invest more now in the four transformation pillars. The goal should be to produce military forces capable of the following type of operations by the end of the decade:

- Standing joint force headquarters will conduct effects-based, adaptive planning in response to contingencies, with the objective of defeating enemy threats using networked, modular forces capable of distributed, seamlessly joint and combined operations.

- U.S. forces will defeat the most potent of enemy anti-access and area denial capabilities through a combination of more robust contamination avoidance measures, mobile basing and priority time critical counterforce targeting.

- U.S. forces will leverage asymmetric advantages to the fullest extent possible, drawing upon unparalleled Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) capabilities that provide joint common relevant operational situational awareness of the battlespace, rapid and robust sensor-to-shooter targeting, reachback and other necessary prerequisites for network-centric warfare.

- Combined arms forces armed with superior situational awareness will maneuver more easily around the battlefield and force the enemy to mass where precision engagement capabilities may be used to maximum effect.

Military forces with the ability to execute these types of operations will be better able to implement the new defense strategy and accomplish the six operational goals identified in the 2001 QDR:

1. <u>Protecting critical bases of operations</u> (U.S. homeland, forces abroad, allies and friends) and defeating CBRNE weapons and means of delivery will ensure our ability to generate forces in a timely manner without being deterred by adversary escalation options.

2. <u>Projecting and sustaining U.S. forces in distant anti-access or area-denial environments and defeating anti-access threats</u> will enable us to preserve and utilize the most effective avenues of approach while rapidly engaging adversary forces.

3. Denying enemies sanctuary through persistent surveillance, tracking and rapid engagement with high-volume precision strikes will permit the United States to prosecute a rapid campaign that reinforces deterrence by denying any adversary hope of achieving even limited objectives, preserving escalation options or maintaining command and control of forces over an extended period.

4. Assuring information systems in the face of attack and conducting effective and discriminate offensive information operations will deny the adversary hope of exploiting a new dimension of the battlespace as a low-cost and powerful asymmetric option while providing us an unwarned strike capability that contributes to a broad, simultaneous and overwhelming range of effects that increases the likelihood of rapid collapse of an adversary's will to fight.

5. Enhancing the capability and survivability of space systems and supporting infrastructure will provide sustained, protected, global C4ISR capabilities that permit rapid engagement of American power and reinforce deterrence by promoting earlier warning of adversary intentions while denying the adversary similar capability.

6. Leveraging information technology and innovative concepts to develop an interoperable, joint C4ISR architecture and capability that includes a tailorable joint operational picture will guarantee our combat leaders decision superiority and enable our forces to maneuver effectively to gain positional advantage, avoid battlefield obstacles and successfully attack the adversary even in the face of numerically superior forces.

Committing to a set of investment priorities designed to accomplish these goals will permit us to execute better the new defense strategy and establish a foundation for further transformation. However, these six QDR goals are just intermediate objectives. The Department will pursue transformation more comprehensively with aggressive and wide-ranging science and technology efforts and, more importantly, with a robust concept development and experimentation program.

Transformation must be comprehensive, ranging from science and technology efforts to fielded capabilities, but need not encompass the entire force simultaneously. The tension between retaining flexibility in transformation and the need to invest now in prerequisite capabilities is greatly reduced by assuming that only a small portion of the force will be transformed during the early phase of transformation. These "vanguard" forces will then be available to exploit new concepts and capabilities in operational environments and influence the

development of the rest of the force. Heavier investments in the larger share of the force will follow after the smaller portion of the force has demonstrated in real-world operations and field trials that a critical mass of transformational capabilities can produce disproportionate effects.

IV. Implementation of the Transformation Strategy

Roles and Responsibilities Overview

The Department's transformation strategy is ambitious and presumes the success of multiple reform efforts. Its success depends upon innovative senior leadership executing clearly defined roles and responsibilities. The primary senior leader roles and responsibilities for executing and implementing the transformation strategy are as follows:

- **The Secretary of Defense** is the final approval authority on all major elements of the transformation strategy. He will set the Department's transformation policies and objectives, and define the roles and responsibilities of the Department's senior leadership in executing the transformation strategy.

- **The Chairman of the Joint Chiefs of Staff (CJCS)** will advise the Secretary on the best approach to balancing the four QDR risk areas, especially operational and future risk. The Chairman also is responsible for overseeing development of joint concepts and validating joint warfighting requirements.

- **The Director, Office of Force Transformation (OFT),** will monitor and evaluate implementation of the Department's transformation strategy, advise the Secretary, and manage the transformation roadmap process. He will help ensure that joint concepts are open to challenge by a wide range of innovative alternative concepts and ideas.

- **The Commander, Joint Forces Command (JFCOM), and other Combatant Commanders** are responsible for developing joint warfighting requirements, conducting joint concept development and experimentation and developing specific joint concepts assigned by CJCS. Commander, JFCOM, is responsible for coordinating concept development and experimentation efforts of the Combatant Commands. He is also responsible for concept development and experimentation on CJCS-directed joint concepts and other joint concepts, integrating the results from these and other Combatant Commanders' experiments, and for recommending to the CJCS modifications to existing joint concepts. The

Commander, JFCOM is also responsible for a joint transformation roadmap to achieve joint capabilities required by joint concepts.

- **The Secretaries of the Military Departments and the Service Chiefs of Staff** are responsible for developing specific concepts for supporting operations and core competencies. They will oversee Service experimentation, modify supporting concepts accordingly, and build transformation roadmaps to achieve transformational capabilities to enable those concepts.

The Secretary of Defense, with the advice of the Chairman, ultimately rules on the appropriate balance in apportioning resources to mitigate risks. The Commander, JFCOM, and the Director, OFT are the advocates for transformational requirements. Their responsibility is to provide input that will better balance the existing requirements and resource allocation system in the Department, which in the past was too heavily oriented toward near-term operational requirements.

More guidance on the roles and responsibilities is provided below. Appendix one summarizes the guidance in this document and provides more detail in the form of a matrix. The matrix identifies the decision authority, activity lead, participants, mechanism, and timelines.

Transformation Implementation Overview

The Secretary's Transformation Planning Guidance, updated as necessary, will provide guidance for transformation strategy, implementation, transformation roadmaps, and joint experimentation. Validated joint concepts will define how transformed forces operate. Roadmaps will be prepared to specify the capabilities required by these concepts. POMs will be developed to incorporate as much of the roadmaps as possible, and will be evaluated for transformational value in light of the roadmaps. Recognizing the inevitability of gaps between capabilities, resources, and needs, rapid and imaginative research, development, test and evaluation (RDT&E) programs will be proposed to accelerate transformation efforts, and to stimulate alternative means for achieving the capabilities envisioned in the roadmaps. Finally, annual strategic appraisals will be conducted to assess progress and to inform periodic updating of the TPG and other Department planning documents. To further elaborate:

1. *Transformation Guidance:* After the issuance of this guidance, the Secretary's TPG will be updated as necessary. This guidance includes transformation strategy and the roles and responsibilities of the parts of the Department supporting ongoing transformation efforts. It also includes transformation roadmap guidance to the Services and Commander, JFCOM

(see appendix three) and joint experimentation guidance to Commander, JFCOM (see appendix five).

2. *Joint and Service Concepts:* New joint concepts will emerge from ongoing, iterative joint concept development and experimentation. The CJCS is responsible for recommending how and whether these new concepts merit inclusion in approved joint operating concepts which he will submit to the Secretary by June 1, 2003 (and update by September 1 each year thereafter). The joint operating concepts will include identification of requisite supporting operations to which the Services, JFCOM, and the Combatant Commands will develop accompanying concepts.

3. *Transformation Roadmaps:* The Services and JFCOM will submit transformation roadmaps for approval no later than November 1 each year. The Secretary of Defense will approve the initial updated roadmaps in November 2003; subsequent roadmaps will be approved by the Service Secretaries. The combat support Defense Agencies will provide JFCOM with inputs into the joint transformation roadmap upon request. The roadmaps will demonstrate how the Services and JFCOM intend to build the capabilities necessary for executing the joint operating concepts. Upon approval, these roadmaps will be used by the Services to help develop their POMs. During the annual program/budget review, the transformation roadmaps will be used by Director, Program Analysis and Evaluation (PA&E) as yardsticks for evaluating the transformational value of the POMs (see tasking, appendix one).

4. *Rapid RDT&E Programs:* The roadmaps are implementation plans for achieving the desired joint operating concepts. To facilitate execution of the roadmaps, or to stimulate alternative ways to better achieve desired capabilities, the Department will initiate several RDT&E programs with substantially greater flexibility and rapidity.

5. *Strategic Transformation Appraisals:* The transformation process will be evaluated in an annual appraisal to be written by the Director, OFT and submitted to the Secretary of Defense no later than January 30 (see tasking, appendix one). These appraisals will evaluate and interpret progress toward implementation of all aspects of the transformation strategy, recommending modifications and revisions where necessary.

A graphic depiction of the transformation implementation process, and its supporting elements identified below, is available at appendix two. The following section elaborates on the implementation process organized around the four transformation pillars identified in the QDR.

Implementing the Four Pillars

Pillar One: Strengthening Joint Operations

Joint Concepts and Architectures

The key to the Department's transformation strategy is future joint operating concepts. They should be specific enough to permit identification and prioritization of transformation requirements inside the defense program. In order to avoid becoming a new orthodoxy that forecloses debate on promising new approaches to warfighting, the concepts will be updated as required by ongoing experimentation results and operational lessons learned. The CJCS will be responsible for oversight of production and annual validation of authoritative joint concepts in three timeframes:

- Near-term (2-3 years out) Joint Operations: Combatant Commander war plans, operational and training lessons learned, and joint doctrine, all designed to achieve new strategy goals and updated in accordance with the CPG, will promote transformation through enhanced jointness and planning modifications. Combatant Commanders will devise war plans taking into account mid-term joint operating concepts, lessons learned from ongoing operations, joint training and exercises, advanced concept technology demonstrations and experiments. Current war plans and joint doctrine will be the authoritative baseline against which joint training and experimental results will be measured to assess their transformational value.

- Mid-term (Just Beyond the FYDP) Joint Concepts: Future joint concepts will depict how the joint force of the future is to fight. They will address specific military operations across the range of military operations. They will be designed to meet the six operational goals established in the 2001 QDR. The CJCS, in coordination with Commander, JFCOM, will initially develop one overarching joint concept and direct the development of four subordinate joint operating concepts (JOC): homeland security, stability operations, strategic deterrence, and major combat operations (see tasking, appendix one). More guidance on the development of these concepts is provided in appendix four. The JOCs will evolve over time to reflect insights gained from experimentation. The transformation roadmaps will identify the desired operational capabilities needed to implement the JOCs and the preferred means of obtaining those capabilities. The Department will measure progress toward building these capabilities in the program/budget review.

- Linking Integrated Architectures to a Reformed Capabilities-Identification Process: Integrated architectures describe in greater detail the relationship between the tasks and activities that generate effects on enemy forces and supporting operations. They identify where operations intersect and overlap and they provide details on interoperability requirements. The architectures will include not just material solutions but also doctrine, organization, and training needs. Using these architectures, the JROC will be responsible for prioritization of capabilities based on their contribution to realization of the JOCs.

- Far-term (15-20 years out) Joint Vision: The current Joint Vision document will be modified and used as a long-range articulation of joint operations (see tasking, appendix one). It will provide a broad statement of desired future concepts and capabilities required for future operations. The Joint Vision also will provide the context for future joint and Service concept development and experimentation.

Other Jointness Initiatives and Interoperability Goals

The FY04-09 DPG directs the Department to strengthen joint operations through standing joint force headquarters, improved joint command and control, joint training transformation, and an expanded joint forces presence policy. Building on the DPG-directed interoperability study results, Commander, JFCOM will develop an integrated interoperability plan to address the following interoperability priorities (see tasking, appendix one):

1. Standard operating procedures and deployable joint command and control processes, organizations, and systems for the Standing Joint Force Headquarters;

2. A common relevant operational picture for joint forces;

3. Enhanced intelligence, surveillance, and reconnaissance capabilities;

4. Selected sensor-to-shooter linkages prioritized by contribution to the joint operating concepts;

5. Reachback capabilities that provide global information access; and

6. Adaptive mission planning, rehearsal, and joint training linked with C4ISR.

Pillar Two: Exploiting U.S. Intelligence Advantages

The new defense strategy rests on a foundation of transformed intelligence capabilities. Our ability to defend America in the new security environment requires unprecedented intelligence capabilities to anticipate where, when, and how adversaries intend to harm us. Our vision of a smaller, more lethal and nimble joint force capable of swiftly defeating an adversary throughout the depth of the global battlespace hinges on intelligence capabilities that:

- Allow us to warn of emerging crises and continuously monitor and thwart our adversary's intentions;
- Identify critical targets for, measure and monitor the progress of, and provide indicators of effectiveness for U.S. effects-based campaigns;
- Persist across all domains and throughout the depth of the global battlespace, supplying near-continuous access to our most important intelligence targets; and
- Provide horizontal integration, ensuring all of our systems plug into the global information grid, shared awareness systems, and transformed Command, Control, and Communications (C3) systems.

Our transformed intelligence capabilities also must adapt to new strategic requirements. Increasingly short decision cycles and swift reaction timelines require the closer integration of intelligence and operations. This trend will require the Department to create new organizational constructs that closely relate or merge operational and intelligence functions.

The new security environment also will require closer cooperation between the Department of Defense and the Intelligence Community on how we acquire, manage, and execute the overall intelligence program. New priorities in clandestine activities, space intelligence, surveillance, reconnaissance, and communications are just a few examples where the Department and the Intelligence Community will have to work as close partners. The FY04 DPG provides extensive guidance for these initiatives, including several intelligence-related studies in support of the new defense strategy.

Pillar Three: Concept Development and Experimentation

Concept development and experimentation are inseparable. Experiments designed to evaluate new concepts provide results that refine those concepts, in iterative fashion. The Department must have multiple joint and Service concept development efforts underway to ensure competition of ideas. To accomplish this,

the Combatant Commands and the Services must establish and continuously conduct robust concept development and experimentation programs. Detailed joint concept development and experimentation guidance is provided in appendix five.

Joint Concept Development and Experimentation Criteria

The Director, OFT will promulgate criteria for successful experimentation programs (see tasking, appendix one). The criteria will address:

- Scientific method and its role in U.S. armed forces achieving competitive advantage;
- Experimentation in exercises and operations and considerations for design, data collection, analysis and sharing results;
- Experimentation with virtual capabilities and threats to explore mid and far term transformational possibilities;
- Experimentation with aggressive threats that include asymmetric capabilities, the possibility of technological breakthroughs, and that span a variety of environments;
- Use of red teams supported with fenced funding and operating at the tactical, operational and strategic levels; and
- Establishment of procedures and repositories for capturing and sharing lessons learned.

Joint Concept Development and Experimentation Progress Assessments

Commander, JFCOM will report annually to the Secretary of Defense on progress in priority experimentation areas and on the adequacy of dedicated experimentation infrastructures. In particular, the report should address and make recommendations on the following infrastructures (see tasking, appendix one):

- War Gaming: War games can help Services and Agencies develop, refine, and evaluate future concepts. Recommendations in the JFCOM report will address:
    - the use of human-in-the-loop war gaming with both constructive and live force elements and objective red-teaming; and
    - the use of commercial-off-the-shelf gaming technology for development of war games for use by unit commanders at various echelons.

- Modeling and Simulation (M&S): A new generation of M&S is needed to support concept development. Recommendations in the report will address M&S options to promote transformation by linking together many types of simulations, from aggregate and detailed computer models to simulators and man-in-the-loop hardware components.

- Joint National Training Capability: The Joint National Training Capability (JNTC) will provide a real-world laboratory with the capability to conduct experiments that assess new doctrine, tactics, and procedures using live military forces against professional opposing forces in realistic combat conditions. Lessons learned from JNTC exercises and experiments will be a principal source of insight for generating new operating concepts.

- Operational Lessons Learned: Lessons learned from operational missions should be systematically captured, analyzed, and incorporated into ongoing experimentation and concept development. The focus should be on results that have lasting application, and those that transcend timeframes should be institutionalized.

Pillar Four: Developing Transformational Capabilities

The Department requires strong mechanisms for implementing results from concept development and experimentation and, more immediately, for developing the capabilities needed to meet the six operational goals established in the QDR. To accomplish these operational goals and to develop the capabilities necessary for achieving future operating concepts, the Department must develop actionable transformation roadmaps, promote rapid and innovative RDT&E alternatives, and transform joint training.

Developing Actionable Transformation Roadmaps

The 2003 DPG-directed roadmap efforts established a baseline assessment across DoD's transformation activities. The next set of revised roadmaps will address capabilities and associated metrics to address the six transformational goals and the joint operating concepts (see tasking, appendix one and guidance, appendix three). In addition, the Service roadmaps will provide a plan for building the capabilities necessary to support the JOCs. Similarly, the joint roadmap will provide a plan for building joint capabilities in support of the JOCs.

Transformational RDT&E

The transformation roadmaps serve as baseline plans for achieving the desired joint operating concepts. However, it is possible that the roadmaps will not be fully funded due to competing priorities in the defense program. To

facilitate execution of the roadmaps and to stimulate better ways to achieve desired capabilities, the Department will initiate RDT&E programs with substantially greater flexibility and rapidity, starting in 2005.

Transformation Initiative Program: The Director, OFT will develop and manage a Transformation Initiatives Program (TIP) to support Combatant Commanders' efforts to implement transformation initiatives and opportunities (see tasking, appendix one). This program will better support a Combatant Command's ability to pursue unforeseen, but potentially high-payoff joint transformation initiatives during the fiscal year. TIP initiatives are expected to be time-critical and present themselves as opportunities to co-evolve operating concepts and technologies in contingencies, joint operations, exercises or experiments.

Joint Rapid Acquisition Program: Transformation of defense management includes the reduction of acquisition cycle time. A joint Rapid Acquisition Program (RAP) can accelerate the implementation and fielding of projects employing newly matured technologies to meet the immediate needs of the warfighter (see tasking, appendix one). Such initiatives are expected to present themselves as a result of the co-evolution of joint operating concepts and technologies in exercises and formal experimentation and may include the outputs of advanced concept technology demonstrations (ACTDs) or Service Advanced Technology Demonstrations (ATDs). Joint RAP will accelerate acquisition by starting development in the current fiscal year with bridge funds that tie the joint acquisition initiative to the PPBS process. To that end, the FY05-09 DPG will address implementation procedures and funding for a JFCOM-led joint RAP to accelerate joint initiatives of Combatant Commands, Services and Defense Agencies.

Transformation of Test and Evaluation: As the Department transforms to a joint concept-centric approach to operational planning and capabilities development, we need integrated architectures that define the specific parameters of the requisite joint capabilities. A Joint Test and Evaluation Capability (JointTEC) is needed to test the capabilities in a realistic joint environment (see tasking, appendix one). Test and evaluation in a joint context will reveal whether or not the integrated architectures present a viable application of warfighting capabilities. A JointTEC would focus policies, plans, methodologies, and resources for evaluation in joint operations environments.

Transformation of Training

The military advantages U.S. forces enjoy are due in large part to the way they train. The rigorous and realistic training regimen which our military conducts provides our forces with extraordinary battlefield advantages. This training

enables the warfighter to maximize the potential of technologically advanced platforms, thus widening the gap between the United States and its adversaries. For this advantage to persist into the future, we must transform our training in the same way we transform the rest of the force. The FY04-09 DPG provides guidance on transforming the force by transforming training through development of a Joint National Training Capability and other new training capabilities.

Transformation of Joint Education

Joint education is fundamental to creating a culture that supports transformation, founded on leaders who are innately joint and comfortable with change. This requires a fundamentally revised approach to joint professional military education (see tasking, appendix one). Joint education must prepare our leaders both to conduct operations as a coherently joint force and to think their way through uncertainty.

Measuring Transformation Progress

Senior leadership must constantly review progress toward implementation of transformation and make appropriate course corrections. To facilitate development of the TPG and other Department planning documents, annual reports that employ common metrics for evaluating transformation are required.

Strategic Transformation Appraisals: The Director, OFT will prepare annual Strategic Transformation Appraisals to assist the Secretary of Defense in evaluating progress in implementing transformation (see tasking, appendix one). The strategic appraisals will:

- Evaluate and interpret progress by approved transformational acquisition programs, and other significant activities such as rapid acquisition programs;
- Evaluate concept development and experimentation findings for implications for transformation;
- Report on actions to facilitate concept development and experimentation and accelerate implementation;
- Identify key barriers to transformation and the means to overcome them, including changes required in manpower and personnel statute, policy and systems; and
- Provide recommendations for the next TPG or DPG.

Program/Budget Review Output Report: To support the annual Strategic Transformation Appraisals, the D(PA&E) each year will produce a post-program/budget review report that summarizes the transformational elements of the defense program (see tasking, appendix one). This output report will evaluate the transformational value of the Service programs in light of their transformation roadmaps and the implementation of transformational initiatives.

Appendix One: Transformation Roles/Responsibilities

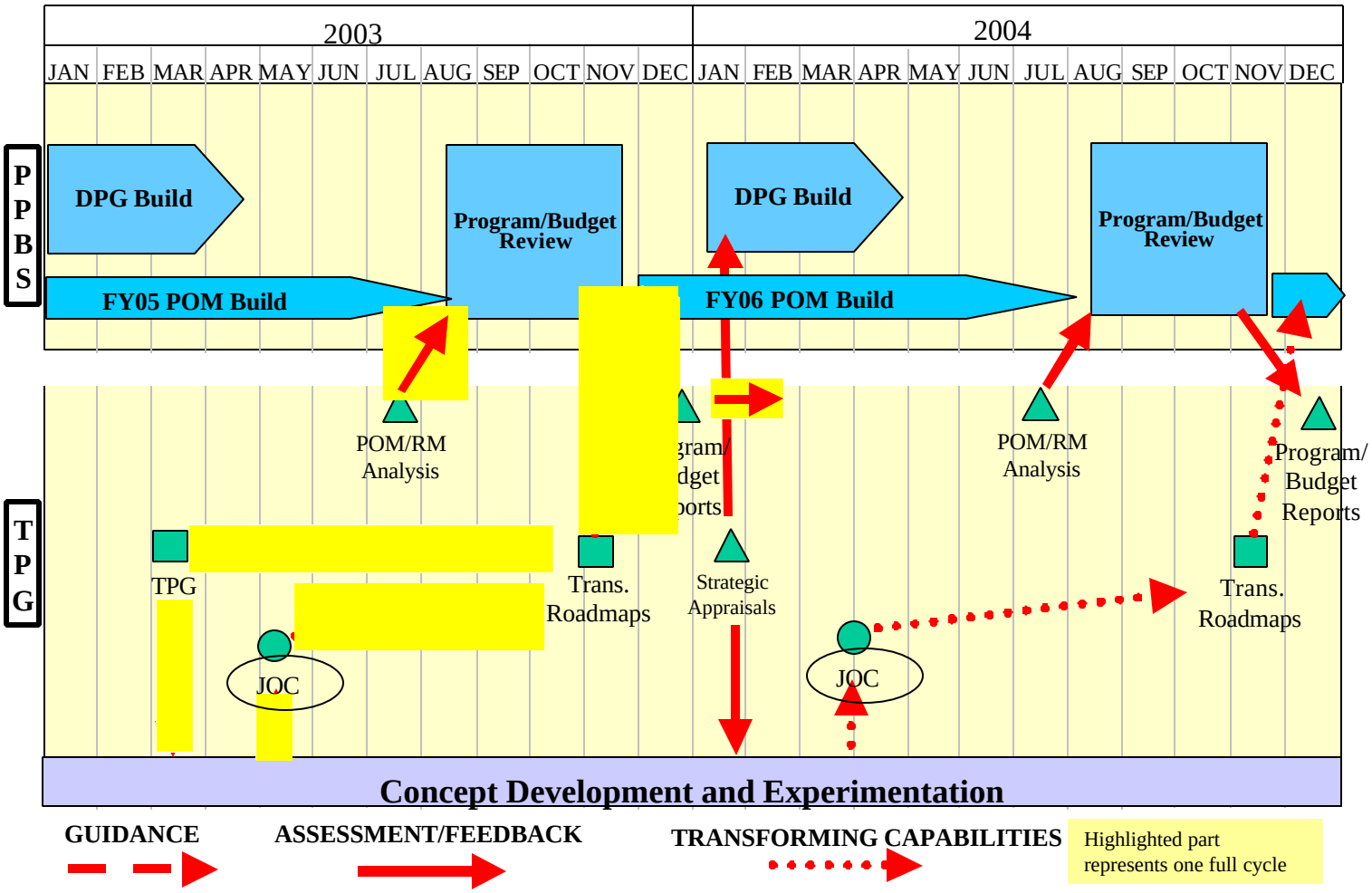
Transformation Task	Page	Approval Authority	Lead	Coordination	Mechanism	Timeline
Shaping Transformation Policy						
Establish Transformation Objectives	-	SECDEF	USD (Policy)	D(OFT), CJCS, JFCOM	*Guidance:* Transformation Planning Guidance	As necessary
Set Transformation Policy	-	SECDEF	USD (Policy)	D(OFT), CJCS, JFCOM	*Guidance:* Transformation Planning Guidance	As necessary
Coordination of Interagency Transformation Efforts	-	DEP SECDEF	USD (Policy)	D(OFT), CJCS, JFCOM, ASD(C3I)	As appropriate	Ongoing
Develop Multinational Transformation Recommendations	8	SECDEF	USD (Policy)	D(OFT), CJCS, JFCOM, Services, USD(AT&L), ASD(C3I)	*Document:* Develop recommendations for inclusion into the Security Cooperation Guidance to govern bilateral and multilateral cooperation on transformation consistent with the new defense strategy and the six QDR goals.	May 30, 2003
Transform Strategic Analysis	8	DEP SECDEF	USD (Policy)	D(PA&E) and CJCS	*Briefing:* Provide new approach to analysis of current and future requirements synchronized with PPBS and QDR. Will include an alternative to DPG IPS, a broader set of analytic tools, and a joint scenario data management approach.	May 1, 2003
Oversee and Allocate Resources	-	SECDEF/ DEP SECDEF	SECDEF	SEC, DRB, D(PA&E)	Program/Budget Review	Aug-Nov annually
Concept Development and Experimentation						
Publish Joint Operations Concepts	15	SECDEF	CJCS	Combatant Commands, Services, D(OFT)	*Document:* Develop one overarching Joint Operations Concepts that describes joint warfighting just outside of the FYDP.	May 1, 2003. Biennial-ly there-after.
Develop Joint Operating Concepts	15	SECDEF	CJCS	Services and Combatant Commands, with comment from D(OFT)	*Briefings/Documents:* Develop four cornerstone JOCs to be updated annually. Will also keep transformation roadmap developers in the Services, Defense Agencies, and JFCOM informed during JOC development.	June 1, 2003. Sept. 1 thereafter

Transformation Task	Page	Approval Authority	Lead	Coordination	Mechanism	Timeline
Define list of Supporting Operations	15	SECDEF	CJCS	Services, JFCOM, USD(Policy)	*Briefings/Documents:* Provide list of required operations necessary to support JOCs. Will update list as joint/Service roles change and new JOCs are developed.	May 1, 2003. Part of JOCs thereafter
Develop Joint and Service Concepts	15	SECDEF	Services, JFCOM, and Combatant Commands	CJCS	*Briefings/Documents*: Service leads and designated Combatant Commands will develop concepts for the supporting operations. The Service Transformation Roadmaps will plot the development of capabilities necessary to support these operations and JOCs. The Joint Transformation Roadmap will plot the development of capabilities to support joint operations and JOCs.	Ongoing
Develop Integrated Architectures for Supporting Operations	16	CJCS	CJCS	Services, JFCOM, and Combatant Commands	*Briefings/Documents:* Develop integrated architectures for each supporting operation. The architectures will describe in greater detail the relationship between the tasks and activities that generate effects on enemy forces and also those tasks and activities that support functional operations. JFCOM, consistent with Management Initiative Decision 912, shall develop the Battle Management Command & Control architecture.	Ongoing
Publish Joint Vision	16	SECDEF	CJCS	Combatant Commands and Services, with comment from D(OFT)	Joint Vision Document	April 1, 2003
Issue Joint Experimentation Guidance	App. 5	SECDEF	CJCS	D(OFT), JFCOM, and Services	*Guidance:* The CJCS, in coordination with D(OFT) and Commander, JFCOM, will recommend to the Secretary modifications to the guidance in this document.	As necessary

Transformation Task	Page	Approval Authority	Lead	Coordination	Mechanism	Timeline
Joint Experimentation Assessments	18	SECDEF	JFCOM	CJCS, Combatant Commands, Services, Agencies, with comment from D(OFT)	*Report:* Report the status of achieving stated experimentation/ interoperability priorities, experimentation infrastructure, and provide recommendations for follow-on activities.	June 1 annually
Develop experimentation plan	App. 5	SECDEF (through CJCS)	JFCOM	CJCS, Combatant Commands, Services, Agencies, D(OFT)	*Plan:* Develop Joint Concept Development and Experimentation Campaign Plan based on guidance in appendix five.	Dec. 1 bienn-ially
Provide Experimentation Criteria	18	D(OFT)	D(OFT)	CJCS	*Memo:* Expand upon experimentation criteria in TPG.	May 1, 2003
Interoperability						
Achieving Interoperability Priorities	16	SECDEF	JFCOM	CJCS, ASD(C3I), USD(AT&L), Combatant Commands, Services, Agencies	*Plan:* Develop Integrated Interoperability plan for achieving stated priorities within the decade (to include DPG 05 recommendations)	July 1, 2003
Transformation Roadmaps						
Interim Progress Report	19	D(OFT)	Services and JFCOM		*Briefing:* Present interim briefing that addresses status of roadmap revision.	August 1 annually
Revised Transformation Roadmaps	19	D(OFT)	Services and JFCOM	Joint Roadmap developed in coordination with CJCS	*Roadmap:* Submit revised transformation roadmaps to D(OFT). Combat support Defense Agencies will provide input into the Joint Transformation Roadmap as requested by Commander, JFCOM.	Nov. 1 annually
Review of Roadmaps	19	SECDEF in Nov. 2003 and Service Secretary thereafter	D(OFT)	Services and JFCOM	*Memo:* Submit roadmaps to the approval authority with comments on adherence to guidance and recommend ways to address shortcomings.	No later than 1 month after roadmap submiss-ion to D(OFT)

Transformation Task	Page	Approval Authority	Lead	Coordination	Mechanism	Timeline
Roadmap/POM Analysis	14	DEP SECDEF	D(PA&E)	D(OFT) and Services	*Briefing:* Evaluate POMs based on their consistency with transformation roadmaps and provide recommendation for resolution of issues in program review.	Prior to program review
Innovative Processes						
Fostering Trans-formation Initiatives	20	D(OFT)	D(OFT)	CJCS, Combatant Commands, and JFCOM	*Transformation Initiative Program*: Programs must be consistent with joint concepts and interoperability standards.	FY05 DPG
Promote Rapid Acquisition of Transformational Programs	20	JFCOM	JFCOM	CJCS and USD(AT&L)	*Joint Rapid Acquisition Program*: Programs must be consistent with joint concepts and interoperability standards.	FY05 DPG
Testing, Training, and Education						
Develop Plan to Transform Military Education	21	SECDEF	CJCS	D(OFT), Combatant Commands, Services, USD(P&R)	*Plan*: Conduct an assessment of the current joint military professional education system and present a plan to change it as necessary to meet the requirements of the future.	July 1, 2003
Joint Test and Evaluation Capability (JointTEC)	20	DEPSEC DEF	D(OT&E)	USD(AT&L), USD(P&R), JFCOM, Services	*Plan/Briefing*: Brief options and implementation plans for a JointTEC. At least one option will consider an integrated approach with the Joint National Training Capability.	June 1, 2003
Establish Policy for Transformation of Training	-	USD (P&R)	USD (P&R)	USD(Policy), D(OFT), Services, CJCS	Training Transformation Implementation Plan	Ongoing
Establish Joint National Training Capability	-	USD (P&R)	JFCOM	CJCS, USD(Policy), Combatant Commands, Services	Joint National Training Capability	October 2004 IOC
Measuring Progress						
Strategic Transformation Appraisals	21	SECDEF	D(OFT)	USD(AT&L), ASD(C3I), JFCOM, Services, Agencies, with comment by CJCS	*Report:* Address specific issues outlined in the TPG. D(OFT) is responsible for managing inputs from the coordinating offices which are due no later than November 1.	Jan. 30 annually
Program/Budget Review Output Report	22	D(OFT)	D(PA&E)	USD(PA&E)	*Report:* Summarize the status of the transformational elements of the program.	Jan. 15 annually

Appendix Two: TPG Integrated with PPBS Timeline



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Appendix Three: Transformation Roadmap Guidance

As described in the body of the TPG, the Services and Joint Forces Command will build transformation roadmaps to achieve transformational capabilities (as represented in the six operational goals) in support of joint operating concepts and supporting operations. The transformation roadmaps will plot the development of capabilities necessary to support these concepts and will serve as baseline plans for achieving the desired joint operating concepts. They will outline the concrete steps organizations must take in order to field capabilities for executing joint and Service concepts.

To ensure that the transformation roadmaps provide a level of consistency for the purpose of comparison and analysis, it is important that the roadmaps adhere to certain fundamental guidelines. The updated transformation roadmaps will:

- Use the definition of transformation presented in this guidance;
- Utilize timelines consistent with the development of joint operating concepts as explained in the body of this document;
- Describe how the organization plans to implement transformational architectures for future operating concepts, consistent with the joint operating concepts and supporting joint and service mission concepts, to include:
    - When and how capabilities will be fielded;
        - Identify critical capabilities from other Services and Agencies required for success;
        - Identify changes to organizational structure, operating concepts, doctrine and skill sets of personnel.
- As possible, include programmatic information that includes appropriation breakouts through the FYDP necessary for the desired capabilities;
- Unclassified or collateral roadmaps will be supplemented with a compartmented annex when required to expand identification of key capabilities and fully represent the spectrum of Service and Agency capabilities.

A central element of transforming our force is interoperability--the ability to bring all relevant information and assets to bear in a timely, coherent manner. All roadmaps will directly address the interoperability priorities listed on page 16 of this document. Additionally, Services will explicitly identify initiatives undertaken to improve interoperability in the following areas: deployment of a secure, robust and wide-band

network; adoption of “post before process” intelligence and information concepts; deployment of dynamic, distributed, collaborative capabilities; achievement of data-level interoperability; and deployment of “net-ready” nodes of sensors, platforms, weapons and forces.

Service roadmaps will identify plans for achieving these critical capabilities by ensuring that:

- Systems are capable of participating in a Joint Technical Architecture collaborative environment;
- Systems are tested and evaluated to determine actual capabilities, limitations, and interoperability in realistic Joint Warfare scenarios and in performing realistic missions;
- New C4ISR, weapons and logistics systems incorporate IP-based protocols;
- Systems are capable of “post before processing” functionality;
- Selected legacy systems are retrofitted with these capabilities.

In addition to adhering to the guidelines above, the joint and Service roadmaps will address plans to implement other aspects of transformation to include:

- Incentives to foster concept-based experimentation, the use of prototyping methodologies, and development of training and education programs;
- Information superiority, the identification and employment of all its elements, how it should be represented in war plans and joint experimentation, and how to achieve it;
- Seamless integration of operations, intelligence and logistics;
- Support Standing Joint Force Headquarters and joint command and control;
- Metrics to address the six transformational goals and transformational operating concepts;
- Transformational intelligence capabilities, specifically those mentioned on page 17 of this guidance;
- And how experimentation programs meet the TPG experimentation criteria (on page 18 of this guidance) and support the priorities for experimentation.

Appendix Four: Joint Concept Guidance

The Joint Operations Concepts and its attendant concepts, architectures, requirements and capabilities, will encapsulate the vision of a transformed organization and a capabilities-based defense strategy designed to meet the six operational goals established in the 2001 QDR. It will also be expressed in terms of the cognitive, information and physical domains of warfare. The cognitive domain exists in the warfighters' minds and encompasses leadership, morale, unit cohesion, experience, training, situational awareness, strategy, doctrine, tactics, techniques and procedures. The information domain facilitates communication of data, sharing of knowledge and conveyance of commander's intent. The physical domain spans the land, sea, air and space environments where forces execute the range of military operations. The following terms of reference serve as principles to guide development of the concept:

- **Superior Information Position (Fight First for Information Superiority)** – generate and exploit high quality shared awareness through better timeliness, accuracy and relevance of information.
    - Increase an enemy's information needs and reduce his ability to access information.
    - Assure our own information access through a well-networked and interoperable force.
- **High Quality Shared Awareness** – move to a capability to translate information and knowledge routinely into the requisite level of common understanding and situational awareness across the spectrum of participants.
    - Requires a collaborative network of networks, populated and refreshed with quality intelligence and non-intelligence data, both raw and processed to enable forces to build a shared awareness relevant to their needs.
    - Requires information users to become information suppliers, responsible for posting information before use.
    - Requires secure and assured networks and information that can be defended.
- **Dynamic Self-Coordination** – increase freedom of low-level forces to operate near-autonomously and re-task themselves through exploitation of shared awareness and commander's intent.
    - Produce a meaningful increase in operational tempo and responsiveness.

    - Rapidly adapt when important developments occur in the battlespace and eliminate the step function character of military operations.

- **Dispersed Forces** – move combat power from a fixed or constant position to non-contiguous operations.

    - Retain control of the battlespace and generate effective combat power at the proper time and place.

    - Increase close coupling of intelligence, operations and logistics to achieve precise effects and gain temporal advantage with dispersed forces.

- **De-massed Forces** – move from an approach based upon massing of forces to one based upon massing of effects.

    - Substitute information and effects for mass to limit the need to concentrate physical forces within a specific geographical location.

    - Increase the speed of movement throughout the battlespace and complicate an opponent's targeting problem.

- **Deep Sensor Reach** – move to deployable, distributed and networked sensors, both distant and proximate, that detect actionable information on items of interest at operationally relevant ranges to achieve decisive effects.

    - Leverage increasingly persistent ISR to use sensors as a maneuver element as well as a deterrent when used as an overt display of intent.

- **Compressed Operations and Levels of War** – reduce boundaries between Services and within processes so that joint operations are conducted at the lowest level possible in order to achieve decisive effects. Increase the convergence in speed of deployment, speed of employment and speed of sustainment.

- **Rapid Speed of Command** – reduce the time required to recognize and understand a situation, and through battlefield innovation and adaptation compress sensor-to-decision maker-to-shooter timelines to turn information advantage into decision superiority and decisive effects. This should include locking out an adversary's options and achieving option dominance.

- **Alter Initial Conditions at Increased Rates of Change** – exploit the principles of high quality shared awareness, dynamic self-coordination, dispersed and de-massed forces, deep sensor reach, compressed operations and levels of war, and rapid speed of command to enable the joint force, across the cognitive, information and physical domains of warfare, to swiftly identify, adapt to and change an opponent's operating context to our advantage.

Appendix Five: Joint Concept Development and Experimentation Guidance

Joint Concept Development and Experimentation (CDE) plays a critical role as a major generator of transformational change in the force, and JFCOM is the locus of this activity. By 1 December biennially, the Commander, JFCOM will submit to the Secretary of Defense, through the CJCS, a Joint Experimentation Campaign Plan that recommends an approach for effectively conducting CDE.

The development of joint operating concepts depicting how our future transformed force will fight and conduct non-combat operations is critical to long range planning, particularly for the transformation roadmaps. It is essential that development of these joint operating concepts and related CDE activities continuously feed back to each other in an iterative fashion, to ensure a dynamic, aggressive approach to both that demonstrates progressive refinement and optimization. The CJCS and the Commander, JFCOM will ensure that this synergy takes place. The Combatant Commanders should also be engaged in joint concept development and experimentation, providing JFCOM with favorable findings/concepts so that JFCOM may use its larger pool of experimentation resources to further experiment with and develop promising concepts. Commander, JFCOM will use experimentation results to recommend to the CJCS modifications to existing joint concepts.

A key element of force transformation will be Joint Force Command and Control at the operational and tactical level. The Commander, JFCOM will work with the CJCS to develop an operating concept for Joint Force Command and Control, and a means of implementing it on behalf of the regional combatant commanders during FY05. Since our military forces will be working closely with other branches of the United States government and with our friends and allies overseas, JFCOM's Joint Force Command and Control concept development and experimentation activities will incorporate features that include interagency and multinational participation, subject to proper security safeguards.

In addition, the Joint Experimentation Campaign Plan should include substantive activities addressing the following:

- Joint capabilities that enable forward and CONUS-based Joint Forces to rapidly deploy, employ, sustain, and redeploy in austere regions and anti-access and area denial environments;

- Integration of forward deployed, CONUS based, and coalition forces into the overall Joint operation, enabling the near-simultaneous synergistic employment and deployment of air, land, sea, cyber and space warfighting capabilities;

- Fast-deploying, adaptable, and agile joint command and control structures that optimally exploit shared situational awareness, reach-back to distributed, non-

deploying centers of information worldwide and better enable the synchronized and synergistic employment of forces provided by the Military Departments;

- Tools enabling the timely correlation and dissemination of mission-specific information tailored to commanders at all levels including mission planning, rehearsal, joint training, and knowledge management;

- Tools enabling the closer integration of intelligence, surveillance and reconnaissance efforts and their connectivity to C2 and targeting elements;

- Resource reallocation recommendations aimed at overcoming Low-Density/High-Demand constraints;

- Improvements to Joint Military Operations in Urban Terrain and jungle environments, with special emphasis on Limited Objective Experiments in urban C4ISR in FY2004 and FY2005;

- A compressed CDE cycle whereby the current 6-year period consisting of workshops, seminars, war games, Limited Objective Experiments, Vision Simulation Experiments, and Challenge Field Experiments will be accelerated to no more than 3 years;

- Criteria for successful experiments, provided by the Director, Force Transformation.