CHAIRMAN OF THE JOINT CHIEFS OF STAFF INSTRUCTION

J-8 CJCSI 3170.01E
DISTRIBUTION: A, B, C, J, S 11 May 2005

JOINT CAPABILITIES INTEGRATION AND DEVELOPMENT SYSTEM

Reference: See Enclosure C

1. Purpose. The purpose of this instruction is to establish the policies and procedures of the Joint Capabilities Integration and Development System (JCIDS). The procedures established in the JCIDS support the Chairman of the Joint Chiefs of Staff (hereafter referred to as "the Chairman") and the Joint Requirements Oversight Council (JROC) in identifying, assessing and prioritizing joint military capability needs as specified in title 10, United States Code, sections 153, 163, 167 and 181 (reference a). This instruction also provides joint policy, guidance and procedures for recommending changes to existing joint resources when such changes are not associated with a new defense acquisition program. Validated and approved JCIDS documents provide CJCS advice and assessment in support of these statutory mandates. Additionally, the JCIDS is a key element in CJCS efforts to realize the initiatives directed in reference b. Specific procedures for the operation of the JCIDS and for the development and staffing of JCIDS documents can be found in reference c. For the purposes of this instruction, joint resources include doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) (hereafter referred to as "joint DOTMLPF") and policy.

2. Cancellation. CJCSI 3170.01D, 12 March 2004, "Joint Capabilities Integration and Development System," and Enclosure B of CJCSI 3180.01, 31 October 2002, "Joint Requirements Oversight Council (JROC) Programmatic Processes for Joint Experimentation and Joint Resource Change Recommendations," are canceled.

3. Applicability. In accordance with references d, e and f, this instruction applies to the Joint Staff, Services, combatant commands, Defense agencies and joint and combined activities. This instruction also applies to other agencies preparing and submitting JCIDS documents in accordance with

references d, e and f. This instruction applies to all unclassified, collateral, compartmented and special access programs.

4. Policy

a. This instruction is based on the need for a joint concepts-centric capabilities identification process that will allow joint forces to meet the full range of military operations and challenges of the future. Meeting these challenges involves a transformation to a fully integrated, expeditionary, networked, decentralized, adaptable and lethal joint force able to achieve decision superiority. To achieve substantive improvements in joint warfighting and interoperability in the battlespace of the future, coordination among Department of Defense (DOD) components is essential from the start of the JCIDS process. That process will establish the linkage between the joint concepts, the analysis needed to identify capabilities required to execute the concepts and the systems delivering those capabilities.

b. To accomplish this transformation, the Department of Defense is implementing processes that assess existing and proposed capabilities in light of their contribution to future joint, allied and coalition operations. The process must produce capability proposals that consider and integrate the full range of joint DOTMLPF and policy solutions in order to advance joint warfighting in a unilateral and multinational context. DOTMLPF includes analysis of all human systems integration (HSI) domains.

c. New solution sets must be crafted to deliver technologically sound, testable, sustainable and affordable increments of militarily useful capability. JCIDS implements the evolutionary acquisition approach to capability development (reference e). There are two approaches for evolutionary acquisition: spiral and incremental development. Regardless of the approach chosen, both deliver capabilities to the warfighter through increments. All capabilities shall be developed, tested and procured to leverage the unique capabilities of other DOD components, international systems from allies and cooperative opportunities and with consideration of applicable US-ratified materiel international standardization agreements. Potential solutions may include a family of systems (FoS) that take different approaches to filling the capability gap, each addressing operational considerations in a different way. Alternatively, the solution may require a system of systems (SoS) approach to fill a capability gap. The FoS and SoS materiel solutions may also require systems delivered by multiple sponsors and materiel developers. The process to identify capability gaps and potential materiel and non-materiel solutions must be supported by a robust analytical process that incorporates innovative practices--including best commercial practices, HSI, collaborative environments, modeling and simulation and electronic business solutions.

d. This instruction complements the need to refer to the DOD 5000 series documents or the National Security Space Acquisition Policy (NSSAP) 03-01 for guidance and direction on defense acquisition (this instruction uses DOD 5000 series terminology for acquisition phases; refer to NSSAP 03-01 for definition of the phases for space programs). Document formats and processes in reference c are mandatory for all DOD capabilities documents for acquisition category (ACAT) programs. Application of a common process and format to all JCIDS documentation will provide better visibility, earlier recognition and improved implementation of joint capabilities improvements. Where appropriate and with validation authority approval, mandatory documentation formats provided in reference c may be tailored to implement the intent of this instruction for specific programs, such as automated information systems (AISs), shipbuilding and national security space systems. Requests for exceptions to this policy must be directed to the Director, Joint Staff/J-8.

e. Sponsor and combatant command compliance with the JCIDS process is not required to support fielding an immediate solution to a warfighter's urgent capability needs. Urgent needs will be worked through the joint rapid acquisition cell and/or the appropriate combatant command, Service or agency process for urgent operational needs. However, follow-up by complying with the JCIDS process is required for the long-term solution, sustainment activities or to transition the solution into a permanent program. This is not intended to create placeholders for future funding or as a means to bypass the normal capabilities and acquisition processes in references d and e.

f. Advanced Concept Technology Demonstrations (ACTDs) and Advanced Technology Demonstrations (ATDs) will comply with the JCIDS process as they transition into the acquisition process.

g. The Knowledge Management/Decision Support (KM/DS) Tool is the Joint Staff automated tool for processing, coordination and repository functions for JCIDS documents. The KM/DS Tool is located on the SIPRNET Web site at https://jrockmds1.js.smil.mil/guestjrcz/gbase.guesthome.

h. Documents that were approved under the previous versions of this instruction remain valid, except as detailed below:

(1) Capstone requirements documents (CRDs) will no longer be approved for development. CRDs have been converted to mission-area initial capabilities documents (ICDs) as directed by reference g to provide a temporary bridge between the CRDs and the implementation of joint capabilities documents (JCDs). The guidance for reformatting CRDs into mission-area ICDs is detailed in reference g. This ensures the critical aspects of the CRD are captured for future use. Mission-area ICDs developed as a result of the conversion process can be used as the baseline for follow-on capability development documents (CDDs). At the next review or update of these mission-area ICDs, the

appropriate functional capabilities board (FCB) will provide advice and assistance on converting to a JCD, ICD or CDD as appropriate.

(2) No new mission needs statements (MNSs) will be accepted for capability development. JCDs and ICDs, developed in accordance with this instruction, will be used instead. Programs that have already completed acquisition Milestone A or beyond are not required to update the MNS with an ICD. No MNSs greater than 2 years old will be used to support a Milestone A (or programs proceeding directly to Milestone B or C) acquisition decision.

(3) No new operational requirements documents (ORDs) will be accepted. ORD updates and annexes, CDDs and capability production documents (CPDs) developed in accordance with this instruction will be accepted to support capability development. ORD updates and annexes will comply with the format instructions in CJCSI 3170.01B and incorporate the net-ready key performance parameter (NR-KPP) as required in accordance with references h, i and j. A validated and approved ORD, developed under a previous version of this instruction, may be used to support a Milestone B or C decision in lieu of a CDD or CPD until 24 June 2005. Subsequent to 24 June 2005, only CDDs or CPDs may be used to support a Milestone B or C decision, respectively.

(4) Draft ICDs, CDDs and CDDs that entered into coordination prior to approval of this instruction are not required to change their format to comply with this instruction and accompanying manual.

i. AISs remain subject to this document.

5. Definitions. See Glossary.

6. Responsibilities. See Enclosure B.

7. Summary of Changes

a. This revision reflects an update to the instruction issued 12 March 2004 to reflect lessons learned and changes as a result of implementation of the JCIDS process.

b. Additional guidance on the development and use of KPPs has been provided.

c. CRDs are eliminated as JCIDS documents. A new document, the JCD, was created to provide a method of defining joint capabilities and identifying and prioritizing gaps and redundancies. Additionally, roles of the combatant commands, FCB and sponsors in the generation of JCDs have been identified.

d. The process for insensitive munitions certification has been modified to reflect the current process.

e. The emphasis on information technology, including data standards, data sharing and compliance with the DOD data strategy, has been increased due to its impact on interoperability. The CJCSI 6212 interoperability certification process will be updated to reflect these changes.

f. The joint DOTMLPF change recommendation (DCR) process has been incorporated.

g. The role of the JROC, supported by the FCBs, in the prioritization, development and assessment of joint warfighting capabilities with increased emphasis on integrated and supportable capabilities has been clarified.

h. The joint integration and implementation component of the joint DCR process has been incorporated, with increased emphasis placed on integrated and supportable capabilities.

i. The process for transitioning ACTDs and ATDs from the technology demonstration process into the JCIDS process has been added.

j. The criteria for warfighter urgent capability needs and corresponding interface between urgent needs statements and the JCIDS process have been addressed.

8. Releasability. This instruction is approved for public release; distribution is unlimited. DOD components (to include the combatant commands), other federal agencies and the public may obtain copies of this instruction through the Internet from the CJCS Directives Home Page--http://www.dtic.mil/cjcs_directives. Copies are also available through the Government Printing Office on the Joint Electronic Library CD-ROM.

9. Effective Date. This instruction is effective upon receipt.

For the Chairman of the Joint Chiefs of Staff:

NORTON A. SCHWARTZ
Lieutenant General, USAF
Director, Joint Staff

Enclosures:

A -- Joint Capabilities Integration and Development System (JCIDS) Process
B -- Responsibilities
C -- References
GL – Glossary

DISTRIBUTION

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LIST OF EFFECTIVE PAGES

The following is a list of effective pages for CJCSI 3170.01E. Use this list to verify the currency and completeness of the document. An "O" indicates a page in the original document.

PAGE	CHANGE
1 thru 6	O
i thru viii	O
A-1 thru A-22	O
B-1 thru B-10	O
C-1 thru C-2	O
GL-1 thru GL-18	O

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RECORD OF CHANGES

Change No.	Date of Change	Date Entered	Name of Person Entering Change

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ENCLOSURE A

JOINT CAPABILITIES INTEGRATION AND DEVELOPMENT SYSTEM (JCIDS) PROCESS

1. Purpose. This enclosure describes the JCIDS process. The JCIDS, the Defense Acquisition System and the planning, programming, budgeting and execution processes form the principal DOD decision support processes for transforming the military forces to support the national military strategy and the defense strategy. The procedures established in the JCIDS support the Chairman and JROC in advising the Secretary of Defense in identifying, assessing and prioritizing joint military capability needs as specified in reference a. Validated and approved JCIDS documents provide this advice and assessment.

a. The JCIDS ensures the joint force has the capabilities necessary to perform across the range of military operations and challenges. Recent operations have emphasized the necessity of integrated and interoperable joint warfighting capabilities. A joint concepts-centric capabilities identification process is required to define how new joint capabilities are identified and developed.

b. JCIDS implements an integrated, collaborative process to guide development of new capabilities through changes in joint DOTMLPF and policy. For all potential materiel and non-materiel solutions, HSI impacts and constraints must be assessed as part of the DOTMLPF analysis. Change recommendations are developed, evaluated and prioritized based on their contribution to future joint operations.

2. JCIDS Methodology. JCIDS implements a capabilities-based approach that better leverages the expertise of all government agencies to identify improvements to existing capabilities and to develop new warfighting capabilities. This approach requires a collaborative process that utilizes joint concepts and integrated architectures to identify prioritized capability gaps and integrated joint DOTMLPF and policy approaches (materiel and non-materiel) to resolve those gaps.

a. Implementation. JCIDS implements:

(1) An enhanced methodology using joint concepts that will identify and describe existing or future shortcomings and redundancies in warfighting capabilities; describe effective solutions; identify potential approach(es) to resolve those shortcomings; and provide a foundation for further development and enhancements of integrated architectures. The JCIDS process will establish the linkage between the key characteristics defined in the Joint

Operations Concepts (JOpsC), the capabilities and the attributes as defined in the JCD and ICD, and the key performance parameters and other attributes of the systems delivering those capabilities. This more rigorous and holistic approach to capability definition and development will require significant effort early in the JCIDS analysis process. The resulting benefits of providing a jointly developed, integrated, testable and supportable solution to the warfighter will be significant.

(2) A broader review of capability proposals developed throughout the Department of Defense, focusing on the contributions that proposals make to the realization of future joint concepts, independent of the ACAT.

(3) Better linkage to the acquisition strategy and process by engaging the provider early, as capabilities proposals are developed. In well-staffed proposals, materiel and non-materiel developers will be engaged when sponsors initiate their JCIDS analysis, prior to the development of capability proposals. This early and ongoing interaction will improve DOD ability to manage FoS and SoS and their streamlined, coordinated delivery to the warfighter by multiple sponsors and/or materiel and non-materiel developers. JCIDS will also facilitate identification and elimination of redundant efforts that will not improve the warfighter's capabilities. Additionally, JCIDS fully complements the evolutionary acquisition process and leverages the use of capability roadmaps and integrated architectures as described in references e and f.

(4) Prioritization of joint warfighting capability gaps based on future joint concepts to help focus the efforts of materiel and non-materiel developers, including bringing together different sponsors to jointly work toward a solution. Joint warfighting priorities established through the JCIDS process should provide a basis for the science and technology community to help focus developmental efforts as specified in the Joint Warfighting Science and Technology Plan (JWSTP). These prioritized joint warfighting capabilities will also inform capability roadmaps and other acquisition decision processes.

(5) Improved prioritization of validated joint warfighting capability proposals submitted in accordance with this instruction. This prioritization must conform to and reflect resource levels projected by the Secretary of Defense through the Strategic Planning Guidance and/or Joint Programming Guidance. Additionally, it should reflect risk guidance from both the Secretary and the Chairman on what portions of joint capability could accept risk.

(6) Better definition of the relationship and integration between materiel considerations and non-materiel, or DOTMLPF and policy (to include environmental, safety and occupational health (ESOH) considerations), resulting from the development, fielding and sustainment of a new capability, whether it is an individual system, a FoS or a SoS. Additionally, the JCIDS

process directly addresses joint non-materiel changes through the joint DCR process.

(7) Incorporation of joint DCRs. The joint DCR defines the implementation of recommendations to change joint DOTMLPF and policy from US Joint Forces Command (USJFCOM) or other sponsors of joint experimentation, assessment and joint testing (reference k) activities. The roles and responsibilities of the Joint Capabilities Board (JCB) for review and implementation of joint DOTMLPF and policy actions following JROC endorsement and the identification of joint DOTMLPF functional process owners (FPOs) are identified. The FPOs are process owners within the Joint Staff responsible for the integration and implementation of approved recommendations into existing joint processes eventually leading to a synchronized fielded joint capability.

(8) Improved coordination with other US government departmental or agency staffs. The potential exists for DOD capabilities to satisfy needs of other government agencies and vice versa. The JCIDS will provide a common coordination and integration process for DOD components working with other agencies and departments. These agencies and departments may include, but are not limited to, the Director of Central Intelligence (DCI) Mission Requirements Board (MRB), the Department of Homeland Security, the Department of State and the National Aeronautics and Space Administration.

b. Top Down Capabilities Identification Methodology. Joint future concepts are developed from top-level strategic guidance, providing a top-down baseline for identifying future capabilities. The Family of Joint Future Concepts (reference l) is used to underpin investment decisions leading to the development of new capabilities beyond the Five-Year Defense Plan. New capability requirements, materiel or non-materiel, must relate directly to capabilities identified through the Family of Joint Future Concepts, whose hierarchical nature and deliberate process require close examination of needed capabilities through an iterative process of assessment. Therefore, joint future concepts are not intended to provide immediate solutions but proposed solutions that can afford careful examination over a more extended period of time. Concepts of operations (CONOPSs) and joint tasks are focused on capabilities required in the near-term (now to 7 years in the future). CONOPSs and joint tasks allow the joint community to adjust or divest current capabilities by providing the operational context needed to substantiate current programs. The objective of this methodology is to answer “what do the joint warfighters value?” and “how do we measure it?” The process flow from national level and strategic guidance through the concepts is shown in Figure A-1.

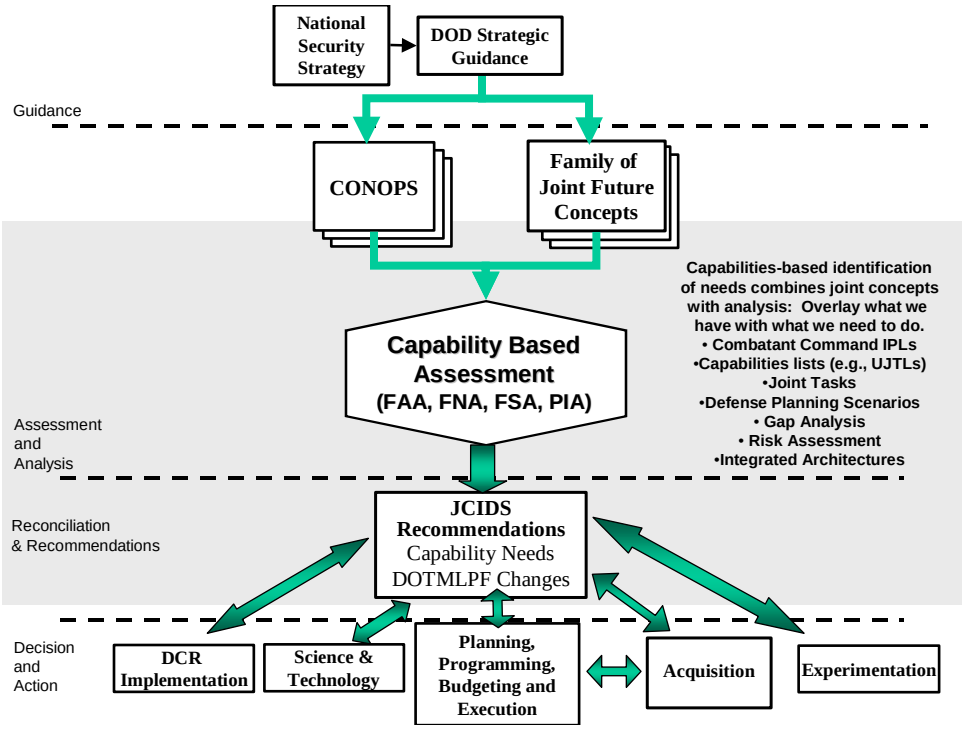

Figure A-1. Top Down Capability Need Identification Process

As they are developed, the Family of Joint Future Concepts will provide the conceptual basis for capabilities-based assessments (CBAs) to answer these questions by identifying capabilities, gaps and redundancies as well as potential non-materiel and materiel approaches to addressing the issues. A CBA may also be based on a Service or Agency CONOPS and JCS-prioritized joint tasks. A key component of the analysis is applicable integrated architectures. They ensure potential approaches to providing the capability are properly linked to existing capabilities and that the relationships are understood. A brief discussion of the methodology is provided below.

(1) Functional Area Analysis (FAA). The FAA identifies the operational tasks, conditions and standards needed to achieve military objectives. It uses the national strategies, the Family of Joint Future Concepts, UCP-assigned missions, CONOPS, joint tasks, the capabilities list (e.g., Universal Joint Task List), the anticipated range of broad capabilities that an adversary might employ and other sources as input. The FAA identifies the scenarios against which the capabilities and attributes will be assessed. Scenario sources include, but are not limited to, the Defense Planning Scenarios (DPS) published by the Office of the Secretary of Defense (OSD). The FAA produces a prioritized list of capabilities and tasks across all functional areas necessary to achieve the military objectives. The capabilities and their attributes should be traceable to the Family of Joint Future Concepts and any other supporting information used to develop the capabilities. These capabilities form the basis

for integrated architectures and will be reviewed in the follow-on functional needs analysis (FNA).

(2) Functional Needs Analysis. The FNA assesses the ability of the current and programmed warfighting systems to deliver the capabilities the FAA identified under the full range of operating conditions and to the designated measures of effectiveness. Using the capabilities and tasks identified in the FAA as primary input, the FNA produces a list of capability gaps that require solutions and indicates the time frame in which those solutions are needed. It may also identify redundancies in capabilities that reflect inefficiencies. The FNA will also provide the relative priority of the gaps identified. The FNA serves to further define and refine the integrated architectures. The FNA must assess the entire range of DOTMLPF and policy, as an inherent part of defining capability needs.

(3) Functional Solution Analysis (FSA). The FSA is an operationally based assessment of all potential DOTMLPF and policy approaches to solving (or mitigating) one or more of the capability gaps identified in the FNA. It may be appropriate to conduct more than one FSA on the results of an FNA, depending on the scope and variety of capability gaps identified. Applicable integrated architectures are a key component of the FSA to ensure potential approaches to providing the capability are properly linked to existing capabilities and that the relationships are understood. On the basis of the capability needs, potential approaches are identified, including (in order of priority) integrated DOTMLPF and policy changes that leverage existing materiel capabilities; product improvements to existing materiel or facilities; adoption of interagency or foreign materiel solutions; and initiation of new materiel programs. The completed FSA shall document the capability gaps and alternative approaches and include integrated architectures linking the approaches to existing systems. Identified capability needs or redundancies (excess to the need) establish the basis for developing non-materiel and/or materiel approaches as documented in an ICD and/or joint DCR.

(4) Post Independent Analysis (PIA). A sponsor group separate from those who performed the FSA performs the PIA. The objective of the PIA is to independently review the FSA to ensure it was thorough and that the recommended non-materiel and materiel approaches are reasonable possibilities to deliver the capability identified in the FAA and/or FNA. The results will be the basis for further evaluation during an analysis of alternatives (AoA). The result of the PIA will be to confirm the decision to develop an ICD, a joint DCR and/or a sponsor DOTMLPF and/or policy change to initiate the process to satisfy the capability needs.

c. Experimentation and Science and Technology

(1) Experimentation. Joint experimentation explores concepts to identify joint and component DOTMLPF change recommendations and capabilities needs. Experimentation provides insight and understanding of the concepts and capabilities that are possible given the maturity of specific technologies and capabilities that need additional research and development emphasis. Experimentation and assessment can help establish measures of effectiveness to indicate achievement of desired operational capabilities. The results of joint experimentation will define the art of the possible and support the identification of joint DOTMLPF and policy solutions to provide new capabilities.

(2) Science and Technology. The prioritized joint warfighting capabilities identified through the JCIDS process should serve to inform the science and technology community and focus the developmental efforts of the community as specified in the JWSTP. ACTDs and ATDs are important mechanisms in this process because they are used to assess the military utility of new capabilities, mature advanced technologies and provide insight into non-materiel implications. They are on a scale large enough to demonstrate operational utility and end-to-end system integrity. The JROC reviews and recommends: (a) prioritization of ACTD candidates based on military need and (b) a sponsoring combatant command and lead Service. Upon completion of the ACTD or ATD, the lead Service will develop the appropriate JCIDS documents if the concept is transitioned to an acquisition program. This may require new JCIDS documents for programs being initiated, or it may require modifications to existing JCIDS documents if the technology is being incorporated into an existing program.

d. Functional Capabilities Boards. Throughout the JCIDS analysis process, the FCBs will provide oversight and assessment as appropriate to ensure the sponsor's analyses are taking into account joint capabilities, concerns and approaches to solutions. Each FCB will be supported by one or more O-6-led FCB working groups. The FCB working groups will be responsible for the day-to-day tasks review and assessment of documents assigned to their FCB, and any other tasks assigned by the FCB. The FCB provides the JROC a context briefing to explain where a given capability proposal fits within a functional area, and makes recommendations on validation and approval (reference m).

e. Sponsor. Throughout the JCIDS process, reference is made to the sponsor. In general, the sponsor is the DOD component or other organization responsible for all common documentation, periodic reporting and funding actions required to support the JCIDS process and acquisition activities carried out in accordance with references e and f. Additional definition of the sponsor's role is provided in Enclosure B of this publication.

f. Defining Capabilities. In a capabilities-based approach, it is important to establish a common understanding of how a capability is conceived and expressed in the ICD. A capability is the ability to achieve a desired effect under specified standards and conditions through combinations of means and ways to perform a set of tasks. The top down capabilities identification methodology provides a method to identify gaps in warfighting capabilities and assess associated risk(s). This methodology also establishes the linkage between the key characteristics identified in the JOpsC and individual capabilities. In describing capabilities to resolve identified gaps, the following guidelines are instructive:

(1) Capability descriptions must contain the following elements:

(a) Key characteristics (attributes) with appropriate parameters and metrics, e.g., time, distance, effect (including scale)

(b) Obstacles to be overcome

(c) Supportability (including HSI)

(2) Capability descriptions should be general enough so as not to prejudice decisions in favor of a particular means of implementation, but specific enough to evaluate alternative approaches to implement the capability.

g. Interagency Capabilities. There will be capabilities that will have applicability across the Department of Defense and certain non-DOD agencies and departments, to include the Department of State, Department of Homeland Security and others. Conversely, there will be capabilities developed by other government departments and agencies that may fill a DOD capability need. The sponsor and their lead FCB working group will ensure that the lead FCB is aware of these opportunities and that the appropriate DOD sponsor works with the right non-DOD departments and/or agencies to fully coordinate the development of these capabilities.

h. National Intelligence Capabilities. Intelligence capabilities developed by the intelligence community provide resources for national users as well as DOD warfighters. As such, capabilities integration and development efforts by the intelligence community must follow a parallel path between the defense and national intelligence communities. Resulting capabilities documents will be validated and approved by the JROC and the DCI MRB.

3. Introduction to the JCIDS Process. A simplified depiction of the relationship between the JCIDS process and key acquisition decision points is provided in Figure A-2 below. The figure illustrates the process flowing through and into defense and information technology acquisition boards in accordance with references e and f. The component milestone decision

authorities (MDAs) use similar practices. The JCIDS process is closely linked to the acquisition process, described in references d, e and f.

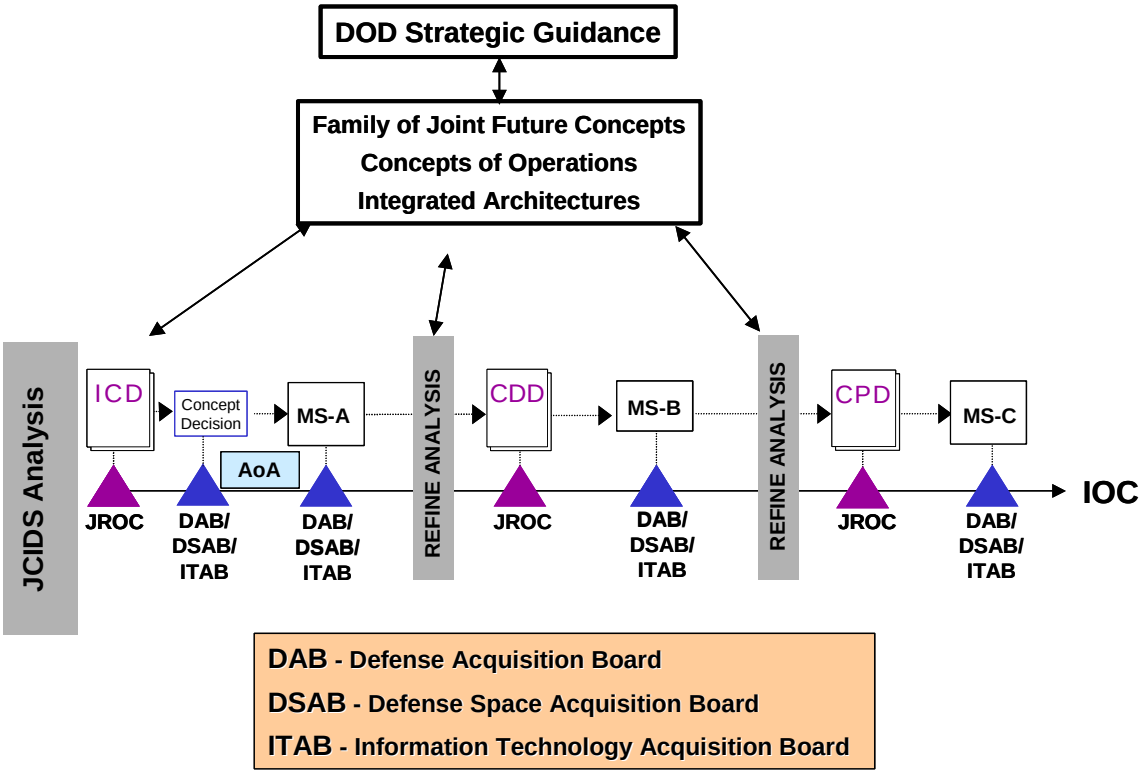

Figure A-2. JCIDS Process and Acquisition Decisions

a. Strategic policy guidance, the Family of Joint Future Concepts, CONOPS and the DPS provide a common construct for analysis to determine joint warfighting capability needs and to identify capability gaps or redundancies (Figure A-2). These concepts along with integrated architectures will enable a comparison of alternatives for improving joint warfighting capabilities. The efforts supporting the development of the Family of Joint Future Concepts are governed through reference l. The development of integrated architectures is governed by references h, i, j and n. The construct for JCIDS analysis will improve as these products are developed and matured. The JCIDS process will leverage available products while promoting further development of joint future concepts and integrated architectures.

b. The JCIDS analysis process identifies capability gaps, capability redundancies, assesses the risk and priority of the gaps and identifies an approach (materiel and/or non-materiel) or combination of approaches to address the gaps. This is a collaborative analysis process that should leverage the abilities and knowledge of all DOD components and other resources, and contribute appropriately to the joint force commander's ability to most effectively deliver the desired effects.

c. JCIDS documents (JCD, ICD, CDD, CPD and joint DCR) support the implementation of non-materiel solutions and the development and production of materiel solutions. Key components of the CDD and CPD are the integrated architecture products that ensure the Department of Defense understands the linkages between capabilities and systems and can make appropriate acquisition decisions.

d. Throughout the process, proposals are evaluated to ensure that they are consistent with the joint force envisioned in strategic policy guidance documents, joint future concepts, integrated architectures and capability roadmaps. When revolutionary new capabilities emerge that are not envisioned in the joint future concepts, the process will examine how these new capabilities impact the existing construct and whether the construct should be revised to optimize the new capability.

4. JCIDS Analysis. The purpose of the JCIDS analysis process is to identify capability gaps and redundancies, determine the attributes of a capability or combination of capabilities that would resolve the gaps, identify materiel and/or non-materiel approaches for implementation and roughly assess the cost and operational effectiveness of the joint force for each of the identified approaches. A result of the joint concepts-centric, capabilities-based JCIDS analysis process is robust cross-component analysis of required capabilities for warfighting. This will ensure the sponsor considers what the warfighter values most in joint force capabilities and the integration of those capabilities early in the process. The development of DOTMLPF and policy solutions must consider appropriate component, cross-component and interagency expertise; integrated architectures, capability roadmaps, science and technology community initiatives and experimentation results; and joint testing results. Due to the wide array of issues that will be considered in the JCIDS process, the breadth and depth of the analysis must be tailored to suit the issue. For JCIDS analyses performed by the sponsor or a combatant command, the FCBs will provide oversight and assessment as appropriate. The sponsors and combatant commands are encouraged to coordinate with the FCBs throughout the analysis process to reduce redundant analysis, ensure consistency in capability definitions and ensure approaches considered cover the broad range of joint possibilities. A detailed explanation of the JCIDS analysis process is provided in reference c.

5. JCIDS Documentation. The documentation developed during the JCIDS process provides the formal communication of capability needs between the operator and the acquisition, test and evaluation and resource management communities. The document formats and review processes specified in reference c are mandatory and shall be used throughout the Department of Defense for all acquisition programs regardless of ACAT.

a. JCIDS Document Descriptions. Services and other DOD components may develop ideas and concepts leading to draft JCDs, ICDs, CDDs, CPDs and joint DCRs. Whether a new materiel proposal proceeds initially to acquisition concept decision (reference e) or Milestone A, B or C depends on criteria specified in references e and f. JCDs are developed to identify joint capability needs that will be further analyzed by sponsors for possible solutions. An ICD will be generated to define the capability in a joint context, review the options to provide the capability and ensure that all DOTMLPF and policy alternatives, impacts and constraints have been adequately considered. Programs that have already completed acquisition Milestone A or beyond are not required to update the MNS with an ICD. In certain cases where ACAT II or below programs proceed directly to Milestone B or C, a waiver to the ICD requirement may be requested from the Joint Staff/J-8 in accordance with reference c. All initiatives transitioning to the acquisition process will have a corresponding validated and approved CDD and/or CPD prior to entering Milestone B or C, respectively (see reference f for DOD space programs). For joint non-materiel approaches, the sponsor will generate a joint DCR to document the approach. Sponsor specific non-materiel approaches will be implemented outside of JCIDS through sponsor processes. Brief descriptions of the documents are provided below.

(1) Joint Capabilities Document

(a) A JCD can be developed by combatant commands, FCBs and combat support agencies (CSAs) with designated functional management roles. Sponsors may develop a JCD if they have pre-coordinated with the combatant commands and/or FCBs to ensure they are not duplicating work. The JCD is based on an analysis of the Family of Joint Future Concepts, CONOPS or UCP-assigned missions. The JCD should be developed in close coordination with the relevant FCBs and sponsors to ensure a thorough analysis. The JCD developer will review and update the JCD and supporting analyses as changes are made to the supported Family of Joint Future Concepts or other guidance (e.g., National Military Strategy).

(b) The JCD will capture the results of the FAA and FNA, identifying the required capabilities and the current gaps or redundancies. The JCD identifies the scenarios against which the capabilities and attributes were assessed. Scenario sources include, but are not limited to, the DPS. The JCD will identify the critical outcome performance measures associated with these capabilities and prioritize the gaps based on operational considerations. The capabilities and their attributes will be linked to the key characteristics defined in the JOpsC. The JCD can be used as a baseline for the analyses (FSA and PIA) of the gap(s) to support the development of ICDs and/or joint DCRs. The JCD is described in detail in reference c.

(2) Initial Capabilities Document

(a) The ICD documents the need to resolve a specific capability gap, or set of capability gaps, identified through the JCIDS analysis process. The ICD supports the concept decision, AoA, technology development strategy, Milestone A acquisition decision, further refinement and/or development of integrated architectures and subsequent technology development phase activities as described in reference e. ICDs should be non-system specific and non-Service, agency or activity specific to ensure capabilities are being developed in consideration of the joint context.

(b) The ICD is based on an analysis of the Family of Joint Future Concepts and CONOPS. The ICD may also be based on the results of the analysis used to develop a relevant JCD. The ICD defines the capability gap in terms of the functional area(s), the relevant range of military operations, time, obstacles to overcome and key attributes with appropriate outcome measures of effectiveness, e.g., distance, effect (including scale), etc. The ICD identifies the scenarios against which the capabilities and attributes were assessed. Scenario sources include, but are not limited to, the DPS. The capabilities and their attributes will be linked to the key characteristics defined in the JOpsC and will include allied and coalition interoperability capabilities when applicable. It also provides the relative importance of the key attributes and prioritizes the gaps when multiple capability gaps are identified. The FSA supporting an ICD will use integrated architecture products to ensure all possible approaches to a capability need are considered.

(c) The ICD also captures the FSA evaluation of different materiel and non-materiel approaches that are proposed to provide the required capability. The ICD proposes a range of approach(es) based on analysis of the relative cost, efficacy, sustainability, environment, HSI and risk posed by the approach(es) under consideration. These will be further refined and analyzed during the AoA(s). The analysis that supports the ICD helps to shape and provides input to the AoA (when required) that will be used through the life of the system. In order to be informed of areas considered critical to their analysis, sponsors should consult with the appropriate FCB working groups while developing their ICD. The FCB working group, in turn, will advise its respective lead FCB and the FCB membership of anticipated proposals. The Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) will advise on applicable capability roadmaps, and the Director, Program Analysis and Evaluation (DPA&E) may provide specific AoA guidance, as approved by the MDA. The ICD describes how the range of approaches satisfies the desired joint capability. The range of approaches may include a combination of materiel and non-materiel approaches. It supports the AoA by providing operational context for assessing the performance characteristics of alternatives.

(d) Once approved, an ICD is not normally updated. When a materiel approach is approved, a CDD (described below) or multiple CDDs bring the desired capability specified in the ICD into the system development and demonstration (SDD) phase. The ICD becomes a baseline document for FoS, SoS and net-centric approaches and for linkages between associated CDDs and CPDs, including the overarching DOTMLPF and policy aspects necessary to meld the FoS or SoS into an effective capability. Thus, an ICD may support multiple CDDs and CPDs. The ICD is described in detail in reference c.

(e) When the ICD identifies a non-materiel approach to providing a capability using joint resources, which must be used in conjunction with a materiel solution, then a joint DCR will be submitted as a compliment to the ICD and subsequent CDD for the materiel solution. If the capability can be completely satisfied by non-materiel change affecting joint resources, then the implementation will be through a joint DCR rather than a CDD. When the non-materiel approach impacts only on DOTMLPF or policy resources within the sponsor's control, the sponsor-specific implementation process for non-materiel changes is used.

(f) An ICD is not required to initiate an ACTD or ATD. The ACTD candidate nomination and approval process is sufficient, along with the FCB assessment, and JROC endorsement to justify the need for the ACTD. ATDs are initiated through Service and agency science and technology plans. Where possible, ACTD and ATD candidates should refer to existing capability gaps, identified in approved JCDs or ICDs.

(3) Capability Development Document

(a) Guided by the ICD, the AoA (for ACAT I/IA programs), associated integrated architectures, capability roadmaps, concept refinement and technology development activities, the CDD captures the information necessary to develop a proposed program(s), normally using an evolutionary acquisition strategy. The CDD outlines an affordable increment of capability. An increment is a militarily useful and supportable operational capability that can be effectively developed, produced or acquired, deployed and sustained. Each increment of capability will have its own set of attributes and associated performance values with thresholds and objectives established by the sponsor with input from the user. The validated and approved CDD supports the development of the required dependent documents as described in Enclosure F of reference c and supports the Milestone B acquisition decision.

(b) The CDD provides the operational performance attributes, including supportability and allied and coalition interoperability, necessary for the acquisition community to design the proposed system. The attributes in the CDD permit the test and evaluation community to evaluate the proposed system in the anticipated joint environment. The CDD includes KPPs and

other parameters that will guide the development, demonstration and testing of the current increment. The KPPs will be linked through the capabilities defined in the ICD to the key characteristics from the JOpsC. Because the operational performance attributes provided in a CDD apply only to a single increment of a program's development, the KPPs shall apply only to the current increment (or to the entire program when only a single increment is required to achieve full capability). The AoA should be reviewed for its relevance for each program increment requiring a Milestone B decision and, if necessary, the AoA should be updated or a new one initiated.

(c) In addition to describing the current increment, the CDD will outline the overall strategy to develop the full or complete capability. For evolutionary acquisition programs, the CDD will outline the increments delivered to date (if any), the current increment, and future increments (if any) of the acquisition program to deliver the full operational capability. The CDD shall always reference the originating ICD. However, in the case of FoS and SoS solutions, the CDD shall also identify other CDDs and/or CPDs that are required for full realization of the capability(s) and describe the synchronization required between programs. The CDD will also reference any additional overarching DOTMLPF and policy changes necessary to meld the FoS and SoS into an effective capability.

(d) When the sponsor of an ACTD or ATD determines that the demonstration is complete, but additional development is required before fielding, the sponsor will create a CDD or modify an existing CDD to guide the development process. The military utility assessment (MUA), completed at the end of the ACTD or ATD, will be used to guide the development of the CDD. The CDD will then be submitted for staffing and approval prior to initiating further development.

(e) The CDD must be validated and approved before each Milestone B decision. If the performance characteristics of subsequent increments of a CDD can be captured in an annex, then it may be appropriate to update an existing CDD for each increment rather than rewriting the entire document. The CDD is described in detail in reference c.

(f) Changes to the KPPs may be identified as a result of SDD phase activities but before the CPD is ready to be validated and approved. In these cases, updates to the CDD should be submitted for validation and approval. This will ensure the system being developed is still of military utility and permits other associated documentation (e.g., the Test and Evaluation Master Plan) to be updated in a timely fashion.

(4) Capability Production Document

(a) The CPD addresses the production attributes and quantities specific to a single increment of an acquisition program. The sponsor finalizes a CPD after design readiness review (after critical design review for space programs, reference f) when projected capabilities of the increment in development have been specified with sufficient accuracy to begin production. The validated and approved CPD supports the development of the required dependent documents as described in Enclosure G of reference c and supports the Milestone C decision review (see reference f or space programs).

(b) When the sponsor of an ACTD or ATD determines that the demonstration is complete, and the capability meets the combatant commands' needs and is ready for immediate fielding, the sponsor will create a CPD to receive approval for production and fielding for other than limited quantities. The MUA, completed at the end of the ACTD or ATD, will be used to guide the development of the CPD. The CPD will then be submitted for staffing and approval. Limited residual capability from the ACTD can be fielded to the operator if testing has been sufficient to indicate there is appropriate military utility.

(c) Performance and supportability attributes in the CPD will be specific to the increment. The design trades from the SDD phase will have been completed and a specific production design determined for the increment. The threshold and objective performance values of the CDD are therefore superseded by the specific production values detailed in the CPD for the increment. When SDD phase activities result in changes to the KPPs, the changes will be assessed by the validation authority. The validation authority will determine if the system defined by the changed KPPs will deliver a militarily useful capability as originally defined in the ICD. The CPD shall always reference the originating ICD. However, when the CPD is part of a FoS/SoS solution, the CPD shall also provide the linkages to related CDDs/CPDs and supporting analyses (e.g., AoA) to ensure the system production is synchronized with the related systems required to fully realize the capability(s). The CPD is described in detail in reference c.

(5) Joint DOTMLPF Change Recommendation. Joint DCRs are generated by combatant commands, Services or agencies when it is necessary to change joint DOTMLPF resources to meet a capability gap. The joint DCR focuses primarily on joint transformation efforts in the areas of doctrine, organization, training, materiel, leadership and education, personnel and facilities as well as policy. The joint DCR process focuses on changes that are primarily non-materiel in nature, although there may be some associated materiel changes (commercial or nondevelopmental) required. While it is recognized that DOTMLPF and policy changes are an integral part of any major acquisition program, those changes are addressed within the scope of the

CDD/CPD and not through the joint DCR process. Joint DCRs are normally referred to as "non-materiel" solutions, while acquisition programs are referred to as "materiel" solutions. Joint DCRs may request additional numbers of existing commercial or nondevelopmental items. As innovation, new technologies, joint experimentation, joint testing, capability reviews, combatant commanders' integrated priority lists, warfighting lessons learned, etc., spawn potential enhancements to operational capabilities, the JROC will review specific change recommendations for joint warfighting utility and programmatic implications. Based on the findings, the JROC will provide recommendations for CJCS review and action. The goal for implementation is less than 18 months from submittal to the Joint Staff.

(a) Joint DCRs may be submitted to:

1. Change, institutionalize and/or introduce new joint DOTMLPF and policy resulting as an output of joint experimentation, lessons learned or other assessments to meet operational needs.

2. Change, institutionalize and/or introduce new joint DOTMLPF and policy resulting from the FSA, but outside the scope or oversight of a new defense acquisition program.

3. Request additional numbers of existing commercial or nondevelopmental items previously produced or deployed in addition to other considerations of DOTMLPF.

4. Introduce existing non-materiel solutions available from other DOD, US interagency or foreign sources.

(b) Joint DCRs will be submitted to the Joint Staff for endorsement by the JROC.

(c) Joint DCRs that have been approved for implementation by the JROC will be assigned to the JCB (chaired by the Director, Joint Staff/J-8) for oversight and monitoring of co-evolution and implementation. The JCB provides substantive oversight of joint DOTMLPF actions to ensure that implementation activities within each of the seven critical considerations remain focused on achieving the integrated result described in the recommendation. The Joint Staff DOTMLPF FPOs are responsible for coordinating assigned tasks via their existing processes and for providing periodic updates on their progress to the Director, Joint Staff/J-8 and the JCB.

(d) Joint DCRs may not be submitted to justify out-of-cycle budget requests.

b. JCIDS Document Relationships. Figure A-3 illustrates some of the more common relationships between JCIDS documents.

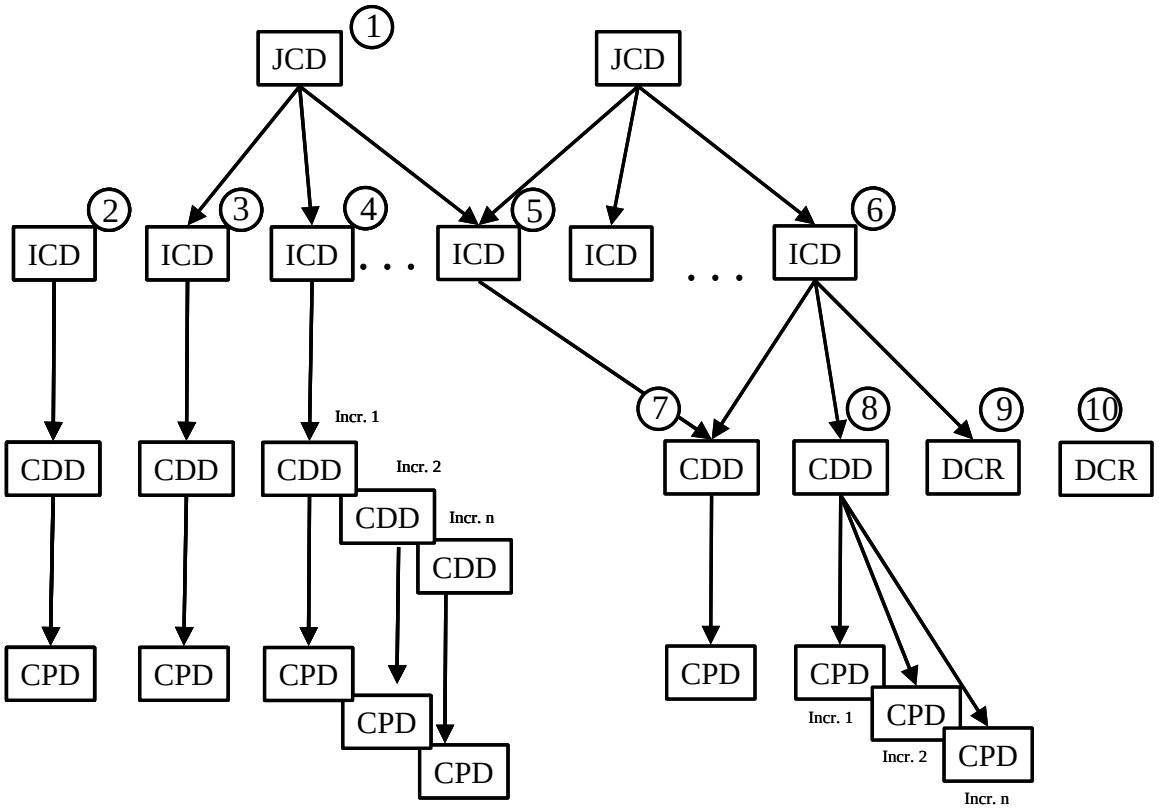

Figure A-3: JCIDS Document Relationships

(1) A JCD can be the source for one or more ICDs. Each ICD will be based on an FSA for one or more of the capability gaps described in the JCD.

(2) An ICD may be developed without being directly descendant from a JCD. The sponsor would perform the requisite JCIDS analysis and submit the ICD for approval.

(3) An ICD may be the source for a single CDD with a resultant CPD.

(4) An ICD may be the source for a system or a SoS that will require incremental development under an evolutionary acquisition strategy. This requires a CDD and a CPD for each increment of the system or SoS.

(5) Two or more JCDs may provide the source material for one ICD. For example, an FSA for a battlespace awareness capability may apply to the JCD for close air support and for joint forcible entry operations.

(6) An ICD may be the source for multiple CDDs where a SoS or FoS is required to deliver the capability.

(a) For a SoS example, the ICD for a capability for precision strike could result in a CDD for the aircraft, separate from the CDD for the munitions.

(b) For a FoS example, the Army develops an ICD for a capability to provide rapid transport of passengers or cargo, which results in a CDD for an Army fixed-wing solution. The Marine Corps may use that same ICD as the basis for developing a rotary wing solution CDD.

(7) Two or more ICDs may be the source for a single CDD. For example, an ICD for long-range heavy lift transport and an ICD for air-to-air refueling may be combined to justify a single aircraft.

(8) A CDD may be used for two or more CPDs where an incremental acquisition strategy is used.

(9) A joint DCR may be developed based upon the FSA in an ICD. For example, an ICD may identify several capability gaps. The FSA for those gaps indicates that one or more may be partially or wholly satisfied through a non-materiel change. This becomes the basis for the joint DCR.

(10) A joint DCR may be developed directly from many sources including: the result of an experiment, lessons learned or other sources.

c. Performance Attributes and KPPs. The CDD and CPD state the operational and support-related performance attributes of a system that provide the desired capability required by the warfighter, attributes so significant that they must be verified by testing and evaluation. The documents shall designate the specific attributes considered essential to the development of an effective military capability and those attributes that make a significant contribution to the key characteristics as defined in the JOpsC as KPPs. Sponsors will establish thresholds and objectives for all KPPs. Whenever possible, attributes should be stated in terms reflecting the capabilities necessary to operate in the full range of military operations and environment intended for the system as based on the concept of operations described in the CDD and the OV-1. This will be used to guide the acquisition community in making tradeoff decisions between the threshold and objective values of the stated attributes and the test and evaluation community in assessing system performance, including the joint mission requirement. Operational testing will assess the operational effectiveness and suitability of the system and its ability to meet the production threshold values. For annexes to the CDD, KPPs in the parent document will apply only if specifically addressed in the annex. Additional discussion of attributes and KPPs is provided in reference c.

d. Acquisition Program Baseline (APB) KPP Procedures. APBs are described in reference e as establishing program threshold and objective values for the

minimum number of cost, schedule and performance attributes that describe the program over its life cycle. The CDD and CPD provide the basis for the performance section of the acquisition strategy and APB, with the KPPs inserted verbatim into the APB. Cost and schedule measures will also be included within the APB with their associated objective and threshold values, which sets up the trade space between cost, schedule and performance attributes. For JROC Interest programs and any other program of significant joint interest, the J-8 will review the APB's cost, schedule and KPPs (objective and threshold values) to ensure they are consistent with a JROC-approved CDD or CPD and prior JROC decision(s) and that it provides the necessary warfighting capabilities affordably and within required time frames. For all programs, establishment of an APB will be sufficient entry criteria for validation of JCIDS proposals, regardless of the timing for the next milestone decision.

6. JCIDS Document Review, Validation and Approval Process. The staffing process prepares the document for review by the lead FCB and validation and approval by the appropriate authority as defined in reference c. JCIDS documents will be submitted into and staffed through the Joint Staff KM/DS tool. The first step in the review process is the determination of the joint potential designator (JPD) and the designation of a lead FCB and supporting FCBs, if appropriate.

a. Based on the content of the submission and in his capacity of Gatekeeper, the Joint Staff Vice Director, J-8, will assign a JPD of "JROC Interest," "Joint Integration," or "Independent" to the document. This designation specifies JCIDS validation, approval and certification expectations.

(1) The JROC Interest designation will apply to all ACAT I/IA programs and ACAT II and below programs where the capabilities have a significant impact on joint warfighting; a potential impact across Services; or interoperability in allied and coalition operations. This designation may also apply to intelligence capabilities that support DOD and national intelligence requirements. These documents will receive all applicable certifications. All JCDs and joint DCRs will be designated as JROC Interest. An exception may be made for ACAT IA programs without significant impact on joint warfighting (i.e., business oriented systems). These programs may be designated either Joint Integration or Independent.

(2) The Joint Integration designation will apply to ACAT II and below programs where the capabilities and/or systems associated with the document do not significantly affect the joint force and an expanded review is not required, but interoperability and supportability, intelligence and/or insensitive munitions (IM) certification is required. Joint Integration proposals are validated and approved by the sponsoring component.

(3) The Independent designation will apply to ACAT II and below programs where the capabilities and/or systems associated with the document do not significantly affect the joint force, an expanded review is not required and no certifications are required.

b. The Gatekeeper assignment determines the body responsible for final validation and approval of the document (see Table A-1), any certifications that may be required (such as information technology (IT) and National Security Systems (NSS) interoperability and supportability, intelligence or IM) and the staffing distribution for the document. Details regarding the review and staffing process are provided in reference c.

Office	JROC Interest	Joint Integration	Independent
JROC	Validate/Approve		
DOD Component		Validate/Approve	Validate/Approve

Table A-1. JCIDS Validation and Approval Authorities

7. Functional Capabilities Boards. Reference l provides overarching guidance on FCB process, membership and procedures. This instruction discusses FCB responsibilities that are unique to the JCIDS process. FCBs are responsible for the organization, analysis and prioritization of joint warfighting capability needs proposals within assigned functional areas. The FCB will work to ensure that the joint force is best served through the JCIDS and overarching joint DCRs.

8. Certifications. As part of the staffing process for each JCIDS document with JPDs of JROC Interest and Joint Integration, appropriate certifications will be processed. The Defense Intelligence Agency (DIA) and Joint Staff/J-2 will grant threat validation and intelligence certification respectively in accordance with reference o, and (for munitions only) Joint Staff/J-8, Deputy Director for Force Protection (DDFP), will grant IM certifications in accordance with reference p. For CDDs and CPDs, Joint Staff/J-6 will grant IT and NSS interoperability and supportability certifications in accordance with references h, i and j. The sponsor is responsible for resolving any certification issues with the appropriate certification authority. Munitions programs not certified as IM compliant will require a waiver to be approved by the JROC when the CDD or CPD is brought forward for approval. The applicable certifications must be completed prior to JCB/JROC review.

9. General Process Flow

a. The JCIDS process will support decision makers by ensuring that validated capabilities needs are being addressed by appropriate materiel and/or non-materiel approaches. The process will also ensure that multiple non-materiel and materiel approaches or concepts, across the spectrum of DOTMLPF and policy across DOD components, are adequately considered to provide desired capabilities. All JCIDS documents (classified SECRET and below) will be submitted through the KM/DS tool and coordinated in accordance with procedures described in reference c. Top Secret, sensitive and special access documents will be submitted through the appropriate security channels to the Joint Staff.

b. The JCD is used by the combatant command to define sets of capabilities necessary to support a mission assigned by the UCP and by CSAs with designated functional manager roles to define the capabilities necessary for their functional area of responsibility to support the Family of Joint Future Concepts or CONOPS. It is also used by the FCBs to document the results of a CBA based on a member of the Family of Joint Future Concepts performed at the direction of the JROC. A sponsor may also use the JCD to define the set of capabilities for a mission supporting the Family of Joint Future Concepts, UCP-assigned mission or CONOPS after coordination with the appropriate FCBs and combatant commands to ensure no duplication of work. The JCD will identify and prioritize gaps and redundancies associated with those capabilities. Upon JROC approval of the JCD, the JROC will assign responsibility for performing the necessary FSAs and the development of the ICDs to address the capability gaps. The JROC will determine the appropriate sponsor for developing the ICD based on recommendations from the FCBs and potential sponsors.

c. After the approval of the ICD, integrated architectures and capability roadmaps must be developed and/or updated. If the solution is likely to result in an ACAT I acquisition program or if directed by the MDA, the sponsor must conduct an AoA in accordance with reference e. The AoA will identify the materiel approach(es) that should be recommended for further development at Milestone A. The results of AoAs will be reviewed by the lead FCB upon submission of the CDD to ensure that the refined concept or approach continues to meet the warfighter's capability needs and the appropriate attributes are designated as KPPs. In the absence of an AoA, the sponsor must be able to provide adequate analysis to justify the adequacy of the approach and to support the determination of the appropriate KPPs.

d. Performance attributes listed in the CDD will specify values for the current increment of system development, as a minimum. If an evolutionary acquisition strategy is anticipated, the capability to be delivered in the next increment is captured in the CDD, incorporating technology development

efforts. The CDD will then be updated, along with its supporting analyses (e.g., AoA), as required between increments.

e. The CPD narrows the generalized performance and cost parameters from the CDD into more precise performance estimates for the production system. The CPD must be validated and approved before Milestone C in accordance with reference e (for space programs, see reference f). The CPD provides refined operational performance, schedule, supportability and affordability attributes to ensure the increment adequately addresses the warfighter capability needs and the cost is commensurate with the additional capability.

f. If the FSA recommends a non-materiel approach that affects joint resources, the sponsor will develop a joint DCR to direct the implementation. The joint DCR recommends changes to existing joint resources when such changes are not associated with a new defense acquisition program. Joint DCRs will be staffed in accordance with the process described in reference c.

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ENCLOSURE B

RESPONSIBILITIES

1. Joint Requirements Oversight Council. Title 10 responsibilities of the JROC are identified in reference a, and the JROC and JCB processes are delineated in reference q.

a. The JROC reviews programs designated as "JROC interest" and supports the acquisition review process. The JROC may review JCIDS documents or any other issues that may have joint interest. The JROC will also review programs at the request of the Secretary of Defense, Deputy Secretary of Defense, USD(AT&L), Assistant Secretary of Defense for Networks and Information Integration (ASD(NII))/DOD Chief Information Officer (CIO), Under Secretary of the Air Force (as DOD Executive Agent for Space) or the DCI MRB.

b. The JROC will manage FCBs in accordance with reference m.

c. For JROC interest proposals, the JROC will validate the KPPs and approve the documents based on recommendations from the lead and supporting FCBs.

d. The JROC will consider IM waivers and may grant them based on recommendations made by the Joint Staff/J-8 DDFP.

e. The JROC ensures the joint DOTMLPF and/or policy recommendations resulting from joint concept development and experimentation are integrated within the JCIDS process.

2. Functional Capabilities Boards. Each FCB is responsible for all aspects, materiel and non-materiel, of its assigned functional area(s). Each FCB will seek to ensure that the joint force is best served throughout the JCIDS and acquisition process. JCIDS-specific FCB responsibilities are identified in reference m and include:

a. Ensure that DOTMLPF and policy aspects of new capabilities are being appropriately considered in the JCIDS documents. This includes overarching DOTMLPF or policy changes necessary to meld a FoS or SoS with multiple CDDs and CPDs into an effective capability.

b. Assist in the adjudication of comments written during the JCIDS staffing process.

c. Evaluate and make validation and approval recommendations to the JROC on JCIDS documents designated as JROC Interest.

d. Lead a capabilities-based assessment on joint future concepts, as assigned by the JROC, leveraging the expertise of the Services and combatant commands. Develop the appropriate JCD as a result of the assessment.

e. Ensure that DPA&E, USD(AT&L) and ASD(NII)/DOD CIO have the opportunity to participate in or review all FCB activities. When the FCB is formulating a recommendation, which may impact directly upon an MDA or other principal staff assistant, that office will be invited to co-chair the FCB. DPA&E, USD(AT&L) and ASD(NII)/DOD CIO should be engaged early to ensure that the analysis plan adequately addresses a sufficient range of materiel approaches.

f. Invite the MRB staff to send a representative to attend or co-chair the FCB meeting when proposals potentially impacting national intelligence capabilities come to the FCB for validation or approval.

g. Request, as necessary, DOD components to support FCB activities in support of this instruction. Tasking issues that cannot be resolved between the FCB(s) and the component(s) will be forwarded to the JROC (through the JCB) for resolution. When support from organizations reporting to the Secretary of Defense is required, the FCB Chairman will seek this support from the responsible office within OSD.

h. Ensure that overarching joint DCRs are consistent with the Family of Joint Future Concepts, and support joint warfighting capability needs.

i. Evaluate the assigned JPD of all initiatives and make a recommendation to the Gatekeeper to change the JPD as required.

j. Ensure that appropriate certifications have been granted.

3. FCB Working Groups. The FCB working groups will operate in accordance with reference m. In support of the JCIDS process, each FCB working group will:

a. Coordinate with and assist the sponsor during JCIDS document development to ensure cross-component synchronization of proposals, and that joint warfighting capability gaps are being adequately addressed.

b. Support the Gatekeeper in determining the JPD and the lead and/or supporting FCBs for each JCIDS document.

c. The lead FCB working group will analyze JCIDS documents and coordinate with supporting FCB working groups to ensure all joint and coalition warfighting aspects have been considered in the analysis. Provide context and a summary of the FCB working group's independent assessment

regarding JCIDS proposals to the FCB when considering capabilities documents.

d. Supporting FCB working group will coordinate with and support the lead FCB working group analysis of JCIDS documents.

e. Provide a summary analysis and recommendation to the FCB on validation and/or approval of JCIDS documents.

4. Sponsor. Within the JCIDS process, the sponsor is expected to:

a. Lead the JCIDS analyses (including the FAA, FNA and FSA (as described in reference c)) required when developing the ICD, while engaging and collaborating with appropriate organizations. The sponsor should work closely with the appropriate FCBs during the analysis process to ensure the analysis is truly joint.

b. Perform FSAs and develop ICDs as directed by the JROC for capability gaps identified in JCDs.

c. Provide support to combatant commands, CSAs and FCBs in developing JCDs.

d. Make affordability determinations in the evaluation of various approaches to delivering capabilities to the warfighter.

e. Develop JCIDS documentation as specified in this instruction and present this documentation for review through the KM/DS tool.

f. Resolve issues that arise during the staffing, certification and validation processes. All comments will be adjudicated prior to JCB and JROC briefings. Unresolved critical comments will be briefed to the JCB or JROC for decision.

g. When the system contributes to FoS or SoS capabilities, coordinate with sponsors of the related joint DCRs, CDDs and CPDs to synchronize development and delivery of the systems and required overarching DOTMLPF and policy changes.

h. Present briefings to decision bodies, as required.

i. Validate Joint Integration documents after receiving required certifications and validate all Independent designated documents.

j. Coordinate/collaborate with non-DOD agencies and departments on the development of interagency capabilities.

k. Develop a CDD, CPD or joint DCR, as appropriate, to support the acquisition or fielding of a capability demonstrated through an ACTD or ATD.

l. When the sponsor disagrees with the assigned JPD, appeal to the FCB or the Gatekeeper by providing a memorandum with justification for changing the JPD.

m. If a munition is not IM-compliant, the sponsor will request the JROC to approve a waiver of the IM requirements.

5. Joint Staff and DIA. The Joint Staff and DIA provide review, coordination and certification functions in support of the JCIDS process. These functions include IT and NSS interoperability and supportability certification, intelligence certification, threat validation and munitions insensitivity certification. Certification process details are provided in reference c.

a. Director, Joint Staff/J-1. Joint Staff/J-1 is the office of primary responsibility for joint manpower and personnel reviews. In accordance with references r and s, Joint Staff/J-1 will review all joint manpower and personnel requirements and issues identified in joint DCRs. It will review JCIDS documents for adequacy of joint manpower and personnel planning.

b. Director, Joint Staff/J-2, and Director, DIA. Joint Staff/J-2 will review and conduct intelligence certification in accordance with reference o. DIA will also perform a threat validation. Additionally, Joint Staff/J-2 will conduct intelligence certification of requirements, deficiencies and solutions documented in the information support plans in accordance with references i and o.

c. Director, Joint Staff/J-3. Joint Staff/J-3 is the office of primary responsibility for the Global Command and Control System (GCCS), its successor, Joint Command and Control and the common operational picture in accordance with reference t. Joint Staff/J-3 will review all GCCS functional capabilities identified in CDDs and CPDs as well as non-materiel changes proposed in joint DCRs. It will review and comment on all JCIDS documents designated as JROC Interest or Joint Integration for operational suitability, sufficiency and supportability to the warfighter.

d. Director, Joint Staff/J-4

(1) Joint Staff/J-4 will certify that capabilities documents include mandatory IM language and will perform initial Joint Staff processing of Service and/or combatant command IM waiver requests.

(2) Joint Staff/J-4 is responsible for joint facilities reviews. It will review JCIDS documents for adequacy of facility planning and design criteria and ESOH considerations regarding basing and operation. Additionally, when documents include materiel solutions, Joint Staff/J-4 will review logistics and supportability issues, to include ensuring the system's initial and/or temporary facility requirements are within existing engineer force capabilities.

e. Director, Joint Staff/J-5. The Joint Staff/J-5 will act as CJCS Executive Agent for implementing JROC decisions regarding multinational and interagency requirements and joint DCRs with multinational or interagency impacts.

f. Director, Joint Staff/J-6

(1) Joint Staff/J-6 will perform IT and NSS interoperability and supportability certifications on all CDDs and CPDs designated as JROC Interest or Joint Integration in accordance with references h, i and j. This certification will include evaluation of compliance with the DOD Net-Centric Data Strategy (reference u) through collaboration with the communities of interest that apply to these capabilities. Additionally, Joint Staff/J-6 will be the lead for validating the NR-KPP and will resolve all issues associated with the NR-KPP (reference j).

(2) Joint Staff/J-6 will ensure that CDDs and CPDs include "embedded instrumentation" in system tradeoff studies and design analyses.

g. Director, Joint Staff/J-7

(1) As the CJCS lead for Joint Future Concepts, Joint Staff/J-7 will oversee the writing, development and revision of joint future concepts (reference l). It will review recommendations resulting from assessment and experimentation that will affect DOTMLPF and/or policy and forward those recommendations to the JROC through the appropriate FCB.

(2) Joint Doctrine, Training and Leadership/Education Review. Joint Staff/J-7 will work with combatant commanders, Services, Joint Staff, OSD and Defense agencies to ensure each joint DCR adequately addresses potential impacts on joint, multinational and interagency warfighting, and other operations with respect to joint doctrine (reference v), joint training (references w and/or x) and joint leadership and education (reference y) resulting from implementation of the proposed concept or employment of the system.

h. Director, Joint Staff/J-8. Director, Joint Staff/J-8, is the appointed JROC Secretary whose staff makes up the JROC Secretariat. Specific J-8 responsibilities are outlined in reference q. Other responsibilities within the directorate are as follows (specific divisions responsible are in parenthesis):

(1) Serve as the "Gatekeeper" of the JCIDS process (Vice Director, Joint Staff/J-8). With the assistance of J-6, J-7, the FCB working group leads and USJFCOM, the Vice Director will assign a JPD and evaluate all JCIDS documents. The Gatekeeper will make the initial determination on the following:

(a) JPD assignment and who has validation and/or approval authority.

(b) The lead and supporting FCBs.

(c) Assigned J-8 Capabilities and Acquisition Division lead.

(2) Coordinate with the MRB for those capabilities with a parallel development path between the defense and national intelligence communities.

(3) Evaluate the recommendations of the lead FCB and/or sponsor to change an assigned JPD and, if necessary, adjust the assigned JPD to appropriately reflect the joint warfighting impact of the proposal.

(4) Evaluate the recommendation of the lead and supporting FCBs to change the lead FCB assignment and, if necessary, the lead FCB.

(5) Certify munitions that comply with IM requirements (Joint Staff/J-8 DDFP). For those munitions that are not compliant, the appropriate FCB will evaluate the waiver request and DDFP will make a recommendation for approval or disapproval to the JROC.

(6) Review all joint DCRs and assess whether existing joint organizations effectively support integration and operational employment of the proposed system or concept (Joint Staff/J-8 Forces Division).

(7) Review all joint DCRs for proposed materiel solutions and staff materiel issues in accordance with the applicable sections of reference c (Joint Staff/J-8 Capabilities and Acquisition Division).

(8) Coordinate all joint DCRs entering JCIDS with the following responsibilities (Joint Staff/J-8 Joint Capabilities Division):

(a) Link JROC and JCIDS process to joint transformation efforts in current DOTMLPF and policy.

(b) Facilitate joint DCR staffing and review from entry into KM/DS through final JROC approval.

(c) Coordinate the objective assessment of joint DCRs by FPOs in each consideration of DOTMLPF and policy in accordance with reference c.

(d) Synchronize and track implementation of JROC-endorsed joint DCRs via the Joint Transformation Integration System (JTIS) database.

(e) Facilitate preparation of JROCMs from JROC-approved joint DCRs.

(f) Coordinate quarterly JTIS review meetings with the JCB to review status of outstanding joint DCRs.

(g) Attend JROC, JCB, FCB and FCB working group meetings when joint DCRs are being briefed or discussed to assist in facilitating the recommendations for JROC approval.

(9) Assess the readiness and responsiveness of CSAs to support operational forces (Joint Staff/J-8 Support Agency Review and Assessment Office).

(a) Review all CSA-submitted JCIDS documents to assess impact on identified CSA warfighting support capability gaps.

(b) Recommend CSA JCIDS actions to correct identified warfighting support capability gaps.

(c) Submit CSA JCIDS action recommendations to the Gatekeeper for dissemination to the appropriate FCB and action in accordance with reference z.

6. Services

a. The Services will coordinate on JROC Interest documents and may review Joint Integration and Independent documents developed by other sponsors to identify opportunities for cross-component utilization and harmonization of capabilities. This coordination and review may lead to a recommendation to change the JPD.

b. The Services are responsible for developing Service-specific operational concepts and experimenting within core competencies, supporting joint concept development with Service experimentation, providing feedback from the field, supporting joint experimentation, joint testing and overseeing integration of validated joint DCRs.

7. Combatant Commands

a. The combatant commands have been assigned specific mission responsibilities in the UCP. For those missions, they will comment on all capabilities documents that fall within their assigned missions and act as the advocate or advisor to the JROC as required. The combatant commands will be provided the opportunity to review and comment on all documents designated as JROC Interest before they are validated and approved. Combatant commands may review and comment on documents designated as Joint Integration during J-2 and J-6 certification processes prior to sponsor validation and approval.

b. Combatant commands may conduct JCIDS functional area and functional needs analyses and submit a JCD that identifies capabilities needed and gaps or redundancies that exist (see reference c). The JROC will then task the appropriate sponsor(s) to perform the FSA and submit complete ICD(s) for approval. The combatant command may perform the FSA with its resources and submit the completed ICD for approval. The combatant command leverages the expertise of its components and may coordinate and receive assistance from a sponsor in this effort. In many circumstances, it may be appropriate for the combatant commander to identify initiatives to the responsible component. The component may then coordinate appropriate analysis and documentation activities.

c. US Joint Forces Command

(1) Commander, USJFCOM (CDRUSJFCOM), is functionally responsible to the Chairman for leading joint concept development and experimentation (CDE) by integrating joint experimentation into the development of all joint concepts. As the DOD Executive Agent for joint warfighting experimentation, CDRUSJFCOM develops combined operational warfighting concepts and integrates multinational and interagency warfighting transformation efforts with joint CDE in coordination with other combatant commands. USJFCOM also coordinates the efforts of the Services, combatant commands and Defense agencies to support joint interoperability and future joint warfighting capabilities and will coordinate with Joint Staff/J-7 and concept authors to translate actionable recommendations into JCDs and joint DCRs as appropriate. They will forward JCDs to Joint Staff/J-8 for JCIDS analysis and forward joint DCRs resulting from joint experimentation to the JROC through the appropriate FCB for coordination, recommendation and endorsement.

(2) CDRUSJFCOM will serve as the Chairman's advocate for joint warfighting interoperability. USJFCOM will provide the warfighter perspective during the development of joint concepts and integrated architectures to ensure that joint forces have interoperable systems. In addition to the responsibilities of other combatant commanders, USJFCOM will support the Chairman in the following areas:

(a) Support the Gatekeeper by making recommendations regarding the joint potential designation and the lead and supporting FCBs assigned to JCIDS proposals.

(b) Comment during the JCIDS staffing process on whether Net-Ready KPP contained in CDD and CPD proposals meet recognized standards in accordance with references h, i and j.

(c) Conduct training workshops that directly address the JCIDS process. The main goal of the training is to help Joint Staff, Service,

combatant commander and agency staff personnel understand joint capability development, the impact of the increased DOD commitment to ensuring interoperability of warfighter systems, how to achieve program milestones and how to reduce the cycle time required for document approval. As follow-on to the training, USJFCOM also provides informal document reviews and coordination. Resources, training materials, important links and points of contact are hosted on the USJFCOM website at http://www.teao.saic.com/cbrtraining.

d. US Special Operations Command. Congress has given USSOCOM specific title 10 authority within a unique major force appropriation category (reference a, section 167). As a result, USSOCOM can establish, validate and approve USSOCOM capabilities, budget for Joint Integration and Independent programs and resource both special operations-peculiar materiel acquisition programs and joint DCRs. USSOCOM will forward all capabilities documents to the Gatekeeper for initial determination of JPD and review by an FCB. Capabilities documents assigned a JPD of Independent or Joint Integration will be returned to USSOCOM for action. JROC Interest capabilities documents will be forwarded for JROC validation and approval. In the event USSOCOM identifies joint DCRs that may benefit other DOD components, the joint DCR process provides a venue to submit proposals for JROC consideration. The Commander, USSOCOM, exercises his responsibility to ensure the interoperability of special operations equipment and forces.

8. Other DOD Components

a. Coordinate on JCIDS documents developed by other sponsors to identify opportunities for cross-component utilization and harmonization of capabilities. Make recommendations to the FCB on documents designated as Joint Integration or Independent that may have broader applicability and therefore should change to JROC Interest designation.

b. Defense agencies may develop their own JCIDS documents as a DOD component or be asked to manage the results of changes initiated by the combatant commands, Services or Joint Staff.

(INTENTIONALLY BLANK)

ENCLOSURE C

REFERENCES

a. Title 10, United States Code, sections 153, 163, 167 and 181.

b. "Transformation Planning Guidance," Secretary of Defense, April 2003.

c. CJCSM 3170.01 Series, "Operation of the Joint Capabilities Integration and Development System."

d. DODD 5000.1, 12 May 2003, "The Defense Acquisition System."

e. DODI 5000.2, 12 May 2003, "Operation of the Defense Acquisition System."

f. National Security Space Acquisition Policy 03-01, December 2004, "Guidance for DOD Space System Acquisition Process."

g. JROCM 095-04, 14 June 2004, "Capstone Requirements Document Conversion Guidance."

h. DODD 4630.5, 30 June 2004, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)."

i. DODI 4630.8, 5 May 2004, "Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)."

j. CJCSI 6212.01 Series, "Interoperability and Supportability of Information Technology and National Security Systems."

k. DODD 5010.41, 23 February 1998, "Joint Test and Evaluation (JT&E) Program."

l. CJCSI 3010.02 Series, "Joint Future Concepts Process."

m. CJCSI 3137.01 Series, "The Functional Capabilities Board Process."

n. "DOD Architecture Framework," 9 February 2004.

o. CJCSI 3312.01 Series, "Joint Military Intelligence Requirements Certification."

p. Title 10, United States Code, Chapter 141, section 2389.

q. CJCSI 5123.01 Series, "Charter of the Joint Requirements Oversight Council."

r. CJCSM 1600.01 Series, "Joint Manpower Program Procedures"

s. CJCSI 1301.01 Series, "Policies and Procedures to Assign Individuals to Meet Combatant Command Mission-Related Temporary Duty Requirements."

t. CJCSI 6721.01 Series, "Global Command and Control Management Structure."

u. DODD 8320.02, 2 December 2004, "Data Sharing in a Net-Centric Department of Defense."

v. CJCSI 5120.02 Series, "Joint Doctrine Development System."

w. CJCSI 3500.01 Series, "Joint Training Policy for the Armed Forces of the United States."

x. CJCSI 3500.02 Series, "Joint Training Master Plan 2002 for the Armed Forces of the United States."

y. CJCSI 1800.01 Series, "Officer Professional Military Education Policy."

z. CJCSI 3460.01 Series, "Combat Support Agency Review Team Assessments."

aa. "Joint Operations Concepts," Secretary of Defense, November 2003.

GLOSSARY

PART I - ACRONYMS

ACAT	acquisition category
ACTD	Advanced Concept Technology Demonstration
AIS	automated information system
AoA	analysis of alternatives
APB	acquisition program baseline
ASD(NII)	Assistant Secretary of Defense (Networks and Information Integration)
ATD	Advanced Technology Demonstration
CBA	capabilities-based assessment
CDD	capability development document
CDE	concept development and experimentation
CDRUSJFCOM	Commander, US Joint Forces Command
CIO	Chief Information Officer
CJCS	Chairman of the Joint Chiefs of Staff
CJCSI	Chairman of the Joint Chiefs of Staff Instruction
CJCSM	Chairman of the Joint Chiefs of Staff Manual
CONOPS	Concept of Operations
CPD	capability production document
CRD	capstone requirements document
CSA	combat support agency
DCI	Director of Central Intelligence
DCR	doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOTMLPF) change recommendation
DDFP	Deputy Director for Force Protection
DIA	Defense Intelligence Agency
DOD	Department of Defense
DODD	Department of Defense directive
DODI	Department of Defense instruction
DOTMLPF	doctrine, organization, training, materiel, leadership and education, personnel, and facilities
DPA&E	Director, Program Analysis and Evaluation
DPS	Defense Planning Scenarios
ESOH	environmental, safety, and occupational health
FAA	functional area analysis
FCB	Functional Capabilities Board

FNA	functional needs analysis
FoS	family of systems
FPO	functional process owner
FSA	functional solution analysis
GCCS	Global Command and Control System
HSI	human systems integration
ICD	initial capabilities document
IM	insensitive munitions
IT	information technology
J-8	Joint Staff Force Structure, Resources and Assessment directorate
JCB	Joint Capabilities Board
JCD	joint capabilities document
JCIDS	Joint Capabilities Integration and Development System
JOpsC	Joint Operations Concepts
JPD	joint potential designator
JROC	Joint Requirements Oversight Council
JROCM	Joint Requirements Oversight Council memorandum
JTIS	Joint Transformation Integration System
JWSTP	Joint Warfighting Science and Technology Plan
KM/DS	Knowledge Management/Decision Support
KPP	key performance parameter
MDA	milestone decision authority
MNS	mission needs statement
MRB	Mission Requirements Board
MUA	military utility assessment
NR-KPP	net-ready key performance parameter
NSS	National Security Systems
NSSAP	National Security Space Acquisition Policy
ORD	operational requirements document
OSD	Office of the Secretary of Defense
PIA	post independent analysis
SDD	system development and demonstration
SoS	system of systems
UCP	Unified Command Plan

USD(AT&L)	Under Secretary of Defense for Acquisition, Technology, and Logistics
USJFCOM	United States Joint Forces Command
USSOCOM	United States Special Operations Command

PART II – DEFINITIONS

acquisition category (ACAT) - Categories established to facilitate decentralized decision-making and execution and compliance with statutorily imposed requirements. ACATs determine the level of review, decision authority and applicable procedures. Reference e provides the specific definition for each ACAT.

acquisition program baseline (APB) - Each program's APB is developed and updated by the program manager and will govern the activity by prescribing the cost, schedule and performance constraints in the phase succeeding the milestone for which it was developed. The APB captures the user capability needs, including key performance parameters, which are copied verbatim from the capability development document.

Advanced Concept Technology Demonstration (ACTD) - A demonstration of the military utility of a significant new technology and an assessment to clearly establish operational utility and system integrity.

Advanced Technology Demonstration (ATD) - A demonstration of the maturity and potential of advanced technologies for enhanced military operational capability or cost-effectiveness. ATDs are identified, sponsored and funded by the Services and agencies.

analysis of alternatives (AoA) - The evaluation of the performance, operational effectiveness, operational suitability and estimated costs of alternative systems to meet a mission capability. The AoA assesses the advantages and disadvantages of alternatives being considered to satisfy capabilities, including the sensitivity of each alternative to possible changes in key assumptions or variables. The AoA is one of the key inputs to defining the system capabilities in the capability development document.

approval - The formal or official sanction of the identified capability described in the capability documentation. Approval also certifies that the documentation has been subject to the uniform process established by the DOD 5000 series.

architecture - The structure of components, their relationships and the principles and guidelines governing their design and evolution over time.

attribute - A quantitative or qualitative characteristic of an element or its actions.

automated information system - A combination of computer hardware and computer software, data and/or telecommunications that performs functions such as collecting, processing, storing, transmitting and displaying information. Excluded are computer resources, both hardware and software,

that are: physically part of, dedicated to or essential in real time to the mission performance of weapons systems; used for weapon system specialized training, simulation, diagnostic test and maintenance or calibration; or used for research and development of weapon systems.

capability - The ability to achieve a desired effect under specified standards and conditions through combinations of means and ways to perform a set of tasks. It is defined by an operational user and expressed in broad operational terms in the format of a joint or initial capabilities document or a joint doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) change recommendation. In the case of materiel proposals, the definition will progressively evolve to DOTMLPF performance attributes identified in the capability development document and the capability production document.

capabilities-based assessment (CBA) – The Joint Capabilities Integration and Development System analysis process that includes the functional area, needs and solution analyses and post independent analysis. The results of the CBA are used to develop a joint or initial capabilities document.

capability development document (CDD) - A document that captures the information necessary to develop a proposed program(s), normally using an evolutionary acquisition strategy. The CDD outlines an affordable increment of militarily useful, logistically supportable and technically mature capability.

capability gaps - The inability to achieve a desired effect under specified standards and conditions through combinations of means and ways to perform a set of tasks. The gap may be the result of no existing capability or lack of proficiency or sufficiency in existing capability.

capability production document - A document that addresses the production elements specific to a single increment of an acquisition program.

certification - A statement of adequacy provided by a responsible agency for a specific area of concern in support of the validation process.

comment priorities

a. critical - A critical comment indicates nonconcurrence in the document, for both the O-6 and flag review, until the comment is satisfactorily resolved.

b. substantive - A substantive comment is provided because a section in the document appears to be or is potentially unnecessary, incorrect, misleading, confusing or inconsistent with other sections.

c. administrative - An administrative comment corrects what appears to be a typographical, format or grammatical error.

concept of operations (CONOPS) - A verbal or graphic statement, in broad outline, of a commander's assumptions or intent in regard to an operation or series of operations. CONOPS frequently is embodied in campaign plans and operation plans; in the latter case, particularly when the plans cover a series of connected operations to be carried out simultaneously or in succession. CONOPS is designed to give an overall picture of the operation. It is included primarily for additional clarity of purpose. Also called commander's concept.

DOD component - The DOD components consist of the Office of the Secretary of Defense, the Military Departments, the Chairman of the Joint Chiefs of Staff, the combatant commands, the Office of the Inspector General of the Department of Defense, the Defense agencies, DOD field activities and all other organizational entities within the Department of Defense.

DOD 5000 series - DOD 5000 series refers collectively to DODD 5000.1 and DODI 5000.2, references d and e, respectively.

embedded instrumentation - Data collection and processing capabilities, integrated into the design of a system for one or more of the following uses: diagnostics, prognostics, testing or training.

environmental quality - The condition of the following elements that make up the environment: flora, fauna, air, water, land and cultural resources.

environmental, safety and occupational health – Includes environmental quality, environmental health, fire protection, ground safety, flight safety, weapons (munitions, explosives, missile and nuclear) safety, space safety, occupational safety and occupational health.

evolutionary acquisition - The preferred DOD strategy for rapid acquisition of mature technology for the user. An evolutionary approach delivers capability in increments, recognizing up-front the need for future capability improvements.

Family of Joint Future Concepts – Incorporates strategic guidance and enduring national interests through an overarching concept. The Joint Operations Concept is written in order to provide overarching guidance to the joint concept community of how the future joint force should operate in 10 to 20 years. This guides the selection, writing and development of joint operating concepts, joint functional concepts and joint integrating concepts. These concepts together constitute the Family of Joint Future Concepts.

family of systems (FoS) - A set of systems that provide similar capabilities through different approaches to achieve similar or complementary effects. For instance, the warfighter may need the capability to track moving targets. The FoS that provides this capability could include unmanned or manned aerial vehicles with appropriate sensors, a space-based sensor platform or a special

operations capability. Each can provide the ability to track moving targets, but with differing characteristics of persistence, accuracy, timeliness, etc.

functional area - A broad scope of related joint warfighting skills and attributes that may span the range of military operations. Specific skill groupings that make up the functional areas are approved by the Joint Requirements Oversight Council.

Functional Capabilities Board - A permanently established body that is responsible for the organization, analysis and prioritization of joint warfighting capabilities within an assigned functional area.

Functional Capabilities Board (FCB) working group - The analytic support for the FCBs. They perform the review and assessment of Joint Capabilities Integration and Development System documents, work with the sponsors to resolve issues and make recommendations to the FCB.

functional process owners (FPO) - Joint Staff directorates that have the responsibility for the joint doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF)-selected "joint processes," as shown in the table below.

Critical Consideration DOTMLPF FPO

Joint Doctrine	Joint Staff/J-7
Joint Organizations	Joint Staff/J-8 (J-1 and J-5 support)
Joint Training	Joint Staff/J-7
Joint Materiel	Joint Staff/J-8
Joint Leadership and Education	Joint Staff/J-7
Joint Personnel	Joint Staff/J-1
Joint Facilities	Joint Staff/J-4

Gatekeeper - That individual who makes the initial joint potential designation of Joint Capabilities Integration and Development System proposals. This individual will also make a determination of the lead and supporting Functional Capabilities Boards (FCBs) for capability proposals. The Gatekeeper is supported in these functions by USJFCOM, Joint Staff/J-6, Joint Staff/J-7, and the FCB working group leads. The Vice Director, Joint Staff/J-8 serves as the Gatekeeper.

human systems integration – Includes the integrated and comprehensive analysis, design and assessment of requirements, concepts and resources for system manpower, personnel, training, safety and occupational health, habitability, personnel survivability and human factors engineering.

increment - A militarily useful and supportable operational capability that can be effectively developed, produced or acquired, deployed and sustained. Each increment of capability will have its own set of threshold and objective values set by the user. Spiral development is an instance of an incremental development strategy where the end state is not known. Technology is spiraled to maturity and injected into the delivery of an increment of capability.

information assurance - Information operations that protect and defend information and information systems by ensuring their availability, integrity, authentication, confidentiality and non-repudiation. This includes providing for restoration of information systems by incorporating protection, detection and reaction capabilities.

information technology (IT) - Any equipment, or interconnected system or subsystem of equipment, that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission or reception of data or information by the executive agency. This includes equipment used by a component directly, or used by a contractor under a contract with the component, which (i) requires the use of such equipment, or (ii) requires the use, to a significant extent, of such equipment in the performance of a service or the furnishing of a product. The term "IT" also includes computers, ancillary equipment, software, firmware and similar procedures, services (including support services) and related resources. Notwithstanding the above, the term "IT" does not include any equipment that is acquired by a federal contractor incidental to a federal contract. The term "IT" includes National Security Systems.

initial capabilities document (ICD) - Documents the need for a materiel approach, or an approach that is a combination of materiel and non-materiel, to satisfy specific capability gap(s). It defines the capability gap(s) in terms of the functional area, the relevant range of military operations, desired effects, time and doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) and policy implications and constraints. The ICD summarizes the results of the DOTMLPF and policy analysis and the DOTMLPF approaches (materiel and non-materiel) that may deliver the required capability. The outcome of an ICD could be one or more joint DCRs or capability development documents.

insensitive munitions - Munitions that minimize the probability of inadvertent initiation and the severity of subsequent collateral damage as a result of unplanned, external stimuli.

integrated architecture - An architecture consisting of multiple views or perspectives (operational view, systems view and technical standards view) that facilitates integration and promotes interoperability across capabilities and among related integrated architectures.

interoperability - The ability of systems, units or forces to provide data, information, materiel and services to and accept the same from other systems, units or forces and to use the data, information, materiel and services so exchanged to enable them to operate effectively together. Information technology and National Security Systems interoperability includes both the technical exchange of information and the end-to-end operational effectiveness of that exchanged information as required for mission accomplishment.

Joint Capabilities Board (JCB) - The JCB functions to assist the Joint Requirements Oversight Council (JROC) in carrying out its duties and responsibilities. The JCB reviews and, if appropriate, endorses all Joint Capabilities Integration and Development System and doctrine, organization, training, materiel, leadership and education, personnel, and facilities proposals prior to their submission to the JROC. The JCB is chaired by the Director, Joint Staff/J-8. It is comprised of general and flag officer representatives of the Services.

Joint Capabilities Document (JCD) - The JCD identifies a set of capabilities that support a defined mission area utilizing associated Family of Joint Future Concepts, CONOPS or Unified Command Plan-assigned missions. The capabilities are identified by analyzing what is required across all functional areas to accomplish the mission. The gaps or redundancies are then identified by comparing the capability needs to the capabilities provided by existing or planned systems. The JCD will be used as a baseline for one or more functional solution analyses leading to the appropriate Initial Capabilities Document or joint doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) change recommendations, but cannot be used for the development of capability development or capability production documents. The JCD will be updated as changes are made to the supported Family of Joint Future Concepts, CONOPS or assigned missions.

joint doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) change recommendation – A recommendation for changes to existing joint resources when such changes are not associated with a new defense acquisition program.

a. joint doctrine – Fundamental principles that guide the employment of US military forces in coordinated action toward a common objective. Though neither policy nor strategy, joint doctrine serves to make US policy and strategy effective in the application of US military power. Joint doctrine is based on extant capabilities. Joint doctrine is authoritative guidance and will be

followed except when, in the judgment of the commander, exceptional circumstances dictate otherwise. (CJCSI 5120.02)

b. joint organization - A [joint] unit or element with varied functions enabled by a structure through which individuals cooperate systematically to accomplish a common mission and directly provide or support [joint] warfighting capabilities. Subordinate units/elements coordinate with other units/elements and, as a whole, enable the higher-level [joint] unit/element to accomplish its mission. This includes the joint manpower (military, civilian and contractor support) required to operate, sustain and reconstitute joint warfighting capabilities.

c. joint training – Military training based on joint doctrine or joint tactics, techniques and procedures to prepare joint forces and/or joint staffs to respond to strategic and operational requirements deemed necessary by combatant commanders to execute their assigned missions. Joint training involves forces of two or more Military Departments interacting with a combatant commander or subordinate joint force commander; involves joint forces and/or joint staffs; and is conducted using joint doctrine or joint tactics, techniques and procedures. (CJCSM 3500.03A)

d. joint materiel – All items (including ships, tanks, self-propelled weapons, aircraft, etc., and related spares, repair parts and support equipment, but excluding real property, installations and utilities) necessary to equip, operate, maintain and support [joint] military activities without distinction as to its application for administrative or combat purposes. (JP 1-02)

e. joint leadership and education – Professional development of the joint commander is the product of a learning continuum that comprises training, experience, education and self-improvement. The role of Professional Military Education and Joint Professional Military Education is to provide the education needed to complement training, experience and self-improvement to produce the most professionally competent individual possible.

f. joint personnel – The personnel component primarily ensures that qualified personnel exist to support joint capabilities. This is accomplished through synchronized efforts of joint force commanders and Service components to optimize personnel support to the joint force to ensure success of ongoing peacetime, contingency and wartime operations.

g. joint facilities – Real property consisting of one or more of the following: a building, a structure, a utility system, pavement and underlying land. Key facilities are selected command installations and industrial facilities of primary importance to the support of military operations or military production programs. A key facilities list is prepared under the policy direction of the Joint Chiefs of Staff.

joint experimentation - An iterative process for developing and assessing concept-based hypotheses to identify and recommend the best value-added solutions for changes in doctrine, organization, training, materiel, leadership and education, personnel, and facilities and policy required to achieve significant advances in future joint operational capabilities.

joint force - A general term applied to a force composed of significant elements, assigned or attached, of two or more Military Departments operating under a single joint force commander.

Joint Operations Concepts (JOpsC) - The JOpsC (reference aa) is the overarching concept that guides the development of future joint force capabilities. It broadly describes how the joint force is expected to operate 10-20 years in the future in all domains across the range of military operations within a multilateral environment in collaboration with interagency and multinational partners. The JOpsC describes the proposed end states derived from strategy as military problems and the key characteristics of the future joint force.

joint potential designator - A designation assigned by the Gatekeeper to specify Joint Capabilities Integration and Development System validation, approval and interoperability expectations.

a. "JROC Interest" designation will apply to all acquisition category (ACAT) I/IA programs and ACAT II and below programs where the capabilities have a significant impact on joint warfighting or have a potential impact across Services. All joint doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) change recommendations will also be designated JROC Interest. This designation may also apply to intelligence capabilities that support DOD and national intelligence requirements. These documents will receive appropriate certifications and be staffed through the JROC for validation and approval. An exception may be made for ACAT IAM programs without significant impact on joint warfighting (i.e., business oriented systems). These programs may be designated either Joint Integration or Independent.

b. "Joint Integration" designation will apply to ACAT II and below programs where the concepts and/or systems associated with the document do not significantly affect the joint force and an expanded review is not required, but staffing is required for applicable certifications (information technology and National Security Systems interoperability, intelligence and/or insensitive munitions). Once the required certification(s) are completed, the proposal may be reviewed by the Functional Capabilities Board (FCB). Joint Integration proposals are validated and approved by the sponsoring component.

c. "Independent" designation will apply to ACAT II and below programs where the concepts and/or systems associated with the document do not significantly affect the joint force, an expanded review is not required and no certifications are required. Once designated Independent, the FCB may review the proposal. These documents are returned to the sponsoring component for validation and approval.

Joint Requirements Oversight Council memorandum (JROCM) - Official JROC correspondence generally directed to an audience(s) external to the JROC. JROCMs are usually decisional in nature.

joint tasks - To ascertain joint capabilities that can immediately direct the near and mid-term objectives of the Future Years Defense Plan, joint tasks must be determined on an annual basis. The Joint Chiefs of Staff, in coordination with the Services and combatant commands, will prioritize a limited number of joint tasks (including capability prototypes) annually that are based on combatant commander input, experimentation and joint lessons learned. The joint tasks will be developed to meet the joint force objective of full spectrum dominance as informed by the Joint Operations Concepts. The joint tasks will primarily focus on joint military operations at the operational and strategic level of war and crisis resolution as informed by the Family of Joint Future Concepts. The development of these joint tasks will determine the division of Service responsibilities and permit the distillation of quick-win joint capabilities. The resulting Service responsibilities and capabilities from these joint tasks will serve to inform programming decisions and the Joint Capabilities Integration and Development System process.

key decision point – Major decision points that separate the phases of a DOD space program.

key performance parameters (KPP) - Those attributes or characteristics of a system that are considered critical or essential to the development of an effective military capability and those attributes that make a significant contribution to the key characteristics as defined in the Joint Operations Concepts. KPPs are validated by the Joint Requirements Oversight Council (JROC) for JROC Interest documents, and by the DOD component for Joint Integration or Independent documents. Capability development and capability production document KPPs are included verbatim in the acquisition program baseline.

logistic support - Logistic support encompasses the logistic services, materiel and transportation required to support the continental United States-based and worldwide-deployed forces.

materiel solution - Correction of a deficiency, satisfaction of a capability gap or incorporation of new technology that results in the development, acquisition,

procurement or fielding of a new item (including ships, tanks, self-propelled weapons, aircraft, etc., and related software, spares, repair parts and support equipment, but excluding real property, installations and utilities) necessary to equip, operate, maintain and support military activities without disruption as to its application for administrative or combat purposes. In the case of family of systems and system of systems approaches, an individual materiel solution may not fully satisfy a necessary capability gap on its own.

measures of effectiveness - Measures designed to correspond to accomplishment of mission objectives and achievement of desired effects.

milestones - Major decision points that separate the phases of an acquisition program.

milestone decision authority (MDA) - The individual designated, in accordance with criteria established by the Under Secretary of Defense for Acquisition, Technology and Logistics, the Assistant Secretary of Defense (Networks and Information Integration) (for Automated Information System acquisition programs) or by the Under Secretary of the Air Force (as the DOD Space MDA) to approve entry of an acquisition program into the next phase.

Military Department - One of the departments within the Department of Defense created by the National Security Act of 1947, as amended.

militarily useful capability - A capability that achieves military objectives through operational effectiveness, suitability and availability, which is interoperable with related systems and processes, transportable and sustainable when and where needed, and at costs known to be affordable over the long term.

Mission Requirements Board (MRB) - The MRB manages the national requirements process that reviews, validates and approves national requirements for future intelligence capabilities and systems. It is the senior validation and approval authority for future intelligence requirements funded within the National Foreign Intelligence Program, and provides advice and council on future requirements funded outside that body.

National Security Systems - Telecommunications and information systems operated by the Department of Defense, the functions, operation or use of which involves (1) intelligence activities; (2) cryptologic activities related to national security; (3) the command and control of military forces; (4) equipment that is an integral part of a weapon or weapons systems; or (5) is critical to the direct fulfillment of military or intelligence missions. Subsection (5) in the preceding sentence does not include procurement of automatic data processing equipment or services to be used for routine administrative and business applications (including payroll, finance, logistics and personnel management applications).

net-centric - Relating to or representing the attributes of net-centricity. Net-centricity is a robust, globally interconnected network environment (including infrastructure, systems, processes and people) in which data is shared timely and seamlessly among users, applications and platforms. Net-centricity enables substantially improved military situational awareness and significantly shortened decision-making cycles.

net-ready key performance parameter (NR-KPP) - The NR-KPP assesses information needs, information timeliness, information assurance and net-ready attributes required for both the technical exchange of information and the end-to-end operational effectiveness of that exchange. The NR-KPP consists of verifiable performance measures and associated metrics required to evaluate the timely, accurate and complete exchange and use of information to satisfy information needs for a given capability. The NR-KPP is comprised of the following elements:

a. Compliance with the Net-Centric Operations and Warfare Reference Model.

b. Compliance with applicable Global Information Grid key interface profiles.

c. Verification of compliance with DOD information assurance requirements.

d. Supporting integrated architecture products required to assess information exchange and use for a given capability.

non-developmental item - Any previously developed item used exclusively for governmental purposes by a federal agency, a state or local government or a foreign government with which the United States has a mutual defense cooperation agreement.

non-materiel solution - Changes in doctrine, organization, training, materiel, leadership and education, personnel, facilities, or policy (including all human systems integration domains) to satisfy identified functional capabilities. The materiel portion is restricted to commercial or nondevelopmental items, which may be purchased commercially, or by purchasing more systems from an existing materiel program.

objective value - The desired operational goal associated with a performance attribute, beyond which any gain in utility does not warrant additional expenditure. The objective value is an operationally significant increment above the threshold. An objective value may be the same as the threshold when an operationally significant increment above the threshold is not significant or useful.

operational effectiveness - Measure of the overall ability to accomplish a mission when used by representative personnel in the environment planned or expected for operational employment of the system considering organization, doctrine, supportability, survivability, vulnerability and threat.

operational suitability - The degree to which a system can be placed and sustained satisfactorily in field use with consideration given to availability, compatibility, transportability, interoperability, reliability, wartime usage rates, maintainability, environmental, safety, and occupational health risks, human factors, habitability, manpower, logistics, supportability, logistics supportability, natural environment effects and impacts, documentation and training requirements.

operator - An operational command or agency that employs the acquired system for the benefit of users. Operators may also be users.

sponsor - The DOD component, principal staff assistant or domain owner responsible for all common documentation, periodic reporting and funding actions required to support the capabilities development and acquisition process for a specific capability proposal.

supportability – A key component of system availability. It includes design, technical support data and maintenance procedures to facilitate detection, isolation and timely repair and/or replacement of system anomalies. This includes factors such as diagnostics, prognostics, real time maintenance data collection and human systems integration considerations.

sustainability - The ability to maintain the necessary level and duration of operational activity to achieve military objectives. Sustainability is a function of providing for and maintaining those levels of ready forces, materiel and consumables necessary to support military effort.

sustainment - The provision of personnel, training, logistic and other support required to maintain and prolong operations or combat until successful accomplishment or revision of the mission or of the national objective.

system of systems (SoS) - A set or arrangement of interdependent systems that are related or connected to provide a given capability. The loss of any part of the system will significantly degrade the performance or capabilities of the whole. The development of a SoS solution will involve trade space between the systems as well as within an individual system performance. An example of a SoS would be a combat aircraft. While the aircraft may be developed as a single system, it could incorporate subsystems developed for other aircraft. For example, the radar from an existing aircraft may be incorporated into the one being developed rather than developing a new radar. The SoS in this case would be the airframe, engines, radar, avionics, etc. that make up the entire combat aircraft capability.

threshold value - A minimum acceptable operational value below which the utility of the system becomes questionable.

user - An operational command or agency that receives or will receive benefit from the acquired system. Combatant commanders and their Service component commands are the users. There may be more than one user for a system. Because the Service component commands are required to organize, equip and train forces for the combatant commanders, they are seen as users for systems. The Chiefs of the Services and heads of other DOD components are validation and approval authorities and are not viewed as users.

user representative - A command or agency that has been formally designated to represent single or multiple users in the capabilities and acquisition process. The Services and the Service components of the combatant commanders are normally the user representatives. There should only be one user representative for a system.

validation - The review of documentation by an operational authority other than the user to confirm the operational capability. Validation is a precursor to approval.

validation authority - The individual within the DOD components charged with overall capability definition and validation. In his role as Chairman of the Joint Requirements Oversight Council (JROC), the Vice Chairman of the Joint Chiefs of Staff is the validation authority for all potential major defense acquisition programs. The validation authority for Joint Capabilities Integration and Development System issues is dependent upon the joint potential designator of the program or initiative as specified below:

a. JROC Interest - JROC

b. Joint Integration - Sponsor

c. Independent – Sponsor