JOINT CAPABILITIES INTEGRATION AND DEVELOPMENT SYSTEM

References: 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 (CJCS) and the Joint Requirements Oversight Council (JROC) in identifying, assessing and prioritizing joint military capability needs as specified in reference a. Validated and approved JCIDS documents provide the Chairman’s advice and assessment in support of these statutory mandates. Additionally, the JCIDS is a key element in the Chairman’s 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.


3. **Applicability.** In accordance with references d and e, 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 and e.

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 challenges of the future. Meeting these challenges involves a transformation that requires the ability to project and sustain joint forces and to conduct flexible, distributed and highly networked operations. 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.

b. To accomplish this transformation, DOD is implementing processes that assess existing and proposed capabilities in light of their contribution to future joint concepts. The process must produce capability proposals that consider the full range of doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOTMLPF) solutions in order to advance joint warfighting.

c. New capabilities must be crafted to deliver technologically sound, sustainable and affordable increments of militarily useful capability. All capabilities shall be developed and procured to leverage the unique attributes of other DOD Components, international systems from allies and cooperative opportunities. Potential solutions may include a family of systems (FoS) that takes different approaches to filling the capability gap, each addressing operational considerations in a different way. Alternatively, the capability 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/materiel developers. The process to identify capability gaps and potential solutions must be supported by a robust analytical process which incorporates innovative practices—including best commercial practices, collaborative environments, modeling and simulation and electronic business solutions.

d. This instruction does not preclude the need to refer to the DOD 5000 series documents for guidance and direction on defense acquisition. Document formats and processes in reference c are mandatory for all DOD capabilities documents for all acquisition category (ACAT) programs. Application of a common process and these common formats 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 (AIS), shipbuilding and national security space systems.

e. Upon implementation of this instruction, the Knowledge Management /Decision Support (KM/DS) Tool will replace the Joint Command, Control, Communications, and Intelligence (C4I) Program Assessment Tool (JCPAT) to support processing, coordination and repository functions for JCIDS documents. Documents established in staffing at the time of implementation of this instruction will convert to KM/DS at the next key-staffing milestone. The Web site for KM/DS is https://siprweb1.js.smil.mil/pls/jrcz. JCPAT will continue be used to support other Joint Staff functions.
f. Documents that were approved under the Requirements Generation System remain valid, except as detailed below:

(1) Capstone Requirements Documents (CRD) that have already been approved by the JROC will continue to be valid until they are absorbed into appropriate integrated architectures and retired. This instruction continues to support new CRDs that are specifically directed for development by the JROC. Within 60 days of approval of this instruction, a JROC memorandum (JROCM) will be published to provide a listing of CRDs approved for continuing use. This JROCM will also provide a listing of CRDs approved for development by the JROC. This JROCM will be maintained on KM/DS to facilitate Capability Development Document (CDD) and Capability Production Document (CPD) crosswalks.

(2) Mission Need Statements (MNSs) that have initiated staffing in the JCPAT will continue through the normal staffing process. No new MNSs will be accepted for staffing. Initial Capabilities Documents (ICD), 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 MNS 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) Operational Requirements Documents (ORD) will be accepted for Joint Staff review for a period of 6 months after approval of this document. After the 6-month period, only ORD updates/annexes, CDDs and CPDs developed in accordance with this instruction will be accepted. 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 for up to 2 years following approval of this instruction.

5. Definitions. See Enclosure GL, Part II.

6. Responsibilities. See Enclosure B.

7. Summary of Changes

a. This revision reflects a complete rewrite of the document. Staffing procedures and guidance to support the development of ICDs, CDDs, CPDs and CRDs are provided in reference c.

b. Upon implementation, JCIDS will provide:

(1) An enhanced methodology utilizing joint concepts that will:
(a) Identify and describe existing or future shortcomings, as identified against current or future capabilities or as measured against current or projected threat capabilities.

(b) Identify and describe redundancies in warfighting capabilities.

(c) Describe the attributes of effective solutions.

(d) Identify the most effective approach or combination of approaches to resolve those shortcomings.

(2) A broader review of materiel capability proposals developed throughout the Department independent of the ACAT of the proposal.

(3) Better linkage to the acquisition process by engaging the acquisition agency early, as capabilities proposals are developed.

(4) Prioritization of joint warfighting capability gaps.

(5) Improved prioritization of validated joint warfighting capability proposals.

(6) Better definition of the DOTMLPF implications resulting from the development and fielding of a new capability.

(7) Improved coordination with other USG departments or national agencies.

c. Ongoing efforts supporting the development and implementation of joint concepts and integrated architectures are not governed within the JCIDS process or this instruction. This document does, however, set the stage for the transition to a process founded on joint concepts and integrated architectures. Future revisions of this instruction and the companion manual will complete this transition.

d. AISs remain subject to this document.

e. JCIDS proposals with nonmateriel DOTMLPF implications require JROC approval and DOTMLPF implementation in accordance with references f and g.

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 /doctrine. 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.

RICHARD B. MYERS  
Chairman  
of the Joint Chiefs of Staff

Enclosures:  
A -- Joint Capabilities Integration and Development System (JCIDS) Process  
B -- Responsibilities  
C -- References  
GL -- Glossary
(1) **Initial Capabilities Document (ICD)**

(a) The ICD makes the case to establish the need for a materiel approach to resolve a specific capability gap derived from the JCIDS analysis process. The ICD supports the analysis of alternatives (AoA) (for ACAT I/IA programs), the Technology Development Strategy, the Milestone A acquisition decision, and subsequent Technology Development phase activities as described in reference e. 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 measures of effectiveness, e.g., distance, effect (including scale), etc. ICDs will eventually be based entirely on integrated architectures.

(b) The ICD also captures the evaluation of different materiel approaches that were proposed to provide the required capability. The ICD proposes the recommended materiel approach(s) based on analysis of the relative cost, efficacy, sustainability, environmental quality impacts and risk posed by the materiel approach(s) under consideration. The analysis that supports the ICD is the beginning of the Analysis of Alternatives (AoA) 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 appropriate JWCA teams while developing their ICD. The JWCA team, in turn, will advise the Director, Program Analysis and Evaluation (D, PA&E) of anticipated proposals. D, PA&E may provide specific AoA guidance, as approved by the MDA. The ICD describes how the recommended approach best satisfies the desired joint capability. It supports the AoA by providing operational context for assessing the performance characteristics of alternatives.

(c) Once approved, an ICD is not normally updated. When approved, CDDs (described below) bring the desired capability specified in the ICD into the System Development and Demonstration (SDD) phase, and the ICD is archived for reference. The ICD becomes a baseline document for FoS and SoS approaches and for linkages between associated CDDs and CPDs including the overarching DOTMLPF aspects necessary to meld the FoS or SoS into an effective capability. The CDD then serves as the living document to carry contributing systems and subsequent increments through the SDD phase. The ICD is described in detail in reference c.

(2) **Capability Development Document (CDD)**

(a) Guided by the ICD, the AoA (for ACAT I/IA programs), 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 CDD supports the Milestone B acquisition decision.

(b) The CDD provides the operational performance attributes, including supportability, necessary for the acquisition community to design the proposed system, including key performance parameters (KPP) that will guide the development, demonstration and testing of the current increment. 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. In the case of FoS and SoS solutions, the CDD will reference the originating ICD, identify other CDDs/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 changes necessary to meld the FoS and SoS into an effective capability.

(d) 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.

(3) Capability Production Document (CPD)

(a) The CPD addresses the production attributes and quantities specific to a single increment of an acquisition program. When the CPD is part of an FoS/SoS solution, the CPD will reference the originating ICD and 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 sponsor finalizes a CPD after critical design review when projected capabilities of the increment in development have been specified with more accuracy. The CPD must be validated and approved before the Milestone C decision review.
(b) 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. Reduction in threshold KPP performance will require an assessment of the military utility of the reduced capability and, possibly, a reexamination of the program to determine if an alternative materiel or nonmateriel solution should be adopted. The CPD is described in detail in reference c.

4) Capstone Requirements Document (CRD). The JROC may approve the development of a new CRD when existing concepts and integrated architectures are not sufficient to support development of capabilities.

(a) As joint concepts and integrated architectures are developed, straight-forward CRDs that are a clear statement of the military task that must be accomplished will continue to induce the development of interoperable capabilities by describing overarching thresholds/goals and standards in functional areas, especially where an FoS or SoS approach is required. In general, the existence of an approved integrated architecture will obviate the need for a CRD. There may be some instances where CRDs are developed at JROC direction to represent specific, clearly stated tasks (see subparagraph 5a(4)(d) below). Integrated architecture products must be traceable to the pertinent CRD and its KPPs.

(b) The JROC will assign "CRD lead" responsibility to an FCB, a JWCA team, or an appropriate DOD Component. The CRD lead will ensure that the intent of JROC-approved CRDs is captured during the development of the integrated architectures. When an integrated architecture is presented to the JROC, CRD leads will propose retirement of appropriate CRDs that are superseded by the approved integrated architecture.

(c) If a conflict arises between a CDD/CPD satisfying attributes/KPPs from multiple CRDs or the Department’s overall strategy, the sponsor, in collaboration with applicable CRD leads, will prioritize CRD attributes/KPPs for a CDD/CPD to achieve appropriate FoS/SoS integration/capability.

(d) New CRDs will be developed only as the result of specific JROC direction. Sponsors will not expend resources or efforts developing a CRD without the written concurrence of the JROC. Updates to existing CRDs may be initiated by the CRD lead. The CRD is described in detail in reference c.

b. 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 identify the specific attributes contributing most significantly to the desired operational capability, in threshold-objective format. 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. This will be used to guide the acquisition community in making tradeoff decisions between the threshold and objective values of the stated attributes. Operational testing will assess the operational effectiveness and suitability of the system and its ability to meet the production threshold values. Additional discussion of attributes and KPPs is provided in reference c.

c. 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. For JROC Interest programs, the J-8, on behalf of the JROC, 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.

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. JCIDS documents will be submitted into and staffed through the Joint Staff KM/DS tool. This staffing includes ORD submitted during the six-month transition period following the effective date of this instruction. The first step in the review process is the determination of the Joint Potential Designator (JPD).

   a. Based on the content of the submission, the Joint Staff, J-8, Deputy Director for Joint Warfighting Capability Assessments (DDJWCA) will assign a JPD of “JROC Interest,” “Joint Impact,” “Joint Integration,” or “Independent” to the document. This designation specifies JCIDS validation, approval and interoperability expectations.

      (1) The JROC Interest designation will apply to all ACAT I/IA programs and programs designated as JROC Interest. All CRDs will be designated as JROC Interest.

      (2) The Joint Impact designation will apply to ACAT II and below programs where the concepts and/or systems associated with the document affect the joint force such that an expanded review is appropriate in order to
PART II – DEFINITIONS

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

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.

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

Analysis of Alternatives (AoA) - The evaluation of the operational effectiveness, operational suitability and estimated costs of alternative systems to meet a mission capability. The analysis 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.

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 testable or measurable characteristic that describes an aspect of a system or capability.

Automated Information System (AIS) – An acquisition program that acquires information technology (IT), except IT that involves equipment that is an integral part of a weapon system or weapons system; or is a tactical communication system.

capability - The ability to execute a specified course of action. It is defined by an operational user and expressed in broad operational terms in the format of an initial capabilities document or a DOTMLPF change recommendation. In the case of material proposals, the definition will progressively evolve to DOTMLPF performance attributes identified in the CDD and the CPD.

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 - Those synergistic resources (DOTMLPF) that are unavailable but potentially attainable to the operational user for effective task execution.
**Capability Production Document (CPD)** - A document that addresses the production elements specific to a single increment of an acquisition program.

**Capstone Requirements Document (CRD)** - A document that contains capabilities-based requirements that facilitates the development of CDDs and CPDs by providing a common framework and operational concept to guide their development.

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

**Comment Priorities**

- **Critical** - A critical comment indicates nonconcurrence in the document, for both the O-6 and flag review, until the comment is satisfactorily resolved.
- **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.
- **Administrative** - An administrative comment corrects what appears to be a typographical, format or grammatical error.

**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.

**Evolutionary Acquisition** - DOD's preferred 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 Systems (FoS)** - A set or arrangement of independent systems that can be arranged or interconnected in various ways to provide different capabilities. The mix of systems can be tailored to provide desired capabilities, dependent on the situation. An example of an FoS would be an anti-submarine warfare FoS consisting of submarines, surface ships, aircraft, static and mobile sensor systems and additional systems. Although these systems can independently provide militarily useful capabilities, in collaboration they can more fully satisfy