

Army Regulation 71-9

Force Development

Warfighting Capabilities Determination

**Headquarters
Department of the Army
Washington, DC
28 December 2009**

UNCLASSIFIED

SUMMARY of CHANGE

AR 71-9

Warfighting Capabilities Determination

This major revision, dated 28 December 2009--

- o Changes the title of the regulation to Warfighting Capabilities Determination (cover).
- o Describes the Army's revised process for determining warfighting materiel and nonmateriel capabilities and assigns roles and responsibilities (chaps 1 and 2).
- o Assigns responsibilities for the combat development portion of the materiel acquisition management process (chap 2).
- o Mandates the use of the formats and procedures prescribed by Chairman of the Joint Chiefs of Staff Instruction 3170.01F, Chairman of the Joint Chiefs of Staff Manual 3170.01C, as well as subsequent versions of these publications, in preparation of materiel and nonmateriel capabilities documents (chaps 3, 4, and 5).
- o Updates policies for preparing, coordinating, and obtaining validation and approval of capabilities documents and conducting supporting analyses (chaps 3, 4, and 5).
- o Provides policy for supporting documentation required for fielding materiel and nonmateriel capabilities in support of combatant commands (chaps 4 and 5).
- o Provides instructions for the equipment common operating picture, information management system, direction for developing, coordinating, and validation and approval of operational needs statement, and the analysis and evaluation processes associated with the capabilities development for rapid transition (chap 6).
- o Describes the Army Requirements and Resourcing Board activities and responsibilities, and introduces the Army Force Generation model to meet strategic requirements for continuous full range of military operations (chaps 6 and 7).


Force Development

Warfighting Capabilities Determination

By Order of the Secretary of the Army:

GEORGE W. CASEY, JR.
General, United States Army
Chief of Staff

Official:


JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army

History. This publication is a major revision.

Summary. This regulation prescribes policy and responsibilities for commands and agencies that determine the required capabilities for warfighting. It implements guidance in the DODD 5000.1 and DODI 5000.2. It also updates policy and responsibilities for the combat development portion of the preparation of required capabilities documents, required analysis, and other combat developments products as required in Chairman of the Joint Chiefs of Staff Instruction 3170.01F and Chairman of the Joint Chiefs of Staff Manual 3170.01C. This Army regulation emphasizes the linkage of force modernization planning, coordination, integration, and execution of materiel and nonmateriel warfighting capabilities determination in support of combatant commands.

Applicability. This regulation applies to the Active Army, the Army National Guard/Army National Guard of the United

States, and the U.S. Army Reserve, unless otherwise stated.

Proponent and exception authority.

The proponent of this regulation is the Deputy Chief of Staff, G-3/5/7. The proponent has the authority to approve exceptions or waivers to this regulation that are consistent with controlling law and regulations. The proponent may delegate this approval authority, in writing, to a division chief within the proponent agency or its direct reporting unit or field operating agency, in the grade of colonel or the civilian equivalent. Activities may request a waiver to this regulation by providing justification that includes a full analysis of the expected benefits and must include formal review by the activity's senior legal officer. All waiver requests will be endorsed by the commander or senior leader of the requesting activity and forwarded through their higher headquarters to the policy proponent. Refer to AR 25-30 for specific guidance.

Army management control process.

This regulation contains management control provisions, but it does not identify key management controls that must be evaluated.

Supplementation. Supplementation of this regulation and establishment of command and local forms are prohibited without prior approval from Deputy Chief of Staff, G-3/5/7 (DAMO-CIC), 400 Army Pentagon, Washington, DC 20310-0400.

Suggested improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and

Blank Forms) directly to Deputy Chief of Staff, G-3/5/7 (DAMO-CIC), 400 Army Pentagon, Washington, DC 20310-0400.

Committee Continuance Approval.

The Department of the Army committee management official concurs in the establishment and/or continuance of the committee(s) outlined herein. AR 15-1 requires the proponent to justify establishing/continuing committee(s), coordinate draft publications, and coordinate changes in committee status with the U.S. Army Resources and Programs Agency, Department of the Army Committee Management Office (AARP-ZX), 2511 Jefferson Davis Highway, 13th Floor, Taylor Building, Arlington, VA 22202-3926. Further, if it is determined that an established "group" identified within this regulation, later takes on the characteristics of a committee, as found in the AR 15-1, then the proponent will follow all AR 15-1 requirements for establishing and continuing the group as a committee.

Distribution. This regulation is available in electronic media only and is intended for command levels C, D, and E for the Active Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve.

*This regulation supersedes AR 71-9, dated 30 March 1997.

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Glossary

Chapter 1 Introduction

1–1. Purpose

This regulation establishes policies and assigns responsibilities for the identification, determination, and integration of required warfighting capabilities. It applies to the validation and approval of capabilities supporting deliberate force modernization planning and the urgent needs of operational commanders. This regulation implements the Joint Capabilities Integration and Development System (JCIDS) within the Department of the Army.

1–2. References

Required and related publications and prescribed and referenced forms are listed in appendix A.

1–3. Explanation of abbreviations and terms

Abbreviations and special terms used in this regulation are explained in the glossary.

1–4. Responsibilities

See responsibilities in chapter 2.

1–5. Policy guidance

a. Governing policies include the following:

- (1) DODD 5000.1 and DODI 5000.2, hereafter referred to as DOD 5000-series unless specified.
- (2) Mandated DOD acquisition policy and procedures, including capabilities documentation and approval guidance for DOD acquisition programs for both acquisition programs and automated information systems (AIS).
- (3) Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3170.01F and Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3170.01C, hereafter referred to as 3170-series unless otherwise specified.
- (4) Mandated Joint Staff and Office of the Secretary of Defense (OSD) policy and procedural guidance for the JCIDS including identification of key performance parameters (KPPs), standardized capabilities documentation, and Joint Requirements Oversight Council (JROC) review of Service capability proposals.
- (5) AR 70–1, which provides Army acquisition guidance for materiel and information systems.
- (6) AR 71–32, which prescribes policies and responsibilities for the development and documentation of Army personnel and equipment requirements and authorizations and associated force management activities.
- (7) This regulation, AR 71–9, which provides Army capability determination policy and responsibilities supporting all doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOTMLPF) developments and related force modernization planning.

b. The capability determination process shapes the improvement of the Army's force effectiveness through the identification, description, development, and integration of required operational capabilities. The process is responsive to urgent materiel and nonmateriel requirements of deployed warfighters, and it projects the full set of DOTMLPF capabilities required for the Army to accomplish the range of military operations assigned in current and future full-spectrum Joint and coalition operations.

(1) Field commanders document and submit urgent operational requirements for warfighting capabilities via the operational needs statement (ONS) process described in chapter 6 of this regulation and the Joint urgent operational needs (JUON) process as specified in CJCSI 3470.01A.

(2) Commanders with combat developments missions conduct continued analysis to identify and describe near-through far-term required capabilities across DOTMLPF domains.

(a) Near-term required capabilities may originate from the determination that a solution for a field commander's ONS, or capability provided by a rapid equipping force (REF)-like organization, has broader applicability across the Army or from finding a technology that provides a critical leap-ahead military advantage, mitigating or eliminating a known capability gap.

(b) Future required capabilities are based on concepts reflecting the Joint vision for full-spectrum military operations or institutional processes designed to generate the operating force (that is, a training transformation or modernization strategy) 10 to 20 years in the future.

c. The U.S. Army Training and Doctrine Command (TRADOC) will verify force integration across DOTMLPF, compliance with Army concept strategy (ACS) family of concepts, which consists of a capstone concept, Army operating concepts, Army functional concepts (AFC), concepts directed by the commanding general (CG), TRADOC, and supporting concept capability plans (CCP). The Army Family of concepts describes Army operations in support of the future Joint Force Commander and nests within the Joint Family of concepts. Capability proposals not in compliance will not be coordinated for HQDA validation and approval.

(1) The TRADOC developed capability needs analysis (CNA) and capability integration maps (CIM) serve as input for force modernization priorities. These priorities are reflected in the Army Capabilities Integration Center (ARCIC) and Army Campaign Plan (ARCP) which serves as the TRADOC control mechanism for capabilities determination

process, authority for support to studies and experimentation, and linkage between capabilities documentation and the concepts. The CNA outcomes inform integrated capabilities development team efforts.

(2) Capabilities determination is conducted by integrated capabilities development teams, made up of personnel from multiple disciplines. The ICDT efforts may include development of a CCP, capabilities-based assessment (CBA) of that concept, an analysis of alternatives (AOA), and documentation of the resultant recommendations to produce integrated capabilities. Functional proponents will perform capabilities development when an ICDT is not required. The Director ARCIC makes the determination of whether an ICDT will be chartered in accordance with AR 15-1.

(3) The DOTMLPF solution sets will be documented in ICDT minutes and products stipulated by the ICDT charter. The ICDT will operate on principals similar to acquisition integrated product teams (IPTs) as described in the Defense Acquisition Guidebook, to identify and resolve issues early. An ICDT will include representatives of Army capabilities process stakeholders and other principal contributors, including academia and industry, when appropriate. The ICDT will invite OSD, other Services, combatant commanders (CCDRs), and Joint Staff to send representatives, as appropriate, when their interest is known or develops.

d. A new materiel solution for a capability gap will only be developed after all other possible DOTMLPF solutions are deemed nonoptimal solutions for the required capability. The priority order of consideration is doctrine, training, leadership and education, organization design, and finally a new materiel solution. Initial capabilities documents will be prepared in accordance with 3170-series format and guidelines to propose a DOTMLPF integrated solution set requiring initiation of a new materiel acquisition program and support a materiel development decision. A DOTMLPF, the lowercase m signifies no new materiel proposal and, if any, limited materiel solution involvement (for example, additional quantities of an existing capability or changes to distribution), integrated capabilities recommendation (DICR) will be prepared to describe a capability solution set which involves one or more of the DOTMLPF domains, requires reallocation of capabilities, policy change, or requires additional procurement of existing equipment.

e. All acquisition category (ACAT) I, IA, II, and III materiel acquisition programs will have a capability production document (CPD) describing the required capability, prepared in accordance with 3170-series, to support a Milestone (MS) C decision. Base operations procurement programs where acquiring or improving equipment for modified table of organization and equipment (MTOE), deployable unit tables of distribution and allowance (TDA), and Information Technology/National Security System (IT/NSS) providing interface to deployed units will use a CPD or HQDA directed requirement. Requirements for ICD and capabilities development document (CDD) are dependent on several variables allowing flexibility in the on-ramp to JCIDS process; see 3170-series for clarification on ICD and CDD requirements and application.

f. All IT/NSS products must comply with DOD Architecture Framework (DODAF) and Army Enterprise Architecture requirements and be stored in an Army architecture centralized database. Materiel developers and other information management (IM) officials requiring IT/NSS will ensure compliance with architectures. Directors of information management will review and ensure compliance with architectures.

g. All Army IT/NSS, regardless of ACAT, mission area, or domain, are required to undergo the Chief Information Officer/G-6 (CIO/G-6) Army Interoperability Certification process prior to fielding, training, or material release decision reviews per AR 25-1 and AR 70-1.

h. A holistic threat analysis depicting the global situation and projected warfighting capabilities of potential adversaries is a key element of the capabilities determination process. Analysts must not limit the definition of threat to known, existing enemy forces but project potential threat capabilities based emerging technologies and the full range of Army roles within the Joint operational environment. Threat analysis performed by combat developers (CBTDEVs) will be reconciled with Joint operational scenarios and threat assessments.

i. Once determined that only a materiel solution is feasible, the capability determination process requires early engagement from the materiel development (acquisition) community to produce recommendations that balance improved operational capability, with reduced life cycle costs, realistic production schedules and technical risk assessments, as well as improved logistic supportability.

j. Close coordination will be maintained between CBTDEV and the science and technology community to ensure that technology investments are appropriately focused on high priority capability gaps. Periodic reviews will be conducted with program offices, laboratories, users, and sustainers to assess the technical status, emerging performance, affordability, and linkage to warfighter outcomes. Modeling and simulation will be used to preclude unnecessary, costly, and impractical development.

k. All materiel system developments have operational characteristics and attributes defined in the CDD and CPD. KPP are those system attributes considered most critical or essential for an effective military capability. During the applicable increment, the CDD and the CPD must contain sufficient KPP to capture the minimum operational effectiveness, suitability, and sustainment attributes needed to achieve the overall desired capabilities for the system or systems if the CDD or CPD describes a system of systems. Failure to meet a CDD or CPD KPP threshold may result in reevaluation or reassessment of the program or a modification of the production increments. The CDD and CPD will contain KPP which in turn document in the system acquisition program baseline (APB). For ACAT I systems, the JROC validates and approves KPP even if the authority for the capabilities document has been delegated to the Army. Key system attributes are specific attributes considered crucial in support of achieving a balanced solution or approach

to a KPP. The Army Requirements Oversight Council (AROC) validates and approves KPP and key system attributes for the Chief of Staff, Army (CSA).

l. When developing system characteristics, supporting attributes, and performance parameters, cost is considered on an equal level. All future required capabilities will include as a minimum the life cycle affordability strategy required to deliver the capability described within the proposed increment. For example, cost will be treated as an independent variable along with others used to define a system. The concept of cost as an independent variable will not preclude Army staffing, and AROC consideration and evaluation of a new, expensive, high potential, or leap-ahead DOTMLPF technology.

m. Architecture requirements will be developed to support JCIDS. Refer to AR 25–1, chapter 4 and DA Pam 25–1–1, chapter 4 for policy and guidance on architecture development (also see para 2–28*b*).

n. Analysis requirements to support JCIDS/force modernization will be conducted in accordance with DODI 5000.2, DODI 3170.01–series, AR 71–9, TRADOC Regulation (TR) 71–20, and required ARCIC procedural guides.

o. Most capabilities will be developed from a concept through a CBA. The CBA consists of a functional area analysis (FAA), functional needs analysis (FNA), and functional solution analysis (FSA). The CBA results may be used to develop required capabilities documentation and CIM.

p. Conceptual architecture should be used to develop operational views which can support detailed analysis of new capabilities in a system of systems environment.

Chapter 2 Responsibilities

Section I Introduction

2–1. General

The responsibilities of the HQDA staff, staff agencies, Army Commands (ACOMs), Army Service Component Commands (ASCCs), and Direct Reporting Units (DRUs) are established in the AR 10–series publications and DAGO 2002–03. This chapter contains specific responsibilities with regard to the capabilities determination process and combat development community of practice.

2–2. All HQDA staff, staff agencies, Army Commands, Army Service Component Commands, and Direct Reporting Units

a. All HQDA staff, staff agencies, ACOMs, ASCCs, and DRUs will—

(1) Coordinate with ARCIC for the Army and Joint integration of capability determination and force modernization proposals.

(2) Participate and support in the capabilities development for rapid transition (CDRT) process as required.

(3) Provide representatives and resources to TRADOC and ARCIC led ICDT as appropriate.

b. See additional responsibilities paragraphs 2–3 through 2–30.

Section II Headquarters, Department of the Army Staff

2–3. Deputy Chief of Staff, G–3/5/7

Deputy Chief of Staff, G–3/5/7. The DCS, G–3/5/7 will—

a. Develop Army policy and procedural guidance for materiel and nonmateriel capabilities and combat development programs. This includes the capabilities determination process, prioritization, resourcing, and integration of materiel and nonmateriel warfighting capabilities.

b. Plan for mid- and long-range force development to include the following:

(1) Prescribe mission, operational capability goals, and Army priorities for warfighting materiel and nonmateriel capabilities.

(2) Establish priorities for developing and acquiring nonsystem training devices (NSTD).

(3) Integrate materiel systems and training aids, devices, simulators, and simulations (TADSS) into the force structure.

c. As lead for prioritization, execute Army implementation of JCIDS in coordination with Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)), Deputy Chief of Staff, G–8 (DCS, G–8), CG, TRADOC, and CG, U.S. Army Medical Command (MEDCOM).

d. Coordinate force modernization activities, develop modernization plans, and monitor the impact of force modernization planning and execution for the total Army, with the assistance of the ASA(ALT).

- e. Document force modernization through development of tables of organization and equipment and basis of issue plans.
- f. Conduct force feasibility reviews to assess supportability and affordability for structure, manpower, equipment, dollars, facilities and training.
- g. Ensure force integration through synchronized, resource constrained execution of an approved force modernization program. This will enable the Army to achieve systemic management of change including— introduction, incorporation, and sustainment of doctrine, organizations, and equipment in the Army; coordination and integration of operational and managerial systems collectively designed to improve the effectiveness and capability of the Army; and knowledge, consideration, and sharing of potential implications for decisions and actions taken within the execution process.
- h. Notify ASA(ALT) who will in turn notify the Office of the Under Secretary of Defense (Acquisition Technology and Logistics) (USD(AT&L)), also notify the Under Secretary of Defense (Program Analysis and Evaluation) of potential ACAT I and IA programs.
- i. Chair the Army Study Advisory Group for approval of AOA and CBA for Joint programs, ACAT I, or special interest programs. The DCS, G-8, Force Development Division, ARCIC, and the Deputy Under Secretary of the Army, Test and Evaluation Office (DUSA-TEO) will provide general officer members, additional participants based on capability area; DCS, G-3/5/7, Current and Future Warfighting Capabilities Division is HQDA coordinator for SAG.
- j. Validate and prioritize institutional support for Army tests and experiments and Joint tests and experiments that have an Army lead.
- k. Assist the ASA(ALT) in preparing acquisition program documentation and adjustments for programming and budgeting.
- l. Forward JCIDS documents to the JROC for validation as required.
- m. Forward JROC interest CDD and CPD to JROC for validation of KPP and assignment of approval authority.
- n. Establish HQDA policy and guidance for the ONS and directed requirement process and validate and approve ONS from commanders.
- o. Assign catalog of approved requirements documents (CARDS) reference number, and maintain and publish CARDS.
- p. Provide final approval memoranda including executable guidance to CBTDEV, Joint Requirements Oversight Council memorandum, and any special instructions supporting the way ahead.
- q. Provide coordination and comment, liaison, and integration, across HQDA, ACOM, DRU, the Joint Staff, and CCDR representatives for the Army JCIDS documents proceeding to the JROC.
- r. Provide ARSTAF oversight of prioritization, development, synchronization, and approval of architecture in support of warfighting capabilities determination.
- s. Guide and discipline the capabilities determination process. Provide capabilities determination and documentation policy and process guidance for the Army.
- t. In coordination with ASA(ALT), DUSA-TEO, establish policy and procedure, and publish directive and task guidance for AOA for ACAT I and II programs and all programs of JROC interest; ensure OSD (PA&E) guidance and SAG procedures are incorporated and Milestone Decision Authority (MDA) approves.
- u. In coordination with ASA(ALT), establish the specific policies and procedures for the review, integration, and approval of modeling and simulation requirements which complement materiel acquisition policies, and recognize unique requirements of M&S. Approve Army M&S requirements as a subset of materiel requirements.

2-4. Assistant Secretary of the Army (Financial Management and Comptroller)

Assistant Secretary of the Army (Financial Management and Comptroller). The ASA(FM&C) will—

- a. Oversee Armywide cost and economic analysis functions and activities.
- b. Direct the Cost and Economic Analysis Program as it relates to all financial management activities, to include establishing cost and economic analysis policies, methods, and procedures.
- c. Provide guidance and oversight to the Army Cost Review Board (CRB) and approve the Army Cost Position for all major acquisition programs.
- d. Provide policy and oversight for the Army's Cost Analysis Manual and Economic Manual and implementation of contractor cost and software data reporting.
- e. Provide policy and oversight for cost analysis career field education, training, and referral.
- f. Coordinate with the DCS, G-8 and the DCS, G-3/5/7 to ensure synchronization of the Army Campaign Plan objectives, and fiscal requirements with the planning, programming, budgeting, and execution process.

2-5. Assistant Secretary of the Army (Installations and Environment)

Assistant Secretary of the Army (Installations and Environment). The ASA(I&E) will coordinate with ASA(ALT) to

ensure emerging Army capabilities are reviewed for potential life cycle environment, safety and occupational health effects for likely materiel solutions based on analyses of similar existing systems and technologies.

2-6. Assistant Secretary of the Army (Acquisition, Logistics and Technology)

Assistant Secretary of the Army (Acquisition, Logistics and Technology). The ASA(ALT) will—

- a. Upon direction of the Secretary of the Army, serve as the Army Acquisition Executive (AAE), the official responsible for the exercise of authorities and discharge of responsibilities of the component acquisition executive that are set forth in Title 10, United States Code (10 USC) and the DOD 5000-series publications.
- b. Be responsible for administering acquisition programs according to DOD policies and guidelines and for the development and validation of system views of integrated architecture.
- c. In coordination with DCS, G-3/5/7, DCS, G-8, and DUSA-TEO, establish policy and guidance for the conduct of AOA for ACAT I and IA programs and all programs of JROC Interest; and provide issues and alternatives to DCS, G-3/5/7 for inclusion in the AOA tasking document.
- d. Serve as the senior research and development (R&D) official for the Department of the Army.
- e. Serve as the Science Advisor to the Secretary of the Army.
- f. Direct the Army Science Board.
- g. Establish and validate Army Technology Base priorities throughout the PPBE.
- h. Approve and resource Army advanced technology demonstrations (ATDs).
- i. Chair the Army Systems Acquisition Review Council (ASARC).
- j. Ensure program executive officers (PEOs) and program/project/product managers (PMs) integrate embedded training capabilities early in the design of new or improved materiel systems.
- k. Provide ICDT the potential ACAT classification for ICD.
- l. Oversee integrated logistics support (ILS), readiness, supply, services, maintenance, transportation, and related automated logistics systems management.
- m. Exercise logistical acceptability and supportability of materiel systems, ILS, materiel release, type classification and logistics research and develop programs for the Army.
- n. Serve as the Army Logistician in the materiel acquisition process. Monitor logistics activities of materiel acquisition and modifications to ensure development and fielding of safe, suitable and supportable capabilities.
- o. Provide ILS policy and guidance for materiel acquisition.
- p. In coordination with ASA(I&E), ensure emerging Army capabilities are reviewed for potential life cycle environment, safety and occupational health affects for likely materiel solutions based on analyses of similar or existing systems and technologies.

2-7. Assistant Chief of Staff for Installation Management

Assistant Chief of Staff for Installation Management. The ACSIM will develop criteria for the mitigation of environmental impacts.

2-8. Chief Information Officer/G-6

Chief Information Officer/G-6. The CIO/G-6 will—

- a. Review all C4/IT/NSS warfighting capability documents ensuring—
 - (1) Nonmateriel alternatives to the requirement were inadequate following DOTMLPF analysis.
 - (2) All materiel solutions are compliant with the DOD IT/NSS Standards Registry.
 - (3) Emerging technologies have been evaluated.
 - (4) Outcome-oriented performance measurements have been included.
 - (5) Capabilities are in compliance with information assurance requirements.
 - (6) Spectrum management criteria are included.
 - (7) New or modified capabilities have been evaluated against existing systems.
 - (8) Traceability between capability proposals and information support plans.
- b. Serve as executive architect for Technical Architecture (TA); oversees development and validation of technical views of integrated architectures.
- c. Have overall responsibility for Army software policy for both AIS and weapon systems.
- d. Direct and approve standards for data and interoperability of products, to include Joint and combined programs.
- e. Review materiel system programs for compliance with HQDA policy for software reuse, technical and systems architectures, data element standardization, and spectrum management initiatives.
- f. Ensure appropriate configuration control of fielded system of system baselines.

2-9. Deputy Chief of Staff, G-2

Deputy Chief of Staff, G-2. The DCS, G-2 will—

- a. Have ARSTAF responsibility for intelligence, counterintelligence, and security support to the systems acquisition process.
- b. Establish and implement threat support and documentation policy for force, combat, training, and materiel development activities to include all technology base programs and nontraditional acquisition techniques.
- c. Designate HQDA threat integration staff officers to manage the threat integration support process for ACAT I and II programs, ACAT IA programs when required, and monitor the threat integration support to ACAT III programs.
- d. Coordinate with ASA(ALT), HQDA, U.S. Army Materiel Command (AMC), and TRADOC to support U.S Army Intelligence and Security Command (INSCOM); providing emerging intelligence capabilities, and ensuring appropriate capabilities undergo consideration to become Army acquisition programs through the CDRT process.
- e. Provide oversight and coordination with national combat intelligence support agencies during the determination, programmatic, delivery and assessment phases of the intelligence, surveillance, and reconnaissance (ISR) quick reaction capability process.
- f. Approve and validate threat documentation, and obtain Defense Intelligence Agency (DIA) validation of threat documentation to support Defense Acquisition Board (DAB) review.
- g. Review and monitor the threat support process to ensure consistent application of threat in support of ACAT I and II programs, select programs designated by OSD Test and Evaluation oversight, HQDA-directed studies, and selected CBTDEV directed studies.

2-10. Deputy Chief of Staff, G-4

Deputy Chief of Staff, G-4. The DCS, G-4 will—

- a. Serve as principal military advisor to the ASA(ALT) in the functional area of logistics.
- b. Ensure the sustainment functions of readiness, supply, services, maintenance, transportation, aviation, munitions, security assistance, and related automated logistics systems management are fully integrated and properly balanced between acquisition and logistics.
- c. Serve as a full voting member in the ASARC and as sustainment representative to the Army Science and Technology Working Group.
- d. Oversee the execution of Army logistics policies, programs, budgetary inputs, and activities in ACOM, ASCC, and DRU, focusing on supply, maintenance, transportation, distribution, strategic mobility, and prepositioning of supplies and equipment.
- e. Represent Army logistics in Joint concepts, such as focused logistics and associated military programs.

2-11. Assistant Secretary of the Army (Manpower and Reserve Affairs)

Assistant Secretary of the Army (Manpower and Reserve Affairs). The ASA(M&RA) will—

- a. Advise the Secretary of the Army on all matters relating to human resources and Reserve affairs matters.
- b. Oversee the current and future personnel readiness and well-being of the Army through the development and integration of human resource policies and programs across all components (Active, Guard, Reserve, civilian and contractor).
- c. Oversee and review all policies and programs pertaining to readiness resourcing; training; force structure; and professional and leader education and development.

2-12. Deputy Chief of Staff, G-1

Deputy Chief of Staff, G-1. The DCS, G-1 will—

- a. Serve as the principal military advisor to the ASA(M&RA) and assist the ASA(M&RA) in the performance of ASA(M&RA) responsibilities.
- b. Ensure manpower and personnel integration (MANPRINT) is considered and executed in the nonmateriel development and materiel acquisition process.
- c. Develop, defend, evaluate, and direct the execution of personnel legislation, policy, programs, and budgets for responsive, flexible, and effective human resources within Army operations worldwide.
- d. Represent Army human resource equities in Joint concept developments, such as Defense Integrated Military Human Resources System and associated military programs.

2-13. Chief of Engineers

Chief of Engineers. The COE will—

- a. Conduct research, development, test and evaluation (RDTE) to support capabilities determination related to the facilities and engineering aspects of: force protection and antiterrorism; force projection and sustainment; battle-space environment; and to support Army training and readiness in infrastructure and environmental sustainment.
- b. Monitor requirements and R&D necessary to provide construction design criteria, construction techniques, and construction material for the Army, Air Force, and other Government agencies.
- c. Forward all operational concepts and materiel capability proposals to TRADOC for approval.

2-14. The Surgeon General

The Surgeon General. TSG will—

- a. Serve as the Army medical materiel developer (MATDEV) for assigned programs and be responsible for medical research, development, and acquisition (RDA) functions, to include health facility planning. Advise the AAE and ASARC concerning medical and health hazard issues during acquisition of systems.
- b. Exercise oversight to ensure the sufficiency of medical DOTMLPF solutions developed by CG, TRADOC and CG, MEDCOM.
- c. Develop policy, responsibilities, and procedures to ensure implementation of systems acquisition policy as it applies to combat medical systems, medical readiness and health care programs, and other assigned Army and Joint service capabilities.
- d. Assign support responsibilities for medical materiel development and acquisition to agencies and activities under TSG functional control.
- e. Recommend to TRADOC materiel capabilities and associated priorities for medical readiness and health care programs.
- f. Establish mission area interface with TRADOC for all medical programs, ensuring that capabilities and interests of each participating service are provided full consideration in medical programs for which the Army has lead agency or executive agency responsibility.
- g. Forward all materiel capability proposals to TRADOC for approval.

2-15. The Judge Advocate General

The Judge Advocate General. TJAG will—

- a. Ensure that such weapons, weapon systems, and their intended use in armed conflict are consistent with—
 - (1) The obligations assumed by the U.S. under all applicable treaties.
 - (2) International law and the laws of war.
- b. Advise and assist TRADOC for those combat and training developments which relate to the TJAG functional area of interest.
- c. Review actions for compliance with environmental policy.
- d. Serve as the materiel developer or assign responsibilities for materiel development on behalf of TJAGs Corps to agencies and activities under TJAG functional control.

2-16. Chief of Chaplains

Chief of Chaplains. The CCH will—

- a. Have responsibility for chaplaincy RDTE for the Army and is the Army chaplaincy MATDEV.
- b. Serve as the materiel developer or assign support responsibilities for chaplaincy materiel development to agencies and activities under CCH functional control.

2-17. Deputy Chief of Staff, G-8

Deputy Chief of Staff, G-8. The DCS, G-8 will—

- a. Develop the program objective memorandum (POM) to include resource guidance.
- b. Review and analyze fiscal programs, requirements, resource planning, and resource allocation for the program years.
- c. Conduct and present affordability assessments to support DOD and HQDA ACAT I oversight and review process.
- d. Ensure capabilities are supportable by cost, schedule, and technical risk assessments that are necessary for achieving program baselines prior to approval of resourcing.
- e. Ensure the overall discipline of the PPBE process and manage the programming phase of the PPBE process.
- f. Review and analyze all Army capability proposals.
- g. Provide general officer membership to Army SAG.

Section III

Army Commands/Army Service Component Commands/Direct Reporting Units

2-18. Commanding General, U.S. Army Medical Command

Commanding General, U.S. Army Medical Command. The CG, MEDCOM will—

- a. Review and evaluate materiel and TADSS capability proposals to identify and ensure that adequate consideration is given to the prevention of health hazards from operating or maintaining materiel systems, and conduct the health hazard assessment program, as required.
- b. Execute the Army medical RDA missions through the U.S. Army Medical Department Center and School (AMEDDC&S) and the USAMRMC.

c. In coordination with the ASA(ALT) executes the Secretary of the Army's responsibilities the DOD Executive Agent for medical research for prevention, mitigation, and treatment of blast injuries.

2-19. Commanding General, U.S. Army Intelligence and Security Command

Commanding General, U.S. Army Intelligence and Security Command. The CG, INSCOM will—

a. Be a CBTDEV and training developer (TNGDEV) for strategic signals intelligence (SIGINT), information security (INFOSEC), geospatial intelligence/measurements and signature intelligence (GEOINT/MASINT), information operations (IO), electronic warfare, and computer network operations (CNO) systems.

b. Prepare capability documents and serve as the Army CBTDEV during development and fielding of new SIGINT, INFOSEC, GEOINT/MASINT, IO, electronic warfare, and CNO systems under the purview of the National Security Agency and/or the National Geospatial-Intelligence Agency and having sole application to U.S. SIGINT, INFOSEC, GEOINT/MASINT, and CNO systems. Forward force modernization proposals, warfighting concepts, and capability documents to CG, TRADOC for integration, validation, and approval.

c. Coordinate with the PEO or MATDEV on matters pertaining to acquisition of INSCOM SIGINT, intelligence, security and electronic warfare (ISEW), GEOINT/MASINT, IO and CNO systems.

d. Coordinate with CG, TRADOC on capabilities determination for other INSCOM ISEW, IO and CNO systems and conduct combat and training developments for these Army systems when directed by HQDA, the Under Secretary of Defense for Intelligence, the Director, Central Intelligence, or the Director of National Intelligence, or at the request of the CG, TRADOC.

e. Ensure documentation of requirements for training support products, system TADSS, and or embedded training for INSCOM systems.

f. Provide threat documentation to DCS, G-2 and TRADOC as validated and approved by DCS, G-2.

g. Recommend to CG, TRADOC materiel requirements and associated priorities for strategic intelligence and security readiness.

h. Nominate ISR capabilities for evaluation by the CDRT process and support the evaluation and transition of CDRT directed capabilities to Army acquisition programs.

2-20. Commanding General, U.S. Army Materiel Command

Commanding General, U.S. Army Materiel Command. The CG, AMC will—

a. Be responsible for logistics support of assigned materiel in response to approved requirements.

b. As required, plan, coordinate, and provide functional support to PEO and program manager, project manager, product manager (PM). Support includes, but is not limited to, procurement and contracting, legal, managerial accounting, cost estimating, systems engineering, developmental test, logistics support analyses, MANPRINT, environmental, intelligence and threat support, configuration management, and conducting various independent assessments and analyses.

c. Provide overall management of the Army's technology base (less Class VIII (medical)), including identification of maturing technologies necessary to support acquisition of warfighting materiel systems.

d. Assist the CBTDEV and TNGDEV in the requirements determination process.

e. Provide security, intelligence, and counterintelligence support to assigned programs having critical program information (CPI).

f. Conduct or assist in the determination of trade-off analyses.

g. Provide RDA science and infrastructure input as required.

h. Provide survivability, vulnerability, or lethality assessments in coordination with U.S. Army Test and Evaluation Command (ATEC). Provide survivability, vulnerability, and lethality enhancement expertise for all Army materiel programs.

i. Provide transportability engineering advice and analyses to the MATDEV, CBTDEV and TNGDEV.

j. Provide item, unit, and system transportability assessments for milestone decision review (MDR).

k. Provide transportability approval or identify corrective actions required to obtain approval for all transportability problem items.

l. Review all materiel requirements documents to assess adequacy of transportability.

2-21. Commanding General, U.S. Army Training and Doctrine Command

Commanding General, U.S. Army Training and Doctrine Command. The CG, TRADOC will—

a. Be the Army's operational architect for current and future forces responsible for determining and developing the DOTMLPF capabilities required to fulfill all designated Army and Joint required capabilities.

b. Determine and integrate force requirements and synchronize the development of DOTMLPF solutions to improve warfighting capabilities with minimum adverse effect on readiness during transition.

c. Ensure focus on integration includes assessing requirements for changes in capability; consideration of growth alternatives; developing suitable, feasible, and acceptable concepts to execute programs; determining, recommending

and obtaining approval of solutions; preparing and executing detailed plans of action; and processing feedback that validates or modifies actions and execution as required.

- d. As required, develop and maintain CIM, capabilities developments roadmaps, strategies and plans as assigned by the ARCIC Campaign Plan.
- e. In coordination with other ACOMs/ASCCs/DRUs, provide the future warfighting vision, overarching concept, force operating capabilities, and the starting points for the warfighting capabilities determination process.
- f. Develop and approve the Army Concept Strategy for DCS, G-3/5/7 validation.
- g. Develop the Army Capstone Concept for CSA approval.
- h. Develop and approve of the Army's operating and functional concepts and CCPs as required. These documents provide the foundation of the Army's future required capabilities.
- i. Provide recommendations on Army equities related to Interagency, Joint, multi-National, and other Service capability documents.
- j. Integrate the TRADOC Campaign Plan (TCP) and ARCP with The Army Plan.
- k. As the Army's operational architecture, develop, validate, and integrate operational architectures depicting warfighting capabilities.
- l. Publish annual concept and capabilities developments guidance in the ARCP.
- m. Develop, coordinate, and recommend policy and guidance to provide direction for executing the JCIDS, and manage its implementation and execution within TRADOC.
- n. Manage, through ICDT, the JCIDS CBA process and products.
- o. Manage the development of JCIDS capability documents.
- p. Integrate and approve capability documents produced by the Army community, and forward to DCS, G-3/5/7 for validation, prioritization, and approval for resourcing.
- q. Assist DCS, G-3/5/7 to develop and maintain an efficient Army capabilities determination process congruent and supportive of the Joint process. This effort includes recommendations for HQDA Program Evaluation Group (PEG) organizations to gain efficiencies and maintain integrated and synchronized DOTMLPF development efforts. Ensure determination process supports the Army Force Generation (ARFORGEN) model.
- r. Lead experimentation; develop, coordinate, prioritize, and direct execution of experimentation through TRADOC and non-TRADOC centers and schools in accordance with Joint and Army guidance.
- s. Develop the Army Experimentation Plan (AEP) as part of the ARCP, and manage its execution.
- t. Assist the AROC in prioritizing and justifying warfighting requirements.
- u. In coordination with the Army Requirements and Resourcing Board (AR2B), determine applicability of ONS, JUON, and Directed Requirements, to future Armywide requirements, and assign to a proponent for capabilities determination, documentation, integration, and synchronization as required. Advise DCS, G-3/5/7 on operational lessons learned and experimentation results/insights relative to ONS, JUON, and directed requirements, and potential for Armywide application. Advise AR2B regarding any ongoing DOTMLPF developments which may impact AR2B recommendations both from current and future perspectives.
- v. Support DCS, G-3/5/7 by participation in the AROC Army Process Review Board (APRB). Provide insights and descriptive information on current and planned DOTMLPF developments.
- w. When required, assist DCS, G-3/5/7 in resolving issues with Functional Capabilities Boards (FCBs), Joint Capabilities Board (JCB), and or JROC.
- x. Assist DCS, G-3/5/7 and DCS, G-8 with prioritization of DOTMLPF solutions for POM input through the CNA process. Participate in PEG reviews.
- y. Collect, analyze, and integrate lessons learned. Perform detailed DOTMLPF analysis on available data and work with individual leaders, Soldiers, unit staffs, ACOM, DRU, and the HQDA staff to identify key Army issues and assist in developing both near-term and/or long-term solutions as required.
- z. When required conduct AOA for ACAT I, IA, and II programs and programs of JROC interest. When required by the MDA, conduct AOA for all other ACAT programs.
 - aa. Validate priorities and provide representation to Army S&T reviews and management teams. Produce the key operational environment and threat documentation necessary to support Army capability proposals.
 - ab. Support capability developments documentation by assisting in the development of test and evaluation master plans, and produce threat test support plans.
 - ac. Provide TRADOC review and validation of all capability proposals from non-TRADOC sponsors to ensure integration with current and future force capabilities.

2-22. Commanding General, U.S. Army Special Operations Command

Commanding General, U.S. Army Special Operations Command. The CG, USASOC will—

- a. Establish mission area interface with TRADOC for capabilities determination and development, ensuring each participating agency receive full consideration in combat developments for which the Army has Lead or executive responsibility.

- b. Serves as the special operations trainer and user representative.
- c. Forward all non-Special Operations Forces unique warfighting capability proposals to CG, TRADOC for integration, validation, and approval.
- d. Forward Special Operations Forces unique warfighting capability proposals to CG, TRADOC for integration as required.
- e. Monitor TRADOC combat and training developments and identify needs that affect the USASOC mission.
- f. Support TRADOC field activities, conduct and support testing, and monitor RDA projects to include potential force standardization and interoperability.
- g. Participate in warfighting experiments as appropriate.

2-23. U.S. Army Corps of Engineers

U.S. Army Corps of Engineers. The USACE will—

- a. Co-chair, with the DCS, G-2, the Geospatial Governance Board to adjudicate the Army Geospatial-Enterprise (AGE) emerging Army systems issues and recommendations.
- b. Preserve and improve environmental quality associated with construction and facilities and Army environmental quality and R&D activities covering atmospheric, terrestrial, and topographic sciences.
- c. Advise and assist TRADOC CBTDEV for those combat and training developments which relate to centers of excellence.

2-24. Commanding General, U.S. Army Test and Evaluation Command

Commanding General, U.S. Army Test and Evaluation Command. The CG, ATEC will—

- a. Review all draft materiel requirements documents for T&E implications.
- b. Assist TRADOC (CBTDEV/TNGDEV) in developing operational relevant, total system focused critical operational issues and criteria that can be evaluated. Provide advice concerning methods and measures to evaluate the system against the critical operational issues and criteria and advise on the resources and ability to test and evaluate the system.
- c. Support the TRADOC Advance Warfighting Experiment Program and the Concept Evaluation Program.

Section IV

Other Department of the Army Agencies

2-25. Commanding General, U.S. Army Medical Research and Materiel Command

Commanding General, U.S. Army Medical Research and Materiel Command. The CG, USAMRMC will—

- a. Serve for TSG as the medical MATDEV, logistician, and technical/developmental tester and act as MDA responsible for RDA and logistical support for assigned medical materiel capabilities. Plan, program, budget, and execute medical RDTE tasks that support system RDA to include required system training support products, TADSS, and or embedded training.
- b. Act as the MEDCOM Chief Technology Officer to maintain and manage the medical science and technology base.
- c. Serve as the Deputy for Medical Systems to the ASA(ALT). As such, advise the AAE and ASARC concerning medical and health hazard issues during acquisition of systems.
- d. Assist the medical CBTDEV/TNGDEV in the requirement determination process.
- e. Review capability proposals to determine their adequacy and feasibility and for logistical support aspects of materiel systems to include ILS.
- f. Conduct developmental tests, evaluations, and assessments for assigned medical materiel systems and support operational test.
- g. Develop and maintain the physiological, psychological, and medical data base to support the health hazard assessment, system safety assessments, and human factors engineering analysis.
- h. Evaluate and manage the materiel readiness functions in the medical materiel acquisition process.
- i. Function as TSG agency responsible for the materiel acquisition of medical nondevelopmental items (NDI), commercial off-the-shelf items, and sets, kits, and outfits.

2-26. Commanding General, U.S. Army Medical Department Center and School

Commanding General, U.S. Army Medical Department Center and School. The AMEDDC&S will—

- a. Develop doctrine, organizations, and systems requirements within the guidelines established by the CG, TRADOC and in accordance with Army health care standards established by TSG (see AR 40-60).
- b. Conduct medical combat and training development activities as assigned by CG, TRADOC and TSG.
- c. Conduct and support assigned operational test and evaluation.

d. Forward warfighting concepts and capability documents to TRADOC for review, approval, and entry into Army and Joint staffing.

2–27. Director, U.S. Army Nuclear and Combating Weapons of Mass Destruction Agency

Director, U.S. Army Nuclear and Combating Weapons of Mass Destruction Agency. The Director, USANCA will—

a. Establish nuclear survivability criteria and chemical, biological, radiological, nuclear, and high yield explosive (CBRNE) contamination survivability criteria for Army materiel (see AR 70–1 and AR 70–75).

b. Assist CBTDEV with the application of CBRNE contamination survivability criteria for systems and items and assist in the evaluation of capability survivability shortfalls (see AR 70–75).

c. Provide the following members to the Nuclear and Chemical Survivability Committee and Nuclear and Chemical Survivability Committee Secretariat to serve in the following capacities:

- (1) Director (nuclear survivability matters).
- (2) Director (CBRNE contamination survivability matters).
- (3) The USANCA representative on nuclear survivability matters.
- (4) The USANCA representative on CBRNE contamination survivability matters (see AR 15–41).
- (5) As administrative support, schedule meetings, maintain and publish minutes, and staff and coordinate actions of the Nuclear and Chemical Survivability Committee and Nuclear and Chemical Survivability Committee Secretariat (see AR 15–41).

2–28. Commanding General, U.S. Army Space and Missile Defense Command/Army Forces Strategic Command

Commanding General, U.S. Army Space and Missile Defense Command/Army Forces Strategic Command. The CG, SMDC/ARSTRAT will—

a. Establish mission area interface with TRADOC for all programs, ensuring that requirements and interests of each participating agency are provided full consideration in programs for which the Army has lead agency, Joint interest or executive responsibility.

b. Serve as Army capability determination proponent for space, high altitude, and ground-based midcourse defense.

c. In coordination with ARCIC, serve as Army integrator for Ground-Based Midcourse Defense System.

d. Serve as Joint user representative, centralized manager, and integrator for the Ground-Based Midcourse Defense System.

e. Be concept, architecture, training, and doctrine and capability developer for areas of assigned Army proponent.

f. Conduct and participate in warfighting experiments.

g. Forward warfighting concepts and capability documents to TRADOC for review, integration, approval, and entry into Army and Joint staffing.

2–29. Developers

a. *Combat developers.* The CBTDEV will—

(1) Utilize Army and Joint capstone concepts to develop operating and functional concepts detailing how the Army will operate as part of a Joint warfighting force. Link the concepts to Joint capability areas (JCAs) for relevancy to Joint capability needs. Develop CCP as required to define/refine operational, warfighting requirements for a particular warfighting function or capability area. When CCP are required, CCP developers will outline the basic capability requirements to provide enough detail to initiate a capabilities-based assessment as outlined in the JCIDS Manual. All concepts must illustrate how future forces will operate, describe the capabilities required to carry out a range of military operations against adversaries in the expected Joint operational environment, and how a commander, using military art and science, might employ these capabilities to achieve desired effects and objectives.

(2) Utilize the contemporary operational environment and Joint Operating Environment. The operational environment must describe the composite of conditions, circumstances, and influences that affect employment of military forces and bear on the decisions of commanders. It depicts the challenging; adaptive global setting the U.S. Army military will encounter over the next 20 years and beyond, and provides the fundamental context for Army and Joint experiments and training. It must provide the essential foundation for developing concepts and writing requirements; define the threat and environment for individual and collective training across schools and combat training centers (CTC); and provide benchmarks for comparing risk, effectiveness, and cost in potential DOTMLPF solutions and for testing materiel solutions to ensure efficiency and effectiveness.

(3) Review and recommend updates to the Army Universal Task List and participate in the review and development of the Universal Joint Task List (see CJCSM 3500.04E).

(4) Ensure only validated threat assessments are used in concept development and any modeling efforts supporting capabilities determination.

(5) Ensure the appropriate experimentation is conducted to validate concepts.

b. *Architecture developers.* The architecture developers—

- (1) Serve as core members of ICDTs.
- (2) Develop and validate integrated architecture data congruent with Joint architectures that support concept and capability developments. Operational architecture portrays a warfighting concept to capability and materiel developers in a manner conducive to conducting capabilities-based assessments and the development of appropriate system architectures thereby ensuring interoperability/compatibility. It provides a description (often graphical) of the operational elements (to include Joint) and nodes, the type of critical information and information flows, the frequency of exchange, and the tasks these information exchanges support in order to achieve warfighting goals.
- (3) Use existing integrated architectures to inform CBAs of Joint and Army concepts across the DOTMLPF.
- (4) In coordination with ASA(ALT) for systems view, and CIO/G-6 for technical view, synchronize development of integrated architecture products for capability documentation to include force design updates, software blocking, JCD (if applicable), ICD, CDD, and CPD.
- (5) Develop architecture in conformance with common data standards to support federation and reuse of architectures resident in approved data repositories.
- (6) Use TRADOC's Capability Architecture Development and Integration Environment to develop, validate, and store operational architecture data and products.
 - c. *Combat and training developers.* The combat and TNGDEVs will—
 - (1) Determine and integrate force requirements and synchronize the development of DOTMLPF solutions. Capture this information in CIM or strategic frameworks.
 - (2) Use war gaming, experimentation, and concepts to develop and integrate requirements from a comprehensive perspective of DOTMLPF.
 - (3) Conduct CBA of Joint and Army concepts as required. Identify tasks, conditions, standards, gaps, and proposed solutions across the DOTMLPF.
 - (4) Conduct analytical support for DOTMLPF developments.
 - (5) Develop and document integrated DOTMLPF solutions to resolve or mitigate gaps with unacceptable risk.
 - (6) Characterize capability in measurable performance terms.
 - (7) Prepare and forward Army and Joint capability proposal documents for CG, TRADOC review and validation.
 - (8) Validate R&D priorities for key Army science and technology needs.
 - (9) Support the development, conduct, and evaluation of experimentation to identify and verify acceptable solutions for required changes in DOTMLPF to achieve significant advances in current and future capabilities.
 - (10) Ensure Joint and Army concepts, validated through war games, experiments, and studies, integrate into doctrinal and training products.
 - (11) Develop individual and collective training systems and programs to execute approved concepts.
 - (12) When assigned, conduct AOA for materiel solutions to assess proposed critical technologies for maturity, technical risk, and if necessary, demonstration needs.
 - (13) Establish user position on acceptability of safety and health hazard risks at MDR.
 - (14) Coordinate with MATDEV on matters pertaining to materiel acquisition management.
 - (15) In coordination with ATEC, develop critical operational issues and criteria and reliability and maintainability information for capability documents and the test and evaluation master plan.
 - (16) Participate with the MATDEV in risk assessments (cost, schedule, and performance trade-off analyses).
 - (17) Establish user constraints, objectives, and requirements for supportability including TADSS; participate in design reviews, program reviews, in-progress reviews, MDR, ASARC, or DAB, and other forums to assure early and continuous consideration of supportability.
 - (18) Conduct experiments to support analysis and risk reduction during capabilities determination efforts.
 - (19) Provide representation at HQDA and OSD overarching and MATDEV integrating and working IPT (IIPT and working level integrated product team) for TRADOC proponent programs.
 - (20) Represent the Soldier throughout the requirements and acquisition processes.
 - (21) Identify potential doctrinal solutions to resolve or mitigate capability gaps. Produce program directives to define and document a detailed requirement for a doctrine publication.
 - (22) Identify potential organizational solutions to resolve or mitigate capability gaps. Develop new organizational designs or correct deficiencies in existing organizations by developing concepts, a capability proposal, unit reference sheet, or force design update.
 - (23) Identify potential training solutions to resolve or mitigate capability gaps. Develop and document training solutions for validation and approval. Prepare training requirements analysis system documents, training publications, training support packages, and training strategies as required. Develop and document requirements for TADSS categorized as nonsystem in accordance with the JCIDS process.
 - (24) Identify potential leadership and education solutions to resolve or mitigate capability gaps. Develop, document, and implement new leadership and education theory, concepts, doctrine and programs for the Army as approved by Army leadership.
 - (25) Identify potential personnel solutions to resolve or mitigate capability gaps. Prepare documentation to support

personnel domain requirements to include changes to the Military Operational Specialty Code System and forward to U.S. Army Human Resources Command (HRC) for Armywide review.

(26) Identify potential facilities solutions to resolve or mitigate capability gaps. Identify, analyze, and justify facilities requirements, particularly the affordability aspect. Identify proper funding or programming streams to solve or mitigate facilities requirements. Validate and rank-order requirements for the Military Construction, Army programming.

(27) Create ICDT chartered by ARCIC and request HQDA representation early in the development.

(28) In coordination with MATDEV, conduct a crosswalk of CDD and CPD to the request for proposal (RFP) to verify that the RFP, to include system specifications and the statement of work, accurately reflect operational requirements. CBTDEV will formally certify that the RFP was cross-walked with CDD and CPD prior to the overarching IPT (OIPT) or program review.

2–30. Program executive officers and direct-reporting program managers and other program, project, and product managers

Program executive officers and direct-reporting program managers and other program, project, and product managers. The PEO and direct-reporting program managers and other PMs will—

a. Assist the capability developers in developing CDD and CPD by providing technical, availability, performance, anticipated materiel acquisition cost, and schedule type information as needed.

b. Ensure programming the cost of architecture development for the system and for the architecture necessary to achieve integration of the system are identified for inclusion in the POM.

c. Ensure programming the cost of software and upgrade and maintenance of software over its planned life cycle are identified for inclusion in the POM.

d. Fund and conduct concept formulation for all system TADSS in support of assigned system in coordination with PEO system training and instrumentation.

e. Embed system training capabilities into assigned materiel systems in accordance with the approved system CDD and CPD and in coordination with the CBTDEV and TNGDEV.

f. In support of information support plan submission and Interoperability and Supportability Certification, acquire DODAF compliant system and technical views that represent the materiel solution that is under contract.

g. Apply DOD common framework for M&S standards in all TADSS design and development, as required.

h. Program and budget funds to support changes to system and nonsystem TADSS resulting from changes or modification to the system supported.

i. Program and budget resources for the integration of materiel systems, digitized components and subsystems, and system TADSS/embedded training into Army CTC instrumentation systems in coordination with DCS, G–3/5/7, Office of the Director of Training (DAMO–TR), and PEO system training and instrumentation.

j. Program and budget resources for TADSS life cycle management plan including where applicable but not limited to system refresh, recapitalization, installation and disposal.

k. Program and budget resources to support MANPRINT in the RDTE and acquisition processes.

l. Provide MATDEV perspective through input to Army Modernization Plans.

m. Lead the cost performance IPT to institute the cost as an independent variable process beginning with the approval of the ICD.

n. Provide validated variable fidelity model (not simulation) of system characteristics and capabilities with supporting parametric data (unclassified, classified if required) in accordance with Army M&S standards for assigned systems to support TADSS development.

o. In coordination with capability developers, conduct a crosswalk of CDD and CPD to the request for proposal to verify that the RFP, to include system specifications and the statement of work, accurately reflect operational requirements. The CBTDEV will formally certify that the RFP was cross-walked with CDD and CPD prior to the OIPT or program review.

Chapter 3

Joint Capabilities Integration and Development System Integration and Decision Forums

3–1. Army Requirements Oversight Council

a. *Mission.* The AROC advises the CSA, in the assessment and prioritization of force modernization planning for integrated DOTMLPF capabilities required to support current and future Joint warfighting commanders. This advice will provide linkage and synchronization between, and recommended prioritization of, required capabilities and resources. The validation of the capability proposal, KPPs, and DOT-LPF requirements (the consideration of domains supporting the materiel solution), and approval to resource within established priority, must address:

(1) *Military Need and Risk.* The AROC will review and provide decisions and guidance on the capability gaps

identified in documentation presented for validation. This ensures identified gaps link with modernization investment priorities essential for maintaining land force dominance.

(2) *Synchronization with Army and Joint Modernization Strategies.* The AROC will validate that recommended strategies to resolve capability gaps, including associated DOTMLPF changes, are consistent with Army modernization strategies. Proposals must contribute to a balanced and synchronized modernization program. The AROC will also review how the recommended strategies fit into related Joint concepts, force modernization strategies and investment portfolios to ensure interoperability and synergy.

(3) *Estimated Program Affordability.* The AROC will review the affordability, based on cost estimates, of all proposed solutions to capability gaps and programs presented to ensure that, if pursued, they are within programming limits for development, procurement and sustainment. The granularity of the affordability data will be tied to the maturity of the proposal. The AROC will consider trade-offs of capability and/or performance versus cost to ensure only affordable solutions are pursued. Affordability will include potential long term supportability requirements for the concept or system. Proposals presented to the AROC will address Joint development and procurement considerations. See chapter 4, paragraph 4–7 for more detail on affordability requirements in JCIDS proposals.

(4) *Capability Definition and Interoperability.* The AROC will ensure that the operational definition of the capability gap and the proposed solution is clear and consistent with Army and Joint warfighting concepts. Key performance parameters serve as the fulcrum for AROC risk deliberations on operational improvements versus costs to field a capability at the appropriate time and in the appropriate quantities. Opportunities to integrate other Service programs or technologies to improve Joint interoperability will be addressed in the AROC presentation.

b. Validation. Validation entails review of a capability proposal by operational and functional authorities other than the originator to confirm the feasibility, acceptability, and supportability of the proposal. Approval indicates acceptance of the proposal and commitment of resources to execute. Final approval and commitment of funding will follow the JROC validation and approval process. The AROC process will be used to validate and approve—

(1) Proposals for insertion of capabilities into the force to address current capability gaps when the solution extends into the POM.

(2) Strategies to address major warfighting concepts and broad capability gaps that drive changes to modernization programs and plans.

(3) The DICR (the consideration of domains other than materiel solution) to address validation of need and required fiscal commitment to other than new materiel solutions. The DICRs are not required to proceed to JROC following AROC validation and approval unless some part of the change intrudes in areas where validation and approval by the JROC is required.

(4) Proposals describing required capabilities of future Army forces. The AROC will validate all JCIDS documents communicating these proposals prior to formal Joint consideration; including Army Annexes to Joint and other Service Documents and those documents for which an Army proponent is designated lead for a Joint development effort, and Army Annexes required for Army but not Joint Staff approval. The final approval memorandum for the proposal will be signed by the DCS, G–3/5/7 at completion of Joint validation through the JROC process.

c. Structure. The AROC consists of—

(1) Nine Principals: Vice Chief of Staff, Army (VCSA) (Chair); DCS, G–3/5/7 (Secretariat); DCS, G–1; DCS, G–2; DCS, G–4, CIO/G–6; DCS, G–8; ASA(ALT) Principal Military Deputy (MILDEP); and DCS, G–3/5/7, TRADOC, ARCIC.

(2) Advisors: ASA FM&C, Deputy, Cost and Economics; Director of the Army Staff; ASA(FM&C) MILDEP; Chief, Army Reserve; Chief, Army National Guard; DCS, G–8, Director, Programs, Analysis and Evaluation (PAED); DCS, G–8, Force Development; CG, ATEC; DCS, G–3/5/7, Director, Capabilities Integration, Prioritization and Analysis; and others as required.

d. Roles.

(1) *Army Requirements Oversight Council principals and advisors.* The AROC principals and advisors will advise the CSA in assessment and prioritization of DOTMLPF integrated capabilities, validate and approve proposals for rapid insertion of technologies to address current capability needs, for example) CDRT, when solution extends into the POM and strategies to resolve capability gaps and resultant changes to modernization programs and plans. The AROC will validate JCIDS documents prior to entry into official Joint staffing. This will encompass all JCIDS efforts including Army Annexes to Joint and other Service documents, those where an Army proponent has been designated as a Joint Combat Developer, and Army Annexes required for Army but not Joint Staff approval.

(2) *Army Requirements Oversight Council Secretariat.* The AROC Secretariat coordinates and synchronizes all requirements and calendars AROC meetings. The Secretariat will publish calendar information to AROC Principals and Advisors on the meeting, topic, and any special information directed by the DCS, G–3/5/7 or VCSA and publish AROC minutes.

(3) *Requirements staff officer.* The RSO is the DCS, G–3/5/7 DOTMLPF functional integrator for specific focus areas (that is, Force Support, Battlespace Awareness, Command and Control, Force Application, Net Centric, Protection, Corporate Management and Support, Building Partnerships, and Logistics), responsible for coordination and integration of functional proposals in the capability and AROC management system (CAMS) assigned to them by the

Army Gatekeeper. The RSO is the Army's functional point of contact for coordination and integration of all proposals entering the AROC staffing process and is responsible for briefing APRB topics and assists the sponsor with staff coordination of pre-briefs for AROC topics. The RSO makes recommendations on comment acceptance, partial acceptance, or rejection. The RSO will facilitate a comment adjudication working group for each JCIDS proposal in Army and Joint staffing unless the Division Chief, Current and Future Warfighting Capabilities Division determines one is not required.

(4) *Headquarters, Department of the Army Staff Action Control Officer.* The SACO determines the subject matter expert(s) within his or her organization that needs to review and comment on the document and forward the document for staff action within their directorate, noting Action and Assist elements and staffing suspense dates.

(5) *Point of contact.* Army Gatekeepers assigned to Current and Future Warfighting Capabilities Division are the points of contact for the DCS, G-3/5/7 to oversee and manage all documents submitted for Army and Joint staffing; the Army Gatekeeper has one primary and one alternate point of contact in CAMS for staffing execution, usually to a staff action control officer but it is by the directorate's or agency's determination.

(6) *U.S. Army Training and Doctrine Command.* The JCIDS document lead is a TRADOC subordinate organization, or one of the limited numbers of non-TRADOC commands or staff agencies, responsible as a proponent for executing the capabilities determination process and works through the TRADOC ARCIC Gatekeeper to facilitate Army and Joint staffing of a document through the AROC and JROC processes. The JCIDS document lead develops JCIDS documents and submits through ARCIC Gatekeeper to DCS, G-3/5/7 via the CAMS application; TRADOC ARCIC has its own Gatekeeper to facilitate actions to and from HQDA.

(7) *Subject matter expert.* The subject matter expert identified within an organization provide expertise on the document subject and comments as a guest user in CAMS. The subject matter expert is responsible for inputting comments for themselves and others (Comment Sponsors) in their organization on the document coordination comment matrix, and having the required level of general officer or senior executive service equivalent comment approval.

e. Army Requirements Oversight Council execution.

(1) *Staff coordination.* A TRADOC validated and approved JCIDS document is submitted to the Army Gatekeeper for initial Army General Officer (1-Star) staffing, Army General Officer (3-Star) review, and signature by the Principals; this is referred to as the paper AROC process. Director, Current and Future Warfighting Capabilities Division directs proposal briefs to the AROC, this is referred to as a full AROC; Current and Future Warfighting Capabilities Division schedules; and the document proponent and others supporting the validation and approval of the proposal brief the proposal.

(2) *Army Gatekeepers.* Army Gatekeepers manage the CAMS tool to ensure consistency of staff coordination as JCIDS proposals progress through the validation and approval process. They review each proposal upon initial ARCIC Gatekeeper submission for content, correctness, and inclusion of required supporting documentation; assign proposals to the appropriate functional RSO for further assessment as the DCS, G-3/5/7 subject matter expert, document integrator, and facilitator of the proposal as it proceeds through the Army Staff coordination process in CAMS. Upon the completion of the Army and Joint Staff validation and approval processes, close the documentation process by publishing the DCS, G-3/5/7 approval memorandum which contains the approved JCIDS document, the CARDS number, and the assigned Joint potential designator.

(3) *Requirements Staff Officer.* Requirements Staff Officers (RSOs) will—

(a) Serve as DCS, G-3/5/7, Current and Future Warfighting Capabilities Division (DAMO-CIC) point of contact, represent the HQDA position for JCIDS proposals, and ensure validation and approval of sponsor proposals through the continuous coordination, integration, and synchronization of documents with appropriate Army Staff and sponsor subject matter expert.

(b) Brief the APRB at directed points during the Army Staff coordination of JCIDS proposals.

(c) Review comments on the JCIDS proposal and make recommendations to the CBTDEV whether the comments should be incorporated or not (accepted, partial, rejected) and provide rationale for the recommendation.

(d) Facilitate a comment adjudication working group for each JCIDS proposal in Army and Joint staffing unless the Chief, Current and Future Warfighting Capabilities Division determines one is not required.

(4) *Capability and Army Requirements Oversight Council Management System.* The CAMS is the DCS, G-3/5/7 database driven knowledge management decision support information technology system supporting AROC document staffing and commenting from numerous users and organizations within the Army into a central database repository. The system allows users to view document information and monitor document progress through AROC validation until submission to the JROC staffing and approval process. The CAMS software technology supported by DCS, G-3/5/7, Information Management Center (IMCEN), found at Secret Internet Protocol Router Network (SIPRNET) address: <http://datasharing.us.army.smil.mil/camsguest/gBase.guesthome>.

f. Conduct of Army Requirements Oversight Council.

(1) Paper AROC execution:

(a) The APRB determines before initial staffing if the document will go to a full AROC or a paper AROC. If the APRB decides the document will staff as a paper AROC, the document processes through initial staffing across HQDA for comments.

(b) Comment sponsors enter their comments into CAMS for consolidation and comment adjudication by the RSO with CBTDEV support.

(c) The RSO adjudicate all comments entered into CAMS during the staffing and review period and enter a remark for each comment in the resolution matrix describing the disposition of each comment (accepted, partial, or rejected).

(d) At the conclusion of comment resolution, the CBTDEV will upload a revised version of the sponsor's proposed capabilities document and an AROC briefing into CAMS for 3-Star review by the AROC Principals and Advisors.

(e) The AROC Principals and Advisors provide the AROC Secretariat with their staff position (concur or nonconcur) and sign the AROC Response Sheet and return to the RSO.

(f) With full concurrence by all AROC members the Gatekeeper enters the document into Knowledge Management/ Decision Support Web-based staffing tool for Joint staffing.

(2) Full AROC execution:

(a) The APRB determines before initial staffing the proposal will go to a full AROC and a tentative AROC date is established.

(b) During initial staffing the AROC Principals and Advisors are made aware of the AROC date and the document is processed as in f(1)(a) through f(1)(e), above.

(c) The AROC Secretariat will arrange the required pre-briefs with the DCS, G-3/5/7 leadership and the VCSA.

(d) If there are no issues to be resolved after the AROC, the signature response sheets are provided to the Gatekeeper and the document forwarded for Joint staffing. Army Staffing JCIDS documents for AROC validation and approval (see fig 3-1).

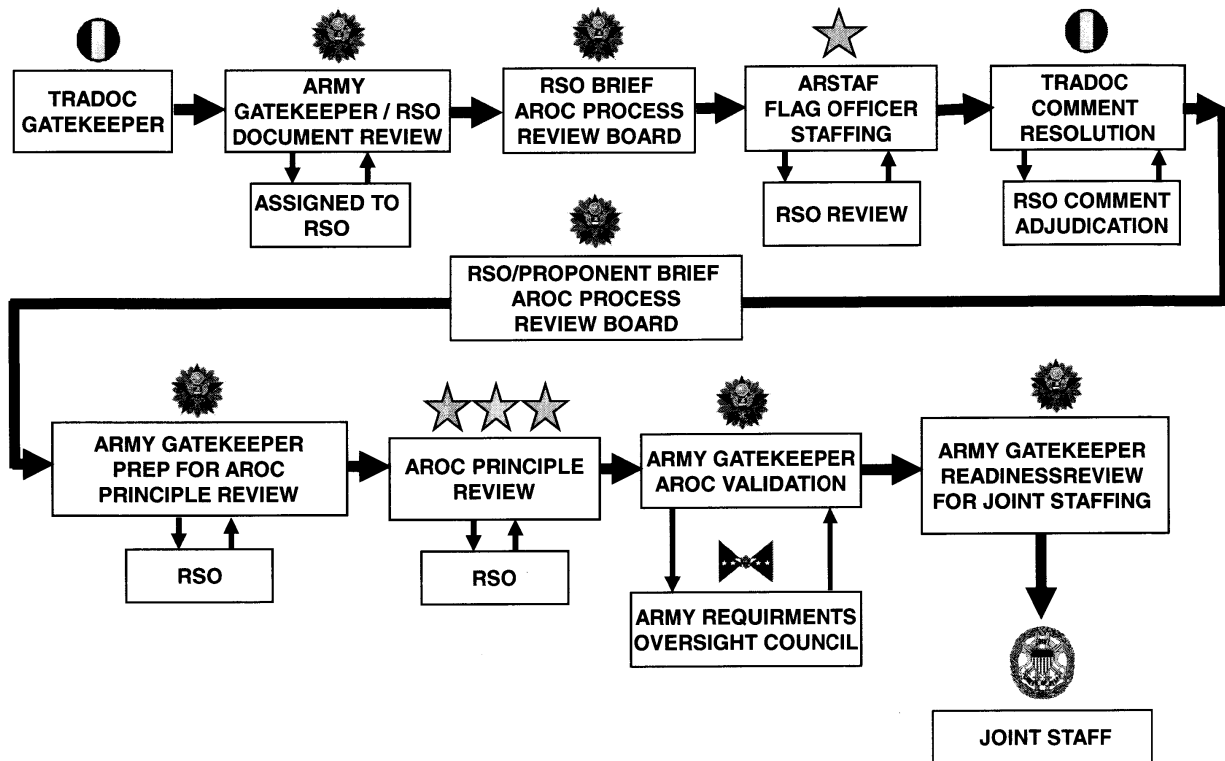


Figure 3-1. Army staffing Joint Capabilities Integration and Development System document for AROC validation and approval

(3) All capabilities documents validated by the AROC, less DICR, are forwarded to the Joint Staff for review as required. Disposition, tasking, and any additional requirements or information will be documented in the AROC minutes.

(4) The DCS, G-3/5/7, Current and Future Warfighting Capabilities Division will prepare a final approval memo for each approved JCIDS document including the name of the capability and date of AROC approval (either paper or in session). A copy of this memo will be provided to the Joint Requirements Office (JRO) or ARCIC Gatekeeper.

g. Army Requirements Oversight Council Process Review Board. The Chief, Current and Future Warfighting Capabilities Division is lead for executing policy and procedure to accomplish the goals and objectives of the APRB. The Current and Future Warfighting Capabilities Division JCIDS Integration and Policy Branch will support, providing the Gatekeepers, Secretariat, and policy and procedure expertise to ensure sound recommendations are made in support of document staffing/review, coordination with topic RSO and respective Branch Chief, and coordinating resulting tasking memos. The DCS, G-3/5/7, DCS, G-8, and ARCIC tri-chair supports the APRB process as required to accomplish AROC goals and objectives. They provide subject matter expertise to represent the Army's interest in validating, prioritizing, and resourcing capabilities through the Army staffing process for JCIDS proposals. The tri-chairs coordinate and synchronize efforts within their organizations to provide collaboration of ideas, support to APRB requirements, recommendation to Army leaders, and initiatives. Representatives of AROC principals and advisors, other HQDA elements, field operating agencies and external organizations provide subject matter expertise as required.

h. Army Requirements Oversight Council Process Review Board. The APRB will—

(1) Serve as the AROC intermediate review body inserted prior to, and immediately following, the initial staffing of documents and as required to review and comment on other documentation, analysis including the AOA plan, or actions. The board will not make final decisions on required capabilities, which only the AROC can make; as a decision making body it will advise and recommend courses of action best suited to executing the AROC efficiently and preparing Army JCIDS documents for JROC staffing, decide if further review is required following 1-Star staffing and comment adjudication, and direction for paper or full AROC. The DCS, G-3/5/7 may require the board to perform specific roles in relation to adjudication of other capabilities related issues outside its normal function.

(2) Ensure AROC topics are suitably developed in accordance with AROC objectives, OSD, and Joint Staff policies and procedures and determine the required method of presentation for approval of the submission as full or paper execution. Ensure life cycle management considerations are addressed in the capabilities description, cost estimation, and review of program affordability. Affordability defined as the degree to which the life cycle cost of a proposed capability is in consonance with the long-range modernization, force structure, and manpower plans of the Department of the Army.

(3) The APRB will verify that appropriate analysis and consideration given to nonmateriel solutions and the option of a DICR before forwarding documents to the AROC.

(4) Review results of TRADOC's comment(s) adjudication from HQDA staffing to determine the proposal's readiness to proceed to AROC review and validation.

(5) As ARCIC CIM develop, confirm the proposals linkage to approved Joint and Army concepts, modernization strategies and priorities, and validate full DOTMLPF integration.

i. To ensure capabilities remain consistent with approved plans, schedules, and APB the APRB may recall any Army JCIDS document for review. The review is provided by the TRADOC Capability Manager and PM before or after validation and or approval if one of the following conditions occurs:

(1) A significant change in cost or schedule which impacts fielding of required capabilities from that program or any associated, complimentary, or dependent program.

(2) Any proposed change to an approved capabilities document that will result in a decreased capability or threaten cost overrun of the APB.

j. The APRB will determine required action such as refer to ASA(ALT) CSB, Joint Staff, or AROC for appropriate action.

k. Review and provide comment on draft ICDT Charters and results of draft FNA provided by ARCIC prior to their approval by Director, ARCIC. The DCS, G-3/5/7 will provide ARCIC with comments/recommendations for consideration within 5 business days following receipt of the FNA results at HQDA.

l. Review Army input to Joint CBA to ensure synchronization with Army modernization strategy and capabilities determination activities.

m. Review required capabilities identified through the CDRT process, ATDs, and directed requirements to assess scope of resultant changes to modernization PPBE and ARCIC integration efforts.

3-2. Joint Requirements Oversight Council

a. Joint Requirements Oversight Council. The JROC mission—

(1) Assesses requirements for defense acquisition programs.

- (2) Represents the commanders of combatant commands on operational requirements.
 - (3) Assesses warfighting capabilities.
 - (4) Assigns a Joint priority among major programs meeting valid requirements identified by the CCDR, Services, and others.
 - (5) Reviews all warfighting deficiencies that may necessitate major defense acquisition programs and validate the need for a material solution to the deficiency.
 - (6) Identifies, evaluates, and designates potential candidates for Joint acquisition programs.
 - (7) Resolves cross-Service requirement issues.
 - (8) Reviews military needs and acquisition programs with emphasis on ensuring interoperability, pursuing opportunities for Joint or multi-Service applications, eliminating unnecessary duplication, and promoting cost savings.
 - (9) Assists the Vice Chairman of the Joint Chiefs of Staff in the role of Vice Chairman of the DAB.
 - (10) Prior to Army proposal review by the JROC, the Functional Capabilities Board Working Group (FCBWG), FCB, and JCB will take briefs and review as required. Detailed discussion of Service and Joint Staff roles, responsibilities, and guidelines found in 3170-series publications.
- b. *Joint staffing.* JCIDS Joint Staff – validation and approval process (see fig 3–2).

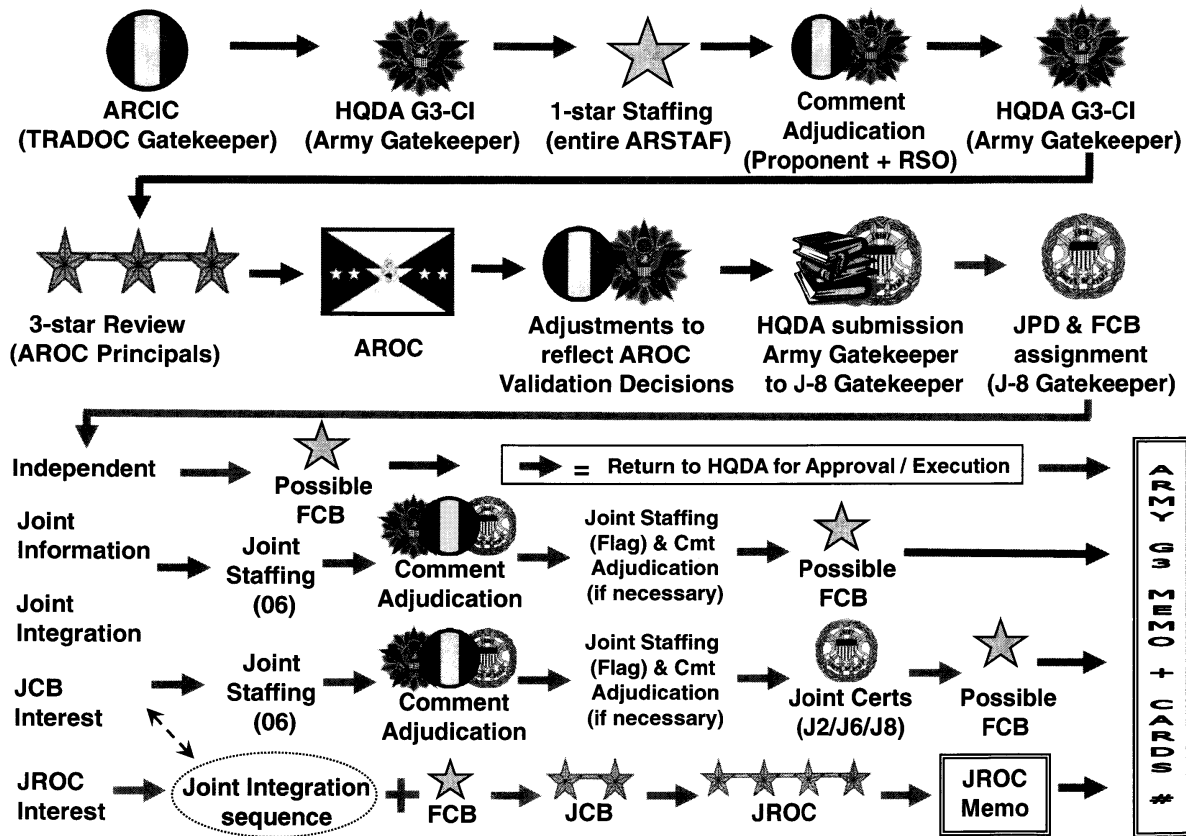


Figure 3–2. Joint Capabilities Integration and Development System Joint Staff validation and approval process

c. Army roles.

(1) The VCSA is the Army's permanent member of the JROC; ensuring that major Army programs are reviewed by the JROC as required. The VCSA represents both Army and CCDR interests in those areas where programs impact the successful accomplishment of the Army's full range of military operations.

(2) The DCS, G-8, Force Development Division is the Army permanent member of the JCB; ensuring that Army programs are scheduled and reviewed by the JCB as required. The DCS, G-8, Force Development Division represents both Army and CCDR interests in those areas where programs impact the successful accomplishment of the Army's full range of military operations.

(3) The DCS, G-8 and the DCS, G-3/5/7 provide representation to the FCB. The FCB supports the Chairman of the Joint Chiefs of Staff responsibilities in providing independent military advice to the Secretary of Defense. The FCB provide the assessments and recommendations required for the JROC to validate and prioritize Joint military capabilities needed to meet the National Military Strategy. Functional Capabilities Boards serve as the link between Services, combatant commands, OSD, and Defense agencies on warfighting capabilities and issues.

(4) The FCB leads oversee working group meetings, confirm working group context briefings and sponsor issue presentations are reviewed and ready for presentation to the FCB, JCB, and JROC, coordinate FCB actions, ensure integration of department-wide views, and participate in FCB integration meetings.

(5) The DCS, G-3/5/7, Current and Future Warfighting Capabilities Division represents the Army position and frames requirements presented to the JROC for review and approval.

(6) The proponent of the JCIDS proposal represents the Army CBTDEV, and supports the Army Staff in presenting Army capability proposals to the JROC for review and approval by executing the functions specified in the other sections of this document.

Chapter 4 Capabilities Documentation

4-1. Concept-driven, capabilities-based approach to identification of doctrine, organization, training, materiel, leadership and education, personnel, and facilities solution

a. TRADOC is assigned as the capabilities developer and operational architect for the Army. In these roles, TRADOC designs, develops, integrates and synchronizes warfighting capability proposals; fosters innovation; and leads change for the Army. To accomplish these tasks, TRADOC utilizes concepts, experimentation, and capabilities determination as core functions and employs the ARCIC as lead.

b. The ARCIC leads Army concept development and supports Joint concept development through TRADOC and non-TRADOC proponents; develops and manages the Army Concept Strategy; develops Army concepts; directs, manages, and synchronizes CCP development through ICDT and TRADOC/non-TRADOC proponents; and ensures the integration of land force capabilities in the development of Joint operating, functional, and integrating concepts in coordination with DCS, G-3/5/7, the Joint Staff J-7, U.S. Joint Forces Command (USJFCOM), and other combatant commands.

c. Concepts-driven approach to JCIDS. Concepts describe the capabilities required to carry out a range of military operations against adversaries in the expected Joint operational environment, and illustrate how a commander, using military art and science, might employ those capabilities to achieve the desired effects and objectives. Concepts provide capability descriptions for future military operations 10-20 years in the future. Each concept describes problems, the components of potential solutions, and how those components work together to achieve operational success.

d. Army concepts, especially CCP, provide the basis for conducting the CBA which is the first analytical step of the JCIDS process.

4-2. Doctrine, organization, training, materiel, leadership and education, personnel, and facilities solution integrated capabilities recommendation

a. The Army DICR requires Army only DOTmLPF and or policy adjustment to close or mitigate a gap identified following analysis, experimentation, or lessons learned, but does not require development of a new materiel solution. TRADOC is responsible for validating and submitting DICR to HQDA for AROC validation and approval. The AROC approves the DICR; the JROC must approve Joint DOTMLPF change recommendation (DCR), see 3170-series publication for DCR policy and procedure. Following validation and approval of a DICR, ARCIC provide status update to the APRB as directed by the AROC. A DICR is the preferred approach to solving or mitigating gaps in required capabilities. The DICR can be a recommendation to ensure the adequacy of future warfighting needs or a follow-on action to an ONS or Directed Requirement providing a current force solution. If a CBA sponsor determines that the capability gap(s) can be partially addressed by nonmateriel approaches, the sponsor will develop a DICR in addition to

an ICD, or required CDD or CPD. If a CBA sponsor determines that the capability gap(s) can be completely addressed by nonmateriel approach, the sponsor will develop a DICR in lieu of completing an ICD (see app C for DICR format).

b. The DICR support the following:

(1) Change, institutionalize, or introduce new DOTmLPP and or policy resulting as an output of experimentation, lessons learned, current force needs such as ONS or CDRT solutions, or other assessments.

(2) Change, institutionalize, or introduce new DOTmLPP and or 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 DOTmLPP.

(4) Introduce existing nonmateriel solutions available from other DOD, U.S. interagency, or foreign sources.

4-3. Initial capabilities document

The TRADOC is responsible for submitting ICD to the DCS, G-3/5/7, Current and Future Warfighting Capabilities Division Gatekeeper for staff coordination, validation, and approval, and forwarding to Joint staffing. The ICD documents the requirement for a materiel or nonmateriel approach, or an approach that is a combination of materiel and nonmateriel approaches, to satisfy a 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, DOTMLPP and policy implications and constraints. The ICD summarizes the results of DOTMLPP analysis and DOTMLPP approaches (materiel and non-materiel) that may deliver the required capability. The outcome of an ICD could be one or more DICR, DCR, CDD, or CPD. If an ICD is developed to document the need for a materiel solution, an analysis of alternatives may be directed to support a MS A decision in accordance with paragraph 5-6.

4-4. Capabilities development document

The TRADOC is responsible for submitting the CDD to the DCS, G-3/5/7, Current and Future Warfighting Capabilities Division Gatekeeper for staff coordination, validation, and approval, and forwarding to Joint staffing. The CDD captures the information necessary to develop proposed program(s), normally using an evolutionary acquisition strategy. The CDD outlines an affordable increment of militarily useful, logistically supportable, and technically achievable or mature capability. The CDD may define multiple increments if there is sufficient definition of the performance attributes (KPPs, key system attributes, and other attributes) to support approval of multiple increments. Several CDD may be written to support the multiple or complex gaps defined in a single ICD.

4-5. Capabilities production document

The TRADOC is responsible for submitting the CPD to the DCS, G-3/5/7, Current and Future Warfighting Capabilities Division Gatekeeper for staff coordination, validation, and approval, and forwarding to Joint staffing. The CPD addresses the production elements specific to a single increment of an acquisition program resulting from an approved CDD or mature existing technology. It is somewhat similar in format to the CDD.

4-6. Joint capabilities document

When directed by HQDA, TRADOC is responsible for submitting JCD to the DCS, G-3/5/7, Current and Future Warfighting Capabilities Division Gatekeeper for validation and forwarding to Joint staffing. The Army may develop a JCD to define the set of capabilities for a mission after coordination with the appropriate FCB and combatant command to ensure no duplication of work. The JCD will identify the relative priority of the capability gap(s) and identify those areas where risk may be taken. The JROC may task HQDA with performing an FSA, and development of an ICD when required. The JCD supports the development of a DCR to implement nonmateriel solutions and the development of an ICD for materiel solutions.

4-7. Program affordability

a. Army sponsored CDD and CPD must contain a life cycle or total ownership cost estimate, an affordability table, and the source, or approved proposed source, of funding. Life cycle of total ownership costs must be expressed in threshold and objective values and must include the base year and dollar-level for example, thousands (\$K) and millions (\$M) (see table 4-1).

b. Army program affordability table will specify funding required by fiscal year (FY) over the future years defense program/plan for research, development, test, and evaluation (RDT&E), procurement, sustainment, and any unfunded requirements (UFR). Program funding is shown in the most recent POM and/or the President's budget or identified during the POM process. This matrix will support Army leadership making informed decisions on whether to move funding for this program (see fig 4-1).

	APPN	APE	FY xx	FY xx	FY xx	FY xx	FY xx	FY xx
RDT&E								
Funding								
UFR								
Procurement Cost								
Funding								
UFR								
Sustainment cost								
Funding								
UFR								
Total UFR								

Figure 4-1. Sample of Army Program Affordability table

c. Source of funding examples include:

- (1) The source of funding for this program is OSD.
- (2) The source of funding for this program is the Joint Program Office.
- (3) Funding for this program transferred from _____ program.

d. Document sponsors will coordinate with appropriate DCS, G-8, Force Development Division for level of funding identified or programmed or the possible source of funding.

e. The DCS, G-8 is responsible for providing the level of funding identified or programmed, and the source of funding to the document sponsor.

Table 4-1
Life cycle or total ownership costs (\$M, BY20xx)

Objective	Threshold
\$627	\$700

4-8. Catalog of approved requirements document system

a. The CARDS is an unclassified DCS, G-3/5/7 publication that provides information on the status of approved capability documents. It includes both active and inactive documents. An active document or assignment of a CARDS reference number does not automatically authorize the expenditure of funds. Each program competes for funds in the Army PPBE.

b. The DCS, G-3/5/7, Current and Future Warfighting Capabilities Division in coordination with the CBTDEV, TNGDEV, and MATDEV will conduct annual update of the CARDS.

c. The DCS, G-3/5/7 will assign a CARDS reference number to each capability document after approval and prior to publication and distribution. The capability document will have a Final Approval memo attached which contains the CARDS reference number. Use CARDS to identify any revision to an approved document by revision date and number.

d. Approved capability documents remain active until AROC guidance terminates the capability, the capability is withdrawn by the CBTDEV, the document is superseded by a follow-on capability document, the program is unfunded for one POM cycle (2 years), or the system is type classified obsolete.

4-9. Training aids, devices, simulators, and simulations

a. The TNGDEV has the lead responsibility for defining TADSS and works with the MATDEV to develop and field TADSS solutions. TADSS are acquired under two categories: as a system training device or as a nonsystem training

device (NSTD). The primary distinction between the two categories is the materiel capabilities documentation and funding responsibilities associated with each.

b. System TADSS are acquired to support the fielding of a specific system or family of systems. TADSS requirements are documented in the JCIDS proposal. If a system TADSS requirement is not identified until after the system has received a MS B decision but before MS C, the requirement may be documented in the materiel system CPD or in a stand-alone JCIDS proposal. If a system TADSS requirement is not identified until after the system has received a MS C decision, the requirement will be documented in a stand-alone JCIDS proposal unless it can be added to a following increment.

c. All NSTD capabilities are documented in a separate JCIDS proposal. The NSTD programs will be managed for planning, programming, budgeting, development and sustainment through the training support system process in accordance with AR 350-1.

d. The Army's goal is to procure system TADSS as part of the total system package and terminate Training PEG funding of TADSS that support a system or family of systems.

e. Modification of TADSS (hardware, software) necessitated by change to the system supported will be accomplished and funded through the system's modification program.

f. The activity responsible for the materiel system's acquisition is also responsible for developing and executing the life cycle management plan of TADSS supporting the materiel system.

4-10. Other Service capability documents

The DCS, G-3/5/7 Gatekeeper will staff other service capability documents via the CAMS for potential Army equities and interest. When another service capability document adequately describes Army requirements, the document may be approved as the Army requirement. The Army may also acquire other service equipment with a national stock number identified through the MATDEV analysis and meeting an approved Army requirement. TRADOC will link Army capability developers with the other Services for staffing of capability proposals. For Joint programs, capability documents will be prepared and processed in accordance with the lead Services' procedures, and the stipulations in the 3170-series publication.

4-11. Transition of capability documents

a. Capability documents that have been initiated prior to implementation of this regulation are valid; do not automatically withdraw or rewrite them unless directed to do so by the DCS, G-3/5/7, Current and Future Warfighting Capabilities Division. If there is a question on revising, rewriting, or updating a currently valid capabilities or older requirements document contact the DCS, G-3/5/7, Current and Future Warfighting Capabilities Division policy team for guidance.

b. Technological advances, threat changes, or the direction of authority may require changes to approved capability documents. Submit recommended changes to any approved capability document to the DCS, G-3/5/7, Current and Future Warfighting Capabilities Division Gatekeeper.

c. Approved capability documents are terminated in accordance with this policy, paragraph 4-8*d*.

Chapter 5 Supporting Documentation and Considerations

5-1. Concepts and capabilities areas

a. Capabilities documentation must be traceable to the requirements delineated in Joint and Army concepts. These concepts are rooted in a chain of strategic guidance documents; the Capstone Concept for Joint Operations, Joint Operating Concepts, Joint Functional Concepts, Joint Integrating Concepts; and Army concepts (capstone concept, operating concepts, functional concepts, CCP, and concepts directed by CG, TRADOC). They provide a common vision of how the DOD and the Army plans to operate in the future, along with the desired attributes of the force.

b. Capability Areas are collections of warfighting capabilities logically grouped to support capability analysis, strategy development, investment decision making, capability portfolio management, and capabilities-based force development and operational planning. The Joint Staff manages capabilities using JCA and the Army adapts capabilities to ensure a common framework of language. All capabilities will trace to JCA and this linkage will be stated in the capability proposal.

5-2. Capability-based assessments

TRADOC is Army Lead for development, execution, and approval of CBAs and will document the CBA results in a JCD, ICD, and or DICR or DCR. The CBA is the supporting analysis of the JCIDS process that defines required capabilities, capability gaps, capability excesses, and then proposes DOTMLPF approaches to solving/mitigating gaps within a specified capability area. Based on strategic guidance and centered on the Joint and Army concepts, the CBA

becomes the basis for the development of JCIDS documents and results in the potential development and deployment of integrated, Joint capabilities. Refer to CJCS 3170-series for follow on Joint CBA activities.

5-3. Functional area analysis

The FAA identifies the mission area or military problem to assess, the concepts to examine, the timeframe in which the problem is assessed, and the scope of the assessment. TRADOC will identify the task, condition, and standard for each required capability from the concept.

5-4. Functional needs analysis

The FNA assesses the capabilities of current and future forces to meet relevant military objectives of scenarios chosen in FAA using doctrinal approaches. Using the standards and evaluation criteria described in FAA, FNA assess whether or not an inability to achieve a desired effect (a capability gap) exists. At the conclusion of FNA, TRADOC will assess whether or not the gaps identified have broader Joint applications. If an FNA has broader Joint applications, TRADOC will submit the FNA through the DCS, G-3/5/7, Current and Future Warfighting Capabilities Division Gatekeeper to the FCB which will make determination if it is to be a JCD or remain an Army only capability.

5-5. Functional solution analysis

The FSA assesses potential DOTMLPF and policy approaches to solving or mitigating one or more capability gaps identified in FNA. The approaches identified should include the broadest possible range of possibilities for addressing capability gaps. The FSA represents the final stage in the CBA process and summarize in the ICD.

5-6. Analysis of alternatives plan

The basic content requirements of the AOA plan are outlined in the OSD Acquisition Desk Book or Defense Acquisition Guidebook. The AOA plan consists of—

- a. Introduction to describe the developments that led to the AOA, including relevant analyses that preceded it.
- b. Reference the applicable capability needs document(s) and other pertinent documents.
- c. Rules include the scenarios and threats, as well as the assumed physical environment and any constraints or additional assumptions.
- d. The range of alternatives to address in the analysis.
- e. Description of how the AOA will establish metrics associated with the military worth of each alternative.
- f. Description of the analytic approach to the effectiveness analysis, which is built upon the hierarchy of military worth, the assumed scenarios and threats, and the nature of the selected alternatives.
- g. The range of alternatives to be addressed in the analysis
- h. The approach to the life cycle cost analysis and the planned approach for the cost-effectiveness comparisons of the study alternatives.
- i. The AOA study organization and management.

5-7. Analysis of alternatives

All acquisition programs require an AOA. The AOA guidance must be approved by the MDA at the materiel development decision. The AOA assess critical technologies, including technology maturity, technical risk, and, if necessary, technology maturation and demonstration needs. The AOA assesses the advantages and disadvantages of alternatives considered to satisfy capabilities, including the sensitivity of each alternative to possible changes in key assumptions or variables. The AOA should also assess cost, system training, and alternative ways to improve energy efficiency of end items that create a demand for energy. The MDA will decide if AOA update is required at MS B and MS C.

a. *MS A - Enter Technology Development Phase.* The purpose of the MS A AOA is to assess the potential materiel solutions to satisfy the capability need documented in the approved ICD. Milestone A AOA results provide a basis for selection of the Technology Development Strategy. The AOA will assess critical technologies associated with these concepts and evaluate technological maturity, risk, and demonstrated capabilities. At this stage, the technology development emphasis is placed on innovation and competition.

b. *MS B (Initiate Acquisition Program) – Enter Engineering and Manufacturing Development (EMD) Phase.* The focus of a MS B AOA is to support or inform the program initiation decision. The AOA should address and clarify how the program will lead to a Joint warfighting capability. The study alternatives are analyzed operationally within an Army and Joint environment where each alternative supports and is supported by Army and Joint asset capabilities. An important aspect of a MS B AOA is to provide analytic support for the detailed operational performance parameters and KPP in the CDD. The AOA will also consider the refined integrated architecture depicting how the alternatives connect and function within the future force.

c. *MS C - Enter Production and Deployment Phase.* The MS C AOA conducts on an “as required” basis. If conducted, focus of MS C AOA is generally on cost updates and program affordability. The Defense Acquisition System decision is a decision on whether or not to enter low rate initial production, and eventually full rate production.

The MS C AOA should demonstrate the system is affordable throughout the life cycle, optimally funded, and properly phased for rapid acquisition.

5-8. Environment, safety, and occupational health impact

a. The DOD Pollution Prevention policy requires that, in designing, manufacturing, testing, operating, maintaining, and disposing of systems, all forms of pollution shall be prevented or reduced at the source whenever feasible.

b. The CBTDEV, in coordination with the MATDEV, shall ensure that acquisition environment, safety, and occupational health (ESOH) staff review capabilities for ESOH impacts based on life cycle lessons learned from existing materiel solutions and technologies. This analysis is not the same as that required by the MATDEV to comply with the National Environmental Policy Act (NEPA) but intended to systematically identify and reduce the Army's intrinsic cost of acquiring, fielding, maintaining, operating, and disposing of materiel. In particular, the analysis will consider the life cycle ESOH impacts in similar or legacy systems and derive specific and tailored requirements to systematically identify, reduce or eliminate those impacts. The analysis will also consider evaluation of potential emerging ESOH impacts such as those identified on the OSD Emerging Contaminants Action and Watch lists.

c. Additional details of environmental requirements and considerations are contained in the Defense Acquisition Guidebook, AR 70-1, and AR 200-1.

5-9. Ammunition requirements

Capability proposals that identify a need for weapons and other related materiel must be coordinated through the DCS, G-4 to obtain a Joint Chiefs of Staff (J4) certification of insensitive munitions and will include provisions for the following:

- a.* Efficient, rapid rearming and resupply of ammunition.
- b.* Special range requirements to include target devices and instrumentation for home station and CTC.
- c.* Training unique ammunition, dummy, drill, and inert munitions, and sub-caliber devices/ammunition as required by the system TADSS documentation.
- d.* Render safe procedures.
- e.* Stockage, crating, and packaging for ammunitions that—
 - (1) Meets the requirements of AR 70-38, AR 700-15, DA Pam 746-1, and MIL-STD1660.
 - (2) Permits rapid access to clean rounds in palletized and individual configuration without special tools or special handling equipment during combat or during extreme climatic conditions.
 - (3) Provide protection from chemical, biological, radiological, nuclear, high yield explosive (CBRNE), petroleum, oils, and lubricants, and other contaminants.
 - (4) Does not contribute to vulnerability of ammunition to fire or explosion, minimizes battlefield litter and signature.
 - (5) Is capable of surveillance inspection without compromising afforded protection.
 - (6) Is man portable and smallest, lightest package possible.

5-10. System Threat Assessment Report

a. The System Threat Assessment Report (STAR) is the basic authoritative threat assessment that supports the development and acquisition of a particular ACAT I or II system. The STAR contains an integrated assessment of projected enemy capabilities (doctrine, tactics, hardware, organization and forces) at initial operational capability (IOC) and IOC plus 10 years, to limit, neutralize or destroy the system. It will explicitly identify critical intelligence categories which are a series of threat capabilities, or thresholds established by the program which could critically impact the effectiveness and survivability of the program. The STAR is a dynamic document that will be continually updated and refined as a program develops. It will be approved and validated in support of ASARC/DAB review. A system threat assessment supports ACAT III systems and is prepared in STAR format.

b. This report will be the primary threat reference for the capability document, the integrated program summary or single acquisition management plan (ACAT ID), the AOA, and the test and evaluation master plan developed in support of a MDR.

- c.* The STAR will be—
- (1) Approved by DCS, G-2 and validated by the DIA for all ACAT I programs at MS A and updated for all ACAT ID programs at MS B and C.
 - (2) Prepared for DCS, G-2 review and approval for ACAT II and III programs, to include highly sensitive classified programs unless specifically waived by the MDA.

5-11. Ability to deploy and containerization requirements

a. The CBTDEV, TNGDEV, and MATDEV will ensure that ability to deploy is considered during capabilities development and compliance with the procedures contained in DODI 4540.07. Additional transportability and deployability considerations are provided in AR 70-47, AR 56-4, and Joint Publication 4-01.7.

- b.* Trade-offs between transportability and combat effectiveness may be appropriate, details must include—
- (1) Configuration, such as full operational capability or partially disassembled.

- (2) Delivery technique (standard airdrop, container delivery system, and the individual parachute).
- (3) Containerization requirements must be identified and considered when developing the capability proposal and during the development process as outlined in AR 70–47.
- (4) External and internal air transportability requirements outlined by type aircraft.
- (5) Provisions to accommodate both the Soldier-operator’s basic load and materials essential to support operating the capability.
 - c. Army Engineering for Transportability and Deployability program provides the MATDEV, CBTDEV, and TNGDEV guidance and procedures for use during the materiel acquisition process. These procedures assure that systems, equipment, and munitions, including spare parts, are designed, engineered, and constructed so required quantities move efficiently and economically by current and future transportation capabilities.
 - d. Unit strategic mobility constraints should state in the constraints paragraph of the capability proposals if applicable.

5–12. Test measurement and diagnostic equipment

The CBTDEV and TNGDEV identify and document requirements for test measurement and diagnostic equipment (TMDE) (built-in test, manual and automatic) in line with the Army’s standardization policies and objectives. Those policies and objectives are aimed at controlling the proliferation of system-specific test equipment, reducing operating and support costs, and providing modern and technologically-capable equipment to support a wide range of Army test and diagnostic requirements. AR 750–43 provides guidance on determination and formulation of TMDE requirements. It also outlines the process used for the selection of TMDE; reinforces the DOD 5000–series requirements for the use of standard automatic test equipment or commercial item, or nondevelopmental item TMDE; and addresses a host other TMDE considerations and requirements.

5–13. Interoperability requirements

- a. Interoperability considerations must be addressed throughout the capability determination process to successfully deliver effective capabilities.
- b. Interoperability considerations that must be addressed include—
 - (1) Capturing interoperability requirements with measurable performance metrics in capability proposals.
 - (2) Capturing the methodology for capability technical interoperability across disparate systems and environments in the systems information support plans and insuring the strategy is supported by the development of integrated architectures.
 - (3) Joint mission threads and Joint test threads, which articulate the system of systems interoperability requirements in operational capability terms.
 - (4) Interoperability certification requirements which validate the interoperable state of capabilities prior to fielding.
 - (5) Configuration management of system baselines to insure the integrity of verified interoperability performance levels in the operational environment.

Chapter 6

Alternative Approaches to Joint Capabilities Integration and Development System and Streamlining Warfighting Capabilities Determination Process

6–1. Operational needs statement

- a. Following mission analysis, unit task organization and cross leveling, or lessons learned, operational commanders use ONS to document the urgent need for a nonstandard and or unprogrammed capability to correct a deficiency or improve a capability that enhances mission accomplishment. The ONS is particularly useful to support units assigned nonstandard or nonstandard requirements code missions they are not equipped to accomplish. ONS support capability requests for above DCS, G–3/5/7 and DCS, G–8 published force feasibility reviews. Additionally, the ONS provides an opportunity for the operational commander, outside the acquisition, combat development, and training development communities, to initiate the capability determination process.
- b. The ONS is not a JCIDS capability document, but a request for need validation and sourcing of a perceived requirement. The ONS will not be used to request or redistribute standard authorization document (MTOE, TDA, mission essential equipment list (MEEL)) shortages or pre-validated deployment items; chapter 7 will address MTOE, TDA, and MEEL shortages and nonstandard equipment validated authorization shortages.
- c. Response to ONS varies depending on the priority of need for the required capability. If the submission is determined not to constitute an ONS, or otherwise is not a valid requirement, it will be returned without action. If the ONS is validated, it may result in: the approval of a directed requirement and resources for execution through the acquisition process; the directed transfer of pre-positioned equipment; or no action until the completion of DOTMLPF analysis by TRADOC. The DCS, G–3/5/7 goal is that an initial response to ONS expected within 14 days of receipt at

HQDA however, the complexity of issues, clarity of stated need, and ability to resource a solution may impact achievement of that goal. Validation of the ONS does not automatically constitute resourcing or the need being prioritized for funding or resourcing. In addition, a need may be validated, but met through a solution that differs from the one requested by the ONS originator (that is, an “in lieu of capability”) due to resourcing constraints. Any proposed “in lieu of capability” will be coordinated with the submitting commander.

d. If validation indicates there exists a specific limited but necessary urgent need, the Director, DAMO-CI may prepare a directed requirement for ONS having Armywide application; and TRADOC or non-TRADOC command or agency tasked to require a CBTDEV to follow with appropriate JCIDS documentation. Directed requirements will be approved in writing by the VCSA and/or the DCS, G-3/5/7.

e. The TRADOC will review all ONS for implications of needed change to current or future DOTMLPF or policy. A goal review period considered 120 days; however, DCS, G-3/5/7 may direct a hasty assessment conducted within 30 days if the urgency of warfighter needs dictate a more rapid response. A written response to the DCS, G-3/5/7 RSO coordinating the ONS is required.

f. The ONS submitted by CBTDEV, MATDEV, TNGDEV, and nonoperational commands will return without action.

g. The ONS types:

(1) *Deployed Unit ONS*. An ONS from a commander deployed in support of a named operation will receive the highest priority.

(2) *Deploying Unit ONS*. An ONS from a commander deploying to a named operation prioritized behind units already deployed.

(3) *The ONS from neither deployed nor deploying Units*. Commanders that are not deployed or deploying, but have identified a capability gap requiring a materiel solution also submits ONS.

h. The ONS processing will be submitted through the operational commanders chain of command, endorsed by a O-6/Colonel or higher for satisfaction through cross leveling or task organization, disapproval of the request, or validation of the operational need for DCS, G-3/5/7 validation and sourcing. The ONS will be submitted using the equipment common operating picture (ECOP) collaborative planning information technology system. (See para 6-2 for more information on the ECOP.)

i. If a deployed unit is operationally restricted from using the ECOP, forward a memorandum through the processing chain of command, in the format at appendix B.

j. If a unit submits an ONS, but the capability is resourced through task organization or cross level of equipment at any level of command prior to action at HQDA, the ONS will be considered closed and the unit will ensure notification either through ECOP or e-mail to the RSO.

k. The DCS, G-3/5/7 coordinates ONS with organizations, commands, or agencies as required to provide analysis, DOTMLPF and integration assessment, and solution evaluation and comparison, to support validation and approval ONS, and warfighter urgent needs analysis. These organizations include but are not limited to Center for Army Analysis, ATEC, Center for Army Lessons Learned, REF, Army Materiel Support Activity, TRADOC, ASA(ALT), and Army Staff as required.

l. The DCS, G-3/5/7, Current and Future Warfighting Capabilities Division is the decision authority to validate and prioritize the ONS; DCS, G-8 and DCS, G-4, ASA(ALT), AMC, or the REF will provide the resourcing solution with sustaining and procurement guidance.

m. The DCS, G-3/5/7, Current and Future Warfighting Capabilities Division will review ONS requiring reprioritization of previous funding decisions, major adjustment to in-place fielding plans, or considered Senior Army Leadership, Congressional, or Administration level interest, before the AR2B.

n. Joint Staff will forward JUON to DCS, G-3/5/7 for urgent warfighter needs having Joint interest when the Army has been appointed sponsor. Army responsibilities supporting JUON process found in CJCSI 3470.01A.

o. The following will occur to support receipt and action of JUON:

(1) The DCS, G-3/5/7 receives JUON from Joint Rapid Acquisition Cell (JRAC); requirement to report to JRAC with status within 30 days.

(2) The RSO is tasked via ECOP to action JUON and executes coordinated staffing with a minimum of DCS, G-8, ASA(ALT), ASA(FM&C), TRADOC ARCIC, and other staffs and Services as required to determine or define the proposed solution, resource prioritization, funding source and or trades.

(3) The RSO lead with Department of the Army System Coordinator (DASC) and System Synchronization Officer (SSO) will brief proposed courses of action to the AR2B.

p. The following AR2B sourcing recommendations support Army execution of JUON:

(1) Procure if JRAC funded.

(2) Prioritize on unfunded requirement (UFR) list.

(3) Reprogram funds from other capabilities.

(4) Decline action due to low priority-reclama to JRAC

q. Although the ECOP Gatekeeper will staff the JUON via ECOP to the RSO, the Joint Staff data base holding the

original JUON staffing action is the CENTCOM Requirements Information Manager (CRIM) found on the SIPRNET at http://hqsweb03.centcom.smil.mil/cpim/req_needs_introduction.asp?

6-2. Equipment common operating picture

a. The ECOP information technology database is a SIPRNET, collaborative web-based database and documentation library for requesting and sourcing materiel and nonmateriel solutions to urgent warfighter needs. Operational field commanders submit and track ONS and equipment sourcing documents (ESD) submitted.

b. The ECOP supports situational awareness and common visibility of requests as the chain-of-command coordinates for endorsement, validation, and resourcing. The ECOP has a posted library containing HQDA-validated MEEL and applicable HQDA and select ASCC, ARFOR equipping policy documents covering named operations.

c. The DCS, G-3/5/7, Current and Future Warfighting Capabilities Division is responsible for functional operation and support of the ECOP. The DCS, G-3/5/7, Command and Control Support Agency is responsible for software development, maintenance, and upgrade and database hardware requirements.

d. The ECOP universal resource locator on the SIPRNET is (<http://www.ecop.army.smil.mil/ecop/login.aspx>.)

6-3. Army Requirements and Resourcing Board

The AR2B was established in November 2004 under VCSA guidance to streamline the process to resource needed capabilities to the warfighter and reduce Army Staff (ARSTAF) operational tempo in support of sustained combat operations.

a. The AR2B mission—

(1) On behalf of the DCS G-3/5/7, the mission of AR2B is to validate, prioritize and resource select operational needs in support of the Global War on Terrorism (GWOT). The AR2B validates and prioritizes current force needs when the need affects current force funding which requires reprioritization in accordance with the Army Resourcing Priority List.

(2) When required, the AR2B is to accelerate capabilities determination to solutions for the warfighter and identify solutions resourced in the year of execution and budget year requiring funding reprioritization. The AR2B framework enables responsive risk mitigation while identifying critical near-term capabilities and resourcing solutions that have long-term impact/application across the Army.

(3) When required, the AR2B will approve resourcing solutions for validated JUON.

(4) In all cases, the AR2B will coordinate with ASA(FMC) to ascertain whether a proposed solution would require a new start notification to Congress and/or reprogramming action in accordance with DOD Financial Management Regulation, Volume 3.

(5) The AR2B conducts worldwide secret video teleconference with multiple agencies, HQDA staff, ACOM/ASCC/DRU, ARFOR, Director, Army National Guard, and others as required.

(6) The DCS, G-3/5/7, DCS, G-8, and ASA(FM&C) tri-chair the AR2B.

(7) As required, other HQDA elements, ACOM, selected ASCC, ARFOR, and DRU, support the forum.

b. The DAMO-CIB has Secretariat responsibilities for conduct of the AR2B.

6-4. Capabilities development for rapid transition

a. The CDRT is a process to identify and approve tactical nonstandard equipment (NS-E), commercial or government-produced, in use in current operations to become sustained Army equipment or compete to become an Army acquisition program. The process also makes recommendations for nonmateriel (DOTmLPF) capabilities initiated outside standard Army process for service wide implementation as enduring capabilities. The process categorizes capabilities as:

(1) Having broad applicability across the Army and should transition using the JCIDS process to an Army acquisition program and or DICR for other DOTmLPF initiatives (Enduring).

(2) Should be sustained in support of a specific theater or named operation (Sustain).

(3) Should not receive further HQDA resources (Terminate).

b. The TRADOC ARCIC and the DCS, G-3/5/7 lead the process with ASCC, ACOM, and HQDA staff participation.

c. The CDRT process may reduce the JCIDS document development cycle. When sufficient positive analysis, which may include one or more of the following; operational assessment, operating force survey, subject matter expert assessment, and HQDA level council of colonel recommendation, determines there is broad applicability CBTDEV may prepare a CPD. When analysis determines there is broad applicability but the initial solution needs further development prior to transitioning to an acquisition program, CBTDEV may initiate a CDD.

d. The AMC will manage and sustain all NS-E (Sustain) throughout its life cycle and NS-E (Enduring) prior to becoming an acquisition program, assumption of responsibilities by a PM, and funding activation in the POM. If ASA(ALT) is better suited to assume management and sustaining responsibilities by a PM, they may direct the transition when appropriate.

e. Nonmateriel initiatives will sustain via resource requests to the AR2B by the originator, sponsor, or proponent.

Prior to CDRT recommendations presentation to the AROC, CG, TRADOC will direct proponent lead for conducting analysis and developing supporting DICR. Following AROC approval of the CDRT recommendations, a TRADOC directed lead will conduct DOTMLPF analysis to determine the appropriate way ahead for integrating the nonmateriel initiative into the current and future force. A DICR will provide the vehicle for execution and resource requirements for the nonmateriel initiative.

f. The TRADOC, in partnership with the DAMO–CI, will conduct the CDRT process on a semi-annual basis. The AROC is the approving authority for CDRT recommendations.

6–5. Joint capability technology demonstration and advanced technology demonstration

a. The JCTD and Advanced Technology Demonstration (ATD) are used to expedite the transition of maturing technologies from the developers to the users. The JCTD emphasize technology assessment and integration rather than technology development. The goal is to provide a prototype capability to the warfighter and to support him in the evaluation of that capability. Warfighters evaluate the capabilities in military exercises and at a scale sufficient to fully assess military utility. They allow the user and materiel developer to jointly experiment with the application of technologies and new operational concepts in a field environment prior to committing to formal acquisition.

b. The JCTD are nominated and then approved and funded by the Joint Staff. The JROC reviews and recommends—

(1) Prioritization of JCTD candidates based on military need.

(2) A sponsoring combatant command and lead Service.

c. The ATDs are initiated by Services.

d. The ATEC conducts assessment of the military utility of all proposed materiel solutions that result from JCTD and ATD.

(1) The assessment will address the operational effectiveness and operational suitability of the proposed solution.

(2) The assessment may be suitable for the required analysis and used as the basis for an ICD.

(3) The assessment guides the development of the CDD or CPD for approval and transition into an acquisition program.

e. Assessments that do not contain critical elements of information presented in the ICD (description of the capability gap(s); associated tasks, conditions and operational performance standards/metrics; associated risks; and how the materiel and nonmateriel approaches and analyses from the JCTD/ATD addressed these factors) will be augmented with a final demonstration report conducted by ATEC or a Service testing organization to qualify the results as equivalent to an ICD.

f. The sponsor will develop the appropriate JCIDS proposal if the concept is to transition to an acquisition program.

g. When the sponsor of a JCTD or ATD determines the demonstration is complete, but additional development is required before fielding, a CDD guides the needed development process. The ATEC assessment will guide the development of the CDD submitted for validation and approval to support MS B decision.

h. When the JCTD or ATD sponsor determines the demonstration is complete, the capability is ready for immediate fielding; a CPD supports approval of production and fielding. The ATEC assessment will guide the development of the CPD submitted for validation and approval to support the MS C decision.

6–6. Directed requirement

a. If operational analysis and assessment of an ONS or JUON solution or results of a JCTD/ATD indicate a specific limited but necessary urgent need exists, the Director, DAMO–CI may prepare a directed requirement for a capability having application within the Army. Directed requirements will be approved in writing by the VCSA and/or the DCS, G–3/5/7. While JCIDS capabilities compete in Army prioritization process for program funding, the DCS, G–3/5/7 will specify the funding source and priority for a directed requirement. (See app D, directed requirement format.)

b. Requests for directed requirements will be presented through the APRB and AR2B or AROC for decision.

c. The scope of a directed requirement will be limited to addressing urgent operational needs that, fall outside of the established JCIDS process, and if not addressed immediately, will seriously endanger personnel or pose a major threat to the success of ongoing operations. A directed requirement should not involve the development of a new technology or capability; however, the acceleration of a JCTD and ATD is within the scope of the directed requirement process.

d. A directed requirement that is to be executed through the acquisition process will include sufficient information to support necessary program management, procurement, and testing activities.

e. A directed requirement will not be used as the basis for acquisition efforts where the dollar value of the total effort would reasonably be anticipated to meet the DODI 5000.2 criteria for ACAT I programs. Directed requirements will not be split to avoid applicability of this restriction.

f. The PM-managed Acquisitions resulting from a directed requirement will be executed in accordance with AR 70-1.

Chapter 7

Configuring Operational Forces

7-1. Army Force Generation

The ARFORGEN meets strategic requirements for continuous operations across the spectrum to preserve the all volunteer force in persistent conflict; Army processes for supporting deliberate and urgent capability determination and fielding must synchronize and integrate with ARFORGEN. The Army generates rotational forces to create conditions for enduring victory in long-term conflicts. Simultaneously, Army forces must protect the homeland, provide Defense Support to Civil Authorities (DSCA), deter conflict in critical regions, remain ready to respond promptly to small-scale contingencies and swiftly defeat the enemy in major combat operations. To meet these multiple strategic challenges, the Army evolved from tiered readiness to cyclic readiness to address both rotational and contingency requirements. The ARFORGEN is the structured progression of increased unit readiness over time, resulting in recurring periods of availability of trained, ready, and available units prepared for operational deployment in support of CCDR requirements. Operational requirements drive the ARFORGEN training and readiness process, which in turn supports the prioritization and synchronization of institutional and operational functions to recruit, organize, man, equip, train, sustain, source, mobilize, and deploy cohesive forces more effectively and efficiently. The Army focuses units against future missions as early as possible in the ARFORGEN process and task organizes modular expeditionary forces. The Army further refines expeditionary force packages in the ARFORGEN synchronization process as operational requirements mature over time. Army units will flow smoothly through the reset/train, ready and available force pools. The goal is to achieve a sustained, more predictable posture to generate trained and ready modular forces tailored to Joint mission requirements.

7-2. Principles for building tailored forces

a. *Plans for required forces.* Secretaries of the Military Departments assign all forces under their jurisdiction to combatant commands or to United States Element, North American Aerospace Defense Command to perform missions assigned to those commands.

b. *Identification of required capabilities.* The CCDR develops operational plans and determines force requirements. Request for forces not already under control of the CCDR are reviewed by Joint Staff, Services, and OUSD for Plans and approved by the Secretary of Defense. A deployment order is only required for requested forces not currently assigned to the CCDR. Following notification of forces required by the Joint Force Provider (JFP), commanders at each level will conduct mission analysis to determine required task organization and ability to perform assigned missions within current organizational construct. Shortfalls in materiel capabilities will forward through the chain of command using ECOP as soon as possible to begin validation process and determination of resourcing solutions.

c. *Request for forces process.* Combatant command identifies operational need for forces and submits request for forces to the Joint Staff for Operations (J-3); submits RFF to fill requirements in their area of responsibility that cannot be sourced by redistribution of internal forces. The J-3 staffs the request for sourcing and drafts order. The JFP develop sourcing solutions and respond to J-3. The sourced RFF package is reviewed by the Joint Staff and OSD followed by a recommendation from the CJCS to the Secretary of Defense for decision. The Joint Staff then releases orders executing the commitment of forces to the CCDR.

d. *Sourcing alternatives.* The JFP are USJFCOM and U.S. Special Operations Command. The USJFCOM is the primary JFP for deploying Joint forces in response to requirements of the supported CCDR. In coordination with the Joint Staff, other Commands and Services, the Commander - USJFCOM (CDRJFCOM) develop global Joint sourcing solutions in response to CCDR requirements.

7-3. Equipping operational forces

a. *Equipping.* Policies and procedures for deployed, prepare-to-deploy, deploying units, deployment ready brigades, and strategic reserve elements, evolve over time to best support the warfighter. This paragraph supports existing and emerging warfighter capability needs and timelines, these topics are to be flexible means to meet the evolution, and may be used in support of specific deployments or missions.

b. *Initial equipment authorizations.* The initial validated equipment requirement for a unit to perform its operational mission is the result of applying one or more of the following documents, as applicable—

- (1) Modified table of organization and equipment.
- (2) Table of distribution and allowance.
- (3) The DCS, G-3/5/7, Current and Future Warfighting Capabilities Division validated MEEL.
- (4) The DCS, G-3/5/7, Director, Force Management (DAMO-FM), validated equipment only TDA, or variant thereof.

(5) Other validated and published as required HQDA equipping and documentation policies and decisions.

c. Modified table of organization and equipment plus formula. A standard calculation for a unit to determine their deploying initial equipment authorizations is the “MTOE plus” formula. The MTOE plus formula = MTOE plus HQDA pre-approved/pre-validated equipment plus theater provided equipment (TPE) minus do not deploy (DND) equipment. This formula supports defining the deployable equipment list (DEL) and submission of ONS or ESD to fill equipment shortages.

d. Mission essential equipment list. The MEEL is an adaptive tool for Army use in managing urgent, organization-wide equipment requirements. Where the MTOE Plus formula is inadequate because a mission is assigned to a task-organized element without an MTOE or a doctrinally-organized unit is assigned a mission far outside the scope of their MTOE, and the submission of an ONS to secure the necessary equipment would be extremely cumbersome, a MEEL may be necessary. A MEEL is an equipment-only document that serves the same purpose as the authorized equipment portion of an MTOE or TDA for deployment planning. The MEEL is designed to address a mission for which there is no MTOE or TDA and is a temporary document used by designated units for a single deployment cycle. The MEEL is submitted by ASCC to DCS, G-3/5/7 for validation and posting in the ECOP library. The ASCC use of MEEL for a named operation must be authorized by the DCS, G-3/5/7. For clarity, MEEL are identified by a specific mission name such as Convoy Security Company, Force Protection Company, or Human Intelligence Team and are documented in the standard format found in ECOP library. Titles, mission descriptions and equipment justifications should remain unclassified to facilitate reserve component unit access where classified IT/NSS systems are not available during pre-deployment planning. An alternative documentation approach to the MEEL is the equipment only TDA. Since the MEEL is intended for short term use it has limited interoperability with the Army’s property accountability and sustainment systems; the equipment only TDA is the enduring policy-driven solution for supporting areas of operation in persistent conflict. The DAMO-FM is lead for development, documenting, and revising equipment only TDA.

e. Capability requests. A capability request to HQDA is an operational commander’s request for a materiel and/or nonmateriel solution to correct a deficiency or improve a capability that affects mission accomplishment for a unit deploying or deployed on orders. Capability requests come to HQDA in two categories—

(1) The ONS (see para 6-1).

(2) Equipment sourcing document. The ESD is a unit request for resourcing a shortage of authorized on hand equipment, authorized by HQDA, including MTOE, TDA, MEEL, and so forth.

(3) Prior to submission of an MTOE or TDA ESD request in ECOP, units ensure equipment request is in Army requisition validation system.

(4) If submitting an ESD, units ensure valid document numbers are provided. No ESD submissions are required for the following three specific instances of procurement:

(a) Procurement of nontactical office automation and data processing equipment should be accomplished in accordance with CIO/G-6 policy.

(b) Commercial items for deploying units should be procured using acquisition policies of the installation from which mobilization training or pre-deployment training occurs.

(c) Commercial purchases for units deployed in support of a named operation should process in accordance with combatant command acquisition policy.

f. Army standard processes for equipping. Other means are still available for units to identify equipment resourcing needs of authorized equipment such as MTOE shortages. For example, units continue to use the unit status report(U-SR)/strategic readiness update process (in accordance with AR 220-1, to identify critical shortages affecting unit readiness).

7-4. Special organizations and capability insertions to deploying and deployed forces

The Army, DOD, and Joint community may establish organizations to respond to urgent or specialized warfighting needs. The Army organizations coordinate with DCS, G-3/5/7, Current and Future Warfighting Capabilities Division to establish documentation requirements for capabilities in support of current operations. These organizations are normally established and funded with specific charter or functional areas as required. These organizations, while generally focused on materiel solutions, may sometimes address other DOTMLPF areas. HQDA may create special capability insertions which are authorization and fielding of selected equipment or equipment sets. Example from Operation Enduring Freedom, Operation Iraqi Freedom, and the Global War on Terrorism include the rapid fielding initiative (RFI). The RFI procured, issued, and accounted for Soldier and unit equipment consisting of numerous types of equipment configured for issue by individual, team, and organizational sets to units during pre-deployment and deployment.

7-5. Doctrine, organization, training, materiel, leadership and education, personnel, and facilities integration and sustainment considerations in Army Force Generation

a. Doctrine, organization, training, materiel, leadership and education, personnel, and facilities. The DOTMLPF supports a problem-solving construct for assessing current capabilities and managing change. Change deliberately executed across DOTMLPF domains enables the Army to improve its capabilities to provide dominant land power to

the Joint Force. The Army utilizes DOTMLPF in training, readiness, and accountability of current organizations, and in changing Army organizations themselves to be more mission capable and versatile.

b. Unit training requirements. The structured progression of increased readiness in ARFORGEN is supported by the focused, progressive, and gated collective training strategy driven by the unit's assigned mission, mission essential task list (METL), deployment timeline and available resources. Every rotational unit has a unique training strategy, which defines a plan to achieve required capability levels for deployment or employment by reset/train, ready, and available force pools. The unit's training strategy also defines the planned collective training events that enable units to achieve the required capability levels. As capabilities develop for current and future forces, consideration given to all training capabilities and training sets driven by the need to provide training sets to installations, mobilization stations, and in theater training sites. Required training capabilities present to the AR2B and AROC in coordination with the base capability required ensuring full consideration for funding, fielding, support, and integration.

c. Training base requirements. The training base consists of training personnel, facilities, training aids for preparing forces to meet present and future threats. These components synchronize to train forces in an effective and timely manner. TRADOC is the proponent oversight agency and establishes the number of trainers, training events and necessary locations to train the operational forces. The U.S. Army Installation Management Command (IMCOM), U.S. Army Human Resources Command, and DCS, G-3/5/7 provide support.

d. Accountability and readiness documentation. The Defense Readiness Reporting System-Army (DRRS-A) provides the readiness reporting flexibility necessary to support implementation of ARFORGEN concepts and processes for manning, equipping, training, and readiness. The key components of DRRS-A are the NetUSR-Army readiness data input tool, the DRRS-A database, and the Army Readiness Management System database output tool.

e. Organizational design adjustments. Organizational requirements from the Total Army Analysis or Force Design Update Process determine whether a new or modified organization is required on tomorrow's battlefield. Once identified, organizational requirements document through a series of connected and related organizational development processes. The TRADOC commander validates and integrates future force capabilities.

Appendix A References

Section I Required Publications

AR 15–1

Boards, Commissions, and Committees — Committee Management (Cited in para 1–5c2.)

AR 25–1

Army Knowledge Management and Information Technology (Cited in paras 1–5g, 1–5m.)

AR 70–1

Army Acquisition Policy (Cited in paras 1–5a, 1–5g, 2–27, 5–8c, 6–6f.)

AR 71–32

Force Development and Documentation-Consolidated Policies (Cited in para 1–5a(6).)

AR 220–1

Unit Status Reporting (Cited in para 7–3f.)

DA Pam 25–1–1

Information Technology Support and Services (Cited in para 1–5m.)

CJCSI 3170.01F

Joint Capabilities Integration and Development System (Cited in paras 1–5a(3), 1–5d, 1–5e, 3–2a(10), 4–2a, 4–10, 5–2.) (Available at <http://www.dtic.mil>.)

CJCSI 3470.01A

Rapid Validation and Resourcing of Joint Urgent Operational Needs (JUONS) in the Year of Execution (Cited in paras 1–5b(1), 6–1n.) (Available at <http://www.dtic.mil>.)

CJCSM 3170.01C

Operation of the Joint Capabilities Integration and Development System (Cited in paras 1–5a(3), 1–5d, 1–5e, 3–2a(10), 4–2a, 4–10, 5–2.) (Available at <http://www.dtic.mil>.)

CJCSM 3500.04E

Universal Joint Task Manual (Cited in para 2–29a(3).) (Available at <http://www.dtic.mil>.)

DAGO 2002–03

Assignment of Functions and Responsibilities within Headquarters, Department of the Army (Cited in para 2–1.)

DOD Architecture Framework

Definitions and Guidelines (Cited in para 1–5f.) (Available at http://defenselink.mil/cio-nil/docs/DoDAF_Volume_I.pdf.)

DODD 5000.1

The Defense Acquisition System (Cited in para 1–5a.) (Available at <http://www.dtic.mil/whs/directives>.)

DODI 5000.2

Operation of the Defense Acquisition System (Cited in paras 1–5a, 1–5n, 6–6e.) (Available at <http://www.dtic.mil/whs/directives>.)

JCIDS Manual

Operation of the Joint Capabilities Integration and Development System (Cited in para 2–9a(1).) (Available at https://www.intelink.gov/wiki/JCIDS_Manual.)

10 USC 153

Chairman Functions (Cited in para 3–2.) (Available at <http://uscode.house.gov>.)

10 USC 163

Role of Chairman of Joint Chiefs of Staff (Cited in para 3–2.) (Available at <http://uscode.house.gov>.)

10 USC 167

Unified Combatant Command for Special Operations Forces (Cited in para 3–2.) (Available at <http://uscode.house.gov>.)

10 USC 181

Joint Requirements Oversight Council (Cited in para 3–2.) (Available at <http://uscode.house.gov>.)

TR 71–20

TRADOC Regulation: Concept Development, Experimentation, and Requirements Determination (Cited in para 1–5*n*.) (Available at <http://www.tradoc.army.mil/tpubs/regs/tr71–20.pdf>.)

**Section II
Related Publications**

AR 1–1

Planning, Programming, Budgeting and Execution System

AR 5–4

Department of the Army Productivity Improvement Program

AR 5–5

Army Studies and Analyses

AR 11–18

The Cost and Economic Analysis Program

AR 15–41

Nuclear and Chemical Survivability Committee

AR 34–1

Multinational Force Compatibility

AR 40–5

Preventive Medicine

AR 40–10

Health Hazard Assessment Program in Support of the Army Acquisition Process

AR 40–60

Policies and Procedures for the Acquisition of Medical Materiel

AR 70–6

Management of the Research, Development, Test and Evaluation, Army Appropriation

AR 70–8

Soldier-Oriented Research and Development in Personnel and Training

AR 70–14

Publication and Reprints of Articles in Professional Journals

AR 70–25

Use of Volunteers as Subjects of Research

AR 70–31

Standards for Technical Reporting

AR 70–38

Research, Development, Test, and Evaluation of Materiel for Extreme Climatic Conditions

AR 70-45

Scientific and Technical Information Program

AR 70-57

Military-Civilian Technology Transfer

AR 70-75

Survivability of Army Personnel and Materiel

AR 73-1

Test and Evaluation Policy

AR 75-15

Policy for Explosive Ordnance Disposal

AR 200-1

Environmental Protection and Enhancement

AR 350-1

Army Training and Leader Development

AR 350-38

Training Device Policies and Management

AR 380-5

Department of the Army Information Security Program

AR 380-10

Foreign Disclosure and Contacts with Foreign Representatives

AR 380-381

Special Access Programs (SAPs) and Sensitive Activities

AR 381-11

Intelligence Support to Capability Development

AR 530-1

Operations Security (OPSEC)

AR 602-1

Human Factors Engineering Program

AR 602-2

Manpower and Personnel Integration (MANPRINT) in the System Acquisition Process

AR 700-15

Packaging of Materiel

AR 700-47

Defense Standardization and Specification Program

AR 700-70

Application of Specifications, Standards, and Related Documents in the Acquisition Process

AR 700-90

Army Industrial Base Program

AR 700-101

Joint Operating Procedures Management and Standardization of Mobile Electric Power Generating Sources

AR 700-127

Integrated Logistics Support

AR 700-142

Type Classification, Materiel Release, Fielding, and Transfer

AR 702-6

Ammunition Stockpile Reliability Program (ASRP)

AR 702-11

Army Quality Program

AR 710-2

Supply Policy Below the National Level

AR 735-5

Policies and Procedures for Property Accountability

AR 750-1

Army Materiel Maintenance Policy

AR 750-43

Army Test, Measurement, and Diagnostic Equipment

CJCSI 6212.01

Interoperability and Supportability of Information Technology and National Security Systems (Available at <http://www.dtic.mil>.)

CJCSI 3010.02B

Joint Operations Concepts Development Process (JOPSC-DP) (Available at <http://www.dtic.mil>.)

Defense Acquisition Guidebook

(Available at <http://akss.dau.mil/dag>.)

DODD 4630.05

Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS) (Available at <http://www.dtic.mil/whs/directives>.)

DODI 3224.03

Physical Security Equipment (PSE) Research, Development, Testing, Procurement, and Evaluation (RDT&E) (Available at <http://www.dtic.mil/whs/directives>.)

DODI 4120.24M

Defense Standardization Program (DSP) (Available at <http://www.dtic.mil/whs/directives>.)

DODI 4630.8

Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS) (Available at <http://www.dtic.mil/whs/directives>.)

DODI 8260.2

Implementation of Data Collection, Development, and Management for Strategic Analyses (Available at <http://www.dtic.mil/whs/directives>.)

MIL-STD 882-C

System Safety Program Requirements (Available at <http://assist.daps.dla.mil/quicksearch>.)

Risk Management Guide for DOD Acquisition

Sixth Edition (v1.0) (Available at <https://dap.dau.mil/policy/Pages/overview.aspx>.)

SB 700–20

Army Adopted/Other Items Selected for Authorization/List of Reportable Items

White Paper

Conducting a Capabilities-Based Assessment (CBA) Under the Joint Capabilities Integration and Development System (JCIDS) (Available at <http://www.dtic.mil>.)

Section III

Prescribed Forms

This section contains no entries.

Section IV

Referenced Forms

This section contains no entries.

Appendix B

Operational Needs Statement Format

This format is also self-contained within the equipment common operating picture database.

- a.* UNIT IDENTIFICATION CODE SHIP TO ADDRESS Directs where to ship materiel to support the requesting unit.
- b.* PROBLEM Define the capability gap; what is it the unit is unable to operationally accomplish.
- c.* JUSTIFICATION Reason for urgency such as impact to mission accomplishment of not having the requested capability. What actions were taken to cross-level equipment or task organize at the force provider level prior to submitting this ONS?
- d.* SYSTEM CHARACTERISTICS If a standard Army type classified piece of equipment is required, system characteristics are not required; include line item number or national stock number and noun nomenclature. If a nonstandard piece of equipment is required, describe pertinent operational, physical, and logistical requirements, for example how far to fire, how fast to operate, how heavy or light, specific interoperability requirements, what type of power generation requirements are best suited.
- e.* OPERATIONAL CONCEPT State how the capability will be employed. Will this capability be vehicle mounted, is there a need to modify from its original configuration, does this capability serve in lieu of a standard or nonstandard capability that is not achieving the required result? Will this capability replace a current standard Army type classified piece of equipment?
- f.* ORGANIZATIONAL CONCEPT State who will employ the system and at what organizational level.
- g.* PROCUREMENT OBJECTIVE State the total quantity of each capability or standard Army type classified piece of equipment is requested.
- h.* TRAINING PLAN List training requirements and provide training concept and strategy (new equipment training, TADSS, Training Support Packages, and so forth).
- i.* SUPPORT REQUIREMENTS List the associated items of equipment envisioned to support the requested capability. If there are additional requirements for operators or supporters, ensure that is requested through appropriate channels; the ONS will only provide materiel solutions.
- j.* AVAILABILITY If known, indicate whether commercial, government, or other Service equipment, foreign or domestic, is available for off-the-shelf procurement.
- k.* RECOMMENDATION Recommend the command's course of action to resolve problem.

Appendix C

DOTMLPF Integrated Capabilities Recommendation Format

C–1. Format

The DICR supports changes to DOTmLPF-integrated capabilities when materiel is not the focus; although there may be some changes recommended to the distribution or performance characteristics of existing materiel solutions; the DICR will not be used to propose a new materiel solution for a required capability.

- a.* **Executive Summary.** (Not more than 1 page.)
- b.* **Table of Contents.** (With list of tables, figures, and appendices.)
- c.* **Points of contact.** (Identify proposal sponsor and the proponent agencies for solution elements, if different.)

- d. Purpose.* Provide a brief statement regarding the concept(s) addressed in this document.
- e. Background.* Frame the discussion by providing context. Briefly discuss the existing DOTmLPPF or policy influenced by the proposal in terms of opportunities to enhance or improve multinational warfighting capabilities. Within the discussion, include the following (as applicable)—
- (1) References to latest DOD strategic guidance or plans.
 - (2) The military task from Army concepts and the UJTL associated with the proposal.
 - (3) Identify which Tier 1, 2, 3, JCAs are supported by this DICR.
- f. Description.* Describe specifics of the proposal; address “who,” “what,” “when,” “how,” and “why.” Clearly state, in terms of major objectives, what the recommendation intends to accomplish and how it could widen the qualitative superiority of Army forces over potential adversaries, close a capability gap (existing or projected) or otherwise enhance warfighting capabilities. If recommendation includes incorporating future technology (materiel component), include brief discussion of the maturity of the science and technology area(s) or future systems involved and risk assessment of the approach.
- g. Analysis process.* Provide an executive summary of the analysis methodology that led to these recommendations, including—
- (1) Projected threat environment based on a DIA validated or current threat.
 - (2) Research, experimentation, and or analysis plan.
 - (3) Analytic techniques employed (that is, modeling and simulation, statistical sampling, experimentation, real-world event lessons learned) to produce findings.
- h. Findings and Proposed Implementation Plan.* List recommendations and implementation plans in terms of each applicable DOTmLPPF element.
- (1) List recommendations in priority order.
 - (2) For each recommendation, include—
 - (a)* Discussion of improvement and/or benefit to warfighting and interoperability.
 - (b)* Any negative impact to developing or in use warfighting capabilities.
- i. Implementation time line and resourcing requirements.*
- (1) Discussion of relationships between recommendations and associated implementation timing (that is, organizational change has implications for a personnel change, which influences training plans).
 - (2) Resources required (total resources, including additional research, hardware, DOD manpower, test range time, contractor support, and so forth)
 - (3) Rough-order-of-magnitude total cost using template discussed in paragraph *j* and *k*, below, including cost by FY and type of funding (RDT&E, O&M, procurement) required.
- j. Affordability table.* Figure C–1 will specify funding required by FY over the future years defense program/plan for RDT&E, procurement and sustainment. Funding must be programmed in the most recent POM and/or the President’s Budget. This will allow the DCS, G–8 the ability to make informed decisions on whether to move funding for this program. DCS, G–3/5/7 may direct or suggest a source for the required funding through reprioritization. The remaining unfunded amount will be shown as in figure C–2.
- k. Constraints.* Identify current or projected resource constraints with respect to implementing any element of the recommended findings in paragraph *h*, above. Identify and recommend any potential sources of funding.
- l. Policy*
- (1) Identify any DOD policy issues that would prevent the effective implementation of the recommended changes and the reason the proposed changes cannot comply with it.
 - (2) Provide proposed changes to the policy.
 - (3) Identify other potential implications from the changes in policy.
- m. Recommendation Summary.*
- (1) Recap major findings and proposed implementation recommendations.
 - (2) List alternative approaches and/or options to implement and resource recommendations, in relative order of priority. (Options are particularly appropriate when comprehensive DICR submitted with significant resource implications; however, DICR without alternatives may submit when only one option is appropriate or practical.) As appropriate, tailor alternatives to the specific DICR and focus on maximizing; discuss advantages and risks or disadvantages for each alternative, for example—
 - (a)* Scope All forces and or systems. All forces and or systems within a particular specialty. Specific performance of a subset of forces within a specialty or system.
 - (b)* Implementation schedule Maximum impact achieved at earliest practical date. Impact achieved in phases.
 - (c)* Additional level of resources required (combined scope and schedule) Comprehensive approach. Moderate. Limited.
- n. Recommended policy changes.* Any policy adjustments required to effect or support the changes.

	FY xx (for example, 08)	FY xx (for example, 09)	FY xx (for example, 10)	FY xx (for example, 11)	FY xx (for example, 12)	FY xx (for example, 13)	FYDP Total
Resources (\$M)							
O&M							
RDT&E							
Procurement							
Manpower							
Military Construction							
TOTAL FUNDING							

Figure C-1. Sample of affordability (life cycle of DICR) table

C-2. Unfunded Requirements of DICR

The following figure shows DICR unfunded requirements.

	APN	APE	FY xx	FY xx	FY xx	FY xx	FY xx	FY xx
Resources (\$M)								
Funding								
UFR								
O&M								
Funding								
UFR								
RDT&E								
Funding								
UFR								
Procurement								
Funding								
UFR								
Manpower								
Funding								
UFR								
Military Construction								
Funding								
UFR								
Total UFR								

Figure C-2. Sample of unfunded requirement of DICR table

Appendix D

Directed Requirement Format

A request for Directed Requirement will include—

- a.* Doctrine, organization, training, materiel, leadership and education, personnel, and facilities analysis results.
- b.* Joint Capabilities Integration and Development System capability documentation (a tailored CPD in most cases).
- c.* Operational concept.
- d.* Organizational concept.
- e.* Justification of the urgency to include why it is necessary and urgent to field Armywide.
- f.* Training plan.
- g.* The utility assessment or system assessment report.
- h.* Source of funding.
- i.* Basis of issue plan feeder data.

Glossary

Section I Abbreviations

AAE

Army Acquisition Executive

ACAT

acquisition category

ACDEP

Army Concept Development and Experimental Plan

ACSIM

Assistant Chief of Staff for Installation Management

ACOM

Army Command

AIS

automated information systems

AMEDDC&S

U.S. Army Medical Department Center and School

AOA

analysis of alternatives

AOR

area of responsibility

APB

acquisition program baseline

APRB

Army Process Review Board

AR2B

Army Requirements and Resourcing Board

ARCIC

Army Capabilities Integration Center

ARCP

Army Campaign Plan

ARFOR

Army Force

ARFORGEN

Army Force Generation

AROC

Army Requirements Oversight Council

ARSTAF

Army Staff

ASA(ALT)

Assistant Secretary of the Army (Acquisition, Logistics and Technology)

ASA(FM&C)

Assistant Secretary of the Army (Financial Management and Comptroller)

ASA(I&E)

Assistant Secretary of the Army (Installations and Environment)

ASA(M&RA)

Assistant Secretary of the Army (Manpower and Reserve Affairs)

ASARC

Army Systems Acquisition Review Council

ASCC

Army Service Component Command

ATEC

U.S. Army Test and Evaluation Command

ATD

advanced technology demonstration

CAMS

capability and AROC management system

CARDS

catalog of approved requirements documents

CBA

capabilities-based assessment

CBTDEV

combat developer

CCDR

combatant commander

CCH

Chief of Chaplains

CCP

concept capability plan

CDD

capabilities development document

CDRT

capabilities development for rapid transition

CG

commanding general

CIM

capability integration map

CIO

Chief Information Officer

CJCSI

Chairman of the Joint Chiefs of Staff Instruction

CJCSM

Chairman of the Joint Chiefs of Staff Manual

CNA

capability needs analysis

CNO

computer network operations

COE

Chief of Engineers

CTC

combat training center

DA

Department of the Army

DAB

Defense Acquisition Board

DAGO

Department of the Army General Order

DAMO-CIC

DCS, G-3/5/7, Current and Future Warfighting Capabilities Division

DAMO-FM

DCS, G-3/5/7, Director, Force Management

DAMO-TR

DCS, G-3/5/7, Office of the Director of Training

DASA(C&E)

Deputy Assistant Secretary of the Army, Cost and Economics

DCR

DOTMLPF change recommendation

DCS

Deputy Chief of Staff

DIA

Defense Intelligence Agency

DICR

DOTmLPPF integrated capabilities recommendation (lowercase m signifies no new materiel proposal)

DND

do not deploy

DOD

Department of Defense

DODAF

Department of Defense Architecture Framework

DODD

Department of Defense Directive

DODI

Department of Defense Instruction

DOTMLPF

doctrine, organization, training, materiel, leadership and education, personnel, and facilities

DRU

Direct Reporting Unit

DRRS-A

Defense Readiness Reporting System-Army

DUSA-TEO

Deputy Under Secretary of the Army, Test and Evaluation Office

ECOP

equipment common operating picture

ESD

equipment sourcing document

ESOH

environment, safety, and occupational health

FAA

functional area analysis

FCB

Functional Capabilities Board

FNA

functional needs analysis

FSA

functional solution analysis

FY

fiscal year

GEOINT

geospatial intelligence

GWOT

Global War on Terrorism

HRC

U.S. Army Human Resources Command

HQDA

Headquarters, Department of the Army

IPT

integrating integrated product team

ILS

integrated logistics support

IMCEN

Information Management Center

IMCOM

U.S. Army Installation Management Command

INFOSEC

information security

INSCOM

U.S. Army Intelligence and Security Command

IO

information operations

IOC

initial operational capability

IPT

integrated product team

ISEW

intelligence security and electronic warfare

ISR

intelligence, surveillance, and reconnaissance

IT

information technology

JCA

Joint capability area

JCB

Joint Capabilities Board

JCD

Joint capabilities document

JCIDS

Joint Capabilities Integration and Development System

JCTD

Joint capability technology demonstration

JFP

Joint Force Provider

JOD

Joint Improvised Explosive Device Defeat Organization

JPD

Joint potential designator

JROC

Joint Requirements Oversight Council

JUON

Joint urgent operational need

KPP

key performance parameter

LTT

long-term transfer

MANPRINT

manpower and personnel integration

MASINT

measurements and signature intelligence

MATDEV

materiel developer

MDA

Milestone Decision Authority

MDR

milestone decision review

MEDCOM

U.S. Army Medical Command

MEEL

mission essential equipment list

METL

mission essential task list

MILDEP

military deputy

MIL-STD

military standard

MS

milestone

MTOE

Modified Table of Organization and Equipment

NSTD

nonsystem training devices

NSS

National Security System (information technology)

OIPT

overarching integrated product team

ONS

operational needs statement

OPA&E

Office of Program Analysis and Evaluation

OSD

Office of the Secretary of Defense

OUSD(AT&L)

Office of the Under Secretary of Defense for Acquisition Technology and Logistics

PEG

Program Evaluation Group

PEO

program executive officer

PM

program manager, project manager, product manager

POM

program objective memorandum

PPBE

planning, programming, budgeting, and execution

R&D

research and development

RDA

research, development, and acquisition

RDT&E

research, development, test, and evaluation

REF

rapid equipping force

RFI

rapid fielding initiative

RFP

request for proposal

RSO

requirements staff officer

SIGINT

signals intelligence

SIPRNET

Secret Internet Protocol Router Network

SMDC/ARSTRAT

U.S. Army Space and Missile Defense Command/Army Forces Strategic Command

SRC

standard requirements code

STAR

System Threat Assessment Report

TADSS

training aids, devices, simulators, and simulations

TCP

TRADOC Campaign Plan

TDA

table of distribution and allowance

TJAG

The Judge Advocate General

TMDE

test measurement and diagnostic equipment

TNGDEV

training developer

TPE

theater provided equipment

TRADOC

U.S. Army Training and Doctrine Command

TSG

The Surgeon General

USAMRMC

U.S. Army Medical Research and Materiel Command

USANCA

U.S. Army Nuclear and Combating Weapons of Mass Destruction Agency

USASOC

U.S. Army Special Operations Command

USD(AT&L)

Under Secretary of Defense (Acquisition Technology and Logistics)

USJFCOM

U.S. Joint Forces Command

USR

unit status report

Section II**Terms****Army Acquisition Executive (AAE)**

The civilian official within the Department of the Army who is designated as the service acquisition executive for purposes of acquisition-related statutes, regulations and procedures.

Acquisition category (ACAT)

Categories established to facilitate decentralized decisionmaking and execution and compliance with statutorily imposed requirements. The ACAT determines the level of review, validation authority, and applicable procedures. See DODI 5000.2, enclosure E.2. ACAT and MDA, for definition of each acquisition category.

Army Concept and Capability Development Plan (AC2DP)

A plan developed in coordination with the proponents and published by the ARCIC as an integration and process management document. It identifies the major themes, projects, and deliverables and then describes how these are integrated (internally and externally) and synchronized to influence developments within the concept and capability developments communities of practice.

Army concept strategy (ACS)

The ACS family of concepts consists of a capstone concept, Army operating concepts (AOCs), Army functional concepts (AFCs), concepts directed by CG, TRADOC; and supporting CCPs. Concepts facilitate the visualization and communication of the Army's key ideas on future operations. When required, CCPs inform the CBA, and guide the development of DOTMLPF solutions to resolve capability gaps identified in the CBA. The ARCIC develops the capstone and subordinate concepts in collaboration with the TRADOC staff and selected proponents. Designated

proponents develop CCPs per the Army Concept and Capability Development Plan through Director, ARCIC chartered ICDTs.

Automated information system (AIS)

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.

Acquisition phase

Phases provide a logical means of progressively translating broadly stated mission needs into well defined system-specific requirements and ultimately into operationally effective, suitable, and survivable systems. All the tasks and activities needed to bring the program to the next milestone occur during an acquisition phase.

Acquisition program

A directed, funded effort designed to provide a new, improved or continuing weapons system or AIS capability in response to an approved need. Acquisition programs are divided into different categories which are established to facilitate decentralized decision-making, and execution and compliance with statutory requirements.

Acquisition strategy (AS)

The AS documents the appropriate planning process and provides a comprehensive approach for achieving goals established in materiel requirements. It serves as a principal long-range document, charting the course of an acquisition program over its life cycle.

Advanced technology demonstration (ATD)

A demonstration of the military utility of a significant new technology and an assessment to clearly establish operational utility and system integrity.

Affordability

A determination that the life cycle cost of an acquisition program is in consonance with the U.S. Army's long-range investment and force structure plans.

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.

Analysis of materiel/nonmateriel approaches (AMA)

The Joint Capabilities Integration and Development System analysis to determine the best approach or combination of approaches to provide the desired capability or capabilities. Though the AMA is similar to an AOA, it occurs earlier in the analytical process. Subsequent to approval of an initial capabilities document, which may lead to a potential acquisition category I/IA program, program analysis, and evaluation provides specific guidance to refine this initial AMA into an AOA.

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 JCIDS process.

Architecture

See Enterprise Architecture and Army Enterprise Architecture.

Army Systems Acquisition Review Council (ASARC)

Top-level DA review body for ACAT I, IA, and II programs. Convened at formal milestone reviews or other program reviews to provide information and develop recommendations for decision by the Milestone Decision Authority.

Army Capabilities Integration Center (ARCIC) Army Campaign Plan (ARCP)

ARCIC Campaign Plan supports Army modernization by identifying, designing, developing, and integrating required

capabilities into the current and future generating and operating force. The plan is a living document informed by Strategic Guidance and provides Concept and Capability Guidance to the Centers of Excellence (CoEs) in TRADOC.

Capabilities-based assessment (CBA)

The CBA is the Joint Capabilities Integration and Development System analysis process. It includes three phases: the functional area analysis, the functional needs analysis, and the functional solution analysis. The results of the CBA are used to develop a Joint capabilities document (based on the FAA and FNA) or initial capabilities document (based on the full analysis).

Capability

The ability to execute a specified course of action. (A capability may or may not be accompanied by an intention.)

Capability-based planning (CBP)

The process for planning under uncertainty to provide capabilities suitable for a wide range of modern-day challenges and circumstances while working within an economic framework that necessitates choice.

Capability developers

The term used to include combat and training developers; otherwise they will be used separately.

Capabilities 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. The CDD may define multiple increments if there is sufficient definition of the performance attributes (key performance parameters, key system attributes, and other attributes) to allow approval of multiple increments.

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, lack of proficiency or sufficiency in existing capability, or the need to recapitalize an existing capability.

Capability production document (CPD)

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

Combat developer (CBTDEV)

Command or Agency that formulates and documents, operational concepts, doctrine, organizations, and or materiel requirements (ICD, CDD, CPD) for assigned mission areas and functions. Represents the end user during acquisition of their approved materiel requirements and serves as the subject matter expert for doctrine and organization developments.

Combat development

The process of analyzing, determining, and prioritizing Army requirements for, doctrine, training, leader development, organizations, Soldier development, and equipment and executing or (in the case of doctrine, training and materiel, initiating) solutions, within the context of the force development process.

Capabilities Needs Analysis

The ARCIC, in coordination with TRADOC headquarters, centers, and proponents, conducts an annual two-phased capabilities-based Future Force Capabilities Needs Analysis coordinated with HQDA and Joint Staff. HQDA and TRADOC use the products to inform capabilities developments and programming processes.

Comment priorities

a. Critical . Indicates nonconcurrency in the document, for both the O-6 and flag review, until the comment is satisfactorily resolved.

b. Substantive. Provided because a section in the document appears to be or is potentially unnecessary, incorrect, misleading, confusing, or inconsistent with other sections.

Community of practice

A community of practice (CoP) is a group of people who regularly interact to collectively learn, solve problems, build skills and competencies, and develop best practices around a shared concern, goal, mission, set of problems, or work practice. CoP cut across formal organizational structures and increase individual and organizational agility and responsiveness by enabling faster learning, problem solving, and competence building; greater reach to expertise across

the force; and quicker development and diffusion of best practices. CoP structures range from informal to formal and may also be referred to as structured professional forums, knowledge networks, or collaborative environments.”

Concept

A notion or statement of an idea—an expression of how something might be done.

Concept capability plan

A CCP is a plan that provides a description of how an Army commander could perform a specific operation or function 10–20 years into the future. When existing Joint and Army concepts do not provide the detail required to conduct a CBA, a CCP may be developed to fill that void. It describes the application of elements of Joint and Army concepts to selected mission, enemy, terrain and weather, time, troops available, and civilian conditions. It is typically more illustrative and descriptive than a concept, and more focused in its purpose. A CCP has a narrow focus in order to derive detailed required capabilities. Although CCPs are developed in support of the range of military operations, a CCP does not attempt to address all possible contingencies or all levels of operations. CCPs include one or more illustrative vignettes for a specific operation or function. The vignettes provide the “how to” and bring to light the capabilities required for a specific operation or function. The CCP is not revised or updated once approved.

Concept of operations (CONOP)

A verbal or graphic statement, in broad outline, of a commander’s assumptions or intent in regard to an operation or series of operations. The CONOP 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. The concept is designed to give an overall picture of the operation. It is included primarily for additional clarity of purpose. Also called commander’s concept.

Configuration Steering Board (CSB)

A CSB will be established for every Army ACAT I and IA program. The CSB will be chaired by the Army Acquisition Executive with broad membership from the Army Acquisition and Combat Developer communities as well as USD(AT&L), and the Joint Staff. The CSB will review all proposed requirements changes and any proposed technical configuration changes which have the potential to result in cost, schedule or performance impacts to the program.

Do not deploy (DND) equipment list

The DND Equipment List is the equipment that the unit is either prohibited from deploying into theater or recommended not to deploy into theater from home station. The DND list is generated and updated by the Supported ASCC in coordination with any theater commands and DCS, G–3/5/7. Units may submit an exception to policy through the ASCC to DCS, G–3/5/7.

DOTmLPF integrated capabilities recommendation (DICR)

Term used to describe/discuss the components of a capability limiting the materiel component to existing, type-classified equipment as the primary system or as required supporting equipment for a new materiel system.

DOTMLPF change recommendation (DCR)

DOTMLPF change recommendation supports Joint requirements to change other than materiel solutions and or Joint policy.

DOD 5000-series

DOD 5000 series refers collectively to DODD 5000.1 and DODI 5000.2.

Endorsement

A statement of adequacy, and any limitations, provided by a responsible agency for a specific area of concern in support of the validation process.

Enterprise architecture

A strategic information asset base, which defines the mission, the information and technologies necessary to perform the mission, and the transitional processes for implementing new technologies in response to changing mission needs. An enterprise architecture includes a baseline architecture, a target architecture, and a sequencing plan.

Evolutionary acquisition

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 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, and so forth.

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 (FCB)

A permanently established body that is responsible for the organization, analysis, and prioritization of Joint warfighting capabilities within an assigned functional area.

Gatekeeper

Army Gatekeepers assigned to DCS, G-3/5/7, Current and Future Warfighting Capabilities Division are the points of contact for the DCS, G-3/5/7 to oversee and manage all documents submitted to the AROC and JROC staffing processes; the Army Gatekeeper has one primary and one alternate point of contact in CAMS for staffing execution, usually to a staff action control officer but it is by the directorate's or agency's call. TRADOC ARCIC has a Gatekeeper to function as above on its behalf.

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.

Initial capabilities document (ICD)

Documents the requirement for a materiel or nonmateriel approach or an approach that is a combination of materiel and nonmateriel to satisfy a 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 DOTMLPF and policy implications and constraints. The ICD summarizes the results of the DOTMLPF analysis and the DOTMLPF approaches (materiel and nonmateriel) that may deliver the required capability. The outcome of an ICD could be one or more Joint DOTMLPF change recommendations or capability development documents.

Integrated architectures

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.

Integrated capabilities development team (ICDT)

The ICDT is made up of multi-disciplined personnel, formally chartered to develop concept capability plans (when required), capability requirements, and DOTMLPF solutions. The ICDT Chair, the Deputy Chair, the core membership, and the staffing membership are the elements of an ICDT. Specific composition is directed in each ICDT charter as each will be different in the execution.

Initial operational capability (IOC)

The IOC is the first attainment of the capability by an MTOE unit and supporting elements to operate and maintain effectively a production item or system provided: The item or system has been type classified as standard or approved for limited production. The unit and support personnel have been trained to operate and maintain the item or system in an operational environment. The unit can be supported in an operational environment in such areas as special tools, test equipment, repair parts, documentation, and training devices.

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.

Integrated product/process team (IPT)

A working level team of representatives from all appropriate functional disciplines working together to build successful and balanced programs, identify and resolve issues, provide recommendations to facilitate sound and timely decisions. IPTs may include members from both Government and industry, including program contractors and sub-contractors.

Joint capability area (JCA)

JCAs are collections of similar capabilities logically grouped to support strategic investment decision-making, capability portfolio management, capability delegation, capability analysis (gap, excess, and major trades), and capabilities-based and operational planning. JCAs are intended to provide a common capabilities language for use across many related DOD activities and processes and are an integral part of the evolving capabilities-based planning process.

a. Tier 1 JCA. A Tier 1 JCA is a high-level capability category that facilitates capabilities-based planning, major trade analysis, and decision-making. Tier 1 JCAs are comprised of functional-, operational-, domain-, and institutional-based Joint capabilities. All DOD capabilities can be mapped to a Tier 1 JCA.

b. Tier 2 JCA. A Tier 2 JCA is a comprehensive capability area logically placed within a Tier 1 JCA. Tier 2 JCAs are capability areas with sufficient detail to help identify operationally required military capabilities, or to help identify Joint Force generation and management capabilities. A Tier 2 JCA scopes, bounds, clarifies, and better defines the intended capability area of its 'parent' Tier 1 JCA. Tier 2 JCAs are intended to reduce duplication between Tier 1 JCAs, and are not Service, mission, or platform specific.

Joint Capabilities Board (JCB)

The JCB functions to assist the Joint Requirements Oversight Council in carrying out its duties and responsibilities. The JCB reviews and, if appropriate, endorses all Joint Capabilities Integration and Development System and Joint DOTMLPF change recommendation documents prior to their submission to the JROC. The JCB is chaired by the Joint Staff Director of Force Structure, Resources and Assessment (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 Joint Operations Concepts (JOpsC), CONOPs, Unified Command Plan, or other 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 documents or Joint DOTMLPF change recommendation, 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 JOpsC, CONOPs, or assigned missions.

Joint capability technology demonstration (JCTD)

JCTD are DOD and combatant command sponsored programs that assess the utility of near-term, mature, and readily able for fielding technology solutions and the concepts of operations needed for effective use of those solutions. The JROC, the USD(AT&L), and Congress validate and approve JCTD.

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 Gatekeeper

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

Joint Operations Concepts (JOpsC)

JOpsC is a of Joint future concept consisting of a Capstone Concept for Joint Operations, Joint Operating Concepts, Joint Functional Concepts, and Joint Integrating Concepts. They are a visualization of future operations and describe how a commander, using military art and science, might employ capabilities necessary to successfully meet challenges 8 to 20 years in the future. Ideally, they will produce military capabilities that render previous ways of warfighting obsolete and may significantly change the measures of success in military operations overall. The JOpsC presents a detailed description of how future operations may be conducted and provides the conceptual basis for Joint experimentation and capabilities-based assessment. The outcomes of experimentation and CBA will underpin investment decisions leading to the development of new military capabilities beyond the future years defense program.

Joint potential designator (JPD)

A designation assigned by the Gatekeeper to determine the Joint Capabilities Integration and Development System (JCIDS) validation and approval process and the potential requirement for certifications/endorsements.

a. "JROC interest" designation will apply to all acquisition category (ACAT) I/IA programs and ACAT II and below programs where these capabilities have a significant impact on Joint warfighting or have a potentially significant impact across Services or interoperability in allied and coalition operations. All Joint capabilities documents and Joint doctrine, organization, training, materiel, leadership and education, personnel, and facilities change recommendation documents (DCRs) will be designated JROC Interest. This designation may also apply to intelligence capabilities that support DOD and national intelligence requirements. These documents will receive all applicable certifications, including a weapon safety endorsement when appropriate, 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 (that is, business oriented systems). These programs may be designated either Joint integration, Joint information, or independent.

b. "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. Staffing is required for applicable certifications (information technology and National Security Systems (NSS) interoperability and supportability and/or intelligence), and for a weapon safety endorsement, when appropriate. Once the required certification(s)/weapon safety endorsement are completed, the document may be reviewed by the FCB. Joint integration documents are validated and approved by the sponsoring component.

c. "Joint information" designation applies to ACAT II and below programs that have interest or potential impact across Services or agencies but do not have significant impact on the Joint Force and do not reach the threshold for JROC Interest. No certifications or endorsements are required. Once designated Joint information, staffing is required for informational purposes only and the FCB may review the document. Joint Information documents are validated and approved by the sponsoring component.

d. "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 or endorsements are required. Once designated independent, the FCB may review the document. Independent documents are validated and approved by the sponsoring component.

Joint Requirements Oversight Council memorandum (JROCM)

Official JROC correspondence generally directed to audiences external to the JROC. Joint Requirements Oversight Council memorandums are usually decisional in nature.

Key performance parameters (KPPs)

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 characteristics of the future Joint Force as defined in the Capstone Concept for Joint Operations. KPPs must be testable to enable feedback from test and evaluation efforts to the requirements process. The KPPs are validated by the JROC for JROC Interest documents, and by the DOD component for Joint Integration, Joint Information, or Independent documents. Capability development and capability production document KPPs are included verbatim in the acquisition program baseline.

Key system attribute (KSA)

An attribute or characteristic considered crucial in support of achieving a balanced solution/approach to a key performance parameter (KPP) or some other key performance attribute deemed necessary by the sponsor. Key system attributes provide decision makers with an additional level of capability performance characteristics below the KPP level and require a sponsor 4-Star, Defense Agency commander, or Principal Staff Assistant to change.

Lead Department of Defense component

The Service or agency that has been formally designated as lead for a Joint program by the Milestone Decision Authority. The lead component is responsible for common documentation, periodic reporting, and funding actions.

Major defense acquisition program (MDAP)

An acquisition program that is designated by the USD(AT&L) as an MDAP, or estimated by the USD(AT&L) to require an eventual total expenditure RDT&E of more than 365 million in FY 2000 constant dollars or, for procurement, of more than 2.19 billion in FY 2000 constant dollars.

Manpower and personnel integration (MANPRINT)

The comprehensive technical effort to identify and integrate all relevant information and considerations regarding the full range of manpower, personnel capabilities, training development and delivery, human factors engineering, system safety, health hazards, and Soldier survivability into the system development and acquisition process to improve

Soldier performance, total systems performance, and reduce the cost of ownership to an acceptable level throughout the entire life cycle of a system. MANPRINT is the Army's human systems integration process for systems acquisition.

Materiel developer (MATDEV)

The RDA command, agency, or office assigned responsibility for the system under development or being acquired. The term may be used generically to refer to the RDA community in the materiel acquisition process (counterpart to the generic use of CBTDEV).

Materiel Developments

The conception, development, and execution of solutions to materiel requirements identified and initiated through the combat developments process, translating equipment requirements into executable programs within acceptable performance, schedule, and cost parameters.

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, and so forth, 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 systems and system of systems approaches, an individual materiel solution may not fully satisfy a necessary capability gap on its own.

Measures of effectiveness (MoE)

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.

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.

National Security System

Any telecommunications or information system operated by the United States Government, the function, operation, or use of which—

- a. Involves intelligence activities.
- b. Involves cryptology activities related to national security.
- c. Involves command and control of military forces.
- d. Involves equipment that is an integral part of a weapon or weapons system.
- e. Is critical to the direct fulfillment of military or intelligence missions.

Net-centric

Relating to or representing the attributes of a net-centric environment. A net-centric environment 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. A net-centric environment 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 measurable and testable characteristics and/or performance metrics required for 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.

Nondevelopmental item (NDI)

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.

Nonmateriel solution

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

Operational architecture (OA)

A description (often graphical) of the operational elements, assigned tasks, and information flows required to accomplish or support a warfighting function. It defines the type of information, the frequency of exchange, and what tasks are supported by these information exchanges.

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, human factors, habitability, manpower, logistics, supportability, logistics supportability, natural environment effects and impacts, documentation, and training requirements.

Operational view (OV)

An architectural view that describes the Joint capabilities that the user seeks and how to employ them. The OV also identifies the operational nodes, the critical information needed to support the piece of the process associated with the nodes, and the organizational relationships.

Overarching integrated product team (OIPT)

The OIPT is a team led by the appropriate OSD technical director, and composed of the PM, PEO, component staff, and USD(A&T) staff, the Joint Staff, and other OSD staff principals, or their representatives, involved in the oversight and review of a particular major defense acquisition program for which the USD(A&T) is MDA. The OIPT provides strategic guidance, for the early resolution of issues as well as oversight and review as the program proceeds through its acquisition life cycle.

Program, project, product manager (PM)

An HQDA board-selected manager for a system or program, a PM may be subordinate to the AAE or PEO. Refers to the management level of intensity the Army assigns to a particular weapon system or information system. As a general rule, a program manager is a general officer or senior executive service; a project manager is a colonel or GS-15; a product manager is a lieutenant colonel or GS-14.

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. The only exception is for the sponsor of a Joint capabilities document. A combatant command or Functional Capability Board may be the sponsor for the JCD. In this usage, the responsibilities of the sponsor are

limited to performing the capabilities-based assessment and developing the JCD for Joint Requirements Oversight Council validation and approval.

Standard

Quantitative or qualitative measures for specifying the levels of performance of a task.

Supportability

Supportability is 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, infrastructure assets, materiel, and consumables necessary to support military effort.

Sustainment

The provision of personnel, training, logistic, environment, safety and occupational health management, and other support required to maintain and prolong operations or combat until successful accomplishment or revision of the mission or of the national objective.

Synchronization

The process of coordinating the timing of the delivery of capabilities, often involving different initiatives, to ensure the evolutionary nature of these deliveries satisfies the capabilities needed at the specified time that they are needed. Synchronization is particularly critical when the method of achieving these capabilities involves a of systems or system of systems approach.

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 an SoS solution will involve trade space between the systems as well as within an individual system performance.

System training

All training methodologies (embedded, institutional, Mobile Training Team, computer, and Web-based) that can be used to train and educate operator and maintainer personnel in the proper technical employment and repair of the equipment and components of a system and to educate and train the commanders and staffs in the doctrinal tactics, techniques, and procedures for employing the system in operations and missions.

System training plan (STRAP)

A training proponent-developed master planning document that addresses training required to introduce a new or improved item of materiel into the force. STRAP integrates the training support system and introduces training and training support requirements needed for the institutional, operational and self development domains. The STRAP provides training details in support of appropriate planning, programming and budgeting requirements.

Systems view (SV)

An architecture view that identifies the kinds of systems, how to organize them, and the integration needed to achieve the desired operational capability. It will also characterize available technology and systems functionality.

Task

An action or activity (derived from an analysis of the mission and concept of operations) assigned to an individual or organization to provide a capability.

Technical view (TV)

An architecture view that describes how to tie the systems together in engineering terms. It consists of standards that define and clarify the individual systems technology and integration requirements.

Theater provided equipment (TPE)

The TPE is equipment identified by HQDA and positioned forward to offset equipment requirements in the combatant commander's AOR. The TPE is distinct from Army prepositioned stock equipment unless otherwise directed by HQDA. The DCS, G-3/5/7 is the validation authority for individual equipment items or entire equipment groups'

addition or deletion from the TPE list, to include commercial off the shelf equipment. The Supported ASCC for that combatant command AOR will manage the property and the local Theater Property Book Office will account for the property in accordance with published accountability guidance.

Threat

The sum of the potential strengths and capabilities that an adversary can bring to bear against U.S. forces to limit mission accomplishment or reduce force, system or equipment (or the combination thereof) effectiveness. A projected threat is an estimate of the combat systems, capabilities or changes in doctrine and strategy an adversary can be expected to develop and employ during a specified period.

Threat (IT)

Capabilities, intentions, and attack methods of adversaries to exploit, or any circumstance or event with the potential to cause harm to, information or an information system. Any circumstance or event with the potential to harm an information system (IS) through unauthorized access, destruction, disclosure, modification of data, and/or denial of service.

Threshold value

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

Trade-off

A balancing of factors all of which are not attainable at the same time. A selection among alternatives, with the intent of obtaining the optimal, achievable system configuration. Often a decision is made to opt for less of one parameter in order to achieve a more favorable overall system result.

Training developer (TNGDEV)

Command or agency that formulates, develops, and documents or produces training concepts, strategies, requirements (materiel and other), and programs for assigned mission areas and functions. Serves as user (trainer and trainee) representative during acquisitions of their approved training materiel and training program developments.

Training devices

Training aids, devices, simulators, and simulations (TADSS) which simulate or demonstrate the function of equipment or weapon systems. These items are categorized as follows:

a. Standalone TADSS. An autonomous item of training equipment designed to enhance or support individual or collective training.

b. Embedded. Training that is provided by capabilities designed to be built into or added onto operational systems to enhance and maintain the skill proficiency necessary to operate and maintain that system. Embedded training capabilities encompass four training categories:

- (1) *Category A–Individual/operator.* To attain and sustain individual, maintenance, and system orientation skills.
- (2) *Category B–Crew.* To sustain combat ready crews/teams. This category builds on skills acquired from Category A.
- (3) *Category C–Functional.* To train or sustain commander, staffs, and crews/teams within each functional area to be utilized in their operational role.
- (4) *Category D–Force Level (Combined Arms Command and Battle Staff).* To train or sustain combat ready commanders and battle staffs utilizing the operational system in its combat operational role.
- (5) *System.* A TADSS item that supports a specific materiel system or of systems program.
- (6) *Nonsystem.* All TADSS not defined as system TADSS.
- (7) *Simulators.* A training medium that replicates or represents the functions of a weapon, weapon system, or item of equipment generally supporting individual, crew, or crew subset training. Simulators may stand alone or be embedded.
- (8) *Simulations.* A training medium designed to replicate or represent battlefield environments in support of command and staff training. Simulations may stand alone or be embedded.

Training support system (TSS)

The TSS provides networked, integrated, interoperable training support capabilities necessary to enable operationally-relevant, full-spectrum, JIIM training for Soldiers, units, and DA civilians.

User

Table of organization and equipment or TDA command, unit, element, agency, crew or person (Soldier or civilian) operating, maintaining, and or otherwise applying DOTLMPF products in accomplishment of a designated mission. An operational command or agency that receives or will receive benefit from the acquired system. Combatant commanders

and their Service component commands and Defense agencies 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.

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 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 documents is dependent upon the Joint potential designator of the program or initiative as specified below:

- a.* The JROC Interest - JROC or as delegated.
- b.* Joint Integration - Sponsor
- c.* Joint Information - Sponsor
- d.* Independent - Sponsor

Section III

Special Abbreviations and Terms

UNCLASSIFIED

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