

Army Regulation 71–9

Force Management

Warfighting Capabilities Determination

**Headquarters
Department of the Army
Washington, DC
29 June 2021**

UNCLASSIFIED

SUMMARY of CHANGE

AR 71–9

Warfighting Capabilities Determination

This major revision, dated 29 June 2021—

- o Incorporates changes in roles and responsibilities between the Chief Information Officer and the Deputy Chief of Staff, G–6, in accordance with Army General Order No. 2020–20 (paras 1–6, 2–7, and 2–12).
- o Incorporates changes in roles and responsibilities between Army Futures Command and the Deputy Chief of Staff, G–8, in accordance with Army Requirements Oversight Council Memorandum 19–23 (chap 2).
- o Incorporates Army Directive 2020–15 by prescribing use of Abbreviated Capabilities Development Document and assigning responsibilities and prescribing procedures for the Army Requirements Oversight Council and the Strategic Portfolio Analysis Review (chaps 2, 3, and 4).
- o Adds a chapter describing the Army Capabilities Integration and Development System processes, and adds the capabilities-needs statement sub process (chap 6).
- o Updates the chapter on the urgent operational needs process and other quick-reaction capabilities, to include new swim lanes and narrative (chap 7).
- o Incorporates guidance on fire suppressant and fuel containment for Army ground vehicles required by Army Directive 2018–13 (app E).
- o Removes chapters on configuring operational forces; strategic portfolio analysis review; and determining and managing Army acquisition objectives, procurement objectives, and retention objectives (throughout).
- o Removes the terms “asymmetric warfare group” and “rapid equipping force” (throughout).


Effective 29 July 2021

Force Management
Warfighting Capabilities Determination

By Order of the Secretary of the Army:

JAMES C. MCCONVILLE
General, United States Army
Chief of Staff

Official:


KATHLEEN S. MILLER
Administrative Assistant
to the Secretary of the Army

History. This publication is a major revision.

Summary. This regulation prescribes policy, procedures, and responsibilities for commands and agencies that determine the required capabilities for warfighting.

Applicability. This regulation applies to the Regular Army, the U.S. 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–8. The propo-

nent 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 requirements.

Army internal control process. This regulation contains internal control provisions in accordance with AR 11–2 and identifies key internal controls that must be evaluated (see appendix F).

Supplementation. Supplementation of this regulation and establishment of command or local forms are prohibited without prior approval from the Deputy Chief of Staff, G–8 (DAPR–FDJ), 700 Army Pentagon, Washington, DC 20310–0700.

Suggested improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to the Deputy Chief of Staff, G–8 (DAPR–FDJ), 700 Army Pentagon, Washington, DC 20310–0700.

Committee management. AR 15–1 requires the proponent to justify establishing or continuing committee(s), coordinate draft publications, and coordinate changes in committee status with the Office of the Administrative Assistant to the Secretary of the Army, Department of the Army Committee Management Office (AARP–ZA), 9301 Chapek Road, Building 1458, Fort Belvoir, VA 22060–5527. Further, if it is determined that an established “group” identified within this regulation later takes on the characteristics of a committee as found in AR 15–39, then the proponent will follow 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 the Regular Army, the U.S. Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve.

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Chapter 1

Introduction

1–1. Purpose

This regulation establishes policies, prescribes procedures, and assigns responsibilities for identifying, determining, and integrating required warfighting capabilities within the framework of doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF–P). It applies to validating and approving capabilities that support deliberate force-modernization planning and the urgent and emergent needs of operational commanders. This regulation implements the Joint Capabilities Integration and Development System (JCIDS), using Army Capabilities Integration and Development System (ACIDS) processes within the Department of the Army (DA). Also, this regulation implements procedures that enable a unity of effort in force-modernization planning, coordination, integration, and execution of materiel and nonmateriel warfighting capabilities determinations in support of combatant commands.

1–2. References and forms

See appendix A.

1–3. Explanation of abbreviations and terms

See the glossary.

1–4. Responsibilities

See responsibilities in chapter 2.

1–5. Records management (recordkeeping) requirements

The records management requirement for all record numbers, associated forms, and reports required by this regulation are addressed in the Records Retention Schedule–Army (RRS–A). Detailed information for all related record numbers, forms, and reports are located in Army Records Information Management System (ARIMS)/RRS–A at <https://www.arims.army.mil>. If any record numbers, forms, and reports are not current, addressed, and published correctly in ARIMS/RRS–A, see DA Pam 25–403 for guidance.

1–6. Policy

a. Governing policies include the following:

(1) Department of Defense Directive (DoDD) 5000.01, Department of Defense Instruction (DoDI) 5000.02 and 5000.02T, Department of Defense Memorandum (DoDM) 5000.78, DoDI 5000.80, DoDI 5000.81, DoDI 5000.82, DoDI 5000.84, and DoDI 5000.85, hereafter referred to as the Department of Defense (DoD 5000–series) unless specified.

(2) Mandated DoD acquisition policy and procedures, including capabilities documentation and approval guidance for DoD acquisition programs and information systems (IS) that impact or are in the Warfighting Domain Portfolio, including National Security Systems (NSS).

(3) Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 5123.01H and the Manual for the Operation of the JCIDS, hereafter referred to as the JCIDS Manual unless otherwise specified.

(4) Mandated Joint Staff (JS) and Office of the Secretary of Defense (OSD) policy and procedural guidance for the JCIDS including identification of key performance parameters (KPPs), key system attributes (KSAs), standardized capabilities documentation, and Joint Requirements Oversight Council (JROC) review of Service-capability proposals.

(5) AR 70–1, which prescribes Army acquisition policy for Army-managed acquisition programs, to include Major Defense Acquisition Programs (MDAP) and Defense Business Systems identified by the Chief Management Officer and Chief Information Officer (CIO), in accordance with DoDI 5000.75 and Army implementation guidance.

(6) AR 71–32, which prescribes policies, procedures, and responsibilities for the development, integration, and documentation of Army doctrinal, organizational, training, leader development, Soldier development, and materiel requirements and authorizations with their associated force-management activities.

(7) AR 5–22, which designates Army force-modernization proponentcy and branch proponentcy.

(8) AR 73–1, which prescribes procedures for generating and approving critical operational issues and criteria (COIC).

b. The capability-requirements determination process shapes the improvement of the Army's force effectiveness by identifying, describing, developing, and integrating required operational capabilities. The process is responsive to the urgent needs of operational commanders in current and imminent contingency operations, and it projects the full set of DOTMLPF-P solutions required for the Army to conduct prompt and sustained unified land operations, across multiple domains.

(1) Commanders, in the rank of colonel and above, document and submit urgent operational requirements for warfighting capabilities via the operational needs statement (ONS) process described in chapter 7 of this regulation and the urgent operational needs (UON) and quick-reaction capability (QRC) processes, as specified in DoDD 5000.71, DoDI 5000.02 and 5000.02T, DoDM 5000.78, and the JCIDS Manual.

(2) Commanders with capability development missions conduct continued analysis to identify, describe, and integrate near-term through far-term required capabilities across DOTMLPF-P areas.

(a) Near-term required capabilities may originate from the determination that a solution for a commander's ONS 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) The Commanding General (CG), Army Futures Command (AFC), has responsibility for force design (5–15 years into the future) and force development (FD) (generally 2–7 years into the future).

(c) Future required capabilities are based on concepts as to how the Army conducts operations as a unified action partner reflecting the Joint vision for the range of military operations or institutional processes designed to generate the operating force (that is, a training transformation or modernization strategy).

c. The CG, AFC, in coordination with CG, U.S. Army Training and Doctrine Command (TRADOC), will verify force integration across the DOTMLPF-P and compliance with the Army concepts framework (ACF). The ACF consists of the Army operating concept, Army functional and supporting concepts, and advisory documents (concept white papers, concept of operations (CONOP), operational and organizational concepts). The ACF describes Army operations in support of the future Joint force commander and nests within the family of Joint concepts. Capability proposals not in compliance will not be coordinated for Headquarters, Department of the Army (HQDA) validation and approval. The ACF provides a rigorous and defensible forecast of how the Army might fight and organize current and future capabilities. The ACF describes the capabilities required to conduct operations in the future, and serves as the basis for experimentation throughout the capability development process.

(1) The Army modernization process enables delivery of quality solutions to Soldiers to ensure future mission success. It builds on a common strategic foundation and an assessment of near- and far-term challenges.

(2) Given the challenges, senior leaders (SLs) establish priorities to drive modernization.

(3) Teams incorporating expertise from across the Army Modernization Enterprise (AME) work the priority efforts, and AME exploits data from across all process activities to integrate efforts and enable shared understanding to inform senior leader decisions on work to pursue and resources to expend.

d. A proposal with no new materiel and, if any, limited materiel-solution involvement is shown with a lowercase "m," as in DOTMLPF-P, for example, additional quantities of an existing capability or changes to distribution. A new materiel solution will only be developed if all other possible DOTMLPF-P nonmateriel solutions cannot close the capability gap. The priority order of consideration is doctrine, training, leadership and education, organization design, and finally a new materiel solution. Initial-capabilities documents (ICDs) and critical operational issues (COIs) will be prepared in accordance with JCIDS Manual format. Guidelines will show how to propose a DOTMLPF-P integrated solution set requiring initiation of a new materiel acquisition program and entry into the adaptive acquisition framework, to include support to a materiel development decision (MDD). An Army DOTMLPF-P integrated capabilities recommendation (DICR) will be prepared to describe a capability solution set that involves one or more of the DOTMLPF-P areas, requires reallocating capabilities, a policy change, or procuring more existing equipment.

e. Requirements for ICDs, requirements definition packages (RDPs), capabilities development documents (CDDs), and capability development document updates (CDD-U) are dependent on several variables, allowing flexibility in the on-ramp to JCIDS process. Base operations procurement programs will use a CDD or HQDA directed requirement (DR) when they are acquiring or improving equipment to provide interface to deployed units for any of the following:

(1) The modified table of organization and equipment (MTOE).

(2) Deployable unit tables of distribution and allowance (TDAs) or augmentation TDAs.

f. All acquisition category (ACAT) materiel acquisition programs will have a validated CDD, to support the development request for proposal (RFP) release decision, prior to milestone (MS) B. Or a validated CDD-U to support MS C, describing the required capability and prepared in accordance with the JCIDS Manual.

g. All information technology (IT) and NSS products must comply with the DoD Architecture Framework (DoDAF) and Army enterprise architecture requirements and be stored in the Army Capability-Based Architecture Development and Integration Environment (ArCADIE). Materiel developers (MATDEVs) and other information

management officials requiring IT/NSS will ensure compliance with architectures. Network Enterprise Center directors will review and ensure compliance with architectures.

h. All Army IT and NSS products, regardless of ACAT, mission area, or domain, are required to undergo the Army interoperability certification process prior to fielding, training, or materiel release decision reviews, per AR 25–1, AR 70–1, and AR 700–142.

i. 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 capability developers (CAPDEVs) will be reconciled with strategic scenarios and threat assessments.

j. Once determined that a materiel solution is required to fill a capability gap, the capability determination process requires early engagement from the materiel development (acquisition) community (Assistant Secretary of the Army (Acquisition, Logistics and Technology) (ASA (ALT)), Army Materiel Command (AMC), TRADOC, and AFC) to produce recommendations that balance improved operational capability, with reduced life-cycle costs, realistic production schedules and technical risk assessments, improved logistics supportability, and divestment of legacy systems.

k. All materiel system developments have operational characteristics and attributes defined in the CDD. The KPPs are those system attributes considered most critical or essential for an effective military capability. During the applicable increment, the CDD must contain sufficient KPPs to capture the minimum operational effectiveness, suitability, survivability, and sustainment attributes needed to achieve the overall desired capabilities for the system or systems if the CDD describes a system-of-systems (SOS). Failure to meet a CDD KPP threshold will result in reevaluation or reassessment of the program or a modification of the production increments. The Army Requirements Oversight Council (AROC) validates and approves KPPs and KSAs. In addition to the JCIDS mandatory KPPs, the CDD will contain KPPs that are inserted in the system acquisition program baseline (APB). The JROC validates and approves KPPs for systems having Joint equities, even if the authority for the capabilities document has been delegated to the Army. The KSAs are specific attributes considered important in support of achieving a balanced solution, but not critical enough to be designated a KPP.

l. When developing system characteristics, supporting attributes, and performance parameters, cost is considered on an equal level. All future required capabilities will include, at 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, AROC consideration, or evaluating new, expensive, high potential, or leap-ahead DOTMLPF–P technology.

m. Architecture requirements will be developed to support JCIDS. Refer to AR 25–1 and DA Pam 25–1–1 for policy and guidance on architecture development (also see para 2–32x).

n. Analysis requirements to support JCIDS and force modernization will be conducted in accordance with DoDI 5000.02.

o. Most materiel solutions will be developed from a concept through a capabilities based assessment (CBA) or like rigorous analyses. Capability assessments consist of analysis to determine required capabilities, identify operational gaps, and develop appropriate DOTMLPF–P solutions. Assessment results may be used to develop required capabilities documentation.

p. Conceptual architecture should be used to develop an operational view (OV) that can support a detailed analysis of new capabilities in an SOS environment.

q. The HQDA accepts the utilization of the Special Operations Forces Capabilities Integration and Development System (SOFICIDS) and the Special Operations Command Requirements Evaluation Board (SOCREB), and will use the AROC forum to adopt SOCREB-validated requirements, in accordance with CJCSI 5123.01H.

r. The Commander, U.S. Army Special Operations Command (USASOC) or other submitters must develop Army supporting documents for the Army to make an informed decision on whether to adopt and resource the SOCREB validated requirement. These documents include a life-cycle cost estimate and resources required; basis of issue (BOI) for general purpose forces to receive the capability, or total BOI if USASOC units are included in the BOI; CONOP or operational mode summary and mission profile if different for Army units than what is described in the SOCREB-validated requirement; and a system training plan (STRAP).

Chapter 2 Responsibilities

2-1. Chief of Staff of the Army

The CSA will—

- a.* Chair the AROC providing Army validation of recommended DOTMLPF-P capabilities, unless delegated to the Vice Chief of Staff of the Army (VCSA), or CG, AFC.
- b.* Provide implementation guidance for associated funding and programming portfolio actions.
- c.* Serve as the approval authority for requirements unless delegated to the VCSA or CG, AFC. The approval authority provides implementation guidance for associated funding and programming portfolio actions.

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

The ASA (ALT) will—

- a.* As his principal duty exercises overall supervision of acquisition, logistics and technology matters of the DA.
- b.* At the 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.
- c.* Be responsible for administering acquisition programs according to DoD policies and guidelines and for developing and validating system views of integrated architecture.
- d.* Serve as a principal member of the AROC to inform and advise the CSA on recommended solutions reviewed for future Army use.
- e.* In coordination with Deputy Chief of Staff, G-8 (DCS, G-8) and CG, AFC, co-chair strategic portfolio analysis reviews (SPARs) to determine affordable investment and sustainment strategies that: support modernization priorities, provide top-down guidance to the AME to support the SPAR and AROC strategic decisions, confirm the prioritization of resourced capabilities, provide fleet investment oversight, nominate legacy systems for divestment, and ensure cross-program evaluation group (PEG) implications are considered.
- f.* In coordination with DCS, G-8 and CG, AFC, establish policy for planning and conducting an analysis of alternatives (AOA).
- g.* Approve and resource Army advanced technology demonstrations (ATDs).
- h.* Ensure program executive officers (PEOs) and program, project, and product managers (PMs) integrate embedded training capabilities early in the design of new or improved materiel systems.
- i.* Ensure PEOs and PMs incorporate human systems integration factors early in the design of new and improved materiel systems.
- j.* Provide the potential ACAT classification for an ICD.
- k.* Oversee integrated product support (IPS), readiness, supply, services, maintenance, transportation, and related automated logistics systems management.
- l.* Exercise logistical acceptability and supportability of materiel systems, IPS, materiel release, type classification and logistics research, and develop programs for the Army.
- m.* In coordination with ASA (IE&E), ensure emerging Army capabilities are reviewed for potential life-cycle environment, safety, and occupational health (ESOH) affects for likely materiel solutions, based on analysis of similar or existing systems and technologies.
- n.* In coordination with the Deputy Chief of Staff, G-9 (DCS, G-9), ensure associated costs with facility changes are captured in resource estimates.
- o.* Serve as a voting member of the Army Requirements and Resourcing Board (AR2B).
- p.* Serve as Army lead for coordinating and executing nonstandard materiel solutions in response to validated ONS and other QRC. Support the disposition assessment conducted by AFC of all capability solutions within 1 year of delivery to the field.
- q.* Assign office of primary responsibility (OPR) for all materiel development activities.
- r.* Develop execution plan for Joint urgent operational needs (JUONs) and Joint emergent operational needs (JEONs), and serve as lead to coordinate solutions in response to JUONs and JEONs assigned to the Army.
- s.* Support DCS, G-8 and DCS, G-3/5/7, in coordination with AMC's Life Cycle Management Command (LCMC), by reviewing designated ONS and other QRC dispositions annually.
- t.* Provide to AMC in-transit visibility, accountability, and sustainment requirements for nonstandard equipment.
- u.* In coordination with DCS, G-8, combine when possible the ICD AROC and the MDD Army Systems Acquisition Review Council (ASARC) to support program decisions, streamline the process, and reduce resourcing requirements for programs at the level of ACAT IC (managed by a DoD component other than a Military Department).

- v. Ensure MATDEVs reflect the approved Army acquisition objective (AAO) or Army procurement objective (APO) (if established), in the APB.
- w. Ensure initial program life-cycle cost estimates are updated, once a determination is made to acquire an APO versus an AAO quantity.
- x. Ensure the MATDEVs participate in the AAO and APO determination when requested.
- y. Ensure MATDEVs use the AFC-recommended AAO and AAO-basis of issue guidance (BOIG) supporting document to the approved CDD to complete CAPDEV's portion of their basis of issue plan (BOIP) feeder data (FD) submission.
- z. Advise DCS, G-8, Programs and Priorities (DAPR-FDR) and DCS, G-8 portfolios when acquisition is within 2 fiscal years (FY) of reaching full operational capability (FOC) and 2 FYs prior to end of procurement.
- aa. Provide AAO quantities within the basis of issue plan feeder data (BOIPFD) module in Cloud Equipping, for new and future amendments for line item numbers (LIN) that do not have an AAO documented within the module.
- bb. Confirm planning quantities for "other requirements" sub-element of the AAO or APO, provided by DCS, G-8.
- cc. Ensure MATDEVs assess initial CAPDEV repair cycle float (RCF) requirements based on platform development data, and when required, recommend RCF quantity changes for new acquisition programs.
- dd. To gain efficiencies, ASA (ALT) will leverage the existing U.S. Special Operations Command (USSOCOM) program management infrastructure, for acquiring conventional force psychological operations and civil affairs materiel.

2-3. Assistant Secretary of the Army (Financial Management and Comptroller)

The ASA (FM&C) will—

- a. Chair the Army Cost Review Board, and approve the Army cost position, for all MDAPs and selected ACAT II, ACAT III programs, and mid-tier acquisition programs.
- b. Provide policy and oversight for the Army Cost Analysis Manual and Economic Manual.
- c. Provide guidance on implementing contractor cost and software data reporting.
- d. Provide policy and oversight for cost analysis career field education, training, and referral.
- e. Serve as a principal member of the AROC to inform and advise the CSA on recommended solutions reviewed for future Army use.
- f. Serve as a member of SPARs, ensuring cross-PEG implications are considered in its resourcing decisions.
- g. Serve as voting member of the AR2B.
- h. Serve as gatekeeper for execution year and budget year funding requirements, address selected validated and prioritized ONS and other QRC actions at the Budget, Requirements, and Programs (BRP) Board for possible funding considerations.
- i. Validate rough order of magnitude estimates.
- j. Serve as the proponent and approval authority for cost-benefit analysis (C-BA).

2-4. Assistant Secretary of the Army (Installations, Energy and Environment)

The ASA (IE&E) will coordinate with ASA (ALT) to ensure emerging Army capabilities are reviewed for potential infrastructure, energy, sustainability, and ESOH effects for likely materiel solutions based on analysis of similar existing systems and technologies.

2-5. Assistant Secretary of the Army (Manpower and Reserve Affairs)

The ASA (M&RA) will—

- a. Advise the AROC on the current and future personnel readiness and well-being of the Army by developing and integrating human resource policies and programs across all components (Regular, Guard, and Reserve).
- b. Advise the AROC on all policies and programs pertaining to readiness resourcing; training; force structure; and leader development and education.

2-6. Deputy Under Secretary of the Army

The Deputy Under Secretary of the Army will advise the Secretary of the Army and CSA on recommended solutions being reviewed for future Army use.

2-7. Chief Information Officer

The CIO will—

- a.* Conduct governance and provide guidelines for creating architectures that facilitate oversight of architectures and models, and to establish the compliance program to support statutory requirements.
- b.* Have overall responsibility for Army software policy for IS.
- c.* Direct and approve standards for data and interoperability of products, to include Joint, combined, and coalition-facing programs.

2-8. Deputy Chief of Staff, G-1

The DCS, G-1, will—

- a.* Evaluate and direct the execution of personnel policy, programs, and budgets for responsive, flexible, and effective human resources within Army operations worldwide.
- b.* Represent Army human resource equities in Joint concept developments.

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

The DCS, G-2, will—

- a.* Participate as an advisor of the AROC to inform and advise on the threat and recommended solutions reviewed for future Army use.
- b.* As senior intelligence officer of the Army, validate threats and direct intelligence threat support to U.S. Army capabilities and systems to be applied to all force, capability, and materiel development processes, to include all technology base programs and nontraditional acquisition techniques. Base validation of threat on intelligence community estimates and assessments of foreign capabilities.
- c.* Be responsible for Army intelligence, counterintelligence, and security support to the systems-acquisition process.
- d.* Designate HQDA threat integration staff officers to manage and execute responsibilities for Armywide coordination of threat integration support and threat validation for force, capability, and the materiel development process.
- e.* Coordinate with ASA (ALT), DCS, G-8, CG, AFC, CG, AMC, and CG, TRADOC to support U.S. Army Intelligence and Security Command (INSCOM); provide emerging intelligence capabilities, and ensure appropriate capabilities undergo consideration to become Army acquisition programs.
- f.* Provide oversight and coordination with national intelligence-related combat support agencies during the determination, programmatic delivery, and assessment phases of the intelligence, surveillance, and reconnaissance QRC process.
- g.* Review and monitor the threat-support process to ensure consistent application of threat in support of ACAT I through III programs, select programs designated by OSD Test and Evaluation oversight, HQDA-directed studies, and selected CAPDEV-directed studies.

2-10. Deputy Chief of Staff, G-3/5/7

The DCS, G-3/5/7, will—

- a.* Serve as a principal member of the AROC to inform and advise the CSA on recommended solutions reviewed for future Army use.
- b.* Plan for mid- and long-range FD to include the following:
 - (1) Develop the Army's strategic warfighting requirements (materiel and nonmateriel) and structure to meet National Defense Strategy (NDS), National Military Strategy (NMS), and global plans.
 - (2) Establish priorities for developing and acquiring nonsystem training devices (NSTDs).
 - (3) Integrate training aids, devices, simulators, and simulations (TADSS) into the force structure.
 - (4) Establish and maintain effective governance of Army business systems within the warfighting mission area, to include training, readiness, and force-management systems.
- c.* Serve as the HQDA lead for prioritizing requirements by publishing The Army Strategy, Army Planning Guidance, and the Army Campaign Plan (ACP) as part of the Army strategic planning system.
- d.* Monitor progress of the modernization line of effort, to include capabilities development in support of Army strategic planning priorities, posture, and interoperability through the ACP.
- e.* Document force modernization by developing table-of-allowances and TDA equipment with BOIP, in accordance with assigned modernization (AMOD) priorities, in coordination with the CG, U.S. Army Forces Command (FORSCOM).
- f.* Conduct force-synchronization reviews to assess when supportability and affordability for structure, manpower, equipment, dollars, facilities, and training become feasible, and include synchronization effective dates for change.
- g.* Serve as the entry point for operational requirements and establish HQDA policy and guidance related to the Army's QRC organizations and processes.

- h.* Retain overall responsibility for the Army's UON process. The processing goal for an ONS is no later than 10 working days from receipt of the request. Conduct initial assessment of all ONS requests generated from the Equipment Common Operating Picture (ECOP). The goal is to complete an initial assessment in 1 working day.
- i.* Serve as Chair and provide oversight and execution of the AR2B, the Army's QRC integration and synchronization forum.
- j.* Serve as Army's entry point for all JUONs and JEONs assigned to the Army from the Joint rapid acquisition cell (JRAC). Develop and deliver OPR request memorandums to the ASA (ALT).
- k.* Validate and prioritize institutional support for Army tests and experiments, and Joint tests and experiments that have an Army lead.
- l.* Provide Army Staff (ARSTAF) oversight of prioritization, development, synchronization, and approval of architecture in support of warfighting capability-requirements determination.
- m.* Serve as validation authority for all ONS and mission essential equipment list (MEEL) requests. Coordinate and synchronize sourcing solutions with key stakeholders.
- n.* Maintain the ECOP database, which is the Army's conduit for all ONS and MEEL submissions to HQDA.
- o.* Ensure copies of all ONS are sent to the CG, TRADOC to maintain situational awareness; develop formal requests for the CG, TRADOC to conduct hasty DOTMLPF-P assessments on ONS to support DCS, G-3/5/7 validation decisions as required.
- p.* Develop and provide OPR request memos to ASA (ALT) for selected ONS requiring nonstandard equipment or a new capability.
- q.* Help DCS, G-8 identify the lead organization to conduct the operational utility assessment for rapidly equipped solutions.
- r.* Ensure that threat-based strategy supports the Army operating concept.
- s.* In coordination with DCS, G-8 and CG, AFC, provide overarching guidance and prioritization from The Army Plan and Modernization Strategy to ensure the alignment of CDDs with future FD strategy.
- t.* In coordination with DCS, G-8, determine the relevant elements of information that result in retention objective (RO) determination.
- u.* Serve as the lead for AAO, APO, and RO policies and procedures. Following reviews of AAO and APO changes, hand off approval recommendations to DCS, G-8 for AROC review.
- v.* Serve as the Army's lead integrator and synchronizer across force modernization time horizons. Capture and manage force modernization activities and decisions in the ACP and track these activities and decisions in execution through the Army Synchronization Meeting (ASM).
- w.* Serve as the HQDA lead for BOIPs and force structure adjustments.
- x.* Ensure all BOIPs are fully applied to the objective table of organization and equipment (OTOE) position in the Structure and Composition System (SACS) file. This helps calculate the Army's requirements for the modernization path and determine AAO for new equipment that is expected to replace currently documented LINs.
- y.* Serve as the HQDA lead for AAO sub-elements as part of the BOIP process for OTOE, Army pre-positioned stock (APS) unit sets, and training base; serve as the approving authority for other AAO sub-element recommendations from DCS, G-4 (class II and VII) and The Surgeon General (TSG) (class VIII) for decision.
- z.* Provide the force-modernization proponents (FMPs) with the approved force impact, when requested for completing AAO-BOIG for draft CDDs.
- aa.* Determine required munitions quantities in accordance with AR 5-13.
- bb.* Validate training device AAO, APO, and RO, and provide to the Army Equipping Enterprise System Modernized (AE2S MOD). Update AAO or APO annually.
- cc.* Help DCS, G-8 maintain the AAO, APO, RO, and modernization path requirements (MPR) in AE2S MOD.
- dd.* Provide DCS, G-8 with the approved SACS master force file, built from the Structure and Manpower Allocation System master force file, at least annually.
- ee.* Serve as the CG, AFC's and FMPs' single point of contact for collection, integration, and staffing of all 11 sub-elements of the AAO contained in AAO-BOIG.
- ff.* Serve as the approving authority for BOIPs and the RO of LINs.
- gg.* Serve as a member of SPARs, ensuring cross-PEG implications are considered in its resourcing decisions.

2-11. Deputy Chief of Staff, G-4

The DCS, G-4, will—

- a.* Participate as an advisor of the AROC to inform and advise the CSA on recommended materiel solutions for future Army use and the disposition strategy for legacy systems.
- b.* Represent Army logistics in Joint concepts, such as focused logistics and associated military programs.

- c. Review all capability-requirements documents to assess logistics support equities, per AR 700–127, and AAO/APO G–4 sub-elements, per DA Pam 71–32.
- d. Serve as the HQDA lead for compiling the following sub-elements of AAO and APO for Army supply class II and class VII:
 - (1) Army war reserve sustainment stocks (AWRS).
 - (2) War reserve stocks for allies (WRSA).
 - (3) Operational project stocks (OPROJ).
 - (4) RCF.
- e. Compile DCS, G–3/5/7, AWRS, WRSA, and OPROJ-approved requirements, and RCF-nominated requirements for DCS, G–3/5/7, to include with AAO–BOIG of capability documents by the FMPs.
- f. Serve as the HQDA lead for staffing out-of-cycle AAO, APO, and RO adjustment requests for DCS, G–3/5/7 approval on receipt of recommendations.
- g. Provide ARSTAF oversight and guidance of equipment divestiture execution.
- h. Serve as a member of SPARs, ensuring cross-PEG implications are considered in its resourcing decisions.

2–12. Deputy Chief of Staff, G–6

The DCS, G–6, will—

- a. Participate as an advisor of the AROC to inform and advise on recommended solutions reviewed for future Army use.
- b. Review all command, control, communication, and computers (C4) IT/NSS warfighting capability-requirements documents ensuring—
 - (1) Nonmateriel alternatives to the requirement were inadequate following DOTMLPF–P 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 comply with information assurance requirements.
 - (6) Electromagnetic 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.
- c. Review materiel system programs for compliance with HQDA policy for software reuse and electromagnetic spectrum management initiatives.
- d. Ensure appropriate configuration control of fielded system of system baselines.
- e. Serve as a member of SPARs, ensuring cross-PEG implications are considered in its resourcing decisions.

2–13. Deputy Chief of Staff, G–8

The DCS, G–8 will—

- a. In coordination with the ASA (ALT), develop Army policy and procedural guidance for materiel capabilities development programs. This includes the capability-requirements determination process and its staffing timelines, prioritization, resourcing, and integration of materiel and nonmateriel warfighting capabilities.
- b. Plan for mid- and long-range FD to include the following:
 - (1) Serve as portfolio manager, and integrate materiel systems into the force structure.
 - (2) In coordination with the CG, AFC and ASA (ALT), plan and execute SPARs to determine affordable investment and sustainment strategies that: support modernization priorities, provide top-down guidance to the AME to support the SPAR and AROC strategic decisions, confirm the prioritization of resourced capabilities, provide fleet investment oversight, nominate legacy systems for divestment, and ensure cross-PEG implications are considered. Additionally, provide periodic updates on the SPAR into the ACP and the ASM, elevating decisions into the ASM as necessary, to assist in the integration and synchronization of Army modernization.
- c. As lead for materiel capabilities, establish and manage ACIDS in coordination with CG, AFC, ASA (ALT), CG, TRADOC, and FMPs identified in AR 5–22.
- 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). In coordination with DCS, G–3/5/7, support documentation of force modernization.
- e. Ensure force integration through synchronized, resource-constrained execution of an approved force-modernization program. Utilize established AMOD levels in developing resource-informed modernization requirements.
- f. In coordination with ASA (ALT), establish policies and procedures to plan and conduct AOA.

- g. Publish guidance and study directives for AOAs as required to support acquisition programs. Ensure relevant OSD, cost assessment and program evaluation guidance, and Study Advisory Group (SAG) requirements are incorporated.
- h. Chair the Army SAG, providing oversight of AOA and other special interest analysis supporting requirements development and approval. The DCS, G-8's FD Directorate is the HQDA coordinator for SAG.
- i. Help the ASA (ALT) prepare acquisition program documentation and adjustments for programming and budgeting.
- j. Provide the ASA (ALT) a memorandum to request an MDD review, if required, for a proposed solution or OPR designation for potential programs that are pre-MDD.
- k. Establish the AROC to serve as the governance forum providing Army validation of recommended DOTMLPF-P capabilities and implementation guidance for associated funding and programing portfolio actions. Provide oversight and execution of the ACIDS process, to include AROC, to afford guidance and discipline to the capability-requirements determination process.
- l. Participate as a principal member of the AROC to inform and advise the CSA on recommended solutions reviewed for future Army use. Provide periodic updates on the AROC into the ACP and the ASM, elevating decisions into the ASM as necessary, to help integrate and synchronize Army modernization.
- m. Serve as the HQDA gatekeeper for the analysis, acceptance, Armywide staffing, and archiving of capability documents within Capabilities and AROC Management System (CAMS).
- n. Serve as the Army lead integrator with the JS for JCIDS. Forward JCIDS documents to the JROC for validation as required.
- o. In coordination with the CG, AFC, establish HQDA policy for the DR process.
- p. In coordination with the ASA (ALT), establish HQDA policy and guidance to determining retention requirements for nonstandard equipment acquired to address urgent needs.
- q. Maintain the CAMS database, or its follow-on, as the Army's authoritative database for staffing and storing requirements documents.
- r. Maintain the Catalog of Approved Requirements Documents System (CARDS) and assign CARDS reference numbers.
- s. Provide final Army approval memorandums including executable guidance to CAPDEVs, JROC memorandums, and special instructions supporting execution of modernization plans.
- t. Provide coordination and comment, liaison, and integration across HQDA, Army commands (ACOMs), Army service component commands (ASCCs), direct reporting units (DRUs), the JS, and combatant commander (CCDR) representatives for the Army JCIDS documents proceeding to the JROC.
- 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 the unique requirements of M&S. Approve Army M&S requirements as a subset of materiel requirements.
- v. Serve as voting member of the AR2B.
- w. Assess, determine, and synchronize sourcing solutions with key stakeholders for all validated ONSs.
- x. Coordinate ONS and other QRC DOTMLPF-P implications reviews with TRADOC.
- y. Identify the requirement to conduct the operational utility assessment for rapidly equipped solutions, and recommend assessment plan and agency to AR2B.
- z. In coordination with the ASA (ALT), establish policy to address affordability constraints for analysis and investments in future capability development efforts (see DoDI 5000.85).
- aa. In coordination with ASA (ALT), combine when possible, the ICD AROC and the MDD ASARC, to support program decisions, streamline the process, and reduce resourcing requirements for programs at the level of ACAT "IC" (managed by a DoD component other than a Military Department).
- bb. Integrate AAO and APO into AROC, SPAR, and program objective memorandum (POM) forums, and establish metrics for AAO and APO review to include decision points for reviews.
- cc. Calculate RO by accounting for all LINs projected within the MPR for the DCS, G-3/5/7 approval at the conclusion of procurement or modification.
- dd. Determine, in conjunction with DCS, G-3/5/7 and ASA (ALT), the affordability of the AAO and establish APO (constrained procurement objectives) as necessary.
- ee. Serve as the HQDA lead for the "AAO other requirements" not documented in the SACS file, and provide requirements to the FMPs for inclusion in the CDD when requested by DCS, G-3/5/7.
- ff. Serve as the HQDA lead for staffing out-of-cycle AAO and APO adjustment requests for AROC processing.

gg. Establish and maintain AE2S MOD as the Army's authoritative repository for AAO, APO, RO, and MPR quantities and the sub-elements for each LIN. Document periodic review decisions in CAMS and AE2S MOD in a timely manner.

hh. The DCS, G-8, will, as required, provide representation to participate in the USSOCOM SOCREB validation process for conventional force psychological operations and civil affairs capabilities. This clears the path for subsequent coordination between the DA staff and ASA (ALT) for acquisition, materiel release, fielding, and IPS resource requirements.

ii. The DCS, G-8 is responsible for the review, adoption, and approval of Army Special Operation Forces (ARSOF) requirements documents developed by USSOCOM that are submitted for Army adoption through the AROC process. In the event that a USSOCOM capability-requirement document becomes a JROC interest item, the DCS, G-8, provides support to the USASOC and USSOCOM as required.

jj. Through the Assistant DCS, G-8 (ADCS, G-8):

- (1) Chair the Army SAG and serve as the primary Army representative to the OSD SAG.
- (2) Exercise oversight authority of analysis supporting capability development with the Studies, Analysis, and Technology Division, responsible for staff coordination and management.

2-14. Deputy Chief of Staff, G-9

The DCS, G-9, will—

a. Participate as an advisor of the AROC to inform and advise the CSA on recommended materiel solutions for future Army use.

b. Serve as the proponent for facilities (including land for ranges and maneuver training) as part of DOTMLPF-P analysis. Provide facility-related advice and analysis to the CAPDEV and MATDEV, and help identify supporting infrastructure requirements to support materiel solutions and the associated lifecycle costs.

c. Represent Army facilities infrastructure in Joint concepts, such as focused facilities, energy, environmental implications (such as, The National Environmental Protection Act), and associated military programs.

d. Provide representation to capability integrated product teams (IPTs) to address supporting infrastructure requirements during DOTMLF-P analysis.

e. Review all draft capability-requirements documents to assess facilities, energy, and environmental equities, per AR 700-127.

f. Advise the AR2B regarding issues related to facilities that support emerging capabilities.

2-15. Chief of Engineers and Commanding General, U.S. Army Corps of Engineers

The dual-hatted COE and USACE will—

a. Advise and assist CAPDEVs for those facility capability and training developments that relate to FMPs.

b. Forward all concept advisory documents and materiel capability proposals to AFC for approval.

c. Conduct research, development, test, and evaluation (RDT&E) to support capabilities determinations related to facilities, combat engineering, construction engineering, and geospatial engineering aspects of: mission command; movement and maneuver; intelligence; sustainment; protection; and to support Army training and readiness in infrastructure and environmental sustainment.

(1) Conduct RDT&E to support capabilities determinations 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.

(2) Monitor requirements and research and development (R&D) necessary to provide construction design criteria, construction techniques, and construction material for the Army, Air Force, and other Government agencies.

(3) Conduct R&D activities covering atmospheric, terrestrial, and topographic sciences.

2-16. The Surgeon General

TSG will—

a. Ensure the sufficiency of medical DOTMLPF-P solutions developed by the Medical Center of Excellence, AFC, TRADOC, and Army Medical Command (MEDCOM).

b. Develop policy, responsibilities, and procedures for combat medical systems, medical readiness and healthcare programs, and other assigned Army and Joint Service capabilities.

c. Review and evaluate materiel and TADSS capability proposals to identify and ensure that adequate consideration is given to preventing health hazards while operating or maintaining materiel systems, and conduct the health hazard assessment program, as required.

d. Provide technical advice and assistance to the Secretariat and ARSTAF for matters regarding public health, readiness of the force, Warrior transition care, medical force structure and equipping, FD, medical materiel and R&D, medical training and education, medical evacuation, and medical military construction.

e. In coordination with ASA (ALT), oversee the Secretary of the Army's responsibilities of the DoD Executive Agent for medical research to prevent, mitigate, and treat blast injuries.

f. Recommend to the CG, AFC materiel capabilities and associated priorities for medical readiness and healthcare programs.

g. Establish mission area interface with AFC, TRADOC, ACOMs, and JS 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.

h. Forward all materiel capability proposals to the CG, AFC for validation and approval.

2-17. 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 United States under all applicable treaties.

(2) International law and the laws of war.

b. Advise and assist AFC, TRADOC, and MEDCOM for those capabilities-development and training-support requirements that relate to TJAG's functional area of interest.

c. Review actions for compliance with environmental law and policy.

d. Serve as the MATDEV, or assign responsibilities for materiel development, on behalf of TJAG, to agencies and activities under TJAG's functional control.

2-18. Chief of Chaplains

The CCH will—

a. Serve as the branch proponent.

b. Serve as the MATDEV, or assign support responsibilities for chaplaincy materiel development to agencies and activities under the CCH's functional control.

2-19. Provost Marshal General and Commanding General, U.S. Army Criminal Investigation Command

The dual-hatted PMG and CG, USACIDC will—

a. Serve as the HQDA integrator and synchronizer with oversight for assigned programs and requirements and capabilities affecting policing functions: law enforcement, criminal investigations, physical security, antiterrorism, detainee operations and corrections, biometrics and forensics, high-risk personnel security, and military working dogs.

b. Exercise oversight to ensure the sufficiency of DOTMLPF-P solutions developed by the U.S. Army Military Police School, the Maneuver Support Center of Excellence, TRADOC, and AFC that impact policing functions.

c. Provide technical advice and assistance to the Secretariat and ARSTAF on matters of policing functions and capabilities.

d. Serve as an advisor to the AROC, and its supporting AROC forums, when the AROC considers requirements and/or capabilities affecting policing functions.

2-20. Commanding General, U.S. Army Intelligence and Security Command

The CG, INSCOM will—

a. Serve as the Army proponent for capability development of theater and strategic expeditionary intelligence systems, to include training development for theater and strategic signals intelligence (SIGINT), information security (INFOSEC), geospatial intelligence (GEOINT), measurements and signature intelligence (MASINT), and capabilities under the purview of the National Security Agency and the National Geospatial Intelligence Agency and having sole application to U.S. SIGINT.

b. In coordination with CG, TRADOC and CG, AFC, prepare capability-requirements documents and serve as the Army CAPDEV during development and fielding of new SIGINT, INFOSEC, and GEOINT/MASINT operations systems per paragraph 2-19*a*. Forward force-modernization proposals, concept-advisory documents, and capability-requirements documents to CG, AFC and CG, TRADOC for them to integrate, validate, and approve.

c. Coordinate force-modernization proposals, warfighting concepts, and capability requirements specific to INSCOM and for which INSCOM is the sole user, with pertinent commands and acquisition agencies; and submit to CG, AFC for them to integrate, validate, and approve.

- d.* Coordinate with the PEO or MATDEV on matters pertaining to acquisition of INSCOM SIGINT and GEOINT/MASINT systems.
- e.* Coordinate with the CG, AFC on capability-requirements determination for other INSCOM-unique systems, and conduct capability developments for these Army systems at the request of the CG, AFC, or when directed by HQDA principal officials, the Under Secretary of Defense for Intelligence, or the Director of National Intelligence.
- f.* Ensure documentation of requirements for training support products, system TADSS, and or embedded training for systems meeting the criteria in paragraph 2–19*b*.
- g.* Provide threat documentation to DCS, G–2; CG, AFC; and CG, TRADOC as validated and approved by DCS, G–2.
- h.* Recommend to CG, AFC, and CG, TRADOC materiel requirements and associated priorities for strategic intelligence and security readiness.
- i.* Operate the Army Technical Assurance Evaluation program for SIGINT, INFOSEC, and GEOINT/MASINT capabilities.

2–21. Commanding General, U.S. Army Materiel Command

The CG, AMC will—

- a.* Participate as a principal member of the AROC to inform and advise the CSA on recommended solutions reviewed for future Army use.
- b.* In coordination with the CG, AFC, assess the proposed materiel-capability solution’s impact on the future force; help analyze and plan for sustaining the proposed solution.
 - (1) Assess suitability and feasibility of the sustainment KPP, including mandatory performance parameters of materiel and operational availability. Also include the mandatory attributes for reliability, maintainability, and operations and support cost to enable materiel life cycle sustainment analysis and planning.
 - (2) Assess transport and deployment needs of proposed materiel solutions, including movement requirements and identifying lift limitations.
 - (3) Identify DOTMLPF–P impacts, including organizational changes and specific facility, supporting infrastructure, and installation requirements.
 - (4) Assess impact to the logistics footprint and to optimizing maintenance operations and supply-chain management to deploy, sustain, and operationally move the proposed solution effectively.
 - (5) Help identify overall resources associated to pursue the capability solution, including materiel and nonmateriel (such as personnel and military construction) cost over its projected life cycle.
- c.* Serve as Army lead to coordinate and execute distribution of materiel solutions in response to validated ONS, and coordinate with DCS, G–8 and ASA (ALT) for sustainment requirements and support. Additionally, provide DCS, G–8 with recommended sourcing solutions for validated ONS requests and other QRC (JUONs, JEONs, and Warfighter Senior Integration Group (WSI–G) directives) solutions.
- d.* Provide strategic logistics advice to support AFC concept development and experimentation efforts, and to enable materiel solutions informed by impacts to operational logistics and the strategic support area.
- e.* Be responsible for executing fleet investment and divestiture activities for systems transitioned to sustainment. This involves making fleet investment recommendations to DCS, G–8 and divestiture recommendations to CG, AFC.
- f.* Review command and LCMC RCF submissions, and submit the total RCF quantities to DCS, G–4 for review.
- g.* Coordinate with ASA (ALT) and DCS, G–8 to provide DCS, G–3/5/7 with transportation data and shipping information for identified sourcing solutions.
- h.* Be responsible for force sustainment and strategic divestiture.
- i.* Serve as a member of SPARs, ensuring cross-PEG implications are considered in its resourcing decisions.

2–22. Commanding General, U.S. Army Training and Doctrine Command

The CG, TRADOC will—

- a.* Participate as a principal member of the AROC to inform and advise the CSA on recommended solutions reviewed for future Army use.
- b.* In coordination with the CG, AFC, integrate fielded force requirements and synchronize the development of DOTMLPF–P solutions to improve warfighting capabilities with minimum adverse affect on readiness during transition.
- c.* Provide recommendations on Army equities related to Joint and unified action-partner capability-requirements documents.
- d.* In coordination with the AR2B, determine how to apply UONs (JUONs/JEONs), W–SIG-identified urgent issues, Secretary of Defense rapid acquisition authority determinations, and DRs, to future Armywide requirements.

Also assign to an Army FMP for follow-up, capability-requirements determinations, documentation, integration, and synchronization as required. Advise DCS, G-3/5/7 on operational lessons learned and experimentation results or insights relative to ONS, UONs (JUONs/JEONs), and DRs, and potential for Armywide application. Advise AR2B regarding any ongoing DOTMLPF-P developments that may impact AR2B recommendations from current perspectives.

e. Forward warfighting concepts and capability-requirements documents to the CG, AFC for review, integration, approval, and entry into Army and Joint staffing.

f. Support DCS, G-8, by participating in the AROC working groups (AWGs). Provide insights and descriptive information on current and planned DOTMLPF-P developments.

g. When required, help ARSTAF resolve issues with Functional Capabilities Boards (FCBs), the Joint Capabilities Board (JCB), and JROC.

h. In coordination with the CG, AFC, help DCS, G-3/5/7 and DCS, G-8 prioritize DOTMLPF-P solutions for POM input or other funding venues. Participate in PEG reviews to present coordinated FMP funding recommendations (for non-Special Operations-unique warfighting capability proposals).

i. Collect, analyze, and integrate lessons learned. In coordination with the CG, AFC, perform detailed DOTMLPF-P analysis on available data and work with individual leaders, Soldiers, unit staffs, ACOMs, ASCCs, DRUs, and the HQDA staff to identify key Army issues and help develop both near-term and long-term solutions as required.

j. Be the Army lead for calculating training base requirements prior to an approved BOIP.

k. In coordination with the CG, AFC, determine impact of approved ONS and other QRCs on capability development activities. Review ONS and QRCs for DOTMLPF-P implications.

l. Conduct hasty DOTMLPF-P assessment when formally directed by DCS, G-3/5/7, to support ONS validation and exploitation of potential solutions.

m. Provide other QRCs to the Army via TRADOC organizations.

n. In coordination with the CG, AFC, produce current operational environment updates for emerging threats.

o. Manage TADSS capabilities at initial operating capability (IOC).

p. As Army lead for the training and leadership domains of the DOTMLPF-P, responsible to ensure training, leadership, and education requirements are addressed in all Army capability-requirements documents, to include ensuring that those requirements are effectively articulated in a STRAP that will accompany each capability-requirements document, unless the STRAP requirement is waived by TRADOC.

q. Serve as a member of SPARs, ensuring cross-PEG implications are considered in its resourcing decisions.

2-23. Commanding General, U.S. Army Forces Command

The CG, FORSCOM will—

a. Participate as a principal member of the AROC to inform and advise the CSA on recommended solutions reviewed for future Army use.

b. Establish interface with CG, AFC; CG, TRADOC; and DCS, G-8 for capability-requirements determination and development.

c. Appoint representatives to conduct pre-coordination activities prior to convening the AROC.

d. Provide for the command's support of warfighting experiments, exercises, and operational testing as appropriate.

e. Represent the operational user during AROC validation.

f. Serve as the responsible ACOM for Force Employment.

g. Serve as a member of SPARs, ensuring cross-PEG implications are considered in its resourcing decisions.

2-24. Commanding General, U.S. Army Futures Command

The CG, AFC will—

a. Lead the AME. Assess and integrate the future operational environment, emerging threats, and technologies to develop and deliver concepts, requirements, and future force designs to support delivery of modernization solutions.

b. In coordination with HQDA principal officials, develop and update, as directed, the Army Modernization Strategy to deliver capability solutions. Publish strategy updates as needed, but at least every 2 years, containing the authoritative list of investment priorities informed by The Army Plan.

c. Posture the Army for the future by integrating the AME and aligning resources to priorities as approved by the DCS, G-3/5/7.

d. Participate as a principal member of the AROC to inform and advise the CSA on recommended materiel solutions for future Army use and the disposition strategy for legacy systems; as directed by CSA, chair the AROC.

- e. Develop and maintain collaboration with AME for capability-requirements determination and development to improve warfighting capabilities.
- f. In coordination with DCS, G-8 and ASA (ALT), co-chair SPARs to determine affordable investment and sustainment strategies that: support modernization priorities, provide top-down guidance to the AME to support the SPAR and AROC strategic decisions, confirm the prioritization of resourced capabilities, provide fleet investment oversight, nominate legacy systems for divestment, and ensure cross-PEG implications are considered.
- g. Serve as the Army's operational architect responsible for determining required capabilities needed to fulfill all designated Army and Joint required capabilities. Maintain the ArCADIE database, the Army's authoritative source for architecture.
- h. In coordination with the AME, manage the development of JCIDS capability-requirements documents. Be responsible for the materiel capability development, from identifying future concepts through analysis, capability development and prioritization, materiel development, and final divestment of the requirement.
- i. In coordination with other ACOMs, ASCCs, and DRUs, provide the future warfighting vision, overarching concepts, current and future force operating capabilities, and the starting points for the warfighting capability-determination process.
- j. Develop and approve the ACF for DCS, G-3/5/7 validation.
- k. Develop the Army Capstone Concept for CSA approval.
- l. Develop and approve the Army's operating and functional concepts as required. These documents provide the foundation of the Army's future required capabilities.
- m. Provide recommendations on Army equities related to Joint and unified-action partner capability-requirements documents.
- n. Publish concept and capabilities-development guidance. Prioritize and direct initiation of capability-development efforts. Be responsible for materiel-requirement development, from identifying future concepts through analysis, capability, materiel development, approval, and final divestment of the requirement.
- o. In coordination with DCS, G-8, and CG, TRADOC, develop, coordinate, and recommend policy and guidance to provide direction for executing the JCIDS, and manage its implementation and execution within the AME.
- p. Manage the JCIDS CBA (or like analysis) process and products.
- q. Certify, endorse, or waive JCIDS certification and endorsement requirements for capabilities documents with a formal memorandum included as supporting documentation for all CDDs submitted for approval.
- r. Manage cross-functional teams, or similar activities throughout the requirements process.
- s. In coordination with the CG, TRADOC, support the force-modernization and branch proponents' capabilities-development efforts.
- t. Develop the Army Experimentation Plan and manage its execution.
- u. In coordination with the CG, TRADOC, 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.
- v. Help the AROC prioritize and justify threat-based warfighting requirements.
- w. As part of the capability-requirements approval process for upgraded or new systems, coordinate with the CG, AMC; DCS, G-8; and DCS, G-4 to determine the impact on force sustainment and strategic divestiture.
- x. In coordination with the AR2B, determine applicability of UONs (JUONs/JEONs), W-SIG-identified urgent issues, Secretary of Defense Rapid Acquisition Authority Determination, and DRs, to future Armywide requirements. Assign to a proponent for follow-up, capability-requirements determination, documentation, integration, and synchronization as required. Advise DCS, G-3/5/7 on experimentation results and insights relative to ONS, UONs (JUONs/JEONs), and DRs, and potential for Armywide application. Advise AR2B regarding any ongoing DOTMLPF-P developments, which may impact AR2B recommendations from future perspectives.
- y. Support DCS, G-8 by participating in the AWGs. Provide insights and descriptive information on planned DOTMLPF-P developments.
- z. When required, help ARSTAF resolve issues with FCBs, JCBs, and JROC.
- aa. In coordination with the CG, TRADOC, help DCS, G-3/5/7 and DCS, G-8 prioritize DOTMLPF-P solutions for POM input or other funding venues. Participate in PEG reviews to present coordinated FMP funding recommendations (for non-Special Operations unique warfighting capability proposals).
- bb. When required, conduct AOA for ACAT I, ACAT I A, ACAT II programs, and programs of JROC interest. For Army-level, non-CSA retained AOAs, tasks include developing and issuing study guidance and study plans, as well as coordinating and chairing SAGs and approving AOAs. When required by the milestone decision authority (MDA), conduct AOAs or similar analysis for all other ACAT programs.

cc. Validate priorities and provide representation to Army science and technology (S&T) review and management teams. Produce the key operational environment and threat documentation necessary to support Army capability proposals.

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

ee. Support capability-requirements documentation by providing COIC for approval by HQDA and inclusion in the test and evaluation master plans, validated online life-cycle threat (VOLT) reports, and threat-test support packages.

ff. Determine impact of validated ONS and other QRCs on capability development activities. Review ONS and QRCs for DOTMLPF-P implications.

gg. Conduct hasty DOTMLPF-P assessments when formally directed by DCS, G-3/5/7, to support ONS validation and exploitation of potential solutions.

hh. No later than 1 year after initial capability delivery, appoint a disposition official to conduct a disposition analysis on all capability solutions associated with Army JUONs, JEON, ONS, or other QRC. Upon completion, approve capability disposition recommendations, document the decision, and inform DCS, G-3/5/7.

ii. Serve as approval authority for the DR's.

jj. Establish mission area interactions with the AME for capability-requirements determination and development. Ensure each participating agency receives full consideration of capability developments for which the Army has lead or executive responsibility.

kk. Ensure CAPDEVs gain the assistance of the G-37 force management (FM) organization during the development of AAO-BOIG, to ensure a proposed BOI is consistent with the programmed force prior to formal submission with capability documents.

ll. Ensure CAPDEVs calculate RCF requirements using formulas in AR 750-1 for new acquisition programs as part of the requirements-development process. This will establish the initial RCF component of the overall AAO.

mm. Ensure human systems integration is considered and executed in the nonmateriel development and Defense Acquisition System (DAS) process. Develop and maintain the human systems-integration database to support human-factors-engineering analyses and human systems-integration assessments.

nn. Lead the operational user's Reliability, Availability, and Maintainability (RAM) Engineering program. Provide operationally relevant RAM engineering metrics and support required by the JCIDS to drive system design, development, testing, evaluation, and life-cycle trades across the AME.

oo. When a decision is made to meet a capability shortfall with a materiel approach, make a modernization decision on the fielded capability to ease the transition to sustainment planning and development of divestiture strategies.

pp. In coordination with the AME, review IT-Box programs as required to ensure adequate execution of the program and to ensure that requirements support program execution.

qq. Charter Army capability managers to synchronize specified capabilities between AFC, TRADOC, and FORSCOM as they are fielded.

2-25. Commanding General, U.S. Army Special Operations Command

The CG, USASOC will—

a. Establish mission-area interface with the CG, AFC for capability-requirements determination and development, ensuring each participating agency receives full consideration in capability developments for which the Army has lead or executive responsibility.

b. Serve as the special operations trainer and CAPDEV.

c. Forward all non-Special Operations Forces unique warfighting capability proposals to the CG, AFC and the CG, TRADOC for integration, validation, and approval.

d. Inform the CG, AFC and the CG, TRADOC of Special Operations Forces-unique warfighting capability proposals for potential integration in Army current and future force capabilities as required.

e. Monitor AFC and TRADOC capability-requirements and training developments, and identify needs that affect the USASOC mission.

f. Support field activities, conduct and support testing, and monitor research, development, and acquisition (RDA) projects, to include potential force standardization and interoperability.

g. Participate in warfighting experiments and exercises, as appropriate.

h. Use the USSOCOM SOFCIDS in accordance with CJCSI 5123.01H to validate capability-requirement documents for the USASOC. The CG, USASOC will then submit SOCREB-validated capability documents that contain conventional force psychological operations and civil affairs requirements to the Army, for adoption by the AROC.

i. In coordination with the CG, TRADOC, provide special operations subject-matter-expert information about recruiting, training development, and education for Soldiers, Army Civilians, and leaders; identify Army support requirements for unit training; develop ARSOF doctrine; and design, build, and integrate a versatile mix of capabilities, formations, and equipment to strengthen the USASOC.

2–26. Commanding General, U.S. Army Test and Evaluation Command

The CG, ATEC will—

- a.* Participate as a principal member of the AROC to inform and advise the CSA on recommended solutions being reviewed for future Army use.
- b.* Review all draft capability-requirements documents for test and evaluation implications.
- c.* Help AFC and TRADOC CAPDEVs develop operationally relevant, total system focused COIC that can be evaluated, to include training development efforts. Provide advice concerning methods and measures to evaluate the system against the COIC, and advise on the resources and ability to test and evaluate the system.
- d.* Support Army warfighter experiments and capstone events.

2–27. Commanding General, U.S. Army Space and Missile Defense Command

The CG, USASMDC will—

- a.* Establish mission-area interface with the CG, AFC and CG, TRADOC for all programs. Ensure 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.* Maintain mission-area interface with the CG, TRADOC for all doctrine, organization, training, and leadership capabilities, ensuring requirements and interests of each participating agency are provided full consideration in current force activities.
- c.* Serve as the Army capability-requirements determination proponent for space, high altitude, and global ballistic missile defense.
- d.* In coordination with the CG, AFC and CG, TRADOC, serve as the Army integrator for the Ground-based Midcourse Defense system.
- e.* Serve as the Joint user representative, centralized manager, and integrator for the Ground-based Midcourse Defense system.
- f.* Serve as the CAPDEV for areas assigned, as the Army proponent.
- g.* Conduct and participate in warfighting experiments.

2–28. Commanding General, U.S. Army Cyber Command

The CG, ARCYBER, will—

- a.* Participate as a principal member of the AROC to inform and advise the CSA on recommended solutions reviewed for future Army use.
- b.* Help apply cyber survivability attributes, per the DoD Cyber Survivability Endorsement Implementation Guide; ensure Joint warfighting systems' cyber survivability requirements are articulated sufficiently to prevent, mitigate, and recover from cyber-based attacks.
- c.* Establish mission-area interface with the CG, AFC for cyberspace capability-requirements determination and development, to include training development, for information operations (IO), DoD Information Network–Army (DoDIN–A), and offensive (collateral and Special Access Programs) and defensive cyberspace and special purpose electronic attack capabilities.
- d.* Help with cyberspace operations (CO) capability-requirements documents, and serve as the Army CAPDEV during development and fielding of new IO, electronic warfare, DoDIN–A, and CO systems under the purview of the National Security Agency and U.S. Cyber Command and having sole application to CO systems. Forward force-modernization proposals, warfighting concepts, and capability-requirements documents to the CG, AFC for integration, validation, and approval.
- e.* Coordinate with the PEO or MATDEV on CO matters pertaining to acquisition of electronic warfare, IO, DoDIN–A, and CO systems. Maintain and execute limited acquisition authority over cyberspace operation capabilities as delegated by ASA (ALT).
- f.* Coordinate with the CG, AFC on capability-requirements determinations for other electronic warfare, IO, DoDIN–A, and CO systems, and conduct capability development for these Army systems at the request of the CG, AFC, or when directed by HQDA, or Director of the National Security Agency.
- g.* In coordination with DCS, G–3/57, lead the response to unique and emerging cyber ONS and QRC requirements, per chapter 7.

- h.* Operate the Army Technical Assurance Evaluation program for offensive CO capabilities.

2–29. Commanding General, U.S. Army Medical Research and Development Command

The CG, USAMRDC will—

- a.* Serve for AFC as the medical MATDEV, and the technical and developmental tester. When delegated, serve as MDA responsible for RDA and logistical support for assigned medical materiel capabilities. Plan, program, budget, and execute medical RDT&E tasks that support system RDA to include required system training support products, TADSS, and embedded training.
- b.* Act as AFC's chief technology officer to maintain and manage the medical S&T base.
- c.* In coordination with the CG, AFC, assess the proposed materiel-capability solution's impact on the future force; help analyze and plan for sustaining the proposed solution.
- d.* Review capability proposals for adequacy, feasibility, and logistical-support aspects of materiel systems to include IPS.
- e.* Coordinate developmental tests, evaluations, and assessments for assigned medical materiel systems, and support operational test with appropriate test board.
- f.* Develop and maintain databases related to Soldier performance and health.
- g.* Evaluate and manage the materiel-readiness functions in the medical-materiel acquisition process.
- h.* Be responsible for the materiel acquisition of medical nondevelopmental items (NDI), commercial off-the-shelf items (COTS), and sets, kits, and outfits.

2–30. 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.* Help the CAPDEVs apply CBRNE-contamination-survivability criteria for systems and items, and help evaluate capability-survivability shortfalls (see AR 70–75).
- c.* Provide the following members to the Chemical, Biological, Radiological, and Nuclear Survivability Committee Secretariat to serve in the following capacities:
 - (1) Chair.
 - (2) Administrative support, to schedule meetings, maintain and publish minutes, and staff and coordinate actions of the Chemical, Biological, Radiological, and Nuclear Survivability Committee Secretariat (see AR 15–41).

2–31. Commanders, Headquarters, Department of the Army staff, staff agencies, Army commands, Army service component commands, and direct reporting units

These commander-level leaders will—

- a.* Coordinate with the CG, AFC and CG, TRADOC for the Army and Joint integration of capability-requirements determination and force-modernization proposals prior to submission to HQDA for AROC validation.
- b.* Participate as an advisor in support of the AROC process, as required.
- c.* Provide a representative to participate in capability IPTs, or other AFC and TRADOC teaming forums involving the development and maturation of the required capabilities and DOTMLPF–P solutions.
- d.* Maintain mission area interaction with the CG, TRADOC for all doctrine, organization, training, and leadership capabilities, to ensure requirements and interests of each participating agency are provided full consideration in current force activities.

2–32. Capability developers

The CAPDEVs will—

- a.* Use Army operating and Joint capstone concepts to develop and integrate operating, functional, and supporting concepts to detail how the Army will operate as part of a Joint warfighting force. Develop and update concepts as required to define and refine operational, warfighting requirements for a particular warfighting function or capability area. 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.
- b.* Ensure only validated threat assessments are used in concept development and modeling efforts that support any capability-requirements determinations.
- c.* Use concept-based war-gaming and experimentation to refine and integrate requirements from a comprehensive perspective of DOTMLPF–P.

- d.* Coordinate with the operational user community throughout, to leverage contemporary knowledge and experience in developing and integrating future capabilities.
- e.* Conduct CBA, or other senior leader-directed analysis, of Joint and Army concepts as directed by SLs. Identify tasks, conditions, standards, gaps, and proposed solutions across the DOTMLPF-P.
- f.* Determine and integrate force requirements, and synchronize the development of DOTMLPF-P solutions.
- g.* Develop and document integrated DOTMLPF-P solutions to resolve or mitigate gaps with unacceptable risk.
- h.* Develop the organizational CONOP and system concept of employment (CONEMP). The CONOP and CONEMP documents drive system design, development, test, evaluation, and life-cycle trades.
- i.* Characterize capability in measurable performance terms to support testing and trade-off analysis.
- j.* Prepare and forward Army and Joint capability proposal documents for AROC review and validation.
- k.* Support validation of R&D priorities for key Army S&T needs.
- l.* When assigned, conduct AOA or other appropriate analysis for materiel solutions to assess proposed critical technologies for maturity and technical risk.
- m.* In coordination with DCS, G-8 and ATEC, develop COIC, RAM performance thresholds for capability-requirement documents, and the test and evaluation master plan.
- n.* Represent the operational user throughout the acquisition process in coordination with Army capability managers.
- o.* In coordination with the MATDEV, conduct a crosswalk of CDD to the RFPs to verify that system specifications and the statement of work accurately reflect approved operational requirements.
- p.* Participate with the MATDEV in risk assessments (cost, schedule, and performance trade-off analysis).
- q.* Calculate initial RCF requirements using formulas in AR 750-1 for new acquisition programs, as part of the requirements development process. This will establish the initial RCF component of the overall AAO. The MATDEV will then further assess the initial RCF based on platform development data, and when required, recommend RCF quantity changes. RCF is a sub-element of the AAO and APO.
- r.* In coordination with the CG, AFC, establish user constraints, objectives, and requirements for supportability including TADSS; participate in review of RFPs, design reviews, program reviews, in-progress reviews, milestone decision review (MDR), ASARC, Defense Acquisition Board (DAB), and other forums to assure user requirements are accurately represented, and ensure early and continuous consideration of supportability.
- s.* Identify potential doctrinal solutions to resolve or mitigate capability gaps. Produce program directives to define and document a detailed requirement for a doctrine publication.
- t.* 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.
- u.* In coordination with the proponent's training developers (TNGDEV), identify 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, STRAPs, training support packages, and training strategies as required. Develop and document requirements for TADSS categorized as nonsystem in accordance with the JCIDS process.
- v.* 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.
- w.* 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 Deputy Chief of Staff, G-1, for Armywide review.
- x.* Identify potential facilities solutions to resolve or mitigate capability gaps, and identify the facilities required to support a materiel solution. Ensure costs associated with facility changes are captured in resource estimates.
- y.* Recommend policy solutions that integrate capability employment across all services, with allies, and in constrained or sensitive environments.
- z.* In coordination with DCS, G-3, complete AAO-BOIG and submit it as a supporting document to an abbreviated CDD (A-CDD), CDD, and CDD-U.
- aa.* Through the architecture developers, will—
 - (1) Serve as core members of IPT.
 - (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 MATDEVs, in a manner conducive to conducting CBAs and the development of appropriate system architectures; thereby, ensuring interoperability and 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 to achieve warfighting goals.

(3) Use existing integrated architectures to inform CBAs (or like analysis) of Joint and Army concepts across the DOTMLPF-P domains.

(4) In coordination with ASA (ALT) for systems view, and DCS, G-6 for technical view, synchronize development of integrated architecture products for capability documentation to include force design updates, software blocking, ICD, and CDD.

(5) Develop architecture to conform with common data standards to support partnership and reuse of architectures resident in approved data repositories.

(6) Use the ArCADIE to develop, validate, and store operational architecture data and products.

2-33. Program executive officers, direct-reporting program managers, other program, project, and product managers

The PEO and direct-reporting program managers and other PMs will—

a. Help the CAPDEVs develop ICDs and CDDs by providing technical, availability, performance, anticipated materiel acquisition cost, and schedule type information as needed.

b. Ensure programming the costs of architecture development for the system and for the architecture necessary to achieve integration of the system in the POM.

c. Ensure programming the planned life-cycle costs of software (procurement, upgrades, and maintenance) in the POM.

d. Fund and conduct concept formulation for all system TADSS in support of assigned system in coordination with PEO for Simulation, Training, and Instrumentation. Ensure consideration of system trainability during development of materiel solution to maintain control of life-cycle training costs.

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

f. In support of information support plan submission and Net-Ready Certification, acquire DoDAF-compliant system and technical views that represent the materiel solution that is under contract.

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

h. The PEOs program and budget funds to support changes to nonsystem TADSS resulting from changes or modification to the TADSS supported.

i. Program and budget funds to support changes to system TADSS, driven by changes or modification to the system supported.

j. Program and budget resources for integrating materiel systems, digitized components and subsystems, and system TADSS and embedded training into Army combat training center instrumentation systems. This is in coordination with DCS, G-3/5/7 (DAMO-TR), and PEO for Simulation, Training, and Instrumentation.

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

l. Program and budget resources to support human systems integration in the RDT&E and acquisition processes.

m. Program and budget resources to support AOA in the RDT&E and acquisition processes.

n. Provide MATDEV perspective input to Army Modernization Plans.

o. Use the AAO-BOIG contained in the approved CDD to build the initial BOIPFD.

p. Develop the life-cycle sustainment plan and update every 5 years or sooner, based on operational availability and readiness requirements.

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

r. 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.

s. In coordination with CAPDEVs, conduct a crosswalk of CDD to the RFP to verify that the RFP, to include system specifications and the statement of work, accurately reflects operational requirements. The CAPDEV will formally certify that the RFP was cross-walked with CDD prior to the publication of the RFP.

Chapter 3

Requirements Decision Forums

3–1. Army Requirements Oversight Council

a. Mission. The AROC advises the CSA (unless delegated to VCSA or CG, AFC) for validation and approval of capabilities required to support warfighting commanders. This advice provides linkage and synchronization between, and recommended prioritization of, required capabilities and resources.

b. Purpose. The AROC validates and approves modernization requirements consistent with Army's strategic priorities. The CSA uses the AROC forum to concur with acquisition MS certifications and Configuration Steering Board (CSB) changes to cost, schedule, and performance. The AROC supports CSA assessment and prioritization of integrated capabilities to balance near-term and future force readiness.

c. Validation and approval.

(1) Army validation indicates a proposed capability gap solution aligned with modernization investment, guidance, and strategy. Army approval indicates proposal acceptance and commitment of resources to proceed forward in the modernization process. Army approval may follow the JS (JROC) validation process. The validation and approval of a proposed capability gap solution must address the following:

(a) Military need and risk. The AROC will review and provide decisions and guidance on the capability gaps identified in documentation presented for validation and approval. This ensures identified gaps link with modernization investment priorities essential to the Army Modernization Strategy.

(b) Synchronization with Army and Joint modernization strategies. The AROC will validate proposed capability gap mitigation solutions, including requisite KPPs, KSAs, and DOTMLPF–P implications, consistent with the Army Modernization Strategy. To support interoperability, the AROC will also consider how proposed capability gap mitigation solutions connect with related Joint concepts and capabilities, modernization strategies, and investment portfolios.

(c) Affordability. The AROC will review the affordability, based on life cycle 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 feasibility. The granularity of the affordability data will be tied to the maturity of the proposal. The AROC will review trade-offs of schedule, capability, and 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.

(d) Joint Capabilities Integration and Development System compliance. The AROC ensures proposed capability gap mitigation solutions are JCIDS-compliant, and consistent with the Army Modernization Strategy and Army Modernization Guidance. Opportunities to integrate Joint, Federal, and other Service programs or technologies to improve Joint interoperability, shorten acquisition timelines, and reduce developmental and sustainment costs will be addressed in the AROC presentation.

(2) The AROC process will be used to validate and approve—

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

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

(c) Disposition strategies for legacy systems, as part of the capability-requirements approval process for upgraded or new systems.

(d) MDDs in conjunction with an AROC, when practical to do so.

(e) Proposals describing required capabilities of future Army forces and the initial estimate of the AAO with sub-elements. An AROC board will validate all JCIDS/ACIDS documents communicating these proposals prior to formal Joint consideration, including Army annexes to Joint and other Service documents; those documents for which an Army proponent is designated lead for a Joint development effort; and Army annexes required for Army but not JS approval. The final approval memorandum for the proposal will be signed by the CSA; the VCSA; or CG, AFC, at completion of Joint validation through the JROC process, unless otherwise delegated.

(f) Modification of a previously approved KPP or KSA.

d. Structure. The AROC membership consists of—

(1) *Chair.* The CSA will chair the AROC. When so directed by the CSA, the VCSA or the CG, AFC will chair the AROC.

(2) *Principals.* DCS, G–8 (Secretary); DCS, G–3/5/7; ASA (ALT); ASA (FM&C); CG, AMC; CG, FORSCOM; CG, AFC (when not chairing the AROC); CG, TRADOC; CG, ARCYBER; and CG, ATEC.

(3) *Advisors.* Other members of the ARSTAF, Army Secretariat offices, commands, or agencies as appropriate for the topic or issue.

e. Roles and responsibilities.

(1) *Army Requirements Oversight Council principals and advisors.* The AROC principals and advisors will advise the AROC chair on assessment and prioritization of DOTMLPF-P integrated capabilities, proposals for rapid insertion of technologies to address current capability needs when solution extends into the POM, and on strategies to resolve capability gaps and resultant changes to modernization programs and plans. The AROC principals will vote to validate JCIDS documents to support AROC chair validation decision, prior to submission for JROC community review. 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 Capabilities Developer, and Army Annexes required for Army but not JROC community validation. Advisors will only be included in the AROC membership by the AROC chair for specified requirements with which they can provide critical information for the AROC board.

(2) *Army Requirements Oversight Council Secretary.* The AROC Secretary coordinates and synchronizes all requirements and calendars for AROC meetings. The Secretary will publish calendar information to AROC Principals and Advisors on the meeting, topic, and any special information directed by the DCS, G-8, or VCSA and publish AROC minutes. The Secretary also schedules and runs the Requirements Integration Synchronization Meetings (RISM) and serves as the Secretary for the AROC Capabilities Board (ACB) and the AROC Review Board (ARB).

(a) *Requirements Integration Staff Officer.* The requirements integration staff officer (RISO) is the DCS, G-8's DOTMLPF-P functional integrator for specific focus areas (aligned with Directorate of Materiel (DOM) Divisions and the Training Support Division in Army G-3, Training), responsible for coordination and integration of functional proposals in the CAMS assigned to them by the DCS, G-8 gatekeeper. The RISO is the Army's functional point of contact for coordination and integration of all proposals entering the AROC staffing process and assists the sponsor with staff coordination of pre-briefs for AROC topics. The RISO makes recommendations on comment acceptance, partial acceptance, or rejection in conjunction with the requirements staff officer (RSO) assigned to the DCS, G-8's FD DOM divisions. Once the RSO closes out the staffing, the RISO then forwards the comments matrix to CG, AFC for adjudication.

(b) *Army (Deputy Chief of Staff, G-8) gatekeepers.* The DCS, G-8, gatekeepers are usually RISOs assigned to the DCS, G-8's Requirements Integration and Assessment Division who oversee and manage all documents submitted for Army and Joint staffing. While there are two Army gatekeepers (one primary and one alternate) for managing the CAMS database, all RISOs are gatekeepers in CAMS for staffing execution and management of the documentation in their functional area.

(c) *Requirements staff officer.* The RSO is the DCS, G-8's capability subject matter expert (SME) within FD DOM. The SMEs identified within an organization provide expertise on the document subject and comments as a guest user in CAMS. The SME is responsible for inputting comments for themselves and others in their organization on the document comment resolution matrix, and obtaining the required general officer (GO) or senior executive service (SES) comment approval. The RSOs are also responsible for reviewing all comments entered into CAMS for a document staffing and recommending acceptance, rejection, or change to the comment and deleting improper or irrelevant comments prior to closing out the document staffing.

(3) *Document sponsor.* The JCIDS document sponsor is an Army FMP who executes the capabilities determination process and coordinates with the AFC gatekeeper. This is to simplify Army and Joint staffing of a document, through the AROC and JROC processes. The proponent develops JCIDS documents and submits them through the AFC gatekeeper to DCS, G-8 via CAMS.

3-2. Conduct of Army Requirements Oversight Council validation and approval process

Army requirements approval occurs in five stages. The first stage is the Department of Army one-time staffing of the requirements document. This review provides an opportunity for ARSTAF, ACOMs, and select ASCCs and DRUs to provide flag-level approved comments on the proposed capability gap mitigation solution, in support of AROC validation. The second stage involves the adjudication of comments, and revision of the requirements document accordingly, to support AROC consideration. The third stage subjects the proposed requirements document to the AROC decision forums for validation, proposal, and approval of future AOA study questions and ultimately, document approval. The fourth stage of the requirements process begins when the Army's validated capability document is submitted for review by the JROC community. Select documents will require validation by the JCB/JROC. The final stage of the AROC process is the preparation of the documentation reflecting the description of the approved capability and associated development guidance.

3–3. Department of the Army staffing overview

a. *Staff coordination.* An AFC-endorsed JCIDS document is submitted into the CAMS database for Army staffing, which includes ACOMs, ASCCs, and DRUs' comments. After staffing, the documents are reviewed by the AWG, led by the DCS, G–8's DOM divisions. After consideration by the CG, AFC, a recommendation is presented to the DCS, G–8 for a decision on the capability recommendation gained through paper validation and approval, or the full AROC briefing cycle. Upon completion of the AROC and validation of the document by the JROC (or review depending on level), the document is forwarded for final approval signature of the CSA; VCSA; or AFC, CG, as appropriate. The HQDA must minimize processing time of requirements in all cases to remain responsive to warfighters. Time limitations must be established and maintained to maximize efficiency in identifying, testing, evaluating, acquiring, deployment, and transition to disposal of capabilities. For new systems, documentation approvals must be conducted to maximize capability and minimize cost and schedule.

b. *Deputy Chief of Staff, G–8 gatekeepers and requirements integration staff officers.* DCS, G–8 gatekeepers manage the CAMS tool to ensure consistency of staff coordination as JCIDS/ACIDS proposals progress, through the validation and approval process. They review each proposal upon initial AFC gatekeeper submission for content, correctness, and inclusion of required supporting documentation. They assign proposals to the appropriate functional RSO for further assessment by the DCS, G–8, SME, document integrator, and facilitator of the proposal as it proceeds through the staff coordination process in CAMS. Once the Army validation (and JS validation if required) and the approval processes are complete, the documentation process is closed by publishing the CSA/VCSA/AFC CG approval memorandum, which contains the approved JCIDS document, the CARDS number, and the assigned Joint staffing designator.

c. *Capability and Army Requirements Oversight Council Management System.* CAMS is the Army database supporting AROC document staffing and comment by numerous Army users and organizations. The system allows users to view document information and monitor document progress through AROC staffing and validation, JROC staffing, and Army approval process.

3–4. Army Requirements Oversight Council's process decision forums

a. *Process.* The AROC requirements approval process is conducted through four levels of review boards. The AROC, the ACB, the ARB, and the AWGs are supported by a number of Army organizations as well as the ARSTAF.

b. *Army Requirements Oversight Council Capability Board.*

(1) *Description.* The ACB is a three-star-general-level board, one level below the AROC. It advises the AROC on issues within and across the capability portfolios and attempts to adjudicate unresolved critical issues prior to the AROC. The ACB is also the delegated approval authority for the Organizational Clothing and Individual Equipment Requirements Document (OCIERD).

(2) *Army Requirements Oversight Council Capability Board Chair.* The DCS, G–8 serves as the ACB Chairman. Duties include—

(a) Support the AROC Chair and the AROC in executing AROC responsibilities, including liaison with the HQDA Secretariat, ARSTAF, CGs of ACOMs, ASCCs, DRUs, and others as required.

(b) Coordinate oversight of the Army requirements process and other issues requiring AROC review.

(3) *Army Requirements Oversight Council Capability Board Secretary/Secretariat.* The Director, Joint and Integration (DAPR–DJI), serves as the ACB Secretary. The ACB Secretariat advises and performs administrative duties as directed by the ACB Secretary or as delegated by the AROC Secretary.

(4) *Army Requirements Oversight Council Capability Board membership.* Representatives of AROC principals and advisors, as requested.

c. *Army Requirements Oversight Council Review Board.*

(1) *Description.* The ARB is a one- or two-star-general-level board, one level below the ACB and advises the ACB and AROC on issues within and across the capability-requirement portfolios. The board attempts to adjudicate unresolved critical issues prior to the ACB. The ARB is also the delegated approval authority for all capability drops (CDs), and RDPs that are derived from IT box capability documentation.

(2) *Army Requirements Oversight Council Review Board Chair.* The Director, FD, serves as ARB Chair.

(3) *Army Requirements Oversight Council Review Board Secretary/Secretariat.* The Chief, Requirements Integration and Assessments Division (DAPR–FDJ), serves as the ARB Secretary. The ARB Secretariat advises and performs administrative duties as directed by the ARB Secretary or as delegated by the AROC Secretary.

(4) *Army Requirements Oversight Council Review Board membership.* Representatives of AROC principals and advisors, as requested.

(5) *Specific functions of the Army Requirements Oversight Council Review Board—*

(a) Serves as the first GO- or SES-level AROC review body immediately following the AWG and the completion of initial staffing of documents or as required to review the requirement.

(b) As a decision-making body, the ARB advises and recommends courses of action best suited to conducting the AROC efficiently and preparing Army JCIDS documents for JROC staffing, adjudicates other capability related issues, decides if further review is required, and makes recommendation for “paper” or “live” AROC.

(c) Ensures AROC topics are developed in accordance with AROC objectives, OSD, and JS policies and procedures. The ARB also ensures life-cycle management and strategic divestiture considerations are addressed in the capabilities description, cost estimation, and review of program affordability. A program is affordable when the estimated total life-cycle cost is less than or equal to the projected fiscal resources available, without any significant impacts to AME-approved warfighting capability, long-range modernization, force structure, and manpower plans.

(d) Provides oversight of specialized governance structures established to manage software-intensive capabilities.

(6) *Consistency.* To ensure capabilities remain consistent with approved plans, schedules, and the APB, the ARB may recall any Army JCIDS document for review. The review is expected to be provided before or after validation and approval if one of the following conditions occurs:

(a) *Army Requirements Oversight Council working group recommendation.* A 10 percent change from the current APB or 20 percent from the original APB in cost or schedule, which impacts fielding of required capabilities from that program or any associated, complementary, or dependent program.

(b) *Proposed change.* Any proposed change to an approved capabilities document that will result in a decreased capability or threaten cost overrun of 10 percent change from the current APB or 20 percent from the original APB in cost or schedule.

d. *Army Requirements Oversight Council working groups.*

(1) *General.* The AWGs are O-6 and general schedule 15-level boards one level below the ARB and advise the ARB, ACB, and AROC on issues within a respective capability-requirement portfolio (or portfolios). AWGs adjudicate comments and provide recommendations for higher level review and approval. The AWGs correspond to the Materiel Divisions in DCS, G-8, FD.

(2) *Army Requirements Oversight Council Working Group Chair.* The chief of the most closely aligned division within the DCS, G-8, FD, DOM serves as the respective AWG Chair.

(3) *Army Requirements Oversight Council Working Group Secretary/Secretariat.* A member of the FD Materiel Division serves as the AWG Secretary. The AWG Secretariat is organized at the discretion of the AWG Chair and performs AWG administrative duties as directed or delegated by the AWG Secretary.

(4) *Representatives.* The AWG is comprised of representatives from the HQDA Secretariat, ARSTAF, ACOMs, ASCCs, DRUs, and other organizations with equity in the capability-requirement portfolio. Each organization will empower its respective representative to speak for it on all matters brought before the AWG.

(5) *Recommendation.* The AWG chair will recommend at the ARB a capability document for “live” AROC or “paper” decision after completion of staffing. If the reason for submission to CAMS is minor or risk free, the AWG can recommend reduced staffing and timelines prior to initiation of the staffing process. If the decision is for a live AROC, the AWG will establish a tentative date, based on timelines for the document to be ready for AROC review. In addition, the AWG will—

(a) Verify that appropriate analysis and consideration has been given to nonmateriel solutions and the option of a DICR before forwarding documents.

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

(c) Determine if a required action needs to be referred to the ASA (ALT) CSB, JS, or other forum.

(d) Review Army input to Joint CBA (or like analysis) to ensure synchronization with Army Modernization Strategy and capabilities-determination activities.

(e) Review acquired hardware and capabilities identified through ATDs, the ONS process, DRs, and other rapid processes to assess scope of resultant changes to modernization efforts, and make recommendations on viability for current and future needs and programs of record.

(f) Verify that related DOTmLPF-P impacts of the proposed capability solution have been identified, to include associated lifecycle costs.

3-5. Requirements Integration Synchronization Meeting

a. The RISM is chartered to bring key stakeholders together to prioritize topics for AROC presentation and decision. This prioritization will help align requirement-document approval and acquisition MSs. The primary output of the RISM is a prioritized list of capability documents with their associated staffing plan, and an approved AROC calendar for document validation and approval.

b. Purpose. The purpose of the RISM is to prioritize and synchronize Army capability-document approval, ensuring integration of acquisition, and JCIDS/ACIDS processes to deliver timely and affordable capabilities to the Army and Joint Force.

3–6. Joint Requirements Oversight Council

- a. Joint Requirements Oversight Council.* The JROC assists in—
- (1) Assessing Joint military capabilities, and identifying, approving, and prioritizing gaps in such capabilities, to meet applicable requirements in the NDS under subparagraph (b)(1), in 10 USC 181.
 - (2) Reviewing and validating whether a capability proposed by an Armed Force, Defense Agency, or other entity of the DoD fulfills a gap in Joint military capabilities.
 - (3) Developing recommendations, in consultation with the JROC advisors, for program costs and fielding targets that:
 - (a) Require a level of resources that is consistent with the level of priority assigned to the associated capability gap.
 - (b) Have an estimated period of time for the delivery of an initial operational capability that is consistent with the urgency of the associated capability gap.
 - (4) Establishing and approving Joint performance requirements that—
 - (a) Ensuring interoperability, where appropriate, between and among Joint military capabilities.
 - (b) Are necessary to fulfill capability gaps of more than one military Service, Defense agency, or other entity of the Department.
 - (5) Reviewing performance parameters and attributes for any existing or proposed capability that the Chairman, Joint Chiefs of Staff determines should be reviewed by the JROC.
 - (6) Identifying new Joint military capabilities based on advances in technology and concepts of operation.
 - (7) Identifying alternatives to any acquisition program that meets approved Joint military capability requirements for the purposes of 10 USC 2366a(b).
- b. Joint staffing.* The JCIDS JS validation and approval process is found in the JCIDS Operations Manual maintained by the JS, J–8.
- 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 the Army interests in areas where programs impact the successful accomplishment of the Army’s full range of military operations.
 - (2) The DCS, G–8’s FD Director is the Army’s permanent member of the JCB, ensuring that Army programs are scheduled and reviewed by the JCB as required. The DCS, G–8’s FD 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 provides representation to the FCB. The FCB supports the Chairman of the Joint Chiefs of Staff’s responsibilities to provide independent military advice to the Secretary of Defense. The FCB provides the assessments and recommendations required for the JROC to validate and prioritize Joint military capabilities needed to execute the NMS. The FCBs serve as the link between Services, combatant commands, OSD, and Defense agencies on warfighting capabilities and issues.
 - (4) The FCB chairs oversee working group meetings; ensure that 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 departmentwide views; and participate in FCB integration meetings.
 - (5) The DCS, G–8’s Requirements Integration and Assessment Division represents the Army position, and frames requirements presented to the JROC for review and validation.
 - (6) The proponent of the JCIDS proposal represents the Army CAPDEV, and supports the ARSTAF to present Army proposed capability-gap mitigation solutions. JROC reviews and validates the proposals by executing the functions specified in the other sections of this regulation.

Chapter 4

Capabilities Documentation

4–1. Concept-driven capabilities and threat-based approaches to identify doctrine, organization, training, materiel, leadership, education, personnel, facilities, and policy solutions

a. The CG, AFC has responsibility for force design and FD and is the capabilities developer and operational architect for the future Army. AFC designs, develops, integrates, and synchronizes warfighting capability proposals; fosters

innovation; and leads modernization for the Army. To accomplish these tasks, AFC uses threat assessments, concepts, experimentation, and capabilities determination as core functions.

b. The CG, AFC leads Army concept development and supports Joint concept development with the support of other Army FMPs; develops and manages the ACF; develops Army concepts; directs, manages, and synchronizes concept development through capability IPTs with the support of Army FMPs; and ensures the integration of future Army capabilities in the development of Joint operating, functional, and integrating concepts in coordination with DCS, G-3/5/7 and CCDRs.

c. The ACIDS is a threat driven, priority focused, data enabled, and concepts-based approach to capability development. 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. Functional concepts should not be finalized until all functional concepts are horizontally integrated to include required capabilities.

d. Army concepts, including advisory documents, are one method for conducting a CBA, which is the first analytical step of the JCIDS process. Other emerging ACIDS processes can also be used as the trigger (reason capability needs ACIDS SLs decision) to address gaps, opportunities, challenges, and decisions made by senior Army leaders.

4–2. Initial-capabilities document

The CG, AFC, regardless of the ACOM sponsoring the effort, is responsible for submitting the ICD to the DCS, G-8's gatekeeper for staff coordination, validation, forwarding to the JS for review and validation (if the Joint staffing designation is JCB or JROC interest), and final Army approval and assignment of a CARDS number. The ICD documents the requirement for a materiel or nonmateriel approach, or an approach that is a combination of materiel and nonmateriel approaches, to 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-P. The ICD summarizes the results of DOTMLPF-P analysis and DOTMLPF-P approaches (materiel and nonmateriel) that may deliver the required capability. Army specific adoption of Joint ICDs will be dependent on the DOTMLPF-P analysis and DOTMLPF-P approaches (materiel and nonmateriel) that may deliver the required capability. The outcome of an ICD could be one or more DICRs, Joint DOTMLPF-P change recommendation (DCR), and CDDs. If an ICD is developed to document the need for a materiel solution, an AOA may be directed to support a MS A and force structure impacts need to be considered. There are two types of ICDs, those that support a materiel solution and the IS variant, where developers can reasonably predict that software can close or sufficiently mitigate the gap(s) under consideration.

a. The ICD for a materiel solution. This ICD quantifies capability gaps associated with the requirements, operational risks across the Army and joint force, and proposes materiel and nonmateriel approaches to close or mitigate some or all of the identified capability gaps.

b. The IS ICDs are used to facilitate efficient and timely hardware and software development efforts:

- (1) When it is clear that an IS solution (software) is the only viable approach.
- (2) For modification of Government off-the-shelf (GOTS) and COTS IS products.
- (3) All hardware associated with the software developed must be COTS or GOTS.

4–3. Capabilities development document

The CG, AFC, regardless of the ACOM sponsoring the effort, is responsible for submitting the CDD to the DCS, G-8's gatekeeper for staff coordination, validation, forwarding to the JS for review and validation (if the Joint staffing designation is JCB or JROC interest), and final Army approval and assignment of a CARDS number. The CDD captures system-level requirements and AAO necessary to develop 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, KSAs, and additional performance attributes) to support approval of multiple increments. Army specific adoption of Joint combat capability documents will be dependent on the DOTMLPF-P analysis and DOTMLPF-P approaches (materiel and nonmateriel) that may deliver the required capability. Mandatory KPPs and KSAs are codified in the JCIDS Manual. Additionally, force structure impacts need to be considered. Several CDDs may be written to support the multiple or complex gaps defined in a single ICD. There are multiple types of CDDs that support specific functions or MSs as outlined below:

a. A-CDDs are Army-only documents, designed to rapidly provide prototypes for templated or suggested desired characteristics in order to quantify desired characteristics, validate the technology and scope the future thresholds and objectives to evolve into a mature requirement through this active process. A-CDDs support middle-tier acquisition (MTA) rapid prototyping or rapid (limited) fielding outlined in Section 804 of the National Defense Authorization

Act for FY16, Public Law 114–92, as amended, 10 United States Code 2302, note. The MTA requires a validated A–CDD or other validated requirement (such as ICD or CDD) and concurrence from the AAE to use MTA for either rapid prototyping or rapid fielding. A–CDDs cover the same paragraphs found in a CDD that supports an MS B, but the information will be less mature, as specific details are anticipated to be learned through rapid prototyping.

(1) A validated A–CDD is a capability–requirement document used to establish characteristics and help the Army understand a potential materiel capability.

(2) A validated A–CDD will not support formal acquisition MS decisions (MDD, MS A, MS B, MS C), thus no CARDS number will be issued.

(3) A–CDDs do not require joint review or JROC validation.

(4) A–CDDs do not contain requirements, they contain desired characteristics that only define a possible threshold that provides military utility in order to provide the MATDEV the most trade space and flexibility in developing a solution.

(5) The AAE may determine to use middle-tier of acquisition (MTA) rapid prototyping or rapid (limited) fielding outlined in Section 804 of the National Defense Authorization Act for FY16, Public Law 114–92, as amended, 10 USC 2302, note. The MTA requires a validated A–CDD or other validated requirement (such as ICD or CDD) and concurrence from the AAE to use MTA for either rapid prototyping or rapid fielding. A–CDDs cover the applicable paragraphs found in a CDD that supports a MS B or C, but the information will be less mature, as specific details are anticipated to be learned through rapid prototyping.

(6) A–CDDs for rapid prototyping provide the Army with limited RDT&E, and necessary procurements for extended operational assessment. The A–CDD uses a “buy, try, and decide” model that does not obligate the Army to an acquisition program. Instead, it allows the Army to buy-down investment risk before formal acquisition MSs and program initiation.

(7) A–CDDs for rapid fielding allow the Army to use a “buy, try, decide” model that does not obligate the Army to a full life cycle funded acquisition program. Instead, it allows the Army to buy-down investment risk before entering Major Capability Acquisition and baselining cost, schedule, and performance. As it has not been determined an enduring program, no CARDS number is issued for an A–CDD to support rapid prototyping.

(8) A–CDDs to support rapid fielding allow the Army to support limited fielding. Limited fielding applies to programs expected to be less than ACAT I, where technology readiness levels and manufacturing readiness are higher, and where militarily useful equipment is expected to be procured within 1–2 years. A–CDDs for rapid fielding are more mature and include supporting AAO–BOIG documentation and DOTMLPF–P analysis. They also require refined life-cycle cost estimates based on respective BOIG. Select A–CDDs to support rapid fielding are issued a Temporary CARDS number that expires in two years from the approval date for the A–CDD; it can be extended up to three additional years at the approval authority’s discretion to correspond with the expiration of the MTA authority.

(9) If a decision is made to pursue a Major Capability Acquisition pathway program, then the A–CDD will be converted to a CDD with all necessary supporting documentation, and staffed, validated, and approved. HQDA DCS, G–8 will coordinate with OSD Cost Analysis and Program Evaluation (CAPE) for the support required to validate and finish the AOA, prior to the CDD going to Joint staffing for approval.

b. CDDs are used to propose development of a materiel capability solution (most common) or procurement of a mature COTS/NDI solution intended to satisfy, wholly or partially, approved capability requirements to close or mitigate associated capability gaps for which the Army does not want to accept operational risk. CDDs are required for entry into the Major Capability Acquisition pathway and can also be used for MTAs.

(1) It defines system-level performance requirements (KPPs, KSAs, and additional performance attributes) to guide the development and production of one or more increments of a system.

(2) All CDDs submitted for formal review must contain the following supporting documents for the Army to make an informed decision: decision paper to modernize or not to modernize specific capability variants of field capability, life-cycle cost estimate based on the recommended course of action from the C–BA, and AAO–BOIG, approved STRAP, CONEMP, or CONOP.

(3) The original CDD, with particular emphasis on the performance requirements, can be used to support a MS C if there are no significant changes to the CDD approved to support MS B. If there are significant updates to KPPs, KSAs, and additional performance attributes, then a CDD update (CDD–U) will be written for formal staffing, validation, and approval.

c. CDD–Us are required when significant requirements changes have occurred during the engineering and manufacturing development phase of acquisition.

(1) A CDD–U will be validated and approved by the same validation or approval authority of the original CDD. Deliberate staffing and review will be used for a CDD–U in the same manner as the original CDD, with the exception

that the only sections for review and validation will be the updated sections of the document. Sponsors may request expedited staffing for CDD updates.

(2) Supporting documents will be updated as necessary. The required cost analysis and resources table in the CDD-U must be updated to provide a refreshed life-cycle cost estimate for the program.

d. The IS-CDD is a variant of the regular CDD and supports MS B, implementing the “IT Box” construct, where software is the primary product envisioned to close or mitigate the capability gap the IS-CDD addresses. The IS-CDDs streamline the requirements process by delegating oversight and approval of derivative child documents that decompose requirements in the IS-CDD (RDPs and CDs). This provides IS programs greater flexibility to incorporate evolving technologies and achieve faster acquisition.

(1) The IS-CDDs are not appropriate when significant hardware is required and integrating software is developed as part of the system.

(2) Child documents, RDPs, and CDs, are approved by the ARB, unless that delegation of authority is specifically withheld by the Army’s signature authority (CSA, VCSA or CG, AFC) of the parent document. Approval of CDs can further be delegated by the AROC to the Army’s operational leads or Center of Excellence.

(3) The CG, AFC will review IT-Box programs as required to ensure adequate execution of the program, to ensure requirements support program execution, and to provide an update to the VCSA.

e. The OCIERD is an Army-only document that requires abbreviated documentation, validation, and approval for OCIE (organizational clothing and individual equipment) to ensure Soldiers remain at a high state of modernization and readiness.

(1) The OCIE is defined as items issued to Soldiers in accordance with common tables of allowances (CTA) 50–900, CTA 50–909 and CTA 50–970. Most OCIE items are usually issued from central issue facilities, remain U.S. Army property, and include the following: ballistic protection; personal clothing and equipment; tactical/environmental clothing; nuclear, biological, and chemical clothing and equipment; and individual Soldier equipment.

(2) Documentation of OCIE requirements will contain the following minimum information:

(a) Executive summary.

(b) Program summary and strategy, complete with the proposed BOIG, proposed IOC date and quantity, and proposed FOC date and quantity.

(c) Performance requirements identifying threshold and objective requirements that are binned as KPPs or KSAs. Those performance values adhere to standard definitions where the requirements are measurable, testable, and operationally relevant.

(d) Proposed APO developed in conjunction with DCS, G–8’s FD DOM divisions, in accordance with DA Pam 71–32.

(e) The FOC quantity provided in the program summary paragraph of the CDD will equal the AAO.

(f) Fielding concept, in coordination with FORSCOM, DCS, G–4, and AMC.

(g) In lieu of C–BA report, which is a single course of action C–BA to inform program affordability.

(h) Following Army staffing and adjudication of comments, OCIERDs are approved by the DCS, G–8, assigned a CARDS number, and archived in the CAMS database.

(i) Other Service-approved OCIE requirements may be adopted as an Army requirement, using the abbreviated AROC approval process. The adoption will require no additional testing unless the materiel solution will be used differently for Army purposes.

4–4. Types of Army acquisition-objective, Army procurement-objective, and retention objective reviews for approval

a. Initial AAO and APO approval via the BOIP process—

(1) Following the approval of the CDD and acceptance of the PM’s BOIP feeder data (FD), the BOIP is developed by U.S. Army Force Management Support Agency (USAFMSA) in accordance with AR 71–32 and DA Pam 71–32. Then it is staffed and approved by the Organizational Requirements Document Approval Board (ORDAB) Council of Colonels (COC) or General Officer Steering Committee (GOSC), hosted by the DCS, G–3/5/7 (DAMO–FM). The BOIP brief provides an overview of the BOIP, AAO, and APO with sub-elements and procurement plan by FY. The AAO, APO, and RO sub-elements—

(a) *Objective table of organization and equipment.* This represents the proposed capability BOIG quantity or approved BOIP quantity for MTOEs. The CG, AFC and FMPs are the Army leads for calculating this value prior to an approved BOIP. Thereafter DCS, G–3/5/7’s Directorate of FM (DAMO–FMD) is the HQDA lead, with the Commander, USAFMSA providing support.

(b) *Training base.* This represents TDA requirements for TRADOC Schools; U.S. Army John F. Kennedy Special Warfare Center and School; Army National Guard; and U.S. Army Reserve Organizations supporting the One Army

School System and Combat Training Centers. The CG, AFC, CG, TRADOC, and FMPs collaborate to calculate this value prior to an approved BOIP, via the Equipment Review and Validation Board (ERVB). Thereafter, DCS, G-3/5/7, Manpower and Accounting (DAMO-FMP) is the Army lead, with the Commander, USAFMSA providing support.

(c) *Army pre-positioned stock unit sets.* This represents the equipment quantities configured into unit sets (component 6) less those LINs designated to-accompany-troops in SB 700-20, Appendix J, and not authorized for pre-positioned items referenced in ATP 3-35.1, pre-positioned at land-based sites and afloat. The APS quantity is identified in the authorized column of the OTOE for the unit identification code unit set. The CG, AFC and the heads of other organizations supporting force-modernization collaborate to develop this value prior to an approved BOIP. Thereafter, DCS, G-3/5/7 is the HQDA lead, with the Commander, USAFMSA providing support.

(d) *Army war reserve sustainment stocks.* This represents the quantities of stocks pre-positioned in or near a theater of operations to last until wartime rates of re-supply are established. These stocks consist of major end items of equipment to sustain the battle by replacing combat losses and war reserve secondary-items of equipment to replace supplies consumed in the battle. The DCS, G-4, is the class VII lead, and TSG is the class VIII lead for this value throughout the lifecycle.

(e) *War reserve stocks for allies.* This represents quantities of U.S. materiel assets prepositioned in the appropriate theater of operations, and owned by the United States, but released to the appropriate Army component commander for transfer to the supported allied force under 22 USC 2151 (The Foreign Assistance Act). The WRSA requirements are developed through OSD to the Department of State. The DCS, G-4 is the class VII lead, and TSG is the class VIII lead for this value throughout the lifecycle.

(f) *Army pre-positioned stock operational project.* This represents quantities of authorized materiel stocks above unit authorizations that are tailored to key strategic capabilities required by CCDRs. The OPROJ stocks support one or more Army operations, plans, or contingencies. The APS OPROJ designated as temporary by the DCS, G-3/5/7, will be nonadditive to the AAO/APO and will not be documented in the BOIP or SACS. The DCS, G-4 is the class VII lead, and TSG is the class VIII lead for this value throughout the lifecycle.

(g) *Repair cycle float.* The RCF represents an HQDA-authorized quantity of select class II, VII, and VIII that is supported by a depot-level sustainment program. The purpose of RCF is to replace equipment immediately being inducted for depot-level maintenance so that readiness is not adversely reflected by unavailability of equipment during repair. Approved RCF quantities are used for the annual depot maintenance POM requirements review (OPS29). The DCS, G-4 is the class II and VII lead, and TSG is the class VIII lead for this value throughout the lifecycle. The MATDEV, LCMC, and command-generated RCF computations for ground and aviation fleets are in accordance with AR 750-1.

(h) *Other tables of distribution and allowance requirements.* This represents TDA requirements not included in paragraphs 4-4a and 4-4b. This includes both operating force and generating force TDAs. DCS, G-3/5/7 (DAMO-FMP) is the HQDA lead for this value.

(i) *Other requirements.* Other requirements represent quantities of major end items needed to serve as seed stocks to support modernization efforts for existing acquisition programs. DCS, G-8 is the HQDA lead for this value, with the CG, AMC and ASA (ALT).

(2) The approved BOIP represents the total requirement for the objective table of OTOE, APS unit sets, and training base along with other AAO sub-elements. As part of the BOIP process, the ORDAB COC/GOSC will review AAO sub-elements or APO adjustments and will refer AAO or APO adjustments to the AROC for decision. The initial BOIP should be consistent with the AAO-BOIG from the AROC validated CDD.

(3) Once the BOIP with AAO or APO adjustments is approved, the process shifts to maintaining and updating AE2S MOD.

b. Annual AAO and APO reviews submission—

(1) The DCS, G-37/FM, conducts an Army annual review of all major end items (class VII) and medical materiel (class VIII) using the summer force lock and resulting SACS file as the governing document, to conduct annual validation of AAO and APO. Annual review of the AAO and APO process is covered in DA Pam 71-32. The SACS file establishes the Army's baseline for table of organization and equipment (TOE) requirements, as well as MTOE and TDA authorizations, according to approved force structure, BOIPs, and ERVB authorizations.

(2) Annual review of AAOs and APOs is conducted through the SPAR to determine whether proposed changes in LIN quantities for procurement will result in a 10 percent or greater change in the previously approved AAO, or if the procurement costs will increase by more than 10 percent.

(3) The AROC will determine whether the LINs falling into these criteria should be fully resourced to procure the AAO or if an APO be established. Proposed changes to an approved AAO or APO, or the initial creation of an APO,

will be approved via the AROC process. The AAOs and APOs that do not experience variance will not be referred to the AROC process.

c. Out of cycle AAO and APO adjustment request submissions—

(1) Requesting authorities, including HQDA leads for AAO or APO sub-elements, AFC, AMC, and other organizations supporting force modernization (such as USASOC, USASMDC, INSCOM) are authorized to submit to the DCS, G-8 a formal request memorandum, with justification, under the signature of a GO.

(2) DCS, G-8 generates and staffs an AAO or APO adjustment request when a submitter determines that an AROC-validated AAO or APO requires changes. Adjustments will include any increases or decreases resulting from approved force-structure changes not previously considered and approved BOIPs. See DA Pam 71-32 for procedures and format for developing an out-of-cycle adjustment request packet.

(3) Once approved by the AROC or DCS, G-8 FD, the DCS, G-8, will publish a decision memorandum with the adjusted AAO or APO to stakeholders and will post the approved memorandum to the CAMS repository and update AE2S MOD.

d. Out of cycle RO adjustment request submissions —

(1) DCS, G-4 generates and staffs an RO adjustment request packet when a submitter determines a need to adjust the Army's RO. See DA Pam 71-32 for procedures and format to develop an out-of-cycle RO adjustment request packet.

(2) Following staffing, the DCS, G-4 action officer will submit the packet to DCS, G-3/5/7 for approval.

(3) Once approved, DCS, G-3/5/7 will publish to the CG, AMC, and other stakeholders, a decision memorandum with the adjusted RO and will ensure the RO is updated in AE2S MOD.

4-5. Army and Joint DOTmLPF-P integrated change recommendations

These documents propose nonmateriel capability solutions, which may serve as an alternative to, or complement of, materiel capability solutions. The materiel DOTmLPF-P consideration is everything necessary to equip Army forces to operate effectively. The letter "m" in the acronym is usually lower case, since Army DICRs and Joint DCRs do not advocate new materiel development, but rather advocate increased quantities or alternate applications of existing materiel to include COTS, GOTS, or NDI. Unlike other capability documents, DCRs provide the sponsor a venue to express needed DOTmLPF-P changes to implement, that are beyond the organization's budgeted resources. If there are no unfinanced requirements (UFR), then the sponsor should implement the recommended changes with no external approval required.

a. The Army DICR is used when nonmateriel solutions do not impact or require any assistance from other Services or the JS.

b. The Joint DCR is used to articulate nonmateriel solutions where multi-service impacts are present, such as setting up a Joint explosive-ordnance disposal course where instructors are required from the Army and Navy, and so forth.

4-6. Catalog of Approved Requirements Documents System

a. The CARDS is an unclassified DCS, G-8 publication that provides information on the status of approved capability-requirements documents. It includes both active and inactive documents. An active document or assignment of a CARDS reference number does not authorize the expenditure of funds. Each program competes for funds in the Army planning, programming, budgeting, and execution (PPBE) process.

b. The DCS, G-8, in coordination with the CAPDEV, TNGDEV, and MATDEV will conduct an annual update of the CARDS.

c. The DCS, G-8 gatekeeper will assign a CARDS reference number to each capability-requirements document after approval and prior to publication and distribution. The capability-requirements document will have a final approval memo attached that contains the CARDS number. Use CARDS to identify any revision to an approved document by revision date and number.

d. Approved capability-requirements documents remain active until AROC guidance terminates the capability, the capability is withdrawn by the CAPDEV, the document is superseded by a follow-on capability document, or the system is type-classified obsolete.

4-7. Training aids, devices, simulators, and simulations

a. Close coordination will be maintained between TNGDEV and CAPDEV to establish user constraints and capability requirements for the MATDEV to develop and field TADSS solutions. The primary distinction between the two categories is the materiel capabilities documentation and funding responsibilities associated with each.

(1) System TADSS are designed and intended to train in support of fielding or to train individual and collective tasks associated with a specific system, family of systems, or SOS, for example, UH-60 Helicopters, M1A2 Abrams

Tanks, and Stryker vehicle variants. System TADSS may be standalone, embedded, or appended and are considered a primary component of a system's total package fielding. System TADSS are funded by equipping PEG resources, as part of the system acquisition program, and are fielded concurrently with the system. System TADSS requirements are documented in the supported system's JCIDS proposal. The cost of TADSS will be identified before MS B. However, if a system's TADSS requirement is not identified until after the system has received an MS B decision but before MS C, the requirement may be documented in the materiel system CDD or in a stand-alone JCIDS proposal. If a system TADSS requirement is not identified until after the system has received an MS C decision, the requirement will be documented in a stand-alone JCIDS proposal unless it can be added to a following increment.

(2) Nonsystem TADSS are designed and intended to support general military training and non-system-specific training requirements. The training PEG plans and programs resources for the life cycle of nonsystem TADSS to include acquisition, fielding, and sustainment. 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, AR 350-38 and AR 350-52.

b. The Army's goal is to procure system TADSS as part of the total system package.

c. Modifying TADSS hardware or software, necessitated by a change to the system supported, is accomplished and funded through the system's modification program.

d. 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.

4-8. Other Service capability documents

The DCS, G-8 gatekeeper will staff other Service capability documents via the CAMS, for potential Army equities and interests. 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. The CG, AFC will link Army CAPDEVs 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 5123-series publication.

4-9. 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 DCS, G-8. If there is a question on revising, rewriting, or updating a currently valid capabilities or older requirements document contact the DCS, G-8 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-8 gatekeeper.

c. Approved capability documents are terminated in accordance with this policy and paragraph 4-6*d*.

d. A CSB can descope requirements that leads to a relook of the descoped requirements and potentially a revision to the underlying capability document to get the requirement consistent with how the program is being executed. This occurs only after an assessment of the impact of the descoping action and consideration of the operational risk and loss of military utility. If the CAPDEV concurs with the descoping, the approved capability document is revised and submitted to the AROC for approval.

Chapter 5

Analysis in Support of Requirements Determination and Capability Development

5-1. Overview

This chapter describes the analytical process used to support the requirement and acquisition authorities and decisions made by other senior Defense and Army leaders. Although this chapter describes analysis in terms of distinct products and processes, analysis should be viewed as a continuum. It begins with support to decisions on the initial concept, then progressively increases in detail and fidelity as the concept (and then the program) matures. Each stage along the continuum builds upon the products from earlier work.

5-2. Approach

The general analytical approach is to understand capability gaps, develop holistic capability gap mitigation solutions, assess the options, and provide critical knowledge to assist key decision makers in pursuing viable solutions. The approach is a continuous process and includes iterative process assessments.

a. Understanding the problem provides the basis for developing a warfighting capability, usually accomplished in the CBA (or like analysis) and other activities. When this effort points to a materiel solution, the next step expands upon the previous work to establish the initial requirements, develop the CONOP and CONEMP, and derive the COIs. These COIs are the foundation upon which the AOA and the operational test plan are based. The AOA occurs prior to MS A, highlighting the importance of developing the COIs during the requirements determination phase. Initial requirements are then refined in terms of attributes, priorities, and expected contributions to military utility and operational effectiveness. Critical assumptions made during these efforts must be recorded and periodically reassessed to ensure the capability is still needed and relevant. Framing the decision is critical to ensure the program and subsequent analysis is focused and scoped to feasible, acceptable, and suitable options. It also includes establishing the decision space that places the problem and proposed requirement in context with other capability needs, and identifies the attributes (operational and system performance) most influencing the cost, schedule, testing, and technological or manufacturing risks that drive fielding the capability. The goal is to have the initial statement of the problem, COIs, desired capabilities, and feasible decision space developed and presented at the first AROC for refinement in subsequent decision forums. Depending on the level of investment or risk to operations, this may provide sufficient knowledge for the requirements or acquisition authority to assess the options and make the decision.

b. To ensure that future Army forces are able to overmatch future enemies, the FMPs conduct focused, sustained, and collaborative learning across the institutional Army, operating force, Joint community, industry, academia, and other inter-organizational and multinational partners. The DOTMLPF-P integration is a collaborative effort between the CG, TRADOC, CG, AFC, and applicable DOTMLPF-P proponent heads.

c. Additional analysis is warranted in situations where investment or operational risks are higher, or when trade-offs must occur between high priority attributes to meet cost and schedule constraints, to provide critical knowledge to assist key decision makers. A clear statement of the problem, COIs, desired capabilities, and feasible decision space helps leaders understand the factors and provide guidance on prioritization and scope to focus efforts on the most pertinent questions and options. The fidelity of defining challenges, opportunities, and senior leader issues heavily influences the scope and direction of subsequent modernization activities. Resolving knowledge gaps is required prior to assessing the options effectively and informing the decision makers.

d. Assessing the options available to the DoD and providing critical knowledge to assist the decision makers are fundamental components for making the requirement or acquisition decisions. All programs require consideration of trade-offs among cost, schedule, and performance objectives and an assessment of whether the military capability can be met in a manner consistent with these same considerations as recommended by the requirements authority. Within capability development, this effort is called an AOA and executed at the appropriate level of detail and fidelity. While all programs require some form of an AOA to provide sufficient knowledge to enable the decisions, the requirements and acquisition authorities, respectively, dictate the level of fidelity required. The knowledge presented in framing the decisions at the AROC, MDD, and ASARC may provide sufficient fidelity; or the requirement and acquisition authorities may have specific questions; or the trade-offs and complexity may warrant a formal analysis effort. The AOA may vary from simply collating existing knowledge into a coherent and cohesive decision- and trade-space framework, to small focused efforts against specific knowledge gaps, to dedicated analytical efforts addressing particularly complex or critical trade decisions. The MDAPs have additional statutory and regulatory requirements for the AOA due to the level of investment involved.

5-3. Activities of the Pre-Army Requirements Oversight Council and the Materiel Development Decision Army Systems Acquisition Review Council

a. Understanding the problem. The initial effort in understanding and describing the problem is to determine and describe the tasks or missions that are not accomplishable or that need to be accomplished to enable another capability, and the conditions where this occurs. These tasks or missions define the gap between the desired capability and the current capability. Changes to DOTMLPF-P will resolve some of these gaps. Since the number of gaps generally exceeds the resources required to develop or procure a materiel solution, the remaining gaps must be assessed and prioritized to determine which will be developed further in the Army Modernization Process. Following that determination, the next step for the selected capabilities is to conduct a CBA (or like analysis). The initial DOTMLPF-P analysis examines all available nonmateriel solutions to achieve the capability or mitigate the gap by evaluating them in terms of operational effectiveness and the resources required to implement them. If no acceptable nonmateriel solution is found, the analysis process documents the solutions examined as unacceptable, infeasible, or unsuitable before beginning to examine potential materiel solutions. The analysis process then explores the types of materiel concepts or systems with potential to achieve the capability or mitigate the gap, and describes the general CONEMP and initial desired capabilities. The gaps, DOTMLPF-P assessment, CONEMP, and desired capabilities form the basis

for developing the ICD. The CAPDEV has the primary responsibility to conduct this analysis effort in support of the requirements authority determination and validation of the capability need.

(1) *Capabilities-based assessments.* The Army conducts focused CBAs, as well as other like requirements analysis, to determine “what the Army must be able to do,” “what the Army is able, and not able, to do,” and “where the Army should focus future investments” within the context of National Strategic Guidance (NSG), concepts, approved Defense Planning Scenarios, the operating environment, and feedback from the Army Lessons Learned, combatant commands, and ASCC commanders. The CBAs must be updated when a change occurs in the NSG, NDS, or NMS.

(2) *Functional area analysis.* The functional area analysis (FAA) identifies “what the Army must be able to do” in context of Strategic Guidance, Concepts, approved Defense Planning Scenarios, the operating environment/threat, Army required capabilities, and associated tasks/conditions/standards (T/C/S) for use in future force capabilities development. The outputs from the FAA are the prioritized capability requirements and their derived tasks, with detailed conditions and standards (measures, criteria, and scale) used for consistency across the future force capabilities development community (for example, experimentation, CONEMP, AOA, testing and evaluation, and S&T).

(3) *Functional needs analysis.* The functional needs analysis (FNA) identifies “what the Army is able and not able to do” using the FAA results (inputs and outputs). The outputs from the FNA are the prioritized DOTMLPF–P capabilities to sustain in the POM and capability gaps for resolution. The FMPs conduct the FNA in two steps. First, the FMP integrates, assesses, and prioritizes DOTMLPF–P capabilities based on their value to achieve capability requirements and their derived T/C/S detail. The FMP identifies those T/C/S the Army can achieve using available current and programmed capabilities, which are needed to sustain operations of the force (those must be retained in the POM). Second, tasks not achieved within a condition or standard are identified and characterized as capability gaps. The risk to mission accomplishment across the relevant operating environments is determined and is used to prioritize the capability gaps and determine which are critical for future force success, driving JCIDS (ICD, CDD, DCR, AOA) and supporting activities. The prioritized critical capability gaps inform the Army’s SPAR and POM future force planning and resourcing decisions.

(4) *Functional solution analysis.* The functional solution analysis (FSA) identifies “where the Army should focus future investments” using FNA results (inputs and outputs). The FSA identifies, integrates, assesses, and prioritizes recommended nonmateriel and materiel approach ideas over a near-, mid-, and far-time horizon to solve critical capability gaps. The FSA results in recommendations to focus JCIDS, S&T, and industry R&D activities over a 30-year period aligned to the Army SPAR.

(5) *Business practices.* Army CBAs use the consistent analytic techniques, assessment tools, and standards of performance prescribed by best business practices. All CBA work performed by the FMP and AME to integrate and use the set of automated procedure, assessments, web-based applications, and data standards contained in the Force Generation Model Database.

b. Refining the requirement.

(1) The process of refining the requirement immediately follows a CBA determination that a materiel solution is needed. Refinement continues through the life of the program, but the primary effort begins at the conclusion of the CBA and continues through the approval of the ICD and the MDD. The requirements analysis conducted during this period expands upon previous work to add detail to the CONOP and CONEMP, derive the COIs, and begin to refine the desired capabilities in terms of attributes, priorities, and their expected contributions to military utility and operational effectiveness.

(2) The CAPDEVs may conduct additional post-CBA analysis to refine CBA results to enable requirements development and determination of details for attributes and to enable alternative development. Additional analysis may benefit understanding when investment or operational risks are high, or when trade-offs must occur between attributes to meet cost, schedule, and technical constraints. A clear statement of the problem, COIs, desired capabilities, and feasible decision trade space helps inform later development of key attributes and subsequent decision making.

c. Refining the concept of operations and employment. The requirements analysis further explores and defines how the capability is intended to fit within unit operations and to contribute to increased operational unit and mission effectiveness. Refining the CONOP and CONEMP is critical to the future development of the capability, by providing the context to evaluate operational effectiveness of potential solutions. The CONOP and CONEMP describes the roles, functions, interactions, and dependencies of the capability within the unit and on other systems to enable refinement of the operational, performance, and system attributes and their priorities. Understanding the type of units and quantities required informs later work to frame the decision. The CONOP and CONEMP are both contained within a CONEMP published by the proponent in support of CDD development. A CONEMP is a time-phased representation of planned operations at the T/C/S level across the full range of military operations. The proponents responsible for the capabilities document prepare the CONEMPs. There are two forms of CONEMPs that serve to identify both formation and system level operational environments.

(1) A formation CONEMP provides a detailed operational understanding of expected peacetime and wartime usage and requirements expressed in a structured and quantitative format. The primary use of the formation CONEMP is as a supporting document for CDD development. Formation CONEMPs support the MATDEVs', testers', and analysis efforts to field systems that are effectively integrated within a brigade and across the full range of military operations.

(2) A system CONEMP contains the T/C/S a system must perform so the overall formation's missions can be completed. A system CONEMP is used as a tool to focus overall system design for both the MATDEV and contractor communities. It is used to establish the key attributes of RAM and serves as the benchmark document for establishing test plans and procedures to assess RAM and other system capabilities. A system CONEMP supports test planning by providing quantitative testable metrics defining qualitative operational conditions (for example, mathematical representations of soft soils for mobility studies, slope and obstacle traversing measures, temperature and other climatic conditions, and so forth).

d. Deriving the critical operational issues. Requirements analysis begins to distill the capability gaps, concepts, and desired capabilities into the COIs driving military utility, or increased operational effectiveness. The COI describe the fundamental problem and the key operational issues (concerns) behind developing and procuring the capability that any acceptable solution must address. These COI provide the foundation and vision for guiding the remainder of the capability development efforts. The COI also form the basis for later development of operational testing criteria (effectiveness, suitability, survivability), which provide balance with purely performance evaluations. A solution which adequately addresses the COI, but does not meet one or more performance specifications, may still be viewed as acceptable.

5-4. Refining the desired capabilities and identifying the attributes

a. To the extent possible, using the CBA, the requirements analysis identifies the relationships between operational, performance, and system-level attributes, with unit and mission effectiveness. It prioritizes these attributes based upon the expected contributions to military utility and operational effectiveness. Critical assumptions made during these efforts must be recorded and periodically reassessed to ensure the capability is still needed and relevant. The analysis identifies and documents those requirements and attributes' specific performance metrics needed to achieve the operational objective and the precision required in evaluating potential solutions. The requirements analysis purpose is to assess desired capabilities against military utility and operational effectiveness rather than resource constraints.

b. The CAPDEV is the primary lead for requirements analysis.

5-5. Framing the decision

All capabilities require information to frame the decision for the decision makers prior to submission to the AROC process or seeking a MDD to enter the acquisition system. The CAPDEV, MATDEV, and resourcing community begin framing the decision by leveraging analysis. The analysis to frame the decision builds on the requirements analysis exploration of the attributes most influencing effectiveness by providing the decision makers with information on the available options and desired capabilities or attributes most influencing the program's cost and schedule. Identifying and examining the desired capabilities and attributes influencing cost, schedule, technology development, or manufacturing design allows the decision makers to screen out options that take too long to field, are too costly, or have insufficient military utility. This framing analysis also allows decision makers to direct future analysis efforts on the areas or questions of most interest or most concern. A robust framing analysis may provide sufficient information for the decision makers to make requirements or acquisition decisions at the AROC/MDD/ASARC.

5-6. Industry feedback

a. A primary information source to frame the decision is the market research conducted by the PEO or PM. The CAPDEV provides the critical capability gaps to focus industry R&D. The industry responses to these requests for information identify potential materiel solutions to the problem that are ready and available and those with challenging or expensive cost or development timelines. Industry feedback and market research reveal what is possible at different cost, schedule, and performance timelines and assist in developing potential acquisition strategies. Feedback is a valuable component to accurately frame the problem for the acquisition and requirement authorities.

b. The MATDEV is the primary lead for the market research and industry feedback in accordance with acquisition policy and procedures.

5-7. Affordability assessment

a. The DoDI 5000.85 outlines constraint requirements for all ACAT 1 level programs.

b. The DoDI 5000.85 directs component acquisition executives to establish a similar affordability process for the acquisition pathways.

c. An ICD proposed to the AROC is supported by a rough order of magnitude cost estimate, prepared by the acquisition community.

d. An Army-sponsored CDD must contain a life-cycle cost estimate, an affordability table, and the source, or approved proposed source, of funding. Life-cycle costs must be expressed in threshold and objective values and must include the base year and dollar-level; for example, thousands (\$K) or millions (\$M). A CBA must also be included for all unfunded requirements and new or expanded program proposals.

e. Army program affordability table will specify funding required by FY over the future years' defense program or plan for RDT&E, procurement, sustainment, and any UFR. Program funding is shown in the most recent POM and the President's budget, or identified during the POM process. This matrix will support Army leadership to make informed decisions on whether to move funding for this program.

f. Document sponsors will coordinate with appropriate DCS, G-8's FD Division for level of funding identified or programmed or the possible source of funding.

g. The DCS, G-8 provides the level of funding identified or programmed, and the source of funding to the document sponsor.

h. Affordability constraints development is a requirements and programming community responsibility, not an acquisition community or a cost estimator responsibility. Nominally, affordability analysis covers the life cycle of the program, which equals the Future Years Defense Program plus the remaining years of a program's anticipated economic useful life.

i. Affordability constraints are established to inform the capability-requirements validation authority, AROC, and the PM and AOA team of the cost limitations dictated by the component's affordability analysis. Early in a program, affordability goals are set to inform capability requirements and major design tradeoffs needed to define the product being acquired. Once requirements and the product definition are firm (prior to MS B), affordability caps are established to provide fixed-cost requirements that are functionally equivalent to KPPs. Based on the component's affordability analysis and recommendations, the MDA will set and enforce affordability constraints as follows:

(1) At MDD. Tentative affordability cost goals (for example, total funding, annual funding profiles, unit procurement or sustainment costs) and inventory goals to help scope the AOA and provide targets around which to consider alternatives.

(2) At MS A. Affordability goals for unit procurement and sustainment costs.

(3) At the Development RFP Release Decision Point, MS B, and beyond, binding affordability caps.

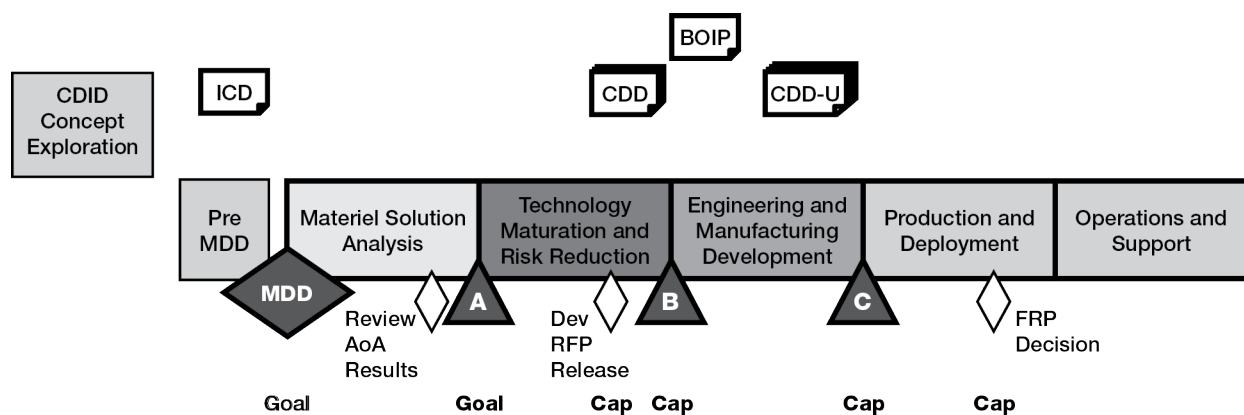


Figure 5-1. Joint Capabilities Integration and Development System and acquisition milestone timeline

j. These constraints will be documented in the acquisition decision memorandums for these decision points. At MS B and beyond, the affordability caps will be documented in the program's APB. Any programs that do not include a MS B decision will receive goals or caps commensurate with their position in the acquisition cycle and their level of maturity.

k. Affordability analysis and affordability constraints are not synonymous with cost estimation and approaches for reducing costs. Affordability constraints are determined in a top-down manner by the resources a DoD component can allocate for a system, given inventory objectives and all other fiscal demands on the component. Constraints then provide a threshold for procurement and sustainment costs that cannot be exceeded by the PM.

l. When approved affordability constraints cannot be met—even with aggressive cost control and reduction approaches—then technical requirements, schedule, and required quantities must be revisited; this will be accomplished

with support from the DoD component's CSB, and with any requirements reductions proposed to the validation authority. If constraints still cannot be met, and the component cannot afford to raise the program's affordability cap(s) by lowering constraints elsewhere and obtaining MDA approval, then the program will be cancelled.

m. The DCS, G-8 is the primary lead for coordinating cross-PEG affordability assessments for Army programs. DoDI 5000.85 provides regulatory guidance on conducting this assessment and developing affordability and investment constraints.

n. The affordability assessment is an evaluation of what resources the Army is willing to commit to gain this capability and must include all DOTMLPF-P associated costs. The agencies conducting affordability assessments consider the feasibility assessment of affordability, technical risk, and supportability costs of solution ideas to solve capability gaps when developing the affordability assessment. The assessment provides decision makers a benchmark and context for the expected program cost and is used to evaluate and compare potential solutions. The assessment accounts for the total system cost over the expected life cycle to include development, procurement, sustainment, and divestiture as well as indirect costs such as military construction or other organizational changes required.

o. In cases where the total system cost does not include procurement of the full AAO, the assessment should clearly document the APO used in developing the total system cost. The total system cost should include the cost for the total economic useful life, and the economic useful life should be clearly articulated in the documentation. This assessment includes the operational effectiveness benefits of the capability relative to the other Army priorities and the overall funding available.

5-8. Technology assessment

a. In addition to the market research and industry feedback, a technology readiness assessment conducted by the government research, development, and engineering community identifies technologically feasible attributes and high technology development risks. A robust cross-walk between the requirements analysis, industry feedback, and the technology assessment provides valuable information to the decision makers about high risk attributes that often cause cost and schedule challenges that have significant impact on the acquisition strategy. Technology readiness assessments also inform S&T program and funding decisions, synchronizing programs with Army strategies and priorities.

b. The U.S. Army Combat Capabilities Development Command is the primary lead for technology assessment and partners with the capabilities developers to consider technology approaches to solve critical capability gaps.

c. All organizations are responsible to ensure the staff frames the decision for the decision makers at the AROC, MDD, and ASARC. However, the CAPDEV and MATDEV have the responsibility for integrating these supporting efforts into the recommendations on the requirement document and acquisition approach, respectively.

5-9. Study guidance and questions

a. Following a decision to proceed with a materiel solution, all programs require follow-up assessments or analysis to inform the next set of program and resourcing decisions and to answer senior leader questions. The scope and fidelity required depends on existing knowledge, nature of the following decisions, and senior leader information requirements.

b. Guidance will shape the information and the knowledge gathered and developed to support following decisions, but not the decision immediately at hand. Normally, the bulk of the analysis work is conducted following the MDD and provides information to support the decisions prior to committing to further investments in the Technology Maturation and Risk Reduction or Engineering and Manufacturing Development phases. Therefore, staff coordination is essential to identify the future decisions, anticipate decision maker needs, and develop recommendations on the scope and fidelity of follow-on analysis to the requirements and acquisition authorities for approval.

c. Early engagement and interaction with SLs through staffing and forums leading up to the AROC, MDD, and ASARC is imperative to gain guidance, elicit intent and interest areas, and confirm the scope of senior leader questions.

5-10. Documentation in Army Requirements Oversight Council, materiel development decision, and Army Systems Acquisition Review Council records

a. Documentation of the AROC, MDD, and ASARC will include guidance and questions provided by the requirements and acquisition authorities and other Army SLs. Documentation should state when there is a determination that existing analysis is sufficient to inform the following decisions or if there are no additional information requirements.

(1) *Major defense acquisition programs.* Following the Weapon System Acquisition Reform Act of 2009, Public Law 111-23, MDAPs have statutory constraints including a formal AOA with study guidance provided by the OSD CAPE Director (OSD-CAPE). The Army requirements and acquisition authorities provide formal input and may have additional questions or analytic requirements in addition to those specified in the OSD-CAPE guidance. Sections 2-4,

DODI 5000.84 provides guidance on the process for developing AOA study guidance for MDAPs, and Sections 2366a and 2366b, Title 10, United States Code provide information on the MS certifications the AOA must inform.

(a) The purpose of an AOA is to assess potential materiel approaches and solutions formally to satisfy the COIs and capability gaps, and potential trade options available to the decision makers. The analysis is normally conducted following the MDD to support the first acquisition MS decision review, along with updates for subsequent MSs, as required.

(b) An AOA is a body of knowledge presented in a coherent framework drawn from rigorous analysis, not a defined process or task. Thus, an AOA can be compiled from existing relevant analysis or be specifically tailored to meet the requirements or acquisition authorities' decision needs. The AOA analysts use the prioritized analytical products (for example, capability requirements, T/C/S, critical capability gaps, and nonmateriel and materiel ideas to solve capability gaps), risk assessments, and operational logic to conduct the analysis. The AOA must comply with statutory guidance to include, at a minimum, a full consideration of possible trade-offs among cost, schedule, and performance objectives for each alternative considered and an assessment of whether or not the Joint military requirement can be met in a manner that is consistent with the cost and schedule objectives recommended by the requirements authority (Weapon System Acquisition Reform Act of 2009, Public Law 111–23); and consideration of prototyping, and a modular open system approach (10 USC 2446b).

(c) An AOA evaluates the performance, operational effectiveness, operational suitability, and estimated costs of alternative technologies or systems to meet a mission capability. The AOA assesses these areas by comparing the potential solutions employed in accordance with operational concepts, and integrated architectures, under operational conditions, to accomplish operational missions. It assesses the advantages and disadvantages to satisfy capabilities, including the sensitivity of each potential solution to possible changes in key assumptions or variables and associated risks (for example, cost, schedule, performance, and technical risks). The AOA evaluates critical technologies, including maturity and risk, providing insights to potential solutions and trades. It should also assess cost, system training, and alternative ways to address the COIs or capability gaps. The AOA is one of the key inputs to refine requirement documents and acquisition approaches, however the AOA does not establish or define the requirement or approach. Similarly, the result of an AOA is not the acquisition decision and does not replace a source selection board. The requirements and acquisition authorities use additional information not covered in the AOA (for example, industrial base considerations, support by Congress, manufacturing location, number of prime and supporting vendors) to make their decisions.

(2) *Nonmajor defense acquisition programs.* The requirements and acquisition authorities determine the questions, scope, fidelity, and timelines to inform the requirement documentation and acquisition approach, refinement, or to resolve leader questions, usually in the AROC or ASARC.

b. The DCS, G–8 compiles and documents SLs' questions and develops HQDA-level Army analysis guidance for all capability development programs. Additionally, for MDAP, the DCS, G–8 prepares the Army input to the Director, OSD–CAPE and conducts other required coordination with CAPE and JS.

5–11. Army Requirements Oversight Council and Materiel Development Decision Army Systems Acquisition Review Council activities

a. Assessing the options.

(1) Approved materiel solutions require a tailored approach to provide sufficient assessment or analysis to compare the options available to the Army to ensure the COIs or capability gaps are met. The objective is to provide analytic support for the trade-offs made and approval of the operational, performance, and system parameters in the requirements document. The analytical approach to gaining this information is tailored to the program and decision maker needs, and is based upon guidance and direction given by the requirements and acquisition authorities in the AROC, MDD, ASARC, or resulting decision documents. This tailored approach must include updated program and life-cycle cost estimates, identify attributes or requirements driving cost and schedule, and document the options and trade-offs available to provide the capability or resolve the critical operational issue.

(2) The analysis supports informing requirements, acquisition, or resourcing decisions in terms of structure, fidelity, and timeliness. The nature of the decisions, decision maker questions, the attributes driving cost and schedule, and the intended requirements and acquisition approaches guide the construct of the analytic approach supporting them. The analytic approach may employ several distinct types of analysis (or combinations of these) from simply conducting the cost estimation and comparing off-the-shelf solutions to a deliberate formal independent analysis effort.

b. Considerations on employing analysis.

(1) *Cost estimation.* The acquisition and requirements authorities require analysis supporting the development of program and life-cycle cost estimates in compliance with AR 11–18.

(2) *Cost-benefit analysis.* The C-BA is the Army's primary tool for enabling resource-informed decisions. Each UFR and new or expanded program proposal submitted to the Secretary of the Army, CSA, Under Secretary of the Army, or VCSA must include a C-BA. With established alternatives linked to operational effectiveness, a well-documented C-BA provides sufficient information to assess potential trades or options for requirements or acquisition approaches. A C-BA should account for updated costs, new information, and reflect changes (for example, fielding quantities, schedules, or BOI plans) that impact programmatic funding. If ongoing development of a JCIDS requirements document has an established C-BA undergoing HQDA review and later generates a DR, as discussed in paragraph 6-4, the DCS, G-8, will staff the DR with supporting C-BA through CAMS. The Deputy Assistant Secretary of the Army (Cost and Economics) is the proponent and approval authority for C-BAs (see AR 11-18). The C-BAs will be conducted in accordance with the U.S. Army Cost-Benefit Analysis Guide's directions for conducting C-BAs.

(3) *Prototyping and demonstrations.* When technology or performance are primary concerns and the impact to CONOP and effectiveness are known, or relatively insensitive, to the options or trade space, prototyping and demonstration can provide required information to support the decision makers more effectively than conceptual models and assessments. Prototyping efforts may be supplemented with conceptual modeling or assessments to assess operational implications or employment in larger operational contexts.

(4) *Experimentation and field assessments.* When there are questions on the CONOP or the potential options and attribute trade-offs require CONOP changes, experimentation with surrogates or prototypes are often more informative than conceptual models and assessments. Prototyping is useful for demonstrating system performance, while experimentation is useful for demonstrating how the capability is employed and integrated within the unit or mission. Experimentation also helps identify attributes that provide the highest operational effectiveness and required levels of performance.

(5) *Analysis of alternatives.* When the decisions or trade-offs are complex, involve several high priority attributes or have significant implications to funding or operational decisions, a structured AOA is often required to provide a complete consideration of the options.

(6) *Analysis of software.* Programs consisting primarily of software or application development, or are structured under the IT acquisition model, have distinct acquisition information requirements and unique development processes. These programs are generally better suited to prototyping and feedback approaches combined with business process reviews.

c. Analytic oversight and determination of analytic sufficiency.

(1) *Army analytic oversight.* As explained in paragraph 2-13jj, ADCS, G-8 is the oversight authority for analysis supporting capability development with the Studies, Analysis, and Technology Division responsible for staff coordination and management.

(2) *Office of the Secretary of Defense analytic oversight.* Following the Weapon System Acquisition Reform Act of 2009, Public Law 111-23, the Director, OSD-CAPE has oversight authority for MDAP programs, as defined in statute and DoDI 5000.02T.

(3) *Study advisory group.* Both the Army and OSD use a SAG as the forum to provide oversight, guidance, and technical approval of analysis supporting capability development and acquisition programs. The ADCS, G-8 serves as the chair of the Army SAG and the primary Army representative to the OSD SAG. The SAG consists of a GO or SES representative from each Army element having a clear functional interest in the program, or having potential implications to their operations. The SAG reviews and provides direction and guidance on the analysis scope, fidelity, plans, tools, techniques, methods, results, findings, and conclusions. The SAG body serves as the representative of the requirements and acquisition authorities and is the only body with the authority to interpret and adjust the analysis guidance on behalf of them.

(4) *Determination of sufficiency.* Although the DCS, G-8 has oversight and assessment responsibilities for analysis supporting capability development and the SAG provides oversight, guidance, and technical approval of the analysis methods and findings, the requirements and acquisition authorities ultimately determine the sufficiency of the analysis by making the respective requirements and acquisition decisions.

Chapter 6

The Army Capabilities Integration and Development System Process

6-1. Purpose

The ACIDS Process is the Army's implementation of JCIDS. This section outlines the process for efficient staffing, validation, and approval of requirements. Moreover, it integrates and synchronizes materiel capability requirements.

The ACIDS Process codifies the roles and functions of Army senior leaders (ASL) as they review and approve requirements documents. The ACIDS process evolved to enable the Army to achieve persistent modernization. The ACIDS process is a priority-driven system approved by the ASL.

6-2. Roles and functions

a. The AFC CG is responsible, in coordination with the ASA(ALT), for developing the Army Modernization Strategy and Army Modernization Guidance, and approving the prioritization of requirements. The AFC CG is responsible for materiel requirements from concept through requirements divestment. When delegated by the CSA, the AFC CG chairs the AROC and approves capability requirements.

b. The DCS, G-8 manages the requirements process, the ACIDS, in coordination with the AFC CG. The DCS, G-8 is the proponent for AR 71-9, and serves as the AROC secretary.

c. The DCS, G-3/5/7 leads the ONS process to include: validating operational gaps, determining prioritization, and approving sourcing solutions to support the immediate needs of the warfighter.

d. The DCS, G-8 manages the capability needs statement (CNS) staffing process. The intent is to allow ACOM and ASCC personnel to express potential emerging needs to the ARSTAF and ASLs for consideration, development, and prioritization.

6-3. Army Capabilities Integration and Development System

a. *Calendar and common operating picture.* The DCS, G-8, in coordination with the CG, AFC, develops and manages the ACIDS calendar and common operating picture (COP) to support coordination, synchronization, transparency, and decisions across the AME. The DCS, G-8 requests that the CG, AFC prioritize scheduling of materiel and nonmateriel proposed capability gap mitigation solutions for ACB, ARB, and AROC events. The DCS, G-8 leverages RISMs to formally conduct AME collaboration in development of the ACIDS calendar and COP. The COP includes prioritization and ensures visibility of actions across the AME. It helps inform whether a capability should go before a “live” AROC or gain validation via a “paper” memorandum action. The ACIDS calendar includes the dates for AROC, ARB, and ACB. Refer to paragraph 3-4 for more information on these AROC decision forums. The DCS, G-8 presents ACIDS calendar and COP recommendations to the AFC CG and CSA monthly for review and final approval.

b. *Types of Army Requirements Oversight Council determination processes (live versus paper).* The “live” vice “paper” AROC determination process (made no lower than the ARB level) includes a review of the capability document’s readiness to be presented to ASLs based upon identified triggers, no later than need date, and the AFC-assigned priority. Following the identification of the trigger, no later than need date, and AFC priority, an assessment is made to determine if the program in question contains unadjudicated, critical issues from CAMS staffing, funding issues as defined by the portfolio functional division lead, AME endorsement of issue recommendations, acquisition issues as defined by the acquisition community lead, and Congressional issues. If there are no identified issues, then the program is a candidate to gain validation via a “paper” memorandum action, based on the ARB decision. If there are outstanding issues, then a determination is made regarding the level of board review required (ACB, or AROC). The CSA, unless delegated to VCSA or AFC, CG, is the approval authority for “paper” memorandums or “live” AROC decisions.

c. *Approval memorandum.* Requirement nominations formally become Army-approved requirements through an approval memorandum signed by the CSA, or by the VCSA or AFC, CG, if delegated. An approval memorandum requires decision-support information from requirement nomination sponsors. This information is given to DCS, G-8 to construct a decision-support packet. The packet includes: an approval memorandum, briefing charts, the associated requirements document, and other supporting documents as needed. The delegation of approval authority for IT-Box child documents (RDPs, CDs) will be made in the Army approval memorandum.

d. *Army Requirements Oversight Council memorandum.* After the ASL makes a final decision at any ACIDS board level, the DCS, G-8 (FD) staff will generate an AROC memorandum to document the decisions and due outs. If the requirement receives approval, the DCS, G-8 (FD), will generate a packet that includes an approval memorandum as an authoritative document, to be archived in CAMS.

e. *Information systems, initial-capabilities documents, capabilities-development documents, and associated requirements-definition packages and capability drops.* Approval of initial IT-Box IS-ICD and IS-CDD is at the CSA level, unless delegated to the VCSA or AFC, CG. Approval of RDPs may be delegated no lower than the chair of the ARB, the DCS, G-8 (FD). Approval of CDs may be delegated no lower than the operational leads, usually the Commander, ARCYBER, and by the Commander, U.S. Army Cyber Center of Excellence. The AFC, CG will review, as required, IT-Box capabilities to include requirements, testing, and demonstrations; compliance with acquisition and resourcing processes; and provide an update to the VCSA.

6-4. Army Capabilities Integration and Development System staffing process

All capability requirements, except ONS requirements, are submitted to the DCS, G-8 gatekeeper in CAMS. A prerequisite for submission into CAMS is the identification of a trigger, AFC priority, and no later than need date (of SL decision) that is added to the ACIDS COP. The ACIDS process consists of four staffing sub-processes for capability nominations: deliberate, quick fire, ONS, and CNS.

a. *Deliberate staffing process.* Intent: The traditional deliberate process for nonurgent capability nominations (defined as required in the next 6 years) needing significant technology development. While deliberate, this process is meant to be streamlined. The CG, AFC releases nominated capability documents (for example ICD, CDD, CDD-U) to the DCS, G-8 gatekeeper. The DCS, G-8's gatekeeper conducts a compliance review, a single one- or two-star-general-level, worldwide staffing, provides comments for sponsor adjudication, and preparation for validation and approval of the capability document. After final adjudication, the DCS, G-8 coordinates the processing of the document for Army validation. Once the AROC validates the document (or gains ARB or ACB endorsement to release to JS), the DCS, G-8 gatekeeper submits the packet to the JS gatekeeper for JS review and assignment of a Joint Staff designator (JSD). If the JS assigns a JSD of joint information, the document is returned to the Army for approval. If it is assigned with a JSD of JCB or JROC interest, the document requires JS staffing and JCB or JROC validation. After the Joint validation and Army approval, the DCS, G-8 assigns a CARDS number with an approval memorandum, and it is documented in the Army and Joint authoritative databases.

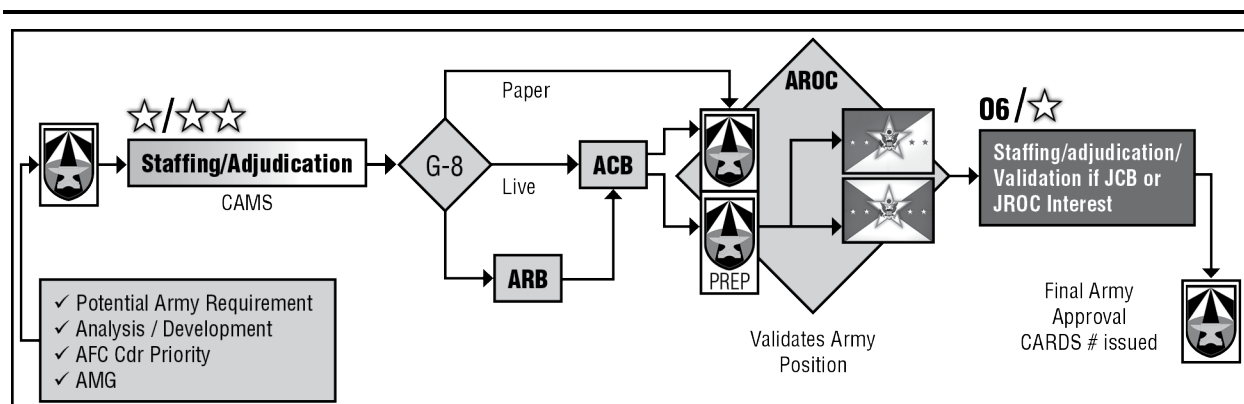


Figure 6-1. Deliberate staffing and review process

b. *Quick fire staffing process.* Intent: Provide an expedited staffing process for high priority capability needs. It is a formal request from AFC headquarters at the three- or four-star-general level, and is released for staffing by the AFC Deputy CG or Director, Systems Integration. This is an ACIDS-like capability document, enabling experimentation and prototyping, intended to inform a deliberate capability document within 2 years. It does not lead to a MS decision. The DCS, G-8 reviews, staffs, and, with the sponsor, adjudicates the request with the AME, and presents comments for approval at the three-star-general level. Most quick fire requirements will require a live ACIDS board review. DRs, which are quick fire documents, are used for transition capabilities not expected to be a long-term solution to fill a capability gap. The DR is released by the AFC headquarters into CAMS and receives an expedited staffing, and is approved by the CG, AFC, unless a live review is requested (see app D for format). If the CG, AFC certifies that the topic has been previously staffed with the ACOMs, then the topic bypasses traditional staffing requirements, and is submitted to DCS, G-8 and proceeds to a live review.

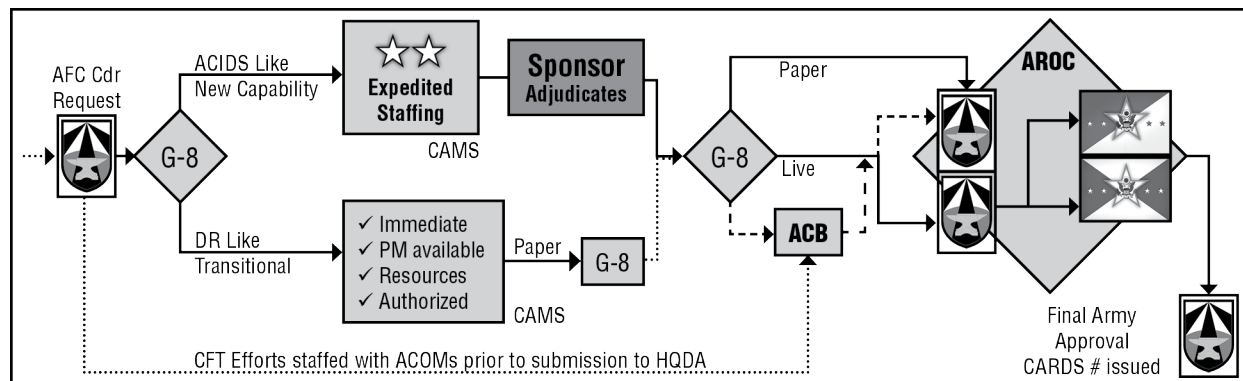


Figure 6-2. "Quick fire" staffing and review process

c. *Capabilities-needs statement staffing process.* Intent: Provide operational commanders the means to get ASL visibility of emerging operational needs. It is an ACOM- or ASCC-sponsored emergent threat in the next 2–5 years, which potentially requires an enduring capability need, and that cannot be mitigated by DOTmLPF–P, to include a current materiel solution. The CNS is similar to the JCIDS Joint emergent operational needs statement (JEONS), whereas an emergent threat exists, but there is time for materiel development (approximately 2–5 years). A CNS is an emergent need, specific to the Army, to prevent loss of life or mission failure for anticipated future missions (not current or pending) per the JCIDS definition of a JEONS. It provides operational commanders a way to capitalize on ASL visibility of emerging operational needs. Given a valid emergent threat, the DCS, G–8 (FD) leads the effort and recommends a materiel solution. Submitted by the sponsor via CAMS, the DCS, G–8 gatekeeper begins a worldwide staffing to review the threat, the enduring capability needed, and the required materiel solution. The request may go through a live or paper process depending on ASL guidance. The AROC assesses the potential Army requirement and may request the AFC conduct analysis to determine if an enduring Army requirement exists, sets priority against other capabilities, and provides a recommended way ahead.

d. *Submitting the document.* At the completion of the ACIDS Process, the validated Army requirements document must be submitted to the JS for staffing, adjudication, and JS validation for requirements assigned a JSD of JROC or JCB Interest. If the JS assigns a JSD of Joint Information, the document must be provided to the JS for staffing, but no requirement exists to adjudicate comments received. Refer to the JCIDS manual, dated 31 August 2018, for more information.

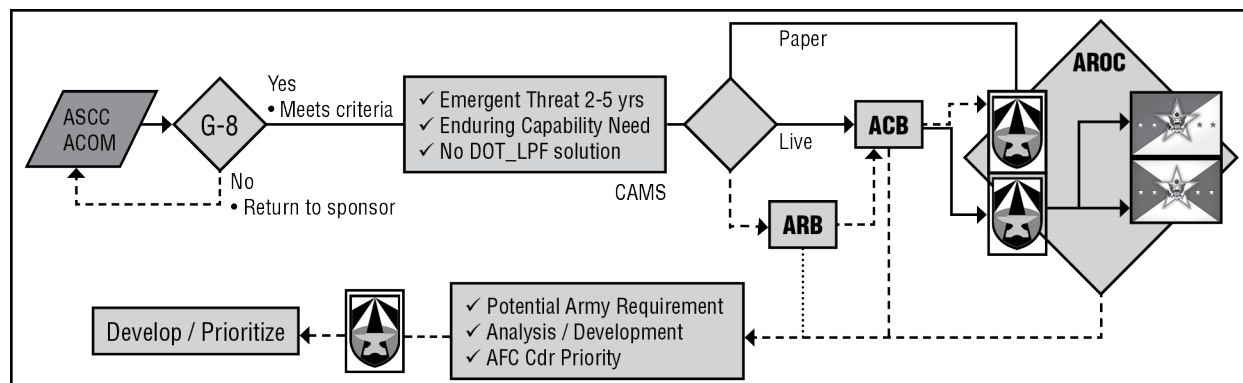


Figure 6-3. Capabilities-needs statement staffing and review process

Chapter 7

Army Urgent-Operational-Needs Process and Other Quick-Reaction Capabilities

7-1. Overview

a. UONs and other QRCs are a means to support operational Army commanders in current or imminent contingency operations, with the capabilities urgently needed to achieve mission success and/or reduce risk of casualties that

other standard Army processes or procedures are unable to provide. Urgent needs, if left unmitigated, seriously endanger personnel and/or pose a major threat to ongoing or imminent operations. The Army executes its UONs and other QRC processes primarily through the use of the ONS and equipment sourcing documents (ESDs). Additionally, the Army supports the execution of a validated JUON or JEON assigned by the JRAC, and DRs as assigned by the W-SIG or CG, AFC, VCSA, CSA, Secretary of the Army, Secretary of Defense, or President of the United States.

b. The Army prioritizes its ONS and other QRC within the Army's prioritization framework and aggressively coordinates to provide timely, synchronized, and executable responses. Established Army priorities are modified at the direction of the President of the United States, Secretary of Defense, Secretary of the Army, or the CSA.

7-2. Operational needs statement

a. Following mission analysis, operational commanders use the ONS process to mitigate operational capability gaps. The purpose of the ONS process is to correct a high-risk deficiency to accomplish the mission and reduce the risk of catastrophic loss of life. High risk deficiencies addressed in the ONS process are primarily class VII, class VIII, and nonstandard equipment. Other classes of supply are addressed through the logistics enterprise (see app B for ONS format).

b. Commanders endorse and submit ONS to HQDA, DCS, G-3/5/7, using the ECOP database. The first Army colonel commander in the unit chain of command must endorse the letter of justification (LOJ) from the requesting unit. In the absence of an Army colonel in the chain of command, subordinate units submit an ONS LOJ through the next Army higher headquarters for the G-3, CoS, or commander's endorsement. All LOJ are endorsed by an Army colonel or higher in G-3 Operations or the chain of command. The G-3s in the supporting command (ASCC, ACOM) complete the staffing and approval process of ONS, with GO endorsement required for submitting the ONS to HQDA. Supported ASCCs must also have GO endorsement to submit all ONSs to HQDA. All ONSs are submitted through ECOP to DCS, G-3/5/7 for vetting, staffing, and a validation decision. The supported ASCC ensures that every attempt is made to cross-level or self-source all ONS prior to submission to HQDA. The proponent for ONS validation is HQDA, DCS, G-3/5/7 (DAMO-OD). In accordance with the TRADOC commanders' role outlined in chapter 2, copies of ONS will be forwarded to the CG, TRADOC to maintain situational awareness.

c. Authorization received by validated ONS is for the duration of the mission only. A validated ONS does not constitute modification to existing requirements and permanent authorization documentation (such as TOE, MTOE, and TDA). Upon completion of the mission, the supported ASCC commander requests disposition instructions for any equipment issued in support of an ONS. The ONS is not an A-CIDS or JCIDS capability document. It is a request for validation and sourcing of an UON. Submissions should be focused on the operational capability gap and not fixated on a specific materiel solution. The HQDA, DCS, G-3/5/7 may approve any number of solutions across the DOTMLPF-P spectrum to mitigate operational gaps. The ONS will not be used to request or redistribute standard authorization document equipment shortages or pre-validated deployment items and must be revalidated annually. The ONSs are not to be used to request testing or fielding prioritization; such decisions are made in the Army prioritization framework. The ONSs and other QRC submissions are not required for the procurement of nontactical office automation, IT, and commercial items requests that can be procured in accordance with command acquisition policy, or contracted goods and services in accordance with command contracting policy.

d. Response to an ONS varies and in all cases DCS, G-3/5/7, is the approval and disapproval authority.

(1) An ONS validation decision may result in the redistribution of equipment, the directed transfer of pre-positioned equipment, or the request of an OPR assignment for execution.

(2) A need may be met through an in-lieu-of capability that differs from the one recommended by the ONS originator. Any proposed in-lieu-of capability will be coordinated with the submitting commander.

(3) If the request is not appropriate to enter the ONS process, or the operational gap is determined unjustified, then ONS validation will not occur, the decision will be annotated in the ECOP database, and the request returned to the submitting commander.

(4) All ONS and ESD solutions are delivered with support items (associated support items of equipment, test measurement and diagnostic equipment (TMDE), and so forth). Commanders are not required to list support items separately within their request. For ONS, funding for the initial issue and follow-on sustainment is the responsibility of the requesting command.

e. The DCS, G-3/5/7's processing goal for an ONS is no more than 10 working days from receipt of request. This includes 1 day for ONS vetting (DCS, G-3/5/7), 2 days for operational gap validation (DCS, G-3/5/7), 5 days for sourcing synchronization (AMC), and 2 days for final decision (DCS, G-3/5/7). The complexity of issues, clarity of stated need, and ability to source a solution may impact achievement of that goal.

f. HQDA ONS staffing:

(1) DCS, G-3/5/7 coordinates materiel sourcing solutions between DCS, G-3/5/7 and DCS, G-8. The DCS, G-3/5/7 is responsible for coordinating materiel sourcing solutions with the CG, AMC, DCS, G-8 and others where a materiel solution exists today.

(2) The ASA (ALT) is responsible for providing materiel sourcing solutions when there is a capability gap with no readily available solution upon OPR assignment request. The G-3/5/7 maintains the status of all ONS using the ECOP database.

(3) The ONS submitted to HQDA are prioritized by DCS, G-3/5/7, based on the urgency of the request, regardless of whether a solution is readily available.

(4) If, during the ONS staffing process the DCS, G-3/5/7 determines a materiel solution is required, but not readily available, and may have Armywide application, the ONS will be forwarded to DCS, G-8 for capability analysis and a disposition recommendation.

(5) As required, ONS will be presented at the AR2B for validation and reprioritization (see fig 7-1 below).

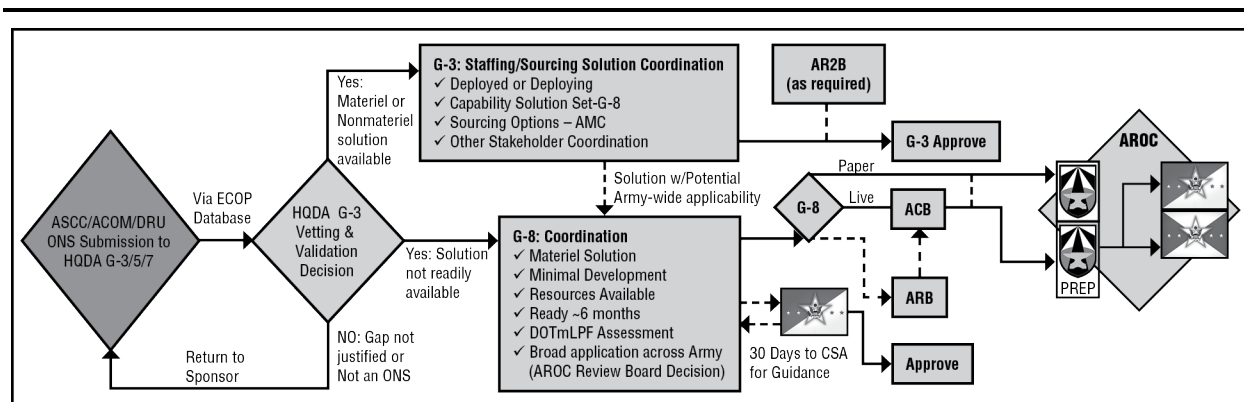


Figure 7-1. The operational-needs statement staffing process

g. Validation of the ONS does not automatically constitute resourcing. All ONS costs should be treated as a UFR and will be self-funded by commands. If commanders assess an inability to self-fund, the commander will submit a UFR through the Operations and Maintenance Army, or RDA UFR portals. The entry point to the BRP review process is through the UFR portals. The Automated Schedule and Reporting System Operation and Maintenance, Army (OMA) UFR submission portal is located at: <https://www.asars.army.mil>, point of contact: Army Budget Office (SAFM-BUO-C) OMA Current Operations Division. The RDA UFR submission portal is located at: https://army.deps.mil/army/cmds/hqda_asafm/abo/bui/requirements/sitepages/home.aspx, point of contact: Army Budget Office (SAFM-BUI) Investments Directorate. Information for the BRP board may be found in paragraph 7-8 below, and located on the DCS, G-3/5/7 (DAMO-ZR) website, at <https://g357.army.pentagon.mil/zr/sitepages/home.aspx>.

h. An assessment of operational utility (AOU), conducted by the original requestor or an expeditionary operational assessment conducted by an appropriate operational tester is required for any rapidly equipped new capability solution delivered to operational users in the Army. The assessment informs follow-on disposition analysis decisions led by the CG, AFC. The AOU must be submitted to HQDA, DCS, G-3/5/7 no later than 6 months of initial delivery.

i. In accordance with DoDI 5000.81, a disposition official appointed by the CG, AFC is responsible for analysis and disposition decision recommendations for capability solutions associated with an Army-assigned JUON or JEON, validated ONS or other QRC. The disposition official will be appointed no later than 1 year after the capability solution is delivered to the operational user. The disposition analysis will include results of the AOU, long-term operational need for the capability solution, and the relationship to existing or planned Army capabilities. The disposition official will inform the CG, AFC when the disposition determination analysis is to be completed. Upon completion, the CG, AFC approves disposition recommendations, documents the decision, and informs HQDA, DCS, G-3/5/7.

7-3. Equipment sourcing documents

a. An ESD is a unit request for sourcing a shortage of authorized equipment (HQDA-approved MTOE, TDA, or MEEL) in support of contingency operations only. Operational commanders use the ESD process to mitigate operational capability gaps. The proper use of the ESD process is to correct a high-risk deficiency to accomplish the mission and reduce the risk of catastrophic loss of life.

- b. Prior to submission of a request in the ECOP, commanders must ensure equipment requests are in the Global Combat Support System - Army and provide valid document numbers.
- c. Although authorized on approved HQDA documentation, ESDs are not automatically approved for sourcing; validation of an urgent need and a DCS, G-3/5/7 prioritization decision is still required.
- d. The ESDs and ONS will not be used to address equipment shortages resulting from battle damage or battle loss.

7-4. Mission-essential equipment list

- a. When a recurring operational mission requires equipment above MTOE/TDA, HQDA may approve a MEEL. The MEEL will list a comprehensive preapproved set of equipment necessary to accomplish the mission.
- b. The MEEL is an adaptive tool for Army use in managing urgent, organizationwide warfighting equipment requirements. The MEEL is submitted by the ASCC to DCS, G-3/5/7 (DAMO-OD), for validation and posting in the ECOP library. For clarity, identify MEEL by a specific mission name such as convoy Security Company, Force Protection Company, or human intelligence team. The MEEL should be kept generic in detail to maintain no greater than "unclassified/ for official use only" as the classification; use the standard format found in the ECOP Library.
- c. When an operational commander deploys in support of a mission with an associated MEEL, the commander then does the following:
 - (1) Meets all MEEL requirements with MTOE items first.
 - (2) Upon completion of the pre-deployment site survey, identifies theater-provided equipment to support the MEEL requirement above MTOE.
 - (3) Submits any remaining MEEL shortage via ECOP as an ESD.
 - (4) Submits an ONS for additional operational shortfalls above the approved MEEL.
 - (5) Understands that an authorization received by a validated MEEL is for the duration of the mission only. A validated MEEL does not constitute modification to existing requirements and permanent authorization documentation (such as TOE, MTOE, or TDA). Upon completion of the mission, the supported ASCC requests disposition instructions for any equipment issued in support of a MEEL.

7-5. Quick-reaction capabilities

The Army uses the following organizations and processes to expedite solutions to capability gaps affecting operational missions: the Rapid Capabilities and Critical Technologies Office (RCCTO), JUONs, JEONs, and the WSIG interest items with coalition partners.

- a. The RCCTO is a unique office established to improve the speed of technology and capability delivery to enable the Army's implementation of the NDS and the Army Vision. The Army RCCTO develops rapid experimental prototypes and delivers residual combat capabilities that address near-term and mid-term threats as tasked by its board of directors (BOD). The Army RCCTO BOD is chaired by the Secretary of the Army and is composed of the CSA; Under Secretary of the Army; VCSA; ASA (ALT); and CG, AFC. The Director for Hypersonics, Directed Energy, Space, and Rapid Acquisition leads the Army RCCTO.
- b. The JUONs and JEONs are submitted by CCDRs to the JS. The JUONs and JEONs are validated by the JROC and assigned to the Services by the JRAC. The DCS, G-3/5/7 (DAMO-OD), receives Army assigned JUONs and JEONs and prepares the OPR request memorandum before submitting it to ASA (ALT) through the ASARC secretariat for development of the execution plan in the format provided by the JRAC (website is <https://jrockmd-spm.js.smil.mil/bizflow/bizindex.jsp>).
- c. The W-SIG identifies urgent warfighter issues and assigns interest items to the Services. The DCS, G-3/5/7 (DAMO-OD), receives Army-assigned interest items and is responsible for the synchronization and development of the Army response.
- d. ARCYBER Capabilities Needs Request (CNR): As per AR 10-87, pursuant to the Commander, ARCYBER's directive authority for CO authority (as delegated by the Secretary of Defense and U.S. Cyber Command), all ACOMs, ASCCs, DRUs, PEOs, PMs, and other Army forces and elements are required to comply with ARCYBER CO-related orders and directives. In addition, the Commander, ARCYBER provides support to Army forces conducting or supporting Joint or Service CO, IO, electronic warfare, and supporting activities. The ARCYBER uses the CNR to address warfighter capability needs and gaps, which prevent them from meeting commanders' operational needs, related to electronic warfare, DODIN-A, CO and IO. These needs and gaps are time-sensitive and not always synchronized with normal Army ONS and other QRC processes. New unique QRC processes and formats continue to evolve to support the warfighter; the ARCYBER CNR is the means to formally capture the operational demand signal to respond to unique and emerging EW, DODIN-A, CO and IO QRC requirements. The ARCYBER CNR process has absorbed other processes used by cyber electromagnetic activity units within the cyber-domain to respond to mission needs and gaps from the operational force. The ARCYBER CNR enables these forces to support maneuver in the information

environment better, to include all combatant commands, but not limited to named operations. As the operational level Army force for addressing warfighter capability needs and gaps related to CO, units will request CO, EW, and IO capabilities using the ARCYBER CNR process. The Commander, ARCYBER will assess if the request is within their authorities and resources. If so, the Commander, ARCYBER will provide the solution to the unit. If the CNR is outside the Commander, ARCYBER's authorities or resources, ARCYBER will submit an ONS or CNS per this AR.

7-6. Coalition operational needs statement

A coalition operational needs statement (CONS) is a request for logistic, support, supplies, and services equipment support for a coalition partner participating in a contingency operation with the United States. It is normally a J-4/G-4 supply action initiated by the requesting coalition partner to fill a capability gap and forwarded to the associated CCDR for validation and sourcing. All CONS requests assigned to the Army for action must be fully coordinated through HQDA, and by exception presented at the AR2B for resolution. The key is to ensure fulfillment of a CONS does not negatively impact sourcing solutions for open Army requirements.

7-7. Army Requirements and Resourcing Board

The AR2B is prescribed in AR 1-1.

- a. The AR2B's mission is to validate and prioritize requirements to meet Army strategic commitments to provide timely Title 10 support to the force.
- b. The AR2B is chaired by DCS, G-3/5/7, with voting members representing DCS, G-8; ASA (ALT); and Assistant Secretary of the Army (Financial Management and Comptroller) (ASA (FM&C)). This board serves as the Army's integration and synchronization forum to provide SLs with situational awareness, and to assist them in making informed decisions on myriad actions related to ONS and QRC support to operations.
- c. When required, the AR2B identifies, provides oversight, and approves resourcing decisions for a selected number of ONS and QRCs deemed "most critical" or contentious until the Army determines their final disposition as an acquisition program or terminate/divest. The AR2B determines priority while taking into consideration the units negatively affected by approved reprogramming and redistribution requests.
- d. The AR2B portfolio includes, but is not limited to, ONS, assigned JUONs and JEONs, W-SIG interest items, and DOTMLPF-P assessments.
- e. The DAMO-ODA serves as the AR2B Secretary.

7-8. Budget, Requirements, and Programs Board

The BRP Board is co-chaired by leaders within the offices of the ASA (FM&C); DCS, G-3/5/7; and DCS, G-8. The BRP recommends a resourced way-ahead for validated requirements subject to applicable fiscal regulations, limitations and restrictions, and availability of funds. Consideration of new BRP board issues will normally start in the colonels BRP board before these issues are referred with recommendations to the BRP boards at the two- and three-star-general levels. However, new issues may enter the BRP process at any level or may originate within one of the boards. The board adjudicates unfunded requirements, including validated ONS funding request issues that originate in a sponsoring command. The intent is for the AR2B to prioritize and recommend validated QRC submissions to the BRP board for a funding strategy. Outputs of the BRP board are—

- a. Approved resourcing within the authority, limitations, and restrictions of the applicable appropriation(s).
- b. Development of a recommended time-phased funding strategy to compete for additional funding.
- c. Requests by the co-chairs for the requirement sponsor to provide additional analysis and information.

7-9. Operational needs statement open microphone forum

The DCS, G-3/5/7 (DAMO-OD) convenes a bi-weekly ONS open-microphone forum to address the critical theater ONS priorities, issues, and concerns. The intent of the forum is to continue the ongoing dialogue between operational Commanders and ARSTAF to achieve shared visibility, confirm status, or resolve issues related to selected ONS submissions. The DCS, G-8 (DOM-OPS) leadership and RSOs/staff synchronization officers assigned to the various capability areas are available to engage as necessary. Key participants include DCS, G-3/5/7 (DAMO-OD); DCS, G-8 (DOM-OPS); ASA (ALT); CG, AMC; and commanders of ASCCs and ACOMs. Open-microphone slides and other key documents are available on the ECOP site located on the secure internet protocol router network (SIPRNET). Operational field commanders submit and track ONS and ESDs submitted.

7–10. Equipment common operating picture

- a.* The ECOP portal supports situational awareness and common visibility of requests as the chain of command coordinates for endorsement, validation, and sourcing. The ECOP has a posted library containing HQDA-validated MEEL and applicable HQDA and select ASCC Army force equipping policy documents covering named operations.
- b.* The DCS, G–3/5/7 (DAMO–OD) is responsible for functional operation and support of the ECOP. The DCS, G–3/5/7's Command, and Control Support Agency is responsible for software development, maintenance, and upgrade and database hardware requirements.
- c.* The ECOP universal resource locator is on the SIPRNET.
- d.* The ECOP database is a vital component of the Army's continuity of operations and is required to be hosted at multiple locations within the National Capital Region.
- e.* The AR2B function is a mission essential task for Army DCS, G–3/5/7, in support of the CSA as a member of the Joint Chiefs of Staff.

Chapter 8

Army Capabilities Development Workforce Identification, Training, Certification, and Management

8–1. General

- a.* The Army requires a well-defined and highly trained capabilities development workforce, which excels at capabilities development and FD in support of the Army's acquisition process.
- b.* Army officers, noncommissioned officers, and Federal employee positions with responsibility for generating, developing, and reviewing capability requirements must be identified, trained, certified, and managed within their organizations.
- c.* As personnel have varying degrees of responsibility within the capability-requirements development process, and correspondingly, variable training needs, the Army has developed specific steps to identify and certify personnel as members of the capabilities development workforce.
 - (1) Completion of appropriate certification courses described in table 8–1 provides a common Army baseline and must be accomplished prior to certification.
 - (2) Additional requirements courses and training can be mandated to meet the specific needs of Army organizations.
 - (3) Contractor personnel who provide support to the Army's capabilities development workforce must be identified, trained, certified, and their certification level codified in their performance work statement.
 - (a)* Contractors may accomplish Defense Acquisition University (DAU) online training as required, subject to guidance and limitations of their specific contract.
 - (b)* Contractors may attend DAU resident courses on a walk-in basis, subject to guidance and limitations of their specific contract.

8–2. Capabilities development workforce identification

All members of the HQDA Secretariat, HQDA staff principals, heads of staff agencies, and commanders of ACOMs, ASCCs, and DRUs will identify branch and functional area officers, noncommissioned officers, and DA Civilians with responsibilities commensurate with the guidelines below. They will be designated as members of the Army's capabilities-development workforce, to simplify coding of TDAs in accordance with AR 71–32. These individuals are tracked by the DCS, G–8 (DAPR–FD), to enforce compliance with training and certification levels. These levels are—

- a. Level A: requirements support.* Level A applies to all personnel who support capability-requirements development, staffing and reviewing documents, conducting coordination, and providing administrative support.
- b. Level B: requirements writers, developers, and coordinators.* Level B applies to all personnel who are the writers, developers, and coordinators of capability-requirements documents. They perform tasks such as leading study elements, adjudicating comments, facilitating document development, and conducting coordination across organizations to the development of capability-requirement documents.
- c. Level C: requirements core experts.* Level C applies to personnel who oversee the creation, assessment, prioritization, staffing, or validation of capability-requirements documents; training others on requirements, or resourcing forums; or support presentations in Army or Joint requirements working groups, councils, or forums. Level C certification is required for AROC members at the colonel level and below who represent their organization in AWGs, or support flag representatives, at the three-star-general-level ACB, and the one- and two-star-general-level ARB. This includes the Army Secretariat, ARSTAF, AFC, AMC, ATEC, ARCYBER, FORSCOM, and TRADOC.

d. Level D: requirements validators and approval authorities. At the GO and SES levels, they validate and approve capability-requirements documents; provide senior leadership and oversight of JCIDS analysis and staffing; and enforce capability-requirements standards and accountability. Level D certification is required for AROC principals and advisors, to include their representatives at the three-star-general-level ACB, and the one- and two-star-general-level ARB. This includes the Army Secretariat, ARSTAF, AFC, AMC, ATEC, ARCYBER, FORSCOM, and TRADOC.

Table 8–1
Capability developer workforce's required training courses and certification levels

Training course title	Estimated time to	Certification level
How the Army Runs Course^{1,3}	30 days	C
Action Officer Integration Course¹	1 week	A, B
Continuous Learning – Requirements (CLR) 101: Introduction to JCIDS Course	4 to 6 hours	A, B, C
Requirements Management (RQM) 110: Core Concepts and Requirements Management Course²	18 to 24 hours	B, C
Capabilities Development Course (CDC)^{3, 4}	10 days	A, B, C
RQM 310: Advanced Concepts and Skills Course²	5 days	C
Functional Integration Course for Senior Leaders¹	1 week	D
RQM 403: Requirements Executive Overview Workshop²	1 day	D (one- to three-star general or SES)
RQM 413: Senior Leader Requirements Course	tailored	D (four-star general or agency head)

Notes:

¹ Required for personnel assigned to the HQDA Staff only.

² DAU-administered courses

³ Officers and DA Civilians who complete the Functional Area 50 "Q Course," or Functional Area 49 Operations Research/Systems Analysis Military Applications Course, meet the requirements of the Capabilities Development Course.

⁴ CDC is not required for Level A and B personnel assigned to the HQDA Staff.

⁵ Officers and DA Civilians who complete the U.S. Army War College meet the requirements of the "How the Army Runs Course".

Appendix A

References

Section I

Required Publications

Unless otherwise stated, Army publications are available on the Army Publishing Directorate website at <https://armypubs.army.mil/>. DoD publications are available at <https://www.esd.whs.mil/>. CJCSIs are available at <https://www.jcs.mil/>.

AR 15–1

Department of the Army Federal Advisory Committee Management Program (Cited in title page.)

AR 25–1

Army Information Technology (Cited in para 1–6*h*.)

AR 70–1

Army Acquisition Policy (Cited in para 1–6*a*(5).)

AR 71–32

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

AR 73–1

Test and Evaluation Policy (Cited in para 1–6*a*(8).)

CJCSI 5123.01H

Charter of the Joint Requirements Oversight Council (JROC) and Implementation of the Joint Capabilities Integration and Development System (JCIDS) (Cited in para 1–6*a*(3).)

DA Pam 25–1–1

Army Information Technology Implementation Instructions (Cited in para 1–6*m*.)

DoD Architecture Framework

Framework (Available at <https://dodcio.defense.gov/>.) (Cited in para 1–6*g*.)

DoDD 5000.01

The Defense Acquisition System (Cited in para 1–6*a*(1).)

DoDD 5000.71

Rapid Fulfillment of Combatant Commander Urgent Operational Needs (Cited in para 1–6*b*(1).)

DoDI 5000.02

Operation of the Defense Acquisition System (Cited in para 1–6*a*(1).)

DoDI 5000.02T

Operation of the Defense Acquisition System (Cited in para 5–11*c*(2).)

DoDI 5000.80

Operation of the Middle Tier of Acquisition (MTA) (Cited in para 1–6*a*(1).)

DoDI 5000.81

Urgent Capability Acquisition (Cited in para 1–6*a*(1).)

DoDI 5000.82

Acquisition of IT (Cited in para 1–6*a*(1).)

DoDI 5000.84

Analysis of Alternatives (Cited in para 1–6*a*(1).)

DoDI 5000.85

Major Capability Acquisition (Cited in para 1–6*a*(1).)

DoDM 5000.78

Rapid Acquisition Authority (Cited in para 1–6*a*(1).)

Section II

Related Publications

AR 1–1

Planning, Programming, Budgeting, and Execution

AR 5–13

Total Army Munitions Requirements and Prioritization Policy

AR 5–22

The Army Force Modernization Proponent System

AR 10–87

Army Commands, Army Service Component Commands, Direct Reporting Units

AR 11–2

Managers' Internal Control Program

AR 11–18

The Cost and Economic Analysis Program

AR 15–39

Department of the Army Intergovernmental and Intragovernmental Committee Management Program

AR 15–41

Chemical, Biological, Radiological, and Nuclear Survivability Committee

AR 25–30

Army Publishing Program

AR 56–4

Distribution of Materiel and Distribution Platform Management

AR 70–38

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

AR 70–47

Engineering for Transportability Program

AR 70–75

Survivability of Army Personnel and Materiel

AR 200–1

Environmental Protection and Enhancement

AR 350–1

Army Training and Leader Development

AR 350–38

Policies and Management for Training Aids, Devices, Simulators, and Simulations

AR 350–52

Army Training Support System

AR 700–15

Packaging of Materiel

AR 700–127

Integrated Product Support

AR 700–142

Type Classification, Materiel Release, Fielding, and Transfer

AR 750–1

Army Materiel Maintenance Policy

AR 750–43

Army Test, Measurement, and Diagnostic Equipment

CTA 50–909

Field and Garrison Furnishings and Equipment (Available at <https://fmsweb.army.mil/>.)

CTA 50–970

Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items)

DA Pam 25–403

Guide to Recordkeeping in the Army

DA Pam 71–32

Force Development and Documentation Consolidated Procedures

DA Pam 746–1

Pallets and Storage Aids for Army Use

10 USC

Armed Forces

10 USC 181

Joint Requirements Oversight Council

10 USC 2302, Note

National Defense Authorization Act for FY16, Section 804, Public Law 114 – 92, as amended

22 USC 2151

Foreign Assistance Act

Section III**Prescribed Forms**

This section contains no entries.

Section IV**Referenced Forms****DA Form 11–2**

Internal Control Evaluation Certification

DA Form 2028

Recommended Changes to Publications and Blank Forms

Appendix B

Operational Needs Statement Format

This format is also self-contained within the ECOP database.

B-1. Unit identification code ship to address

Directs where to ship materiel to support the requesting unit.

B-2. Problem

Define the capability gap; what is it the unit is unable to operationally accomplish.

B-3. 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?

B-4. System characteristics

If a standard Army type-classified piece of equipment is required, system characteristics are not required; include LIN 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.

B-5. 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?

B-6. Organizational concept

State who will employ the system and at what organizational level.

B-7. Procurement objective

State the total quantity of each capability or standard, Army type-classified piece of equipment is requested.

B-8. Training plan

List training requirements and provide training concept and strategy (new equipment training, TADSS, training support packages, and so forth).

B-9. 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.

B-10. Availability

If known, indicate whether commercial, government, or other Service equipment, foreign or domestic, is available for off-the-shelf procurement.

B-11. Recommendation

Recommend the command's course of action to resolve problem.

Appendix C

Army Capabilities Development Workforce Training Program

C-1. Capabilities-development workforce training curriculum

Training courses fall into two general categories: Core courses required for all members of the capabilities-development workforce and core plus courses, which are required for specific capabilities-development workforce positions, or as prerequisites for designated core courses.

a. Core courses to achieve the Capabilities Development Workforce Certification:

(1) *Force Integration Course for Senior Leaders*. This weeklong in-residence course familiarizes HQDA-level D senior military and civilian personnel on determining force requirements and capabilities. This is mandatory instruction for GO and SES leaders and should be completed within 6 months of assignment, dependent on seat availability.

(2) *How the Army Runs*. This monthlong in-residence course provides training on the roles, missions, and functions of the seven interdependent and continuous processes within the Army Force Management Model; the nine force integration functional areas; and the requirements, resourcing, and acquisition processes. This is mandatory instruction for personnel assigned to the ARSTAF who require level C certification. SLs may mandate this training for certain members who require level A or B certification. Training should be completed within the first 6 months of assignment to a capabilities development workforce position, dependent on seat availability.

(3) *Action Officer Integration Course*. This one-week in-residence course provides a basic overview of PPBE, JCIDS, DAS, and FM. This is mandatory instruction for personnel assigned to the ARSTAF who require level A and B certification. Training should be completed within the first 6 months of assignment to a capabilities development workforce position, dependent on seat availability.

(4) *Continuous Learning – Requirements 101: Introduction to the Joint Capabilities Integration & Development System*. Also known as CLR 101, this online course provides an overview of the DoD capabilities, analysis, and requirements process. The course focuses on terms, definitions, basic concepts, processes, and the roles and responsibilities of personnel involved in executing the JCIDS process. This is mandatory instruction for certification levels A, B, and C. Training should be completed within the first 6 months of assignment to a capabilities development workforce position.

(5) *Requirements Management 110 - Core Concepts and Requirements Management*. Also known as RQM 110, this online course focuses on the requirements-manager role and RQM within the “Big A” Acquisition construct. The course examines the capability development process from an end-to-end perspective, highlighting the interactions between JCIDS, DAS, and PPBE processes. This is mandatory instruction for certification levels B and C of the requirements and force design workforces (CLR 101 as a prerequisite). Training should be completed within the first 6 months of assignment to a capabilities development workforce position.

(6) *Requirements Management 310 - Advanced Concepts and Skills for Requirements Managers*. Also known as RQM 310, this in-residence course provides an in-depth look into the interactions between the JCIDS, DAS, and PPBE processes. This is mandatory instruction for certification level C (CLR 101 and RQM 110 as prerequisites). Training should be completed within the first year of assignment to a capabilities development workforce position, dependent on seat availability.

(7) *Requirements Management 403 - Requirements Executive Overview Workshop*. Also known as RQM 401, this 1-day, in-residence course provides an in-depth review of the interrelationships between the JCIDS, DAS, and PPBE processes. This is mandatory instruction for GO or SES certification level D (no prerequisites). This training should be completed within 6 months of assignment to a GO or SES capabilities development workforce position.

(8) *Requirement*. Level D certification is required for AROC members and their representatives at the three-star-general-level ACB, and the one- and two-star-general-level ARB. This is required from the Army Secretariat, ARSTAF, AFC, AMC, ATEC, ARCYBER, FORSCOM, and TRADOC.

(9) *Requirements Management 413 - Senior Leader Requirements Course*. This one-on-one course provides HQDA level D, four-star GO and agency leaders an executive level understanding of the interrelationship between the JCIDS, DAS, and PPBE processes to meet warfighter needs. The presentation’s length and scope are tailored to meet of the needs of the SLs (no prerequisites). This training should be completed within 6 months of assignment as an AROC principal.

(10) *Requirement*. Level D certification is required for AROC principals from the ARSTAF, AFC, AMC, FORSCOM, and TRADOC.

(11) *Training and Doctrine Command Capabilities Development Course*. Also known as the TRADOC CDC, this 10-day course concentrates on inputs to and outputs of JCIDS, its relationships to PPBE and DAS, as well as the analysis and critical thinking required to execute the Army’s requirements process. This is mandatory instruction for

capabilities development workforce at level C (CLR 101, CLR 250, and CLR 252 as prerequisites). Training should be completed within 2 years of assignment to a capabilities development workforce position, dependent on seat availability.

b. Core plus courses supplement the core curriculum and are not required for Capabilities Development Workforce Certification, unless otherwise directed by specific office or agency instruction, or policy (see table C–1).

(1) *Continuous Learning – Requirements 151: Analysis of Alternatives*. Also known as CLR 151, this online course provides professionals who lead or directly support AOA with a comprehensive introduction to conducting AOA activities.

(2) *Continuous Learning – Requirements 250: Capabilities-Based Assessment*. Also known as CLR 250, this online course provides professionals who lead or directly support CBAs with a comprehensive introduction to conducting CBA activities (also a prerequisite for CDC).

(3) *Continuous Learning – Requirements 252: Developing Performance Attributes*. Also known as CLR 252, this online course provides professionals who develop KPPs and other requirements for inclusion in capability-requirements documents with an overview of how to develop KPPs, details of the mandatory KSAs, and the relationships of KPP and KSA measures of effectiveness, measures of performance, and measures of suitability (also a prerequisite for CDC).

Table C–1
Core Plus training courses

Training course and title	CLR 151: Analysis of Alternatives ¹	CLR 250: Capabilities Based Assessments ¹	CLR 252: Developing Performance Attributes ¹
Estimated time to complete	3 to 5 hours online	3 to 5 hours online	3 to 5 hours online

Notes:

¹ DAU-administered courses

C–2. Capabilities development training program management and reporting

All principal officials of HQDA staffs, staff agencies, ACOMs, ASCCs, and DRUs having members of the capabilities-development workforce—

a. Designate a primary and alternate point of contact in writing to identify, train, certify, and manage their organization’s capabilities development workforce. Specifically they—

(1) Identify and designate the required certification level (A through D) billets/positions within their organization, which are filled by the capabilities development workforce.

(2) In accordance with organization policies, update TDAs (military and DA Civilians) to reflect capabilities development workforce positions.

(3) Determine training requirements for the organization’s capabilities development workforce, and schedule training as needed.

(4) Manage training and certification status for the organization’s capabilities-development workforce.

(5) Report certification status to AFC and DCS, G–8 quarterly, to ensure the Army’s capability-requirements workforce’s training and certification is tracked to enforce compliance.

b. Provide capabilities-development workforce status reports quarterly, on 31 December, 30 March, 30 June, and 30 September (see table C–2). All principal officials of HQDA staff, agencies, ACOMs, ASCCs, and DRUs having members of the capabilities development workforce within their organizations, will provide the following information to the OPR:

(1) Number of capabilities-development workforce, level A personnel required (military/civilian/contractor).

(2) Number of capabilities-development workforce, level B personnel required (military/civilian/contractor).

(3) Number of capabilities-development workforce, level C personnel required (military/civilian/contractor).

(4) Number of capabilities-development workforce, level D personnel required (military/civilian/contractor).

(5) Number of capabilities-development workforce, level A required personnel on hand (military/civilian/contractor).

(6) Number of capabilities-development workforce, level B required personnel on hand (military/civilian/contractor).

(7) Number of capabilities-development workforce, level C required personnel on hand (military/civilian/contractor).

(8) Number of capabilities-development workforce, level D required personnel on hand (military/civilian/contractor).

- (9) Number of capabilities-development workforce, level A personnel trained/certified (military/civilian/contractor).
- (10) Number of capabilities-development workforce, level B personnel trained/certified (military/civilian/contractor).
- (11) Number of capabilities-development workforce, level C personnel trained/certified (military/civilian/contractor).
- (12) Number of capabilities-development workforce, level D personnel trained/certified (military/civilian/contractor).

Table C-2

Sample capabilities-development workforce status report

Certification levels	Level A military/ civilian/ contractor	Level B military/ civilian/ contractor	Level C military/ civilian/ contractor	Level D military/ civilian/ contractor	Total military/ civilian/ contractor
Required	24/16/8	15/22/10	88/120/56	6/2/0	133/160/74
Required on hand	21/14/7	13/19/8	84/115/53	5/1/0	123/149/68
Certified	12/5/2	5/10/2	32/34/0	4/1/0	53/50/4

Appendix D

Directed Requirement Information

D–1. General

CG, AFC serves as approval authority for DRs. A request for DR will normally include the following information. Please note, this is not a mandated format but a guide to the type of information that should be in the request.

D–2. Guide

- a.* General description of the capability gap, for use by what units, and why it needs to be addressed.
- b.* Restrictions and limitations on the DR to include no additional people; funding limits by type of money, years for funding, line for funding; numbers required and limits in quantity and units to be fielded to; timeline for delivery of the product, and so forth.
- c.* Specific description of need and description of gaps including timelines for execution; justification for the urgency.
- d.* Operational, organizational, and deployment concept—training; sustainment support or contract support; people (operators, maintainers, others); BOI or description of what units and personnel receive the items being acquired; other as required or appropriate.
- e.* Acquisition information—prototype parameters or details of capabilities required including limitations (if very detailed move to an enclosure); any test and evaluation needed including safety certifications; any additional information the assigned program office would need to execute the DR.
- f.* Statement indicating the DR does not serve as the sole justification for sole source or noncompetitive acquisition and the need to use policy and procedures in place to execute if appropriate.
- g.* Statement on limitation of quantity and funding with need to return to DCS, G–8 to make any adjustments of those.

Appendix E

Certification and Integration Considerations

E-1. 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 be prevented or reduced at the source whenever feasible.

b. The CAPDEV, in coordination with the MATDEV, ensures that acquisition 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 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 identify, reduce, or eliminate those impacts systematically. The analysis will consider evaluating 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.

E-2. 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 combat training center.
- c. Training-unique ammunition; dummy, drill, and inert munitions; and sub-caliber devices/ammunition as required by the system's TADSS documentation.
- d. Render safe procedures.
- e. Stockage, crating, and packaging for ammunitions that—
 - (1) Meet the requirements of AR 70-38, AR 700-15, DA Pam 746-1, and MIL-STD-1660.
 - (2) Permit 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 CBRNE, petroleum, oils, and lubricants, and other contaminants.
 - (4) Do not contribute to vulnerability of ammunition to fire or explosion, and minimize battlefield litter and signature.
 - (5) Are capable of surveillance inspection without compromising afforded protection.
 - (6) Are man portable and smallest, lightest package possible.

E-3. Validated Online Life Cycle Threat report

a. The VOLT report is the basic authoritative threat assessment that supports the development and acquisition of a particular ACAT system. The VOLT contains an integrated assessment of projected enemy capabilities (doctrine, tactics, hardware, organization, and forces) at IOC and IOC plus 10 years, to limit, neutralize, or destroy the system. The report will explicitly identify critical intelligence parameters which are thresholds established by the program which could critically impact the effectiveness and survivability of the program. The VOLT 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 and DAB reviews.

b. The VOLT report will be the primary threat reference for the capability document, the AOA, and the test and evaluation master plan, and other requirements or acquisition documents developed in support of a MDR.

- c. The VOLT will be—
 - (1) Approved by DCS, G-2, and validated by the Defense Intelligence Agency for all ACAT I programs at MS A and updated for all ACAT I D 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.

E-4. Ability to deploy and containerization requirements

a. The CAPDEV and MATDEV will ensure that ability to deploy is considered during capabilities development and compliance with the procedures contained in DoDI 4540.07.

b. Additional transportability and deployability considerations are provided in AR 70-1, AR 70-47, AR 56-4, and Joint Publication 4-01.7.

(1) Trade-offs between transportability and combat effectiveness may be appropriate. Details must include configuration, such as FOC or partially disassembled and delivery technique (standard airdrop, container delivery system, and the individual parachute).

(2) Containerization requirements must be identified and considered when developing the capability proposal and during the development process, as outlined in AR 70-47.

(3) External and internal air transportability requirements must be outlined by type aircraft.

(4) Include provisions to accommodate both the Soldier-operator's basic load and materials essential to support operating the capability.

c. The Army Engineering for Transportability and Deployability program provides the MATDEV and CAPDEV 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 be stated in the constraints paragraph of the capability proposals, if applicable.

E-5. Test measurement and diagnostic equipment

The CAPDEV and TNGDEV identify and document requirements for 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. The 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 NDI TMDE; and addresses a host of other TMDE considerations and requirements.

E-6. Guidance on Fire Suppressant and Fuel Containment for Army Ground Vehicles

This guidance applies to light, medium, and heavy tactical vehicles and ground combat vehicles initially acquired on or after 1 October 2018 under an MDAP.

a. The fire suppressant and fuel containment requirements, as part of the force protection and/or survivability KPPs, will meet the applicable survivability requirements for each class of covered vehicles.

b. Various types of fire suppressant equipment currently are in use to protect crews and vehicles. However, the Army must consistently apply fire suppressant requirements. Modified or new requirements must balance cost, survivability, and mobility; include requirements for standardization, commonality, and vehicle armor; and leverage the latest fire suppression and fuel containment technologies for vehicles.

Appendix F

Internal Control Evaluation

F–1. Function

The functions covered by this evaluation are for the warfighting capabilities determination.

F–2. Purpose

The purpose of this evaluation is to help DCS, G–8, CAPDEVs evaluate the key internal controls listed. It is intended as a guide and does not include all controls.

F–3. Instructions

Answers must be based on actual document inspection for required authorizations and approvals. Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that the evaluation has been conducted must be accomplished on DA Form 11–2 (Internal Control Evaluation Certification).

F–4. Test questions

- a. Is the requirements document signed by sponsor organization approval authority?
- b. Are requirements documents subjected to analysis by appropriate levels of authority to judge their consistency with proponent gap analysis, C–BA, SPAR, and Army Modernization Strategy?
- c. Was AOA, if conducted, in conjunction with ASA (ALT)?
- d. Was a memorandum to request a MDD review provided to ASA (ALT)?
- e. Was final approval memorandum, including executable guidance to capabilities developers, JROC memorandums, and any special instructions supporting execution of modernization plans, prepared and saved in repository for future provenance of the capability solution?

Note. To verify the questions in paragraph F–4 are answered affirmatively, find the original documents (signed requirements documents, records of the decision, or other correspondence) in the CAMS.

F–5. Supersession

This evaluation replaces the evaluation for the warfighting capabilities determination previously published in AR 71–9, dated 15 August 2019.

F–6. Comments

Help make this a better tool for evaluating internal controls. Submit comments to: DCS, G–8 (FD–DJI–FDJ), 700 Army Pentagon, 2C349, Washington, DC 20301–0700.

Glossary

Section I

Abbreviations

AAE

Army Acquisition Executive

AAO

Army acquisition objective

ACAT

acquisition category

ACB

AROC Capabilities Board

A–CDD

abbreviated CDD

ACF

Army concepts framework

ACIDS

Army Capabilities Integration and Development System

ACOM

Army command

ACP

Army Campaign Plan

ADCS, G–8

Assistant Deputy Chief of Staff, G–8

AE2S MOD

Army Equipping Enterprise System Modernized

AFC

Army Futures Command

AMA

analysis of materiel/nonmateriel approaches

AMC

Army Materiel Command

AME

Army Modernization Enterprise

AMOD

Assigned Modernization

AOA

analysis of alternatives

AOU

assessment of operational utility

APB

acquisition program baseline

APO

Army procurement objective

APS

Army pre-positioned stock

AR

Army regulation

AR2B

Army Requirements and Resourcing Board

ARB

AROC Review Board

ArCADIE

Army Capability-Based Architecture Development and Integration Environment

ARCYBER

U.S. Army Cyber Command

ARIMS

Army Records Information Management System

AROC

Army Requirements Oversight Council

ARSOF

Army Special Operation Forces

ARSTAF

Army Staff

ASA

Assistant Secretary of the Army

ASA (ALT)

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

ASA (FM&C)

Assistant Secretary of the Army (Financial Management and Comptroller)

ASA (IE&E)

Assistant Secretary of the Army (Installations, Energy 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

ASL

Army senior leaders

ASM

Army Synchronization Meeting

ATD

advanced technology demonstration

ATEC

Army Test and Evaluation Command

ATP

Army techniques publication

AWG

AROC working group

AWRS

Army war reserve sustainment stocks

BOD
Board of Directors

BOI
basis of issue

BOIG
basis of issue guidance

BOIP
basis of issue plan

BOIPFD
basis of issue plan feeder data

BRP
budget, requirements, and programs

CAMS
Capabilities and AROC Management System

CAPDEV
capability developer

CAPE
cost analysis and program evaluation

CARDS
Catalog of Approved Requirements Documents System

CBA
capabilities based assessment

C-BA
cost-benefit analysis

CBRNE
chemical, biological, radiological, nuclear and high yield explosive

CCDR
combatant commander

CCH
Chief of Chaplains

CDC
Capabilities Development Course

CDDs
capabilities development documents

CDs
capability drops

CG
commanding general

CIO
chief information officer

CJCSI
Chairman of the Joint Chiefs of Staff instruction

CLR
Continuous Learning – Requirements

CNR
capabilities needs request

CNS
capability needs statement

CO
cyberspace operations

COC
Council of Colonels

COE
Chief of Engineers

COIC
critical operational issues and criteria

COIs
critical operational issues

CONEMP
concept of employment

CONOP
concept of operations

CONS
coalition operational needs statement

COP
common operating picture

COTS
commercial off-the-shelf items

CSA
Chief of Staff of the Army

CSB
Configuration Steering Board

CTA
common tables of allowances

DA
Department of the Army

DAB
Defense Acquisition Board

DAS
Defense Acquisition System

DAU
Defense Acquisition University

DCR
DOTmLPF-P change recommendation

DCS
Deputy Chief of Staff

DCS, G-8
Deputy Chief of Staff, G-8

DCS, G-9
Deputy Chief of Staff, G-9

DICR
DOTmLPF-P integrated capabilities recommendation (lowercase m signifies a no-new-materiel proposal)

DoD

Department of Defense

DoDAF

Department of Defense architecture framework

DoDD

Department of Defense directive

DoDI

Department of Defense instruction

DoDIN-A

DOD Information Network-Army

DoDM

Department of Defense memorandum

DOM

Directorate of Materiel Divisions

DOTMLPF-P

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

DOTmLPF-P

not a new materiel proposal

DR

directed requirement

DRU

direct reporting unit

ECOP

equipment common operating picture

ERVb

Equipment Review and Validation Board

ESD

equipment sourcing document

ESOH

environment, safety, and occupational health

FAA

functional area analysis

FCB

Functional Capabilities Board

FD

force development

FM

force management

FMP

force-modernization proponents

FNA

functional needs analysis

FOC

full operational capability

FORSCOM

U.S. Army Forces Command

FRP

full rate production

FSA

functional solution analysis

FY

fiscal year

GEOINT

geospatial intelligence

GO

general officer

GOSC

General Officer Steering Committee

GOTS

Government off-the-shelf

HQDA

Headquarters, Department of the Army

IC

managed by a DoD component other than a Military Department

ICD

initial-capabilities document

IE&E

Installations, Energy and Environment

INFOSEC

information security

INSCOM

U.S. Army Intelligence and Security Command

IO

information operations

IOC

initial operating capability

IPS

integrated product support

IPT

Integrated Product Team

IS

information system

IT

information technology

JCAAs

Joint capability areas

JCB

Joint Capabilities Board

JCIDS

Joint Capabilities Integration and Development System

JEONs

Joint emergent operational needs

JEONS

Joint emergent operational needs statement

JRAC

Joint rapid acquisition cell

JROC

Joint Requirements Oversight Council

JS

Joint Staff

JSD

Joint Staff designator

JUONs

Joint urgent operational needs

KPP

key performance parameter

KSA

key system attribute

LCMC

Life Cycle Management Command

LIN

line item number

LOJ

letter of justification

M&S

modeling and simulation

MASINT

measurements and signature intelligence

MATDEV

materiel developer

MDA

milestone decision authority

MDAP

major defense acquisition program

MDD

materiel development decision

MDR

milestone decision review

MEDCOM

Army Medical Command

MEEL

mission essential equipment list

MIL-STD

military standard

MPR

modernization path requirement

MS

milestone

MTA
middle-tier acquisition

MTOE
modified table of organization and equipment

NDI
nondevelopmental item

NDS
National Defense Strategy

NMS
National Military Strategy

NSG
National Strategic Guidance

NSS
National Security Systems (information technology)

NSTD
nonsystem training device

OCIE
organizational clothing and individual equipment

OCIERD
Organizational Clothing and Individual Equipment Requirements Document

OIPT
overarching IPT

OMA
Operation and Maintenance, Army

ONS
operational needs statement

OPR
office of primary responsibility

OPROJ
operational project stocks

ORDAB
Organizational Requirements Document Approval Board

OSD
Office of the Secretary of Defense

OTOE
objective table of organization and equipment

OV
operational view

PEG
Program Evaluation Group

PEO
program executive officer

PIPT
program-level IPT

PMG
Provost Marshal General

PMs

program, project, and product managers

POM

program objective memorandum

PPBE

planning, programming, budgeting, and execution

QRC

quick-reaction capability

R&D

research and development

RAM

reliability, availability, and maintainability

RCCTO

Rapid Capabilities and Critical Technologies Office

RCF

repair cycle float

RDA

research, development, and acquisition

RDPs

requirements definition packages

RD&E

research, development, test, and evaluation

RFP

request for proposal

RISM

requirements integration synchronization meeting

RISO

requirements integration staff officer

RO

retention objective

RQM

requirements management

RSO

requirements staff officer

S&T

science and technology

SACS

Structure and Composition System

SAG

study advisory group

SB

supply bulletin

SES

Senior Executive Service

SIGINT

signals intelligence

SIPRNET

secure internet protocol router network

SLs

senior leaders

SME

subject matter expert

SOCREB

Special Operations Command Requirements Evaluation Board

SOFCIDS

Special Operations Forces Capabilities Integration and Development System

SOS

System-of-systems

SPAR

strategic portfolio analysis review

STRAP

system training plan

T/C/S

tasks/conditions/standards

TADSS

training aids, devices, simulators, and simulations

TDA

tables of distribution and allowance

TJAG

The Judge Advocate General

TMDE

test measurement and diagnostic equipment

TNGDEV

training developer

TOE

table of organization and equipment

TRADOC

U.S. Army Training and Doctrine Command

TSG

The Surgeon General

UFR

unfinanced requirements

UON

urgent operational need

USACE

U.S. Army Corps of Engineers

USACIDC

U.S. Army Criminal Investigation Command

USAFMSA

U.S. Army Force Management Support Agency

USAMRDC

U.S. Army Medical Research and Development Command

USANCA

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

USASMD

U.S. Army Space and Missile Defense Command

USASOC

U.S. Army Special Operations Command

USSOCOM

U.S. Special Operations Command

VCSA

Vice Chief of Staff of the Army

VOLT

validated online life-cycle threat

WIPT

working-level IPT

WRSA

war reserve stocks for allies

W-SIG

Warfighter Senior Integration Group

Section II**Terms****acquisition category**

Categories established to facilitate decentralized decision making and execution and compliance with statutorily imposed requirements. The categories determine the level of review, decision authority, and applicable procedures. ACAT categories include: ACAT I, ACAT II, ACAT III

acquisition milestones

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

acquisition phase

All the tasks and activities needed to bring the program to the next MS occur during an 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.

acquisition program

A directed, funded effort that provides a new, improved, or continuing materiel, weapon, IS, or service capability in response to an approved need. Acquisition programs are divided into different categories that are established to facilitate decentralized decision making, execution, and compliance with statutory requirements.

acquisition strategy

Describes the Program Manager's plan to achieve program execution and programmatic goals across the entire program life cycle. Summarizes the overall approach to acquiring the capability (to include the program schedule, structure, risks, funding, and the business strategy). Contains sufficient detail to allow senior leadership and the MDA to assess whether the strategy makes good business sense, effectively implements laws and policies, and reflects management's priorities. Once approved by the MDA, the Acquisition Strategy provides a basis for more detailed planning. The strategy evolves over time and should continuously reflect the current status and desired goals of the program.

advanced technology demonstration

A demonstration of the maturity and potential of advanced technologies for enhanced military operational capability or cost effectiveness. ATDs are identified, sponsored, and funded by military departments and defense agencies. ATDs are funded by the advanced technology development budget activity within the research, development, test, and evaluation (RDT&E) appropriation.

analysis of alternatives

Assessment of potential materiel solutions to satisfy the capability need documented in the approved ICD. It focuses on identification and assesses potential materiel solutions, key trades between cost and capability, total life-cycle cost, including sustainment, schedule, concepts of operations, and overall risk. The AoA will inform and be informed by affordability analysis, cost analysis, sustainment considerations, early systems engineering analyses, threat projections, and market research. It supports a decision on the most cost effective solution that has a reasonable likelihood of providing the validated capability requirement(s). The AoA is normally conducted during the Materiel Solution Analysis phase, is key input to the Capability Development Document, and supports the materiel solution decision at MS A. The AoA may be updated for subsequent decision points and MS reviews, if design changes impact AoA assumptions.

analysis of materiel/nonmateriel approaches

The JCIDS analysis to determine the best approach or combination of approaches to provide the desired capability or capabilities. Though the analysis of materiel/nonmateriel approaches (AMA) is similar to an AOA, it occurs earlier in the analytical process. Subsequent to approval of an ICD, which may lead to a potential ACAT I or IA program, program analysis, and evaluation provides specific guidance to refine this initial AMA into an AOA.

Army Acquisition Executive

The Secretary of the Army has designated the ASA (ALT) as the AAE, responsible for all acquisition functions within the Army.

Army Acquisition Objective

The AAO is the total Army requirement that represents the unconstrained acquisition quantity required for a major end item of equipment that has, or will have, a LIN that reflects the minimum mission essential wartime requirement needed to equip and sustain the Army's approved master force and to meet other specified approved equipment requirements. The AAO is a composite of requirement by sub-elements.

Army Concept Framework

The ACF is the set of designated Army concepts that present the integrated foundation on how the Army would conduct military activities as part of the Joint force in the mid-term future (6 to 18 years into the future). The ACF includes the capstone concept; operating concept(s); subordinate functional concepts; CONOP-, CONEMP-, and CG-directed concepts. They are published as TRADOC 525-series pamphlets. Designated proponents develop concepts, per the Army Future Force Developments Directive through IPTs.

Army Modernization Enterprise

Encompasses all Army entities with missions to assess the future operational environment and threats; identify and prioritize capability gaps in future warfighting; conceptualize and prioritize gap mitigating solutions to those problems; allocate modernization resources according to priorities; and develop solutions through experimentation, prototyping, and acquisition; and field innovative solutions that deliver the overmatching lethality necessary to sustain our competitive advantage in ground combat against current and potential adversaries. The AME workforce includes the majority of personnel in the Army's S&T, R&D, future operational environment and future threat, concepts, requirements, analytics, and acquisition communities.

Army procurement objective

The APO is a determined portion of the AAO (total LIN requirement) that is affordable at an acceptable level of risk to Army missions and modernization objectives. The APO represents the total quantity of fully configured end items the Army intends to procure during the life cycle of the program. An APO is established when Army priorities change or program costs make procurement of the full AAO unaffordable.

Army Requirements Oversight Council gatekeeper

Gatekeepers assigned to DCS, G-8's Requirements Integration and Assessments Division are the points of contact for the DCS, G-8, to oversee and manage all documents submitted to the AROC and JROC staffing processes. The DCS, G-8's 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 the directorate's or agency's call. AFC and the JS also have gatekeepers to function on their respective behalf.

Army Systems Acquisition Review Council

Top level DA review body for acquisition programs where the AAE or Defense Acquisition Executive is the MDA. It is chaired by the ASA (ALT) and convened at formal MS or other program reviews to provide information and develop recommendations for decisions by the AAE.

automated information system

A combination of computer hardware and computer software, data, and telecommunications that performs functions such as collecting, processing, storing, transmitting, and displaying information. Excluded are computer resources, both hardware and software, that are an integral part of a weapons system, used for highly sensitive classified program as determined by the Secretary of Defense, used for other highly sensitive IT programs (as determined by the Defense CIO or determined by the Defense Acquisition Executive or designee) to be better overseen as a non-automated IS program (for example, a program with a low ratio of RDT&E funding to total program acquisition costs or that requires significant hardware development).

Business Mission Area

The business arm of the Army Mission Area framework. Working in coordination with the Defense Intelligence, Warfighting, and Enterprise Information Environment Mission areas, the Business Mission Area guides, governs, and manages all business operational activities and associated business system portfolios within the Army. It is organized along five primary domains (acquisition, financial management and comptroller, human resource management, installation, energy, and environment, and logistics) that encompasses DoD-validated, business operational activities. It ensures that the right capabilities, organization, resources, and materiel are reliably delivered to the operating force.

capabilities based assessment

A JCIDS analytic process. The CBA identifies capability requirements and associated capability gaps. Results of a CBA or other study provide the source material for one or more ICDs, or other JCIDS documents in certain cases when an ICD is not required.

capabilities development document

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

capability developer

Responsible for analyzing, determining, prioritizing warfighting requirements for DOTLMPF-P requirements, personnel, facilities, and policy implications within the context of the FD process. Also responsible for representing the end user during the full development and life cycle process (counterpart to generic use of MATDEV).

capability 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 FD process.

capability gaps

The inability to meet or exceed a capability requirement, resulting in an associated operational risk until closed or mitigated. The gap may be the result of no existing capability, lack of proficiency or sufficiency in an existing capability solution, or the need to replace an existing capability solution to prevent a future gap.

capability requirement

A capability required to meet an organization's roles, functions, and missions in current or future operations. To the greatest extent possible, capability requirements are described in relation to tasks, standards, and conditions in accordance with the universal Joint task list or equivalent DoD component task list. If a capability requirement is not satisfied by a capability solution, then there is also an associated capability gap. A requirement is considered to be "draft" or "proposed" until validated by the appropriate authority.

concept of employment

The CONEMP establishes how the operational user intends to use the materiel system being developed within the context of its associated CONOP(s); it describes the materiel system's operational tasks and conditions.

concept of operations

A verbal or graphic statement, in broad outline, of a commander's assumptions or intent in regard to an operation or series of operations. It is designed to give an overall picture of the operation. It is also called the Commander's Concept.

cost-benefit analysis

A structured methodology for estimating and comparing the anticipated costs and benefits of alternative courses of action in order to identify the optimum solution for achieving a stated goal or objective. A C-BA identifies courses of action for solving a problem, determines their costs and benefits and, with a sound rationale, identifies the best

course of action. The purpose of a C–BA is to produce a strong value proposition, which is a clear statement that the benefits of a recommended course of action justify the costs, risks, and bill-payers associated with that course of action. C–BA is a narrowly focused economic analysis that applies rigorous analytical techniques to complement, but not replace, experience, judgment, and subject matter expertise.

critical operational issues and criteria

Key operational concerns (issues) of the decision maker, with bottom line standards of performance (criteria) that, if satisfied, signify the system is operationally ready to proceed beyond the full rate production (FRP) and full deployment decision (FD) review. The COIs must be relevant to the required capabilities and of key importance to the system being operationally effective, operationally suitable and survivable, and represent a significant risk if not satisfactorily resolved. A COIC is normally phrased as a question that must be answered in the affirmative to properly evaluate operational effectiveness (for example, “Will the system detect the threat in a combat environment at adequate range to allow successful engagement?”) and operational suitability (for example, “Will the system be safe to operate in a combat environment?”). The COICs are not pass-or-fail absolutes but are “show stoppers,” such that a system falling short of the criteria should not proceed beyond the FRP and FD, unless convincing evidence of its operational effectiveness, operational suitability, and survivability is provided to the decision makers and authorities. The COICs are few in number, reflect total operational system concern, and employ higher order measures.

Department of Defense 5000-series

DoD 5000-series refers collectively to DoDD 5000.01, DoDI 5000.02, and other 5000-series DoDIs that implement the Adaptive Acquisition Framework.

divestiture

A conscious decision by the Army to reduce the excess, obsolete, and low use or low utility equipment in the Army’s inventory; these decisions are vetted through the ARSTAF and approved by the DCS, G–3/5/7. The method of disposal is based upon a cost analysis to identify the best course of action for the Army.

doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy change recommendation

A DOTmLPF–P change recommendation is an Army or Joint document that proposes non-materiel capability solutions, which may serve as an alternative to, or complement of, materiel capability solutions. For non-materiel solutions that impact more than just the Army, a Joint DCR is used to ensure all equities of all affected organizations are addressed during review and validation.

doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy integrated capabilities recommendation

A DOTmLPF–P integrated capabilities recommendation is an Army term used to describe and 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. It is a tool used to apprise the ARSTAF of a recommendation for a major DOTmLPF–P change.

document 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.

enterprise architecture

A strategic information asset base, which defines the mission, 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.

family of systems

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.

force modernization

The process of improving the Army’s force effectiveness and operational capabilities through FD and integration.

Functional Capabilities Board

Boards in the JROC structure below the JCB that provide review and assessment of JCIDS documents and adjudication of lower-level issues within their designated portfolios prior to review by the JCB, review/adjust Joint prioritization established by the FCB Working Groups, and perform other activities at the direction of the JCB or the JROC.

human systems integration

The systems engineering process and program management effort that provides integrated and comprehensive analysis, design, and assessment of requirements, concepts, and resources for human engineering, manpower, personnel, training, system safety, health hazards, personnel survivability, and habitability. These domains are intimately and intricately interrelated and interdependent and must be among the primary drivers of effective, efficient, affordable, and safe system designs. Human systems integration integrates and facilitates trade-offs among these domains, but does not replace individual domain activities, responsibilities, or reporting channels.

initial operational capability

The criteria and schedule for when a program must attain IOC is defined as the program's CDD and capability production document. The IOC is the first attainment of the capability by an MTOE unit and supporting elements to operate and maintain a production item or system effectively, provided that: 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. This designation is usually applied at a point in the Defense Acquisition Model that is after the FRP decision review and implies that the unit is combat ready.

Initial-capabilities document

Documents the need for a materiel approach to a specific capability gap derived from an initial analysis of materiel approaches executed by the operational user and, as required, an independent analysis of materiel alternatives. It defines the capability gap in terms of the functional area, the relevant range of military operations, desired effects, and time. The ICD summarizes the results of the DOTMLPF-P analysis and describes why non-materiel changes alone have been judged inadequate in fully providing the capability.

integrated architectures

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

Integrated Product Team

Team composed of representatives from appropriate functional disciplines working together to build successful programs, identify and resolve issues, and make sound and timely recommendations to facilitate decision-making. There are three types of IPTs: the overarching IPT (OIPT) that focuses on strategic guidance, program assessment, and issue resolution; the working-level IPT (WIPT) that identifies and resolves program issues, determines program status, and seeks opportunities for acquisition reform; and the program-level IPT (PIPT) that focuses on program execution and may include representatives from both government and industry after contract award.

intelligence threat support

Consideration and evaluation of intelligence information in order to conduct a threat assessment of an enemy or potential enemy's current or projected capability to limit, neutralize, or destroy the effectiveness of any aspect of DOTMLPF-P. Threat support is a continuous process beginning with concept development or rapid fielding and continuing through DOTMLPF-P life cycles in a collaborative environment and reassessed between multidisciplinary proponents.

interoperability

- a. The ability to act together coherently, effectively, and efficiently to achieve tactical, operational, and strategic objectives.
- b. The condition achieved among communications-electronics systems or items of communications-electronics equipment when information or services can be exchanged directly and satisfactorily between them and their users.
- c. For the purposes of defense acquisitions, 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 exchanged to enable them to operate effectively together. IT interoperability includes both the technical exchange of information and the end-to-end operational effectiveness of that exchange of information as required for mission accomplishment. Interoperability is more than just information exchange. It includes systems, processes, procedures, organizations, and missions over the life cycle and must be balanced with cybersecurity.

Joint Capabilities Board

The JCB is a board below the JROC and provides review and endorsement of documents and adjudication of lower level issues prior to validation by the JROC. The JCB has validation authority for JCIDS documents with a Joint Staffing Designator (JSD) of “JCB Interest.” The JCB is chaired by the JS Director, J-8. It is comprised of general or flag officers, or government civilian equivalent, from the Services and Combatant Commands.

Joint Capabilities Integration and Development System 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.

Joint capability area

The Joint capability areas 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. The 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 Joint capability area. 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 Joint capability area. 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 Force

A force composed of elements, assigned or attached, of two or more Military Departments operating under a single joint force commander.

Joint Requirements Oversight Council 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 JROC.

Joint Requirements Oversight Council memorandum

Official JROC correspondence generally directed to audiences external to the JROC. The JROC memorandums are usually decisional in nature.

Joint staffing designator

A designation assigned by the JS gatekeeper based on actual or potential ACAT and JS equities (necessity of specific endorsements, leadership guidance, or predecessor document JSD). The JSD sets the staffing path and timeline for the document and identifies the validation authority. According to the JCIDS Manual, there are three categories of JSDs: JROC Interest, JCB Interest, and Joint Information.

key performance parameters

Performance attribute of a system that are considered critical or essential to the development of an effective military capability. KPPs are contained in the CDD and the updated CDD and are included verbatim in the APB. KPPs are expressed in term of parameters which reflect measures of performance using a threshold/objective format. KPPs must be measurable, testable, and support efficient and effective test and evaluation. Mandatory KPPs are specified in the JCIDS Manual.

key system attribute

Performance attribute of a system considered important to achieving a balanced solution/approach to a system, but not critical enough to be designated as a KPP. KSAs must be measurable, testable, and support efficient and effective test and evaluation. KSAs are expressed in terms of measures of performance.

lead Department of Defense component for acquisitions

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

maintainability

Maintainability is the ability of an item to be retained in, or restored to, a specified condition when maintenance is performed by personnel having specified skill levels, using prescribed procedures and resources, at each prescribed level of maintenance and repair.

major defense acquisition program

An acquisition program within the meaning of Section 2430 of Title 10, USC. The term “major defense acquisition program” means a Department of Defense acquisition program that is not a highly sensitive classified program (as determined by the Secretary of Defense) and— (A) that is designated by the Secretary of Defense as an MDAP; or (B) in the case of a program that is not a program for the acquisition of an automated IS (either a product or a service), that is estimated by the Secretary of Defense for all increments of the program to require an eventual total expenditure for research, development, and test and evaluation of more than \$525 million in FY 2020 constant dollars or, for procurement, of more than \$3.065 billion in FY 2020 constant dollars.

materiel developer

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 CAPDEV).

materiel developments

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

materiel solution

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), developed or purchased to satisfy one or more capability requirements (or needs) and reduce or eliminate one or more capability gaps.

measures of effectiveness

The data used to measure the military effect (mission accomplishment) that comes from using the system in its expected environment. That environment includes the system under test and all interrelated systems, that is, the planned or expected environment in terms of weapons, sensors, command and control, and platforms, as appropriate, needed to accomplish an end-to-end mission in combat.

milestone decision authority

Designated individual with overall responsibility for a program. The MDA has the authority to approve entry of an acquisition program into the next phase of the acquisition process and is accountable for cost, schedule, and performance reporting to higher authority, including Congressional reporting.

militarily useful capability

A capability that achieves military objectives through operational effectiveness, suitability, and RAM, 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.

modernization path requirement

MPR defines or lists the LINs along with the required OTOE quantity being replaced by the new or modernized capability; the on-hand inventory quantity by LIN; quantity to be replaced by LIN; and the quantity by LIN that must be retained as the RO until all of the new capability is procured and fielded.

modified table of organization and equipment, or tables of distribution and allowance, user

TOE or TDA command, unit, element, agency, crew, or person (Soldier or Civilian) operating, maintaining, and/or otherwise applying DOTMLPF–P products in accomplishment of a designated mission. An operational command or agency that receives or will receive benefit from the acquired system. The CCDRs 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 CCDRs, 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.

National Security System

Any IS (including any telecommunications system) used or operated by an agency or a contractor of an agency, or other organization on behalf of an agency, the function, operation, or use of which: (1) involves intelligence activities,

(2) involves cryptologic activities related to national security, (3) involves the command and control of military forces, (4) involves equipment that is an integral part of a weapons or weapons system, or (5) is critical to the direct fulfillment of military or intelligence missions. Item (5) above does not include a system that is to be used for routine administrative and business applications (including payroll, finance, logistics, and personnel management applications).

net-centric

Relating to or representing the attributes of a robust, globally interconnected network environment (including infrastructure, systems, processes, and people) in which data are shared timely and seamlessly among users, applications, and platforms.

nondevelopmental item

Any previously developed item of supply used exclusively for government 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. Any item described above that requires only minor modifications or modifications of the type customarily available in the commercial marketplace in order to meet the requirements of the procuring department or agency.

nonmateriel (capability solution)

Changes in doctrine, organization, training, (existing) materiel, leadership and education, personnel, facilities, or policy implemented to satisfy one or more capability requirements (or needs) and reduce or eliminate one or more capability gaps, without the need to develop or purchase new materiel capability solutions.

nonstandard equipment.

Commercially-acquired or nondevelopmental equipment that is rapidly acquired and fielded outside of the normal POM and acquisition processes to bridge capability gaps and meet urgent warfighter requirements.

objective value

Value of an attribute that is applicable when a higher level of performance delivers significant increased operational effect, or decreased operational risk, if it can be delivered at an affordable life-cycle cost. The objective value is the desired operational goal that is achievable but at a higher risk in life-cycle cost, schedule, and technology. Performance above the objective does not justify additional expense.

operational architecture

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.

operational effectiveness

Measure of the overall ability of a system 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 environment

A composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander.

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, safety, human factors, habitability, manpower supportability, logistics supportability, environment effects, and training requirements.

operational view

Description of tasks and activities, operational elements, and information exchanges required to accomplish DoD missions. DoD missions include both warfighting missions and business processes. The OV contains graphical and textual products that comprise an identification of the operational nodes and elements, assigned tasks and activities, and information flows between nodes. It defines the type of information exchanged, the frequency of exchange, which tasks and activities are supported by the information exchanges, and the nature of information exchanges.

overarching Integrated Product Team

Team composed of representatives from appropriate functional disciplines working together to build successful programs, identify and resolve issues, and make sound and timely recommendations to facilitate decision-making. There are three types of IPTs: the OIPT focuses on strategic guidance, program assessment, and issue resolution, WIPTs that

identify and resolve program issues, determine program status, and seek opportunities for acquisition reform, and PIPTs that focus on program execution and may include representatives from both government and industry after contract award.

program, project, or product manager

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 IS.

quick-reaction capabilities

The QRCs encompass the organizations, policies, processes, and materiel or nonmateriel solutions that collectively support Army global warfighter requirements.

retention objective

The RO is the quantity of major end items of equipment that the Army will retain once procurement is complete to support life-cycle management.

Special Operations Command Requirements Evaluation Board

The SOCREB as the Special Operations JCB responsible for managing and approving Special Operations Peculiar capability-requirement documents in accordance with independent validation authorities identified in the CJCSI 3170.01 series.

Special Operations Forces Capabilities Integration and Development System

The SOFCIDS is the process used by USSOCOM to fulfill its JROC authorities to certify or endorse and validate Special Operations-Peculiar (SO-P) capabilities.

special operations peculiar

SO-P capabilities are equipment, material, supplies, and services required for special operations missions for which there is no Service common requirement.

standard equipment

Standard Equipment is a type classification for materiel acceptable for the mission intended. It is capable of being supported in its intended environment, and acceptable for introduction into the Army inventory.

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 logistics and personnel services required to maintain and prolong operations until successful mission accomplishment.

synchronization

The arrangement of military actions in time, space, and purpose to produce maximum relative combat power at a decisive place and time.

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

A training proponent-developed master planning document that addresses training required to introduce a new or improved item of materiel into the force. The 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.

system-of-systems

A set or arrangement that results when independent and useful systems are integrated into a larger system that delivers unique capabilities. The SOS may deliver capabilities by combining multiple collaborative and independent-yet-interacting systems. The mix of systems may include existing, partially developed, and yet-to-be designed independent systems.

systems view

Solution architecture views that flow from the OV and describe the systems and their interconnections that provide for or support DoD systems functions.

task

A clearly defined action or activity specifically assigned to an individual or organization that must be done as it is imposed by an appropriate authority.

technical view

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.

threat

The sum of the potential strengths, capabilities, and strategic objectives of any adversary that can limit or negate U.S. mission accomplishment or reduce force, system, or equipment effectiveness. It does not include any of the following:

- a.* Natural or environmental factors affecting the ability or the system to function or support mission accomplishment.
- b.* Mechanical or component failure affecting mission accomplishment unless caused by adversary action.
- c.* Program issues related to budgeting, restructuring, or cancellation of a program.

threat validation

The substantiation of threat documentation for appropriateness and completeness of the intelligence, consistency with existing intelligence positions, and use of accepted analytic tradecraft in developing assessments.

threshold value

Reflects the minimum performance required to achieve the required operational effect, while being achievable through the current state of technology at an affordable life-cycle cost. Performance below the threshold value is not operationally effective or suitable or may not provide an improvement over current capabilities.

training developer

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

Three-dimensional objects and associated computer software developed, fabricated, stand alone, embedded and appended, and procured specifically for improving the learning process. They are categorized as either system or non-system devices.

training support system

A training support related SOS that provides the networked, integrated, interoperable training support capabilities that are necessary to enable an operationally relevant training environment for warfighters anytime, anywhere.

unprogrammed equipment

Equipment type classified standard, but is not listed on the requesting unit's authorization documents, such as, the MTOE or TDA in the quantities requested.

urgent operational need

Capability requirements identified as impacting an ongoing or anticipated contingency operation. If left unfulfilled, UONs result in capability gaps potentially resulting in loss of life or critical mission failure. When validated by a single DoD component, these are known as DoD component UONs. The DoD components, in their own terminology, may use a different name for a UON (such as the Army ONS).

validated online life-cycle threat report

The authoritative threat assessment tailored for and normally focused on one specific MDAP, or major automated IS program, that is authorized for use in the defense acquisition management process.

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