Army Regulation 71–9

Force Management

Warfighting Capabilities Determination

Headquarters
Department of the Army
Washington, DC
15 August 2019

UNCLASSIFIED

SUMMARY of CHANGE

AR 71–9
Warfighting Capabilities Determination

This major revision, dated 15 August 2019—

o   Transfers proponency of the regulation from Deputy Chief of Staff, G –3/5/7 to Deputy Chief of Staff, G–8 (title page).

o   Assigns Deputy Chief of Staff, G–8 as the Army staff lead for management of the Army Requirements Oversight Council process for capabilities development and integration (para 2–13).

o   Adds U.S. Army Forces Command, U.S. Army Materiel Command, U.S. Army Cyber Command, and U.S. Army Test and Evaluation Command as Army Requirements Oversight Council principal members (chap 2).

o   Incorporates policy from Army Directives 2017–31 (Acquisition Reform Initiative #5: Aligning Sustainment Policy to Foster Cost Efficiency and Improved Readiness), dated 15 November 2017 and 2017–34 (Acquisition Reform Initiative #7: Improving Cost Estimation and Resourcing), dated 15 November 2017 (chaps 2, 4, and 10).

o   Incorporates Army Directive 2017–22 (Implementation of Acquisition Reform Initiatives 1 and 2), dated 12 September 2017 (chaps 2, 3, 4, 5, and 8).

o   Describes the revised Army Requirements Oversight Council structure and procedures pertaining to validation and approval of materiel requirements (or required capabilities) (chap 3).

o   Adds description of various analytical efforts used in requirements definition and refinement activities (chap 5).

o   Adds description of the new Army Requirements Development Workforce Training and Certification Program (chap 8).

o   Adds an internal control evaluation (app H).

o   Incorporates select Secretary of the Army Acquisition Reform Initiatives that support the Army Directive timelines for implementation (throughout).

Headquarters
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15 August 2019

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Effective 15 September 2019

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 and responsibilities for commands and agencies that determine the required capabilities for warfighting. It implements guidance in DODD 5000.01 and DODI 5000.02. Also, it implements other capabilities requirements documents, analysis, and capability development products as required in Chairman of the Joint Chiefs of Staff Instruction 5123.01H and the Manual for the Operation of the Joint Capabilities Integration and Development System. This Army regulation emphasizes the linkage of force modernization planning, coordination, integration, and execution of materiel and non-materiel warfighting capabilities determination in support of combatant commands.

Applicability. This regulation applies to the Regular Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve, unless otherwise stated.

Proponent and exception authority. The proponent of this regulation is the Deputy Chief of Staff, G–8. The proponent has the authority to approve exceptions or waivers to this regulation that are consistent with controlling law and regulations. The proponent may delegate this approval authority, in writing, to a division chief within the proponent agency or its direct reporting unit or field operating agency, in the grade of colonel or the civilian equivalent. Activities may request a waiver to this regulation by providing justification that includes a full analysis of the expected benefits and must include formal review by the activity's senior legal officer. All waiver requests will be endorsed by the commander or senior leader of the requesting activity and forwarded through their higher headquarters to the policy proponent. Refer to AR 25–30 for specific guidance.

Army 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 H).

Supplementation. Supplementation of this regulation and establishment of command and 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 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/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 15–1, then the proponent will follow all AR 15–1 requirements for establishing and continuing the group as a committee.

Distribution. This regulation is available in electronic media only and is intended for the Regular Army, the Army National Guard/ Army National Guard of the United States, and the U.S. Army Reserve.

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*This regulation supersedes AR 71–9, dated 28 December 2009 and AD 2017-22, dated 12 September 2017.
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Glossary

Chapter 1
Introduction

1–1. Purpose
This regulation establishes policies and assigns responsibilities for the identification, determination, and integration of required warfighting capabilities within the framework of doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF–P). It applies to the validation and approval of capabilities supporting deliberate force modernization planning and the urgent and emergent needs of operational commanders. This regulation implements the Joint Capabilities Integration and Development System (JCIDS) within the Department of the Army.

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 Army Records Retention Schedule-Army (RRS–A). Detailed information for all related record numbers, forms, and reports are located in ARIMS/RRS–A at https://www.arims.army.mil. If any record numbers, forms, and reports are not current, addressed, and/or published correctly in ARIMS/RRS–A, see DA Pam 25–403 for guidance.

1–6. Policy guidance
a. Governing policies include the following:

(1) DODD 5000.01 and DODI 5000.02, hereafter referred to as the DOD 5000–series unless specified.

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

(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 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 provides Army acquisition guidance for materiel and information systems.

(6) AR 71–32, which prescribes policies and responsibilities for the development and documentation of Army personnel and equipment requirements, and authorizations and associated force management activities.

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

(1) Field commanders document and submit urgent operational requirements for warfighting capabilities via the operational needs statement (ONS) process described in chapter 6 of this regulation and the Joint urgent operational needs (JUONs) processes as specified in DODD 5000.71, DODI 5000.02 and the JCIDS Manual.

(2) Commanders with capability developments missions conduct continued analysis to identify and describe near-through far-term required capabilities across doctrine, organization, training, materiel, leadership and education, personnel, facilities (DOTMLPF) domains.

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

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

c. The U.S. Army Futures Command (AFC) will verify force integration across the DOTMLPF–P, compliance with the Army Concept Strategy family of concepts, which consists of a capstone concept, Army operating concepts, Army functional concepts, concepts directed by the Commanding General (CG), AFC, and supporting concept capability plans (CCP). The Army Family of concepts describes Army operations in support of the future Joint Force Commander and nest within the Joint Family of concepts. Capability proposals not in compliance will not be coordinated for Headquarters, Department of the Army (HQDA) validation and approval.

(1) AFC-developed capability needs analysis (CNA) serves as input for force modernization priorities. These priorities are reflected in the Army Campaign Plan which serves as the control mechanism for the capability determination process, authority for support to studies and experimentation, and provides the linkage between capabilities documentation and the concepts. The CNA outcomes inform integrated capabilities development team (ICDT) efforts.

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

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

d. A new materiel solution for a capability gap will only be developed after all other possible DOTMLPF solutions are deemed non-optimal solutions for the required capability. The priority order of consideration is doctrine, training, leadership and education, organization design, and finally a new materiel solution. Initial capabilities documents (ICDs) will be prepared in accordance with 5123–series format and guidelines to propose a DOTMLPF integrated solution set requiring initiation of a new materiel acquisition program and support a materiel development decision (MDD). A DOTMLPF, the lowercase m signifies no new materiel proposal and, if any, limited materiel solution involvement (for example, additional quantities of an existing capability or changes to distribution), DOTMLPF–P integrated capabilities recommendation (DICR) will be prepared to describe a capability solution set which involves one or more of the DOTMLPF domains, requires reallocation of capabilities, policy change, or requires additional procurement of existing equipment.

e. All acquisition category (ACAT) (ACAT materiel acquisition programs will have a capability development document (CDD) describing the required capability, prepared in accordance with 5123–series, to support a Milestone C decision.) Base operations procurement programs where acquiring or improving equipment for modified table of organization and equipment (MTOE), deployable unit tables of distribution and allowance (TDAs), and information technology/National Security System (IT/NSS) providing interface to deployed units will use a CDD or HQDA-directed requirement. Requirements for ICD and capabilities development document (CDD) are dependent on several variables allowing flexibility in the on-ramp to JCIDS process.

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

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

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

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

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

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

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

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

n. Analysis requirements to support JCIDS/force modernization will be conducted in accordance with DODI 5000.2 and required AFC procedural guides.

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

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

Chapter 2
Responsibilities

2–1. Chief of Staff of the Army
The CSA will—
a. Chair the AROC providing Army approval of recommended DOTMLPF–P capabilities and   implementation guidance for associated funding and programing portfolio actions.
b. Serve as the approval authority for requirements presented to the AROC.

2–2. Under Secretary of the Army
The Under Secretary of the Army will—
a. Serve as the senior advisor to the Secretary of the Army on all business operations and business transformation matters, and in this role provides guidance and oversight on behalf of the Secretary of the Army's business transformation activities.
b. Provide guidance on the issues, problems, and equities presented through Army Business Council (ABC) meetings. Establish the ABC Three-Star Review Group to review and validate requirements presented as Army Business Systems.
c. Serve as the Army's representative to the DOD Defense Business Council.
d. Ensure the Deputy Chief Management Officer—
(1) Oversees business operations, processes, and policies for the Under Secretary of the Army/Chief Management Officer.
(2) Represents the Under Secretary of the Army/Chief Management Officer at the Defense Business Council.
(3) Serves as chair for the ABC Three-Star Review Group.
e. Ensure the Director, Army Office of Business Transformation (OBT) will execute the Secretary of the Army's business transformation initiatives.

2–3. Assistant Secretary of the Army (Acquisition, Logistics and Technology)

The ASA (ALT) will—

a. Upon direction of the Secretary of the Army, serve as the Army Acquisition Executive (AAE), the official responsible for the exercise of authorities and discharge of responsibilities of the component acquisition executive that are set forth in Title 10, United States Code (10 USC) and the DOD 5000–series publications.

b. Be responsible for administering acquisition programs according to DOD policies and guidelines and for the development and validation of system views of integrated architecture.

c. In coordination with Deputy Chief of Staff (DCS), G–8, establish policy for the planning and conduct of AOA.

d. Approve and resource Army advanced technology demonstrations (ATDs).

e. Ensure program executive officers (PEOs) and program/project/product managers (PMs) integrate embedded training capabilities early in the design of new or improved materiel systems.

f. Provide the potential ACAT classification for ICD.

g. Oversee integrated product support (IPS), readiness, supply, services, maintenance, transportation, and related automated logistics systems management.

h. Exercise logistical acceptability and supportability of materiel systems, IPS, materiel release, type classification and logistics research and develop programs for the Army.

i. In coordination with ASA (I&E), ensure emerging Army capabilities are reviewed for potential life cycle environment, safety and occupational health (ESOH) affects for likely materiel solutions based on analyses of similar or existing systems and technologies.

j. Serve as voting member of the Army Requirements and Resourcing Board (AR2B).

k. Serve as Army lead for coordinating and executing nonstandard materiel solutions in response to validated ONS and other quick reaction capability (QRC).

l. Assign office of primary responsibility (OPR) for selected nonstandard equipment and new capability gap ONS.

m. Develop execution plan for JUONs/Joint emergent operational needs (JEONs) and serve as lead for coordinating solutions in response to JUONs/JEONs assigned to the Army.

n. Support DCS, G–8 and DCS, G–3/5/7, in coordination with U.S. Army Materiel Command's (AMC) Life Cycle Management Command, by reviewing designated ONS and other QRC dispositions annually.

o. Provide to AMC in-transit visibility, accountability, and sustainment requirements for nonstandard equipment to enable increased command supply discipline.

p. 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 ACAT IC programs.

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

The ASA (FM&C) will—

a. Provide guidance and oversight to the Army Cost Review Board and approve the Army Cost Position for all major acquisition programs.

b. Provide policy and oversight for the Army's Cost Analysis Manual and Economic Manual and implementation of contractor cost and software data reporting.

c. Provide policy and oversight for cost analysis career field education, training, and referral.

d. Serve as voting member of the AR2B.

e. 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) Forum for possible funding considerations.

2–5. 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, ESOH effects for likely materiel solutions based on analyses of similar existing systems and technologies.

2–6. 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 through the development and integration of 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.

2–7. Deputy Under Secretary of the Army
The Deputy Under Secretary of the Army will participate as a principal member of the AROC in order to inform and advise the CSA on recommended solutions being reviewed for future Army use.

2–8. Chief Information Officer/G–6
The CIO/G–6 will—
a. Review all command, control, communication, and computers /IT/NSS warfighting capability requirements documents ensuring—
(1) Non-materiel 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 are in compliance with information assurance requirements.
(6) Spectrum management criteria are included.
(7) New or modified capabilities have been evaluated against existing systems.
(8) Traceability between capability proposals and information support plans.
b. Serve as executive architect for Technical Architecture (TA); oversees development and validation of technical views of integrated architectures.
c. Have overall responsibility for Army software policy for information systems.
d. Direct and approve standards for data and interoperability of products, to include Joint, combined , and coalition facing programs.
e. Review materiel system programs for compliance with HQDA policy for software reuse, technical and systems architectures, data element standardization, and spectrum management initiatives.
f. Ensure appropriate configuration control of fielded system of system baselines.

2–9. Deputy Chief of Staff, G–1
The DCS, G–1 will—
a. Ensure human systems integration is considered and executed in the non-materiel development and Defense Acquisition System process.
b. Develop, defend, evaluate, and direct the execution of personnel legislation, policy, programs, and budgets for responsive, flexible, and effective human resources within Army operations worldwide.
c. Represent Army human resource equities in Joint concept developments.

2–10. Deputy Chief of Staff, G–2
The DCS, G–2 will—
a. Participate as a member of the AROC in order to inform and advise the CSA on recommended solutions reviewed for future Army use.
b. Have Army Staff (ARSTAF) responsibility for intelligence, counterintelligence, and security support to the systems acquisition process.
c. Establish and implement threat support and documentation policy for force, capability and materiel development activities to include all technology base programs and nontraditional acquisition techniques.
d. Designate HQDA threat integration staff officers to manage the threat integration support process for ACAT I and II programs, ACAT IA programs when required, and to monitor the threat integration support to ACAT III programs.
e. Coordinate with ASA (ALT), HQDA, AFC; AMC, and U.S. Army Training and Doctrine Command (TRADOC) to support U.S Army Intelligence and Security Command (INSCOM); providing emerging intelligence capabilities, and ensuring appropriate capabilities undergo consideration to become Army acquisition programs through the Non-Standard Equipment AROC review process.
f. Provide oversight and coordination with national combat intelligence support agencies during the determination, programmatic delivery and assessment phases of the intelligence, surveillance, and reconnaissance (ISR) quick reaction capability process.
g. Approve and validate threat documentation.

h. Review and monitor the threat support process to ensure consistent application of threat in support of ACAT I and II programs, select programs designated by OSD Test and Evaluation oversight, HQDA-directed studies, and selected CAPDEV directed studies.

2–11. Deputy Chief of Staff, G–3/5/7
The DCS, G–3/5/7 will—

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

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

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

(2) Establish priorities for developing and acquiring non-system 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 to include training, readiness, and force management systems.

c. Document force modernization through development of tables of organization and equipment through application of basis of issue plans.

d. Conduct force feasibility reviews (FFRs) to assess supportability and affordability for structure, manpower, equipment, dollars, facilities and training.

e. Serve as the entry point for operational requirements and establish HQDA policy and guidance related to the Army's QRC organizations and processes.

f. Retain overall responsibility for the Army's urgent operational needs process. Processing goal for an ONS is no later than ten working days from receipt of request. Conduct initial assessment of all ONS requests generated from Equipment Common Operating Picture (ECOP). Goal is to complete initial assessment in one working day.

g.. Serve as -Chairman, Secretariat, and provide oversight and execution of the AR2B, the Army's QRC integration and synchronization forum.

h.. Serve as Army's entry point for all JUONs and JEONs assigned to the Army from the Joint Rapid Acquisition Cell (JRAC). Responsible for development and delivery of OPR request memoranda to the ASA (ALT).

i. Establish policy to integrate Rapid Equipping Force efforts with Army urgent operational need process management.

j. Validate and prioritize institutional support for Army tests and experiments and Joint tests and experiments that have an Army lead.

k. Provide ARSTAF oversight of prioritization, development, synchronization, and approval of architecture in support of warfighting capability requirements determination.

l. Serve as validation authority for all ONS and Mission Essential Equipment List (MEEL) requests. Coordinate and synchronize sourcing solutions with key stakeholders.

m. Maintain the ECOP database, which is the Army's conduit for all ONS and MEEL submissions to HQDA.

n. Develop formal requests for TRADOC to conduct hasty DOTMLPF–P assessments on ONS to support DCS, G–3/5/7 validations decision as required.

o. Develop and provide OPR request memo to ASA (ALT) for selected ONS requiring nonstandard equipment or a new capability.

p. Assist DCS, G–8 in identifying lead organization for conducting the Operational Utility Assessment for rapidly equipped solutions.

q. Ensure threat-based strategy supports the Army Operating Concept.

r. In coordination with DCS, G–8, provide overarching guidance and prioritization from The Army Plan and Modernization Strategy to ensure the alignment of CDDs with Future Force Development Strategy.

s. In coordination with DCS, G–8, determine the relevant elements of information that result in retention objective determination.

2–12. Deputy Chief of Staff, G–4
The DCS, G–4 will—

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

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.

2–13. Deputy Chief of Staff, G–8

The DCS, G–8 will—

a. Develop Army policy and procedural guidance for materiel capabilities developments programs. This includes the capability requirements determination process and its staffing timelines, prioritization, resourcing, and integration of materiel and non-materiel warfighting capabilities.

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

(1) Integrate materiel systems into the force structure.

(2) Conduct Strategic Portfolio Analysis Review (SPAR) to determine affordable investment and sustainment strategies that: support modernization priorities, provide top-down guidance to TRADOC to support the SPAR and AROC strategic decisions, and to confirm the prioritization of resourced capabilities.

c. As lead for materiel capabilities, execute Army implementation of JCIDS in coordination with Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA (ALT)); CG, TRADOC; CG, AFC; and Force Modernization Proponents 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). Support documentation of force modernization through the development of tables of organization and equipment, TDAs, and basis of issue plans.

e. Ensure force integration through synchronized, resource constrained execution of an approved force modernization program.

f. Collaborate with the OBT in the review of information system requirements to determine which governance body (AROC or Army Business Council) will provide oversight of the solution being developed.

g. In coordination with ASA (ALT), establish policy and procedure for the planning and conduct of AOA.

h. 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.

i. Chair the Army SAG providing oversight of AOA and other special interest analyses supporting requirements development and approval. The DCS, G–8, Force Development Directorate is HQDA coordinator for SAG.

j. Assist the ASA (ALT) in preparing acquisition program documentation and adjustments for programming and budgeting.

k. Provide the ASA (ALT) a memorandum to request a MDD review for a proposed solution.

l. Establish the AROC to serve as the governance forum providing Army approval of recommended DOTMLPF–P capabilities and implementation guidance for associated funding and programing portfolio actions.

m. Forward JCIDS documents to the JROC for validation as required.

n. Establish HQDA policy and guidance for the Directed Requirement process.

o. Establish HQDA policy and guidance for determination of retention requirements for Non-standard equipment acquired to address urgent needs.

p. Maintain the catalog of approved requirements documents (CARDS) and assign CARDS reference numbers.

q. Provide final Army approval memoranda including executable guidance to CAPDEVs, JROC memorandums, and any special instructions supporting execution of modernization plans.

r. Provide coordination and comment, liaison, and integration across HQDA, Army commands (ACOMs), Army service component commands (ASCCs) direct reporting units (DRUs), the Joint Staff, and CCDR representatives for the Army JCIDS documents proceeding to the JROC.

s. Serve as AROC Secretariat to provide guidance and discipline to the capability requirements determination process.

t. In coordination with ASA (ALT), establish the specific policies and procedures for the review, integration, and approval of modeling and simulation requirements which complement materiel acquisition policies, and recognize unique requirements of Modeling and Simulation (M&S). Approve Army M&S requirements as a subset of materiel requirements.

u. Serve as Co-chair of the AR2B.

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. Establish policy to address affordability constraints for analysis and investments in future capability development efforts (DODI 5000.02, Enclosure 8, Affordability Analysis and Investment Constraints).

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

bb. 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 ACAT IC programs.

2–14. Chief of Engineers/Commanding General, U.S. Army Corps of Engineers
The COE will—

a. Advise and assist CAPDEV for those capability and training developments which relate to centers of excellence.

b. Forward all operational concepts and materiel capability proposals to AFC for approval.

c. Conduct research, development, test, and evaluation (RDT&E) to support capabilities determination 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. The USACE will—

(1) Conduct RDT&E to support capabilities determination related to the facilities and engineering aspects of: force protection and antiterrorism; force projection and sustainment; battle-space environment; and to support Army training and readiness in infrastructure and environmental sustainment.

(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.

2–15. The Surgeon General/Commanding General, U.S. Army Medical Command
The TSG/CG, MEDCOM will—

a. Serve as the Army medical MATDEV for assigned programs and be responsible for medical research, development, and acquisition (RDA) functions, to include health facility planning. Advise the AAE, ASA (ALT), ASA (IE&E), and ASARC concerning medical and health hazard issues during acquisition of systems.

b. Exercise oversight to ensure the sufficiency of medical DOTMLPF–P solutions developed by CG, AFC.

c. Develop policy, responsibilities, and procedures to ensure implementation of systems acquisition policy as it applies to combat medical systems, medical readiness and health care programs, and other assigned Army and Joint service capabilities.

d. Assign support responsibilities for medical materiel development and acquisition to agencies and activities under TSG functional control.

e. Recommend to AFC materiel capabilities and associated priorities for medical readiness and health care programs.

f. Establish mission area interface with AFC for all medical programs, ensuring that capabilities and interests of each participating Service are provided full consideration in medical programs for which the Army has lead agency or executive agency responsibility.

g. Forward all materiel capability proposals to AFC for approval.

2–16. Assistant Chief of Staff for Installation Management
The ACSIM will participate as a member of the AROC in order to inform and advise the CSA on recommended solutions reviewed for future Army use.

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 U.S. under all applicable treaties.

(2) International law and the laws of war.

b. Advise and assist AFC for those capabilities developments and training support requirements which relate to the TJAG functional area of interest.

c. Review actions for compliance with environmental law policy.

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

2–18. Chief of Chaplains
The CCH will—

a. Serve as the force modernization proponent for the Chaplain Corps and branch.

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

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

b. Execute the Army medical RDA missions through the U.S. Army Medical Department Center and School (AMEDDC&S) and the U.S. Army Medical Research and Materiel Command (USAMRMC).

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

2–20. Commanding General, U.S. Army Intelligence and Security Command
The CG, INSCOM will—

a. Be a CAPDEV, to include training development, for strategic signals intelligence (SIGINT), information security (INFOSEC), geospatial intelligence/measurements and signature intelligence (GEOINT/MASINT), information operations (IO), and echelon above corps collateral and Special Access Program offensive cyberspace /special purpose electronic attack capabilities.

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

c. Coordinate with the PEO or MATDEV on matters pertaining to acquisition of INSCOM SIGINT, electronic warfare, GEOINT/MASINT, IO and cyberspace operations systems.

d. Coordinate with AFC on capability requirements determination for other INSCOM intelligence security and electronic warfare, IO and cyberspace operations systems, and conduct capability developments for these Army systems at the request of the CG, AFC or when directed by HQDA, the Under Secretary of Defense for Intelligence, or the Director of National Intelligence.

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

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

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

h. Nominate ISR capabilities for evaluation by the N–SE AROC process and support the evaluation and transition of N–SE AROC process directed capabilities to Army acquisition programs.

i. Conduct test and evaluation of assigned systems.

j. Operate the Army Technical Assurance Evaluation program for Offensive Cyberspace Operations capabilities.

2–21. Commanding General, U.S. Army Materiel Command
The CG, AMC will—

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

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

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

d. Assist the CAPDEV in the capability requirements determination process.

e. Provide RDA science and infrastructure input as required.

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

g. Provide transportability engineering advice and analyses to the MATDEV, and CAPDEV, to include training development.

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

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

j. Review all capability requirements documents to assess adequacy of transportability.

k. Serve as Army lead for coordinating and executing the distribution of materiel solutions in response to validated ONS, and coordinate with DCS, G–8 and ASA (ALT) for sustainment requirements and support.

l. Provide DCS, G–8 with proposed sourcing solutions for validated ONS requests and other QRC (JUONs, JEONs, and Warfighter Senior Integration Group (SIG) directives) solutions until which time ECOP allows direct input by AMC.

m. 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.

n. Provide science and technology advice to AFC integrated concept development teams, science and technology (S&T) experimentation workgroups and Capabilities Integration Enterprise Forum to facilitate materiel solutions that are technologically able to meet warfighting challenges and to systematically and holistically develop the future operational environment, explore new warfighting concepts, and ensure alignment of the S&T portfolio.

2–22. Commanding General, U.S. Army Training and Doctrine Command
The CG, TRADOC will—

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

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

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

d. Provide recommendations on Army equities related to Joint and unified action partner capability requirements documents.

e. In coordination with the AR2B, determine applicability of urgent operational needs (UONs) (JUONs/JEONs), Warfighter Senior Integration Group (SIG)-identified Urgent Issue, Secretary of Defense Rapid Acquisition Authority Determination, and Directed Requirements, to future Armywide requirements, and assign to a proponent for follow-up, capability requirements determination, documentation, integration, and synchronization as required. Advise DCS, G–3/5/7 on operational lessons learned and experimentation results/insights relative to ONS, UONs (JUON/JEON), and directed requirements, and potential for Armywide application. Advise AR2B regarding any ongoing DOTMLPF–P developments which may impact AR2B recommendations both from current and future perspectives.

f. Support DCS, G–8 by participation in the AROC Working Groups. Provide insights and descriptive information on current and planned DOTMLPF–P developments.

g. When required, assist ARSTAF in resolving issues with Functional Capabilities Boards (FCBs), Joint Capabilities Board (JCB), and or JROC.

h. Assist DCS, G–3/5/7 and DCS, G–8 with prioritization of DOTMLPF–P solutions for program objective memorandum (POM) input or other funding venues. Participate in program evaluation group (PEG) reviews to present coordinated force modernization proponent funding recommendations (for non-Special Operations unique warfighting capability proposals).

i. Collect, analyze, and integrate lessons learned. Perform detailed DOTMLPF–P analysis on available data and work with individual leaders, Soldiers, unit staffs, ACOM, ASCC, DRU, and the HQDA staff to identify key Army issues and assist in developing both near-term and/or long-term solutions as required.

j. Determine impact of approved ONS and other QRCs on capability development activities. Review ONS and QRCs for DOTMLPF–P implications.

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

l. Provide other QRCs to the Army via TRADOC organizations (Asymmetric Warfare Group and REF).

2–23. Commanding General, U.S. Army Forces Command
The CG, FORSCOM will—

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

b. Establish interface with AFC and DCS, G–8 for capability requirements determination and development.

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

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

e. Represent operational user during AROC validation.

2–24. Commanding General, U.S. Army Futures Command
The CG, AFC will—

a. Lead, provide guidance and vision for the Army's future force modernization enterprise (FFME).

b. Assess and integrate the future operational environment, emerging threats, and technologies to develop and deliver concepts, requirements, future force designs, and supports the delivery of modernization solutions.

c. Posture the Army for the future by setting strategic direction, integrating the Army's FFME, aligning resources to priorities, and maintaining accountability for modernization solutions.

d. Participate as a principal member of the AROC in order to inform and advise the CSA on recommended solutions reviewed for future Army use and when required chairs the AROC.

e. Establish interface with TRADOC and DCS, G–8 for capability requirements determination and development.

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

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

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

i. In coordination with other ACOMs/Army service component commands (ASCCs)/DRUs, provide the future warfighting vision, overarching concepts, current and future force operating capabilities, and the starting points for the warfighting capabilities determination process.

j. Develop and approve the Army Concept Strategy 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. As the Army's operational architect, develop, validate, and integrate operational architectures depicting war-fighting capabilities.

o. Publish concept and capabilities developments guidance.

p. Develop, coordinate, and recommend policy and guidance to provide direction for executing the JCIDS, and manage its implementation and execution within the force modernization proponent community.

q. Manage the JCIDS C–BA process and products, and through teaming arrangements, the force modernization and branch proponents capabilities development efforts.

r. Manage the development of JCIDS capability requirements documents.

s. Integrate and validate capability requirements documents produced by the Army community and forward to DCS, G–8 for validation, prioritization, and approval for resourcing.

t. 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.

u. Develop the Army Experimentation Plan and manage its execution.

v. Assist the AROC in prioritizing and justifying warfighting requirements.

w. In coordination with the AR2B, determine applicability of UONs (JUONs/JEONs), Warfighter Senior Integration Group (SIG)-identified Urgent Issue, Secretary of Defense Rapid Acquisition Authority Determination, and Directed Requirements, to future Armywide requirements, and assign to a proponent for follow-up, capability requirements determination, documentation, integration, and synchronization as required. Advise DCS, G–3/5/7 on operational lessons learned and experimentation results/insights relative to ONS, UONs (JUON/JEON), and directed requirements, and potential for Armywide application. Advise AR2B regarding any ongoing DOTMLPF–P developments which may impact AR2B recommendations both from current and future perspectives.

x. Support DCS, G–8 by participation in the AROC Working Groups. Provide insights and descriptive information on current and planned DOTMLPF–P developments.

y. When required, assist ARSTAF in resolving issues with FCBs, JCB, and or JROC.

z. Assist DCS, G–3/5/7 and DCS, G–8 with prioritization of DOTMLPF–P solutions for POM input or other funding venues. Participate in PEG reviews to present coordinated force modernization proponent funding recommendations (for non-Special Operations unique warfighting capability proposals).

aa. When required conduct AOA for ACAT I, IA, and II programs and programs of JROC interest. When required by the Milestone Decision Authority (MDA), conduct AOA or similar analysis for all other ACAT programs.

bb. Validate priorities and provide representation to Army S&T reviews and management teams. Produce the key operational environment and threat documentation necessary to support Army capability proposals.

cc. Support capability requirement documentation by providing critical operational issues and criteria for approval by HQDA and inclusion in the test and evaluation master plans, Validated Online Life Cycle Threats reports, and threat test support packages.

dd. Provide AFC review and validation of all capability proposals, program prioritizations, and funding priorities from TRADOC and non-TRADOC sponsors to ensure integration with current and future force capabilities.

ee. Determine impact of approved ONS and other QRCs on capability development activities. Review ONS and QRCs for DOTMLPF–P implications.

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

gg. Cross-Functional Teams will initiate initial Life Cycle Sustainment Plans at MDD and make them available for the PM team before Milestone B.

hh. Publish a Modernization Strategy update, as needed but at least every 2 years, that contains the authoritative list of investment priorities informed by The Army Plan.

2–25. Commanding General, U.S. Army Special Operations Command
The CG, USASOC will—

a. Establish mission area interface with 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 CG, AFC for integration, validation, and approval.

d. Forward Special Operations Forces unique warfighting capability proposals to CG, AFC for integration as part of the Army current and future force capabilities as required.

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

f. Support field activities, conduct and support testing, and monitor RDA projects to include potential force standardization and interoperability.

g. Participate in warfighting experiments and exercises as appropriate.

2–26. Commanding General, U.S. Army Test and Evaluation Command
The CG, ATEC will—

a. Participate as a member of the AROC in order 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. Assist CAPDEVs in developing operational relevant, total system focused critical operational issues and criteria that can be evaluated, to include training development efforts. Provide advice concerning methods and measures to evaluate the system against the critical operational issues and criteria and advise on the resources and ability to test and evaluate the system.

d. Support the Network Integration Evaluation and Army Warfighting Assessment Programs.

2–27. Commanding General, U.S. Army Space and Missile Defense Command/Army Forces Strategic Command
The CG, SMDC/ARSTRAT will—

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

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

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

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

e. Serve as the CAPDEV for areas of assigned as the Army proponent.

f. Conduct and participate in warfighting experiments.

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

2–28. Commanding General, U.S. Army Cyber Command
The CG, ARCYBER will—

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

b. Assist with the application of 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-attacks.

2–29. Headquarters, Department of the Army staff, staff agencies, Army commands, Army service component commands, and direct reporting units

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

a. Coordinate with AFCfor the Army and Joint integration of capability requirements determination and force modernization proposals prior to submission to HQDA for AROC validation.

b. Participate in and support the AROC process as required.

c. Provide a representative to participate in ICDT or other AFC teaming forums involving the development and maturation of the required capabilities and DOTMLPF–P solutions.

2–30. Commanding General, U.S. Army Medical Research and Materiel Command

The CG, USAMRMC will—

a. Serve for TSG as the medical MATDEV, logistician, and technical/developmental tester and act as MDA responsible for RDA and logistical support for assigned medical materiel capabilities. Plan, program, budget, and execute medical RDT&E tasks that support system RDA to include required system training support products, TADSS, and/or embedded training.

b. Act as the MEDCOM Chief Technology Officer to maintain and manage the medical science and technology base.

c. Serve as the Deputy for Medical Systems to the ASA (ALT). As such, advise the AAE and ASARC concerning medical and health hazard issues during acquisition of systems.

d. Assist the medical CAPDEVs in the requirement determination process.

e. Review capability proposals to determine their adequacy and feasibility and for logistical support aspects of materiel systems to include IPS.

f. Conduct developmental tests, evaluations, and assessments for assigned medical materiel systems and support operational test.

g. Develop and maintain the physiological, psychological, and medical data base to support the health hazard assessment, system safety assessments, and human factors engineering analysis.

h. Evaluate and manage the materiel readiness functions in the medical materiel acquisition process.

i. Responsible for the materiel acquisition of medical non-developmental items (NDI), commercial off-the-shelf items, and sets, kits, and outfits.

2–31. Commanding General, U.S. Army Medical Department Center and School

The CG, AMEDDC&S will—

a. Develop doctrine, organizations, and capability requirements in coordination with the ARSTAF and accordance with Army health care standards established by TSG (see AR 40–60).

b. Conduct medical capability development activities as assigned by CG, AFC and TSG.

c. Conduct and support assigned operational test and evaluation.

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

2–32. Director, U.S. Army Nuclear and Combating Weapons of Mass Destruction Agency

The Director, USANCA will—

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

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

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

(1) Chairman.

(2) As administrative support, 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).

2–33. Capability developers
The CAPDEVs will—

a. Use Army and Joint capstone concepts to develop and integrate operating and functional concepts detailing how the Army will operate as part of a Joint warfighting force. Develop and update concepts as required to define/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 any modeling efforts supporting capability requirements determination.

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 in order to leverage contemporary knowledge/ experience in the development and integration of future capabilities.

e. Conduct CBA of Joint and Army concepts as required. 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. Characterize capability in measurable performance terms to support testing and trade-off analysis.

i. Prepare and forward Army and Joint capability proposal documents for CG, AFC review and validation.

j. Support validation of R&D priorities for key Army science and technology needs.

k. When assigned, conduct AOA or other appropriate analysis for materiel solutions to assess proposed critical technologies for maturity and technical risk.

l. In coordination with DCS, G–8 and ATEC, develop critical operational issues and criteria, as well as reliability and maintainability performance thresholds for capability requirement documents and the test and evaluation master plan.

m. Represent the operational user throughout the acquisition process.

n. In coordination with MATDEV, conduct a crosswalk of CDD to the requests for proposals (RFPs) to verify that system specifications and the statement of work accurately reflect approved operational requirements.

o. Participate with the MATDEV in risk assessments (cost, schedule, and performance trade-off analyses).

p. Establish user constraints, objectives, and requirements for supportability including TADSS; participate in review of RFPs, design reviews, program reviews, in-progress reviews, MDR, ASARC, Defense Acquisition Board (DAB), and other forums to assure user requirements are accurately represented, and ensure early and continuous consideration of supportability.

q. Identify potential doctrinal solutions to resolve or mitigate capability gaps. Produce program directives to define and document a detailed requirement for a doctrine publication.

r. 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.

s. Identify potential training solutions to resolve or mitigate capability gaps. Develop and document training solutions for validation and approval. Prepare training requirements analysis system documents, training publications, training support packages, and training strategies as required. Develop and document requirements for TADSS categorized as non-system in accordance with the JCIDS process.

t. 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.

u. Identify potential personnel solutions to resolve or mitigate capability gaps. Prepare documentation to support personnel domain requirements to include changes to the Military Operational Specialty Code System and forward to U.S. Army Human Resources Command (HRC) for Army wide review.

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

2–34. Program executive officers and direct-reporting program managers and other program, project, and product managers
The PEO and direct-reporting program managers and other PMs will—

a. Assist the CAPDEVs in developing ICD, CDD, and JUON by providing technical, availability, performance, anticipated materiel acquisition cost, and schedule type information as needed.

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

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

d. Fund and conduct concept formulation for all system TADSS in support of assigned system in coordination with PEO for Simulation, Training and Instrumentation.

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 Interoperability and Supportability Certification, acquire DODAF compliant system and technical views that represent the materiel solution that is under contract.

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

h. PEOs program and budget funds to support changes to non-system TADSS resulting from changes or modification to the TADSS supported.

i. PMs and program directors 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 the integration of materiel systems, digitized components and subsystems, and system TADSS/embedded training into Army combat training center instrumentation systems 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 where applicable 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 through input to Army Modernization Plans.

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

p. 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.

q. 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 reflect operational requirements. The CAPDEV will formally certify that the RFP was cross-walked with CDD prior to the publication of the RFP.

Chapter 3
Joint Capabilities Integration and Development System Integration and Decision Forums

3–1. Army Requirements Oversight Council

a. Mission. The AROC advises the CSA for 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 approves modernization requirements consistent with Army strategic priorities. CSA uses the AROC forum to concur with acquisition milestone certifications and Configuration Steering Board changes to cost, schedule and performance. AROC supports CSA assessment and prioritization of integrated capabilities to balance near-term and future force readiness.

c. Validation and approval.

(1) Validation entails review of a capability proposal by operational and functional authorities other than the originator to confirm the feasibility, acceptability, and supportability of the proposal. Approval indicates acceptance of the proposal and commitment of resources to execute. Final approval and commitment of funding will follow the JROC validation and approval process. The validation of the capability proposal, KPPs, and DOT–LPF–P requirements, and approval to resource within established priority, must address:

(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 for maintaining land force dominance.

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

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

(d) Capability definition. The AROC will ensure the operational definition of the capability gap and the proposed solution are clear and consistent with Army and Joint warfighting concepts. Key performance gap and the proposed solution must be clear and consistent with Army and Joint warfighting concepts. Key performance parameters serve as the fulcrum for AROC risk deliberations on operational improvements sought versus technical maturity and costs to field for a capability at the appropriate time and in the appropriate quantities. Opportunities to integrate 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) Materiel development decisions in conjunction with an AROC, when practical to do so.

(d) Proposals describing required capabilities of future Army forces. The AROC will validate all JCIDS documents communicating these proposals prior to formal Joint consideration, including Army Annexes to Joint and other Service Documents and those documents for which an Army proponent is designated lead for a Joint development effort, and Army Annexes required for Army but not Joint Staff approval. The final approval memorandum for the proposal will be signed by the CSA, the Vice Chief of Staff of the Army (VCSA), or CG, AFC at completion of Joint validation through the JROC process unless otherwise delegated.

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

d. Structure. The AROC membership consists of—

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

(2) *Principals.* DCS, G–8 (Secretariat); Assistant Secretary of the Army (Acquisition, Logistics, and Technology); Assistant Secretary of the Army (Financial Management and Comptroller); CG, U.S. Army Materiel Command; CG, U.S. Army Forces Command; CG, AFC (when not chairing the AROC), CG, TRADOC; CG, U.S. Army Cyber Command; CG, U.S. Army Test and Evaluation Command.

(3) *Advisors.* DCS, G–1; DCS, G–2; DCS, G–3/5/7; DCS, G–4; CIO/G–6; Chief, Army Reserve; the Chief, National Guard Bureau (CNGB), or the Director, Army National Guard if so delegated by the CNGB; Commander U.S. Army Research, Development and Engineering Command; Military Deputy, Assistant Secretary of the Army (Acquisition, Logistics, and Technology); Assistant Secretary of the Army (Financial Management and Comptroller) Deputy for Cost and Economics; Director of the Army Staff; DCS, G–8, Director, Programs, Analysis and Evaluation; DCS, G–8, Force Development; General Council; The Judge Advocate General; Director, Congressional Legislative Liaison; CGs of Centers of Excellence; TRADOC Capabilities Managers; Program Executive Officers/Program Managers; and other ARSTAF, Army Secretariat offices or commands/agencies as appropriate for topic or issue.

e. Roles.

(1) *AROC principals and advisors.* The AROC principals and advisors will advise the CSA in assessment and prioritization of DOTMLPF–P integrated capabilities, validate and approve proposals for rapid insertion of technologies to address current capability needs when solution extends into the POM, and advise on strategies to resolve capability gaps and resultant changes to modernization programs and plans. The AROC will validate JCIDS documents in support of CSA approval 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 Combat Developer, and Army Annexes required for Army but not JROC community validation.

(2) *AROC Secretariat.* The AROC Secretariat coordinates and synchronizes all requirements and calendars for AROC meetings. The Secretariat will publish calendar information to AROC Principals and Advisors on the meeting, topic, and any special information directed by the DCS, G–8 or VCSA and publish AROC minutes. The Secretariat also schedules

and runs the requirements integration synchronization meetings (RISMs) and serves as the AROC Capabilities Board (ACB) and the AROC Review Board (ARB) Secretariats.

(a) Requirements integration staff officer. The RISO is the DCS, G–8 DOTMLPF–P functional integrator for specific focus areas (aligned with Directorate of Materiel (DOM) Divisions), responsible for coordination and integration of functional proposals in the capability and AROC management system (CAMS) assigned to them by the Army 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 Force Development (FD) DOM divisions. Once the RSO closes out the staffing, the RISO then forwards the comments matrix to AFC for adjudication.

(b) Army Gatekeepers. Army Gatekeepers are usually RISOs assigned to the 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 capability subject matter expert within the Directorate of Materiel in Force Development. The subject matter experts identified within an organization provide expertise on the document subject and comments as a guest user in CAMS. The subject matter expert is responsible for inputting comments for themselves and others in their organization on the document coordination comment matrix, and having the required level of general officer or senior executive service equivalent comment approval. 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 improperly provided or irrelevant comments prior to closing out the document staffing.

(3) *U.S. Army Futures Command.* The JCIDS document sponsor is an Army force modernization proponent responsible for executing the capabilities determination process and coordinating with the AFC Gatekeeper to facilitate 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/approval process
Army requirements approval occurs in five stages. The first stage is the Department of Army staffing of the requirements document. This review provides opportunity for ARSTAF, ACOMs, and select ASCCs/DRUs to provide flag-level comment on the proposed capability 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 requirements process begins when the Army requirements document is submitted for review by the JROC community. Select documents will require validation by the JROC. The final stage of 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
a. Staff coordination. An AFC validated JCIDS document is submitted into the CAMS database for Army staffing which includes: ACOMs, ASCCs, and direct reporting units' comment input. After staffing, the documents are reviewed by the AROC Working Group led by the DCS, G–8 DOM divisions. After consideration by the AFC, a recommendation is presented to the DCS, G–8 for decision on the capability recommendation gained through paper approval or the full AROC briefing cycle. Upon completion of the AROC and approval of the document by the JROC (or review depending on level), the document is forwarded for final signature of the CSA. HQDA must minimize processing time of requirements in all cases in order to remain responsive to warfighters. Time limitations must be established and maintained in order to maximize efficiency in the identification, testing, evaluation, acquisition, deployment and transition to disposal of capabilities. For new systems, documentation approvals must be conducted in a manner maximizing capability and minimizing cost and schedule. To this objective, the following time limits must be maintained with exceptions. Capability documents will be developed within 180 days from approval of the CNA gap to submission to AFC, and 90 days from AFC submission to AROC review. Cumulative staffing will not exceed 270 days without approval of the VCSA.

b. Army Gatekeepers/Requirements integration staff officers. Army Gatekeepers manage the CAMS tool to ensure consistency of staff coordination as JCIDS proposals progress through the validation and approval process. They review each proposal upon initial 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 subject matter expert, document integrator, and facilitator of the proposal as it proceeds through the ARSTAF coordination process in CAMS. Upon the completion of the Army and Joint Staff validation and approval processes, close the documentation

process by publishing the CSA/VCSA 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 commenting from numerous users and organizations within the Army. The system allows users to view document information and monitor document progress through AROC validation until submission to the JROC staffing and approval process. The CAMS software technology is supported by DCS, G–3/5/7, Information Management Center.

3–4. Army Requirements Oversight Council 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 AROC Working Groups (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 board one level below the AROC. It advises the AROC on issues within and across the capability portfolios.

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

(a) Support the AROC Chairman and the AROC in executing AROC responsibilities, including liaison with the HQDA Secretariat, ARSTAF, 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.

c. Army Requirements Oversight Council Review Board.

(1) *Description.* The ARB is a one-/two-star board one level below the ACB and advises the ACB and AROC on issues within and across the capability requirement portfolios, and performs other activities at the direction of the ACB or AROC. The ARB is also the delegated approval authority for all Requirements Definition Packages that are derived from Information Technology (IT) Box capability documentation.

(2) *Army Requirements Oversight Council Review Board Chair.* The Director, Force Development serves as the 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.

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

(a) Serves as the first general officer/senior executive service (SES) level AROC review body immediately following the AWG and the completion of initial staffing of documents or as required to review the requirement. The board will not make final decisions on required capabilities, which only the AROC can make.

(b) As a decisionmaking body, the ARB advises and recommends courses of action best suited to executing 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 full AROC.

(c) Ensures AROC topics are suitably developed in accordance with AROC objectives, OSD, and Joint Staff policies and procedures. The ARB also ensures life cycle management considerations are addressed in the capabilities description, cost estimation, and review of program affordability. Affordability is defined as the degree to which the life cycle cost of a proposed capability is in consonance with the long-range modernization, force structure, and manpower plans of the Department of the Army.

(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/or approval if one of the following conditions occurs:

(a) Army Requirements Oversight Council Working Group recommendation. A significant change in cost or schedule which impacts fielding of required capabilities from that program or any associated, complimentary, 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 the APB.

d. Army Requirements Oversight Council Working Groups.

(1) *General.* AWGs are O–6/General Schedule (GS)–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). AFCs perform other activities at the direction of the ACB or AROC Chairs. There are seven standing AWGs corresponding to the Materiel Divisions in DCS, G8–FD.

(2) *Army Requirements Oversight Council Working Group.* The chief of the most closely aligned division within the DCS, G8–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 AFC.

(5) *Recommendation.* The AWG will recommend a capability document for full AROC or paper decision after completion of staffing. If the reason for submission to CAMS is significantly minor or risk free, the AWG can recommend reduced staffing and timelines prior to initiation of the staffing process for comments. If the decision is for a full 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 non-materiel solutions and the option of a DICR before forwarding documents.

(b) Review results of the comment(s) 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 ASA (ALT) Configuration Steering Board (CSB), Joint Staff, or other appropriate forum.

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

(e) Review acquired hardware and capabilities identified through ATDs, the ONS process, directed requirements 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.

3–5. Requirements integration synchronization meeting

a. The RISM is chartered to bring key stakeholders together to prioritize topics for AROC presentation. This prioritization will facilitate alignment of requirement document approval and acquisition milestones. The primary output of the RISM is a prioritized list of requirements documents, staffing strategy for each open requirement document, and an approved AROC calendar.

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

3–6. Joint Requirements Oversight Council

a. Joint Requirements Oversight Council. The JROC shall assist in—

(1) Assessing Joint military capabilities, and identifying, approving, and prioritizing gaps in such capabilities, to meet applicable requirements in the National Defense Strategy under reference a (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 pursuant to reference i, 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) Ensure interoperability, where appropriate, between and among Joint military capabilities.

(b) Are necessary to fulfill capability gaps of more than one-Armed Force, Defense Agency, or other entity of the Department.

(5) Reviewing performance requirements for any existing or proposed capability that the CJCS 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 references n, o, and p (10 USC 2366a(b), 10 USC 2366a(4), 10 USC 2433e(2)).

b. Joint staffing. JCIDS Joint Staff – validation and approval process is found in the JCIDS Operations Manual maintained on-line by the Joint Staff J8.

c. Army roles.

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

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

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

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

(5) The DCS, G–8, Requirements Integration and Assessment Division represents the Army position and frames requirements presented to the JROC for review and approval.

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

Chapter 4
Capabilities Documentation

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

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

b. AFC leads Army concept development and supports Joint concept development through AFC and non-AFC proponents; develops and manages the Army Concept Strategy; develops Army concepts; directs, manages, and synchronizes CCP development through ICDT and AFC/non-AFC proponents; and ensures the integration of land force capabilities in the development of Joint operating, functional, and integrating concepts in coordination with DCS, G–3/5/7 and combatant commands.

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

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

4–2. Initial capabilities document

AFC is responsible for submitting ICD to the DAPR–FDJ Gatekeeper for staff coordination, validation, and approval, and forwarding to Joint staffing. The ICD documents the requirement for a materiel or non-materiel approach, or an approach

that is a combination of materiel and non-materiel approaches, to satisfy a specific capability gap(s). It defines the capability gap(s) in terms of the functional area, the relevant range of military operations, desired effects, time, DOTMLPF and policy implications and constraints. The ICD summarizes the results of DOTMLPF analysis and DOTMLPF approaches (materiel and non-materiel) that may deliver the required capability. The outcome of an ICD could be one or more DICR, DOTMLPF–P change recommendation (DCR), CDD. If an ICD is developed to document the need for a materiel solution, an AOA may be directed to support a MS A decision in accordance with paragraph 5–6.

4–3. Capabilities development document

AFC is responsible for submitting the CDD to the DAPR–FDJ Gatekeeper for staff coordination, validation, and approval, and forwarding to Joint staffing. The CDD captures the information necessary to develop proposed program(s), normally using an evolutionary acquisition strategy. The CDD outlines an affordable increment of militarily useful, logistically supportable, and technically achievable or mature capability. The CDD may define multiple increments if there is sufficient definition of the performance attributes (KPPs, key system attributes, and other attributes) to support approval of multiple increments. Mandatory KPPs, KSAs and other attributes are codified in the JCIDS Manual. Maintainability is directed by Secretary of the Army Directive 2017–31. Several CDDs may be written to support the multiple or complex gaps defined in a single ICD.

4–4. Program affordability assessment and cost estimation

a. An ICD proposed to the AROC will be supported by a rough order of magnitude cost estimate prepared by the acquisition community.

b. Army sponsored CDD must contain a life cycle or total ownership cost estimate, an affordability table, and the source, or approved proposed source, of funding. Life cycle of total ownership costs must be expressed in threshold and objective values and must include the base year and dollar-level for example, thousands ($K) and millions ($M) (see table 4–1). As discussed in 5–11, a cost-benefit analysis must also be included.

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

d. Source of funding examples include—

(1) The source of funding for this program is OSD.

(2) The source of funding for this program is the Joint Program Office.

(3) Funding for this program transferred from (name of program) program.

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

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

Table 4–1
Sample of Army Program Affordability table

	Appropriation	Army Program Element	FY XX	FY XX	FY XX
RDT&E					
Funding					
UFR					
Procurement cost					
Funding					
UFR					

Table 4–1
Sample of Army Program Affordability table—Continued

Sustainment cost					
Funding					
UFR					
Total UFR					

4–5. Catalog of approved requirements document 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 automatically authorize the expenditure of funds. Each program competes for funds in the Army planning, programming, budgeting, and execution (PPBE).

b. The DAPR–FDJ, in coordination with the CAPDEV, training developer (TNGDEV), and MATDEV will conduct an annual update of the CARDS.

c. The DCS, G–8 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 which contains the CARDS reference 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, the program is unfunded for one POM cycle (2 years), or the system is type-classified obsolete.

4–6. Training aids, devices, simulators, and simulations

a. The TNGDEV has the lead responsibility for defining TADSS and works with the MATDEV to develop and field TADSS solutions. TADSS are acquired under two categories: as a system training device or as a NSTD. 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/or collective tasks associated with a specific system or family, family of systems (FoS), or system of systems (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 TADSS requirement is not identified until after the system has received a MS B decision but before MS C, the requirement may be documented in the materiel system CDD or in a stand-alone JCIDS proposal. If a system TADSS requirement is not identified until after the system has received a MS C decision, the requirement will be documented in a stand-alone JCIDS proposal unless it can be added to a following increment.

(2) Non-system TADSS are designed and intended to support general military training and non-system-specific training requirements. The training program evaluation group plans and programs resources for the life cycle of non-system 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.. Modification of TADSS (hardware, software) necessitated by change to the system supported will be 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.

4–7. Other Service capability documents

The DCS, G–8 Gatekeeper will staff other Service capability documents via the CAMS for potential Army equities and interest. When another Service capability document adequately describes Army requirements, the document may be approved as the Army requirement. The Army may also acquire other Service equipment with a national stock number identified through the MATDEV analysis and meeting an approved Army requirement. 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.

4–8. Transition of capability documents

a. Capability documents that have been initiated prior to implementation of this regulation are valid; do not automatically withdraw or rewrite them unless directed to do so by the DAPR–FDJ. If there is a question on revising, rewriting, or updating a currently valid capabilities or older requirements document contact the DAPR–FDJ policy team for guidance.

b. Technological advances, threat changes, or the direction of authority may require changes to approved capability documents. Submit recommended changes to any approved capability document to the DAPR–FDJ Gatekeeper.

c. Approved capability documents are terminated in accordance with this policy and paragraph 4–5*d*.

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 the problem, refine the requirement, frame the decision, assess the options, and provide critical knowledge to assist key decision makers. While understanding, refinement, and framing are continuous processes, assessing and informing are specific to the decision and are focused, iterative actions.

a. Understanding the problem provides the basis for developing a warfighting capability, usually accomplished in the capability based assessment 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 concept of operations and employment, and derive the critical operational issues. 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 which 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, critical operational issues, 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 Force Modernization Proponents (FMP) conduct focused, sustained, and collaborative learning across the institutional Army, operating force, Joint community, industry, academia, and other inter-organizational and multinational partners. The AFC integrates efforts across DOTMLPF–P. The Army approach for future force development follows a think, learn, analyze, and implement construct.

(1) *Think: Establish a sound conceptual foundation for Army modernization.* To ensure our Army's readiness to fight and win as part of a Joint force, Army leaders think clearly about future armed conflict by considering strategic guidance, threats, anticipated missions, feedback from CCDRs and ASCCs, emerging technologies, opportunities to use existing capabilities in new ways, historical observations, and lessons learned. Concepts describe how future Joint and Army forces may operate, and identify capabilities required to accomplish the mission across the range of military operations. Scenarios provide an understanding of the operational environment with insights as to how commanders might employ future capabilities to overmatch peer and near peer adversaries in complex environments.

(2) *Learn: Conduct experiments, wargames, and assessments to learn in a focused, sustained and collaborative manner.* Army leaders learn through physical and intellectual activities (for example, experimentation and wargaming) providing observations and insights into overcoming future force challenges.

(3) *Analyze: Identify capability gaps and mitigating solutions.* The Army uses information from Think and Learn activities to analyze its future force capability requirements. The JCIDS CBA method will be used to produce prioritized future force capability requirements, DOTMLPF–P capabilities, capability gaps, and ideas to solve the capability gaps.

(4) *Implement: Deliver integrated DOTMLPF–P solutions to improve combat effectiveness of the current and future force.* The Army uses priorities from its analysis work to drive JCIDS requirements development activities and inform the Army's future force planning, programming and funding strategy decisions.

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, critical operational issues, 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 the problem heavily influences the scope and direction of the following work. Resolving knowledge gaps is required prior to effectively assessing the options and informing the decision makers.

d. Assessing the options available to the Department of Defense 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 requirement 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 decision at the AROC/MDD 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. Major Defense Acquisition Programs have additional statutory and regulatory requirements for the AOA due to the level of investment involved.

5–3. Pre-Army Requirements Oversight Council/Materiel development decision Army Systems Acquisition Review Council activities

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 need to be accomplishing 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 a process like the CNA. Following that determination, the next step for the selected capabilities is to conduct a CBA. The initial DOTMLPF–P analysis examines all available non-materiel 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 non-materiel 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 concept for employment and initial desired capabilities. The gaps, DOTMLPF–P assessment, concept for employment, 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) *CBA.* The Army conducts focused CBAs as well as an integrated CBA across all FMPs' functions 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, Concepts, approved Defense Planning Scenarios, the Operating Environment, and feedback from the Army Lessons Learned, Combatant Commands and ASCC commanders. The Army's integrated CBA is the CNA. All focused CBAs are incorporated within the CNA.

(2) *CNA ICDT.* Led by the Army Futures Command, the FMPs in collaboration with representatives from the materiel development and resourcing community form the CNA ICDT to conduct, integrate, and aggregate the CNA across selected conceptual requirements, missions, formation-types, and all functional areas. The CNA ICDT provides prioritized future force capabilities development recommendations to help the Secretary of the Army and Chief of Staff of the Army give

force development guidance and assist the ARSTAF and ASA (ALT) with prioritization and resourcing of Army modernization capabilities. The criteria used for CNA prioritization is risk to mission accomplishment. The future force CNA and focused CBAs consist of three distinct phases.

(a) Functional area analysis. The 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 (RC), 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 (measure, criteria and scale) used for consistency across the future force capabilities development community (for example, experimentation, operational mode summary/mission profile (OMS/MP), AOA, testing and evaluation, and S&T).

(b) Functional needs analysis. The 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 FMP conducts 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 (for example, thus must be retained in the POM). Second, tasks not achieved within a condition and/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 (for example, Force Design Update, Campaign of Learning (CoL), S&T, and industry R&D). The prioritized critical capability gaps inform the Army's SPAR and POM future force planning and resourcing decisions.

(c) Functional solution analysis. The FSA identifies "where the Army should focus future investments" using FNA results (inputs and outputs). The FSA identifies, integrates, assesses and prioritizes recommended non-materiel 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, CoL, S&T, and industry R&D activities over a 30 year period aligned to the Army SPAR.

(3) *Business practices.* Army CBAs use the consistent analytic techniques, assessment tools, and standards of performance prescribed by the CNA business practices. All CBA work performed by the FMP and Force Modernization Enterprise will be integrated within the CNA and use the set of automated procedure, assessments, web-based applications, and data standards as contained in the Army Capabilities Assessment Tool (ArCAT).

b. Refining the requirement.

(1) The process of refining the requirement immediately follows a capability based assessment 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 capability based assessment and continues through the approval of the ICD and the materiel development decision. The requirements analysis conducted during this period expands upon previous work to add detail to the concepts of operation and employment, derive the critical operational issues, and begins to refine the desired capabilities in terms of attributes, priorities and their expected contributions to military utility and operational effectiveness.

(2) 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, critical operational issues, desired capabilities, and feasible decision trade space helps inform later development of key attributes and subsequent decisionmaking.

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 concept of operations and employment is critical to the future development of the capability, by providing the context to evaluate operational effectiveness of potential solutions. The concept of operations and employment 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. Concept of operations and employment is contained within an OMS/MP published by the proponent in support of CDD development. An OMS/MP is a time-phased representation of planned operations at the T/C/S level across the full range of military operations consistent with the CNA T/C/S. The proponents responsible for the capabilities document prepare the OMS/MPs. There are two forms of OMS/MPs that serve to identify both formation and system level operational environments.

(1) A formation OMS/MP 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 OMS/MP is as a supporting document for CDD development. Formation OMS/MPs support the MATDEVs', testers', and AMSAA's efforts to field systems that are effectively integrated within a brigade and across the full range of military operations.

(2) A system OMS/MP contains the T/C/S a system must perform so the overall formation's missions can be completed. A system OMS/MP 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 Reliability, Availability and Maintainability (RAM) and serves as the benchmark document for establishing test plans and procedures to assess RAM and other system capabilities. A system OMS/MP 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 CNA capability gaps, concepts, and desired capabilities into the critical operational issues (COI) 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 and any post-independent analysis when appropriate, the requirements analysis identifies the relationships between operational, performance, and system level attributes and unit/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/or attributes' specific performance metrics needed to achieve the operational objective and the precision required in evaluating the 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 Capabilities Developer, MATDEV, and Resourcing Community begin framing the decision by leveraging the CNA products and post-independent 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/or 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 Program Executive Office or Program Manager. The CAPDEV provides the critical capability gaps from CNA 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. DODI 5000.02 outlines constraint requirements for all ACAT 1 level programs.

b. DODI 5000.02 directs component acquisition executives to establish a similar affordability process for ACAT II/III programs.

c. 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 30 to 40 years into the future.

d. Affordability constraints, are established to inform the capability requirements validation authority, AROC, and the program manager 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 Milestone 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 and/or sustainment costs, as appropriate) and inventory goals to help scope the AOA and provide targets around which to consider alternatives.

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

(3) At the Development RFP Release Decision Point, Milestone B, and beyond, binding affordability caps.
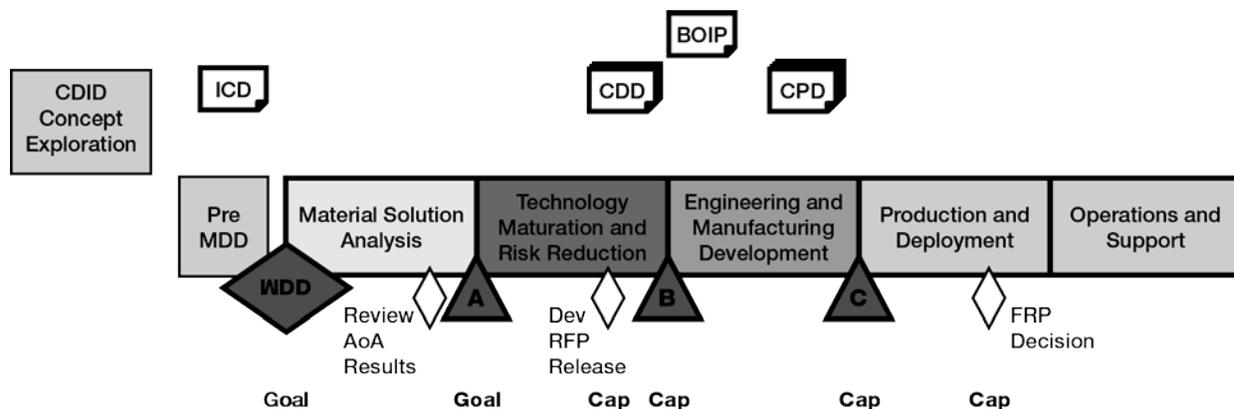
Figure 5–1. Joint Capabilities Integration and Development System and Acquisition Milestone Timeline

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

f. 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 Program Manager.

g. 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.

h. DCS, G–8 is the primary lead for coordinating cross-PEG affordability constraints for Army programs. Enclosure 8 of DODI 5000.02 provides regulatory guidance on conducting this assessment and developing Affordability Constraints.

i. The affordability assessment is an evaluation of what resources the Army is willing to commit to gain this capability. The agencies conducting affordability assessments consider the CNA 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.

j.. In cases where the total system cost does not include procurement of the full Army Acquisition Objective (AAO), the assessment should clearly document the Army Procurement Objective (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.

k. DCS, G–8 is the primary lead for the affordability assessment. DODI 5000.02 provides regulatory guidance on conducting this assessment and developing affordability and investment constraints.

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 Science and Technology program and funding decisions, synchronizing programs with Army strategies and priorities.

b. U.S. Army Combat Capabilities Development Command is the primary lead for technology assessment and partners with the capabilities developers conducting the CNA 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 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 analyses 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 Materiel Development Decision 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 senior leaders through staffing and forums leading up to the AROC/MDD 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 Army Systems Acquisition Review Council records

a. Documentation of the AROC/MDD ASARC will include guidance and questions provided by the requirements and acquisition authorities and other Army senior leaders. 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, major defense acquisition programs (MDAPs) have statutory constraints including a formal AOA with study guidance provided by the Director, Cost Analysis and Program Evaluation (CAPE) in the Office of the Secretary of Defense. The Army requirements and acquisition authorities provide formal input and may have additional questions or analytic requirements in addition to those specified in the CAPE guidance. Enclosure 9 of DODI 5000.02 provides guidance on the process for development of the guidance for MDAP programs and Sections 2366a and 2366b, Title 10, United States Code provide information on the Milestone certifications the AOA must inform.

(2) *Non-major 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/ASARC.

b. The DCS, G–8 (DAPR–FDS) is responsible for compiling and documenting senior leader questions and developing HQDA-level Army analysis guidance for all capability development programs. Additionally, for MDAP, the DCS, G–8 will prepare the Army input to the Director, CAPE and conduct other required coordination with CAPE and Joint Staff.

5–11. Post Army Requirements Oversight Council/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 critical operational issues 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 the provisions of AR 11–18.

(2) *Cost-benefit analysis.* The cost-benefit analysis (C–BA) is the Army's primary tool for enabling resource-informed decisions. Each unfunded requirement and new or expanded program proposal submitted to the Secretary of the Army, Chief of Staff, Army, Under Secretary of the Army or Vice Chief of Staff, Army 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 basis of issue 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 directed requirement as discussed in paragraph 6–5, the DCS, G–8 will staff the directed requirement with supporting C–BA through CAMS. The Deputy Assistant Secretary of the Army (Cost and Economics) is the proponent and approval authority for cost-benefit analyses (see AR 11–18). The CBAs will be conducted in accordance with the U.S. Army Cost-Benefit Analysis Guide guidance for conducting CBAs.

(3) *Prototyping and demonstrations.* When technology or performance are primary concerns and the impact to concept of operations (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/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 most operational effectiveness and/or 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. Paragraph 5–12 provides additional information and guidance on conducting AOA.

(6) *Analysis of software.* Programs consisting primarily of software or application development, or are structured under the Information Technology 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.* The lead agency for the oversight of analysis supporting capability development is the DCS, G–8. The Assistant DCS, G–8 serves as the oversight authority 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, the Director, CAPE has oversight authority for MDAP programs as defined in statute and DODI 5000.02.

(3) *Study advisory group.* Both the Army and OSD use a study advisory group as the forum to provide oversight, guidance and technical approval of analysis supporting capability development and acquisition programs. The A/DCS G–8 serves as the chair of the Army SAG and the primary Army representative to the OSD SAG. The SAG consists of a general officer or senior executive service 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.

5–12. Analysis of alternatives

a. The purpose of an AOA is to formally assess the potential materiel approaches and/or solutions to satisfy the critical operational issues and capability gaps and the potential trade options available to the decision makers. The analysis is normally conducted following the MDD to support the first acquisition milestone (MS) decision review, along with updates for subsequent milestones, 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 pre-existing relevant analysis or be specifically tailored to meet the requirements or acquisition authorities' decision needs. AOA analysts use the prioritized CNA products (for example, capability requirements, T/C/S, critical capability gaps, and non-materiel 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); and consideration of evolutionary acquisition, 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 trades insights to potential solutions and trades. It should also assess cost, system training, and alternative ways to address the critical operational issues 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.

Chapter 6
Army Urgent Operational Needs Process and Other Quick Reaction Capabilities

6–1. Urgent operational needs process and other quick reaction capabilities
Urgent operational needs and other QRC are a means to support commanders 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 urgent operational needs and other QRC processes primarily through the use of ONSs, equipment sourcing documents (ESDs), REF 10-Liners, and Asymmetric Warfare Group (AWG) requests for support (RFS). Additionally, the Army supports the execution of validated JUON and JEON assigned by the JRAC, and directed requirements assigned by the Warfighter Senior Integration Group (W–SIG) or senior leaders within HQDA.

6–2. Operational needs statement
a. Following mission analysis, unit task organization and cross leveling, or lessons learned, commands use the Army ONS process to temporarily document the urgent need for a nonstandard and or un-programmed capability to correct a deficiency or improve a capability that enhances mission accomplishment.

b. Commands submit ONS into the ECOP database. The ONS is then reviewed and endorsed through the unit chain of command. All ONS require DCS, G–3/5/7 validation. The proponent for ONS validation is DCS, G–3/5/7 (DAMO–OD).

c. Authorization received by validated ONS is temporary and for the duration of the mission only. The ONS is not a JCIDS capability document, but rather a request for validation and sourcing of an urgent need. 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. ONS and other QRC submissions are not required for the procurement of non-tactical office

automation and data processing equipment, or commercial items requests that can be procured in accordance with command acquisition policy.

d. Response to an ONS varies.

(1) Validation of the ONS may result in the redistribution of equipment; the directed transfer of pre-positioned equipment; or no action until the completion of an expedited acquisition strategy by ASA (ALT).

(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 command.

(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 and the request returned to the submitting organization.

e. The DCS, G–3/5/7 processing goal for an ONS is no more than ten working days from receipt of request. This includes one day for ONS Triage (DCS, G–3/5/7), two days for validation (DCS, G–3/5/7), five days for sourcing synchronization (DCS, G–3/DCS, G–8), and two days for final staffing (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. Selected ONS will be presented at the AR2B General Officer Steering Committee (GOSC) for validation confirmation and decision.

f. Validation of the ONS does not automatically constitute resourcing. All ONS are UFR and will be self-funded by commands. Commands may submit an offsetting UFR to compete for reimbursement during the Army's Year of Execution Review. If commands assess an inability to self-fund, the command may present a UFR to the HQDA BRP board. All UFRs should be prepared to compete for funding. Prior to presenting the UFR to the BRP, commands are directed to submit the details of the funding requirement to the Army Budget Office via the UFR database links (https://army.deps.mil/army/cmds/hqda_asafm/abo/bui/requirements/sitepages/home.aspx).

g. Operational Utility Assessments. An operational utility assessment conducted by the original requirement sponsor or an expeditionary operational assessment conducted by ATEC is required for any rapidly equipped solution delivered to operational users. The assessment informs the follow-on Disposition Analysis and AROC adjudication led by DCS, G–8 that determines whether to terminate, sustain for current contingency or near-term threats, or transition the capability solution to an acquisition program. The lead organization in concert with AMC will generate an assessment of the capability solution no later than six months after initial delivery.

6–3. Equipping sourcing documents

a. An ESD is a unit request for sourcing a shortage of authorized equipment (HQDA approved MTOE, TDA, MEEL) of on-hand equipment urgently needed to achieve mission success and/or reduce risk of casualties.

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 DCS, G–3/5/7 prioritization decision is still required.

6–4. Other quick reaction capabilities

Other QRCs compliment the Army UON process and are defined as additional Army organizations, processes, and materiel and nonmaterial solutions that help to satisfy the operational needs of the warfighter.

a. Rapid Equipping Force 10-Liner. The REF is an organization within TRADOC chartered to engage operational commanders, and assist with the expeditious identification and rapid resolution of critical materiel capability gaps affecting operational missions. A REF 10-Liner is a means to request a commercial, off-the-shelf or government, off-the-shelf solution to fill a capability gap identified during mission analysis that is limited in scope and quantity, and/or addresses an immediate need. In cases where requests or identified solutions are for Army type-classified equipment, units will be redirected to submit an ONS through ECOP. The REF maintains a detailed status of all REF 10-Liners using the REF Information Sharing Environment (RISE) database. The RISE URL is on the SIPRNET. (See appendix F for further discussion concerning the REF 10-Liner Format.)

b. Asymmetric Warfare Group Request for Support. The AWG is a subordinate organization within TRADOC chartered to advise operational commanders and assist with the expeditious identification and rapid resolution of critical capability gaps affecting operational missions. The AWG's processes are initiated by a unit's submission of an AWG RFS to mitigate or eliminate a capability gap. An AWG RFS is a means to request assistance to develop a solution to a capability gap identified during mission analysis that is limited in scope and quantity, and addresses an immediate need. AWG informs requirements for capability development to mitigate current and emerging asymmetric threats and methods through TRADOC partners, ASA (ALT) and program executive offices. The AWG may also pursue capability development to potential needs identified by Army senior leaders or through AWG Commander determination based on analysis of AWG observations of ongoing Army operations, exercises, and experiments. (See appendix G for further discussion concerning the AWG request for support format.)

c. Army Cyber, Cyber Needs Form. Warfighter cyber needs in support of named operations are time-sensitive and not always synchronized with normal Army ONS and other QRC processes. New Cyber-unique QRC processes and formats continue to evolve in order to support the warfighter. The Cyber Needs Forms is the means for ARCYBER to respond to unique and emerging cyber ONS and QRC requirements. The interim Cyber Needs Form process has absorbed other processes used by Cyber Electromagnetic Activity units within the ARCYBER domain to respond to requests.

d. Army Rapid Capabilities Office. The RCO is a separate entity under a Board of Directors (BOD) consisting of the Secretary of the Army, Army Chief of Staff, and the AAE. Army RCO direction comes from the Board of Directors and their bandwidth is looking primarily at solving strategic gaps. However, their focus is not limited to the strategic level and at times will coordinate directly with the greater Army QRC community to ensure timely delivery of critical capabilities to meet operational needs of the warfighter.

e. Joint urgent operational needs statements and Joint emergent operational needs statements. JUONs and JEONs are submitted by CCDRs to the Joint Staff. JUONs and JEONs are validated by the JROC and assigned to the Services by the JRAC. 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. (https://jrockmdspm.js.smil.mil/bizflow/bizindex.jsp).

f. Warfighter Senior Integration Group (W–SIG). W–SIG identifies urgent Warfighter issues and assigns interest items to the Services. DCS, G–3/5/7 (DAMO–OD) receives Army assigned interest items and is responsible for the synchronization and development of the Army response.

6–5. Army prioritization
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 can be modified at the direction of the President of the United States, Secretary of Defense, Secretary of the Army, or the Army Chief of Staff.

6–6. Coalition operational needs statement
Coalition operational needs statements (CONS). A 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.

6–7. Army Requirements and Resourcing Board
The AR2B was established in November 2004 under VCSA guidance to streamline the process to resource needed capabilities to the warfighter and reduce ARSTAF operational tempo in support of sustained combat operations.

a. The AR2B mission is to validate and prioritize requirements to meet Army strategic commitments to provide timely Title X 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 for Financial Management and Comptroller (ASA (FM&C)). This board serves as the Army's integration and synchronization forum to provide senior leaders with situational awareness, and to assist them in making informed decisions on a myriad of actions related to ONS and QRC support to operations.

c. When required, the AR2B identifies and provides oversight, and approves resourcing decisions to 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. AR2B portfolio includes, but is not limited to, ONS, REF 10-Liners, assigned JUONS and JEONS, W–SIG interest items, and DOTMLPF–P assessments.

e. The DAMO–ODA has Secretariat responsibilities for conduct of the AR2B.

6–8. Budget, requirements, and programs forum
The BRP forum is co-chaired by leaders within 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. The forum 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 forum for a funding strategy. Outputs of the BRP forum 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.

6–9. Operational needs statement open microphone forum

a. 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 HQDA staff to achieve shared visibility, confirm status, or resolve issues related to selected ONS submissions. 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); AMC; ASCCs; and ACOMs. Open microphone slides and other key documents are available on the ECOP site located on the SIPR. Operational field commanders submit and track ONS and ESDs submitted.

b. The ECOP 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.

c. The DCS, G–3/5/7 (DAMO–OD) is responsible for functional operation and support of the ECOP. The DCS, G–3/5/7, Command and Control Support Agency is responsible for software development, maintenance, and upgrade and database hardware requirements.

d. The ECOP universal resource locator is on the SIPRNET.

Chapter 7
Configuring Operational Forces

7–1. Sustainable readiness process

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

7–2. Principles for building tailored forces

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

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

c. Request for forces process. Combatant command identifies operational need for forces and submits request for forces to the Joint Staff for Operations (J–3); submits RFF to fill requirements in their area of responsibility that cannot be sourced by redistribution of internal forces. The J–3 staffs the request for sourcing and drafts order. The JFP develop sourcing

solutions and respond to J–3. The sourced RFF package is reviewed by the Joint Staff and OSD followed by a recommendation from the CJCS to the Secretary of Defense for decision. The Joint Staff then releases orders executing the commitment of forces to the CCDR.

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

7–3. Equipping operational forces

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

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

(1) Modified table of organization and equipment.

(2) Table of distribution and allowance.

(3) The DAMO–ODA validated MEEL.

(4) The DCS, G–3/5/7 (DAMO–FM) validated equipment only TDA, or variant thereof.

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

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

d. Mission essential equipment list. A MEEL may be necessary where the MTOE Plus formula is inadequate, the mission is tasked to an ad hoc organization, the unit's mission is outside the scope of their MTOE standard requirements code (SRC), or submitting an ONS would be extremely cumbersome. The term MEEL was adapted during Operation Iraqi Freedom missions originally as an adjustment to Army standard equipping authorizations to support only ad hoc organizations that did not have an initial equipping document (examples include: military transition teams, convoy security company, and force protection company). Another option includes creating an equipment only TDA. A MEEL is an equipment only document that performs much the same function of the equipment portion of an MTOE or TDA. MEELs are for missions where there is no SRC MTOE or TDA that adequately applies to that mission set. They are temporary documents used by a unit for the duration of the deployment only. The MEEL is an adaptive tool for Army use in managing urgent, organization-wide warfighting equipment requirements. The MEEL is submitted by the ASCC to DCS, G–3/5/7 for validation and posting in the ECOP library. Use of MEEL for a named operation must be authorized by the DCS, G–3/5/7. For clarity, identify MEEL by a specific mission name such as convoy security company, force protection company, or human intelligence team, and keep generic in detail to maintain no greater than UNCLASSIFIED For Official Use Only as the classification; use the standard format found in ECOP library. The MEEL supports Reserve Component unit access where classified IT/NSS systems are not available during pre-deployment planning. MEELs are intended for short term and temporary use. Equipment only TDA are the policy driven solution for supporting areas of operation in persistent conflict. The DCS, G–3/5/7 (DAMO–FM) is the lead for developing, documenting, and revising equipment only TDA.

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

(1) The ONS (see para 6–1).

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

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

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

1. Procurement of non-tactical office automation and data processing equipment should be accomplished in accordance with CIO/G–6 policy.

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

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

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

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

In addition to MTOE, TDA, MEEL, ONS, and so forth, the Army, DOD, and Joint community may establish organizations to respond to urgent or specialized warfighting needs. These organizations work through the DAMO–CIC to establish required documentation of required capabilities in support of current operations. Examples from Operation Enduring Freedom, Operation Iraqi Freedom, and Global War on Terror include HQDA REF, Asymmetric Warfare Group, and DOD Joint Improvised Explosive Device Defeat Organization (JIEDDO). These organizations are normally established and funded with specific charter or functional areas as required. REF and JIEDDO normally focus on materiel solutions, but they may address other DOTMLPF areas. These organizations, while generally focused on materiel solutions, may sometimes address other DOTMLPF areas. HQDA may create special capability insertions which are authorization and fielding of selected equipment or equipment sets. Examples from Operation Enduring Freedom, Operation Iraqi Freedom, and the Global War on Terrorism include the rapid fielding initiative (RFI). The RFI procured, issued, and accounted for Soldier and unit equipment consisting of numerous types of equipment configured for issue by individual, team, and organizational sets to units during pre-deployment and deployment.

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

a. Doctrine, organization, training, materiel, leadership & education, personnel, facilities. The DOTMLPF–P supports a problem-solving construct for assessing current capabilities and managing change. Change deliberately executed across DOTMLPF domains enables the Army to improve its capabilities to provide dominant land power to the Joint Force. The Army utilizes DOTMLPF in training, readiness, and accountability of current organizations, and in changing Army organizations themselves to be more mission capable and versatile.

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

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

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

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

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 combat development and force development in support of the Army's acquisition process.

b. Army 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 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) on-line training as required, subject to guidance and / or limitations of their specific contract.

(b) Contractors may attend DAU resident courses on a walk-in bases subject to guidance and/or limitations of their specific contract.

8–2. Capabilities development workforce identification

All HQDA Secretariat, staff principals, staff agencies, ACOMs, ASCC, and DRUs will identify branch immaterial officers, noncommissioned officers, functional area officers and DA Civilians with responsibilities commensurate with the guidelines below and designate them as members of the Army's Capabilities Development Workforce to facilitate coding of TDAs in accordance with AR 71–32. These individuals are tracked by the DCS, G–8 (DAPR–FDJ) 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 developments, staffing and reviewing documents, conducting coordination, and providing administrative support.

b. Level B. Requirements writers, developers, and/or 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 group, councils, or forums. Level C certification is required for AROC members at the colonel level and below who represent their organization in AROC Working Groups or support flag representatives at the 3 Star AROC Capabilities Board and the 1/2 Star AROC Review Board. This includes representatives from the ARSTAF, FORSCOM, TRADOC, AFC, AMC, ATEC, and ARCYBER.

d. Level D. Requirements validators and approval authorities. At the general officer (GO)/senior executive service (SES) levels, they validate and approve capability requirements documents; provide senior leadership and oversight of Joint Capabilities Integrated Development System (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 3 Star AROC Capabilities Board and the 1/2 Star AROC Review Board.

Table 8–1
Capability Developers Workforce Required Training Courses and Certification Levels

Training course/title	HTAR[1,3]	AOIC[1]	Core Concepts for Requirements Management[2]	TRADOC Capabilities Development Course[3]	Advanced Concepts and Skills[2]	FICSL[1]	Requirements Executive Overview Workshop[2]	Senior Leader Requirements Course
Estimated time to complete	30 days	1 week	18 to 24 hours	10 days	5 days	1 week	1 day	Tailored

Table 8–1
Capability Developers Workforce Required Training Courses and Certification Levels—Continued

Certifica-tion level	A, B, C	A, B	B, C	C	C	D	D (1 to 3 Star/SES)	D (4 Star/Agency head)

Notes:

[1]Required for personnel assigned to the HQDA Staff.

[2]DAU–administered courses

[3]Officers/DA Civilians who complete the Functional Area 50 "Q Course" or Functional Area 49 "ORSA MAC" meet the requirements of the TRADOC Capabilities Courses.

Chapter 9
Strategic Portfolio Analysis Review

9–1. General

a. Strategic Portfolio Analysis Review. The SPAR is a comprehensive, coordinated planning effort across multiple PEGs that develops a roadmap for Army capability development and equipment modernization. SPAR is a forum that combines and replaces the Army's Long-range Investment Requirements Analysis and the Capabilities Portfolio Review process. The SPAR process reviews Army capabilities over a 30 year period and enables informed decisions, provides a venue to assess cross-portfolio priorities, cross-PEG impacts and identifies trade space.

b. Strategic Portfolio Analysis Review purpose and concept. SPAR is designed to assist Senior Army Leaders in re-source allocation decisions within a larger strategic framework. The process begins with iterative strategic updates and guidance sessions with Army Senior Leaders. Analysis then begins with modeling and identification of requirements over a timeframe extending 30 years, beginning with the POM. This allows the Army to conduct long-term strategic resource planning beyond the five year traditional POM planning horizon. The result is prioritized capabilities within each portfolio grouped into: critical capabilities to accelerate, sustain; areas where we can assume some risk; or areas where we can divest.

c. Strategic Portfolio Analysis Review capability assessments. SPAR Capability assessments review each portfolio and synchronize S&T efforts, program development, operational testing efforts, decision points for key leaders, total life cycle cost assessments, acquisition program new starts / transition to sustainment, potential infrastructure adjustments, and time-lines for developing training and requirements documents.

d. Scope and execution. SPAR will assess capabilities each year leading up to the Senior Leaders' POM Off-Site in mid-December. SPAR results will inform the POM guidance for the following POM cycle and should be considered an iterative process beginning with the SPAR kick-off providing strategic guidance and resulting in approval of the Army's POM in the May/June time frame annually.

9–2. Strategic Portfolio Analysis Review implementation guidance

a. Staffing the Strategic Portfolio Analysis Review implementation guidance. The purpose of staffing the SPAR Im-plementation Guidance is to gain concurrence with stakeholders prior to publishing. Annual guidance will be refined and staffed based on feedback and after action reviews from the previous year. Staffing for SPAR is a joint effort between DCS, G–8 FD, ASA (ALT) Resource Integration (RI) and the AFC. Within ASA (ALT), the Deputy Assistant Secretary of the Army for Plans Programs and Resources is one of the Co-Chairs and their representative at SAAL–RI works to synchronize/facilitate activities pertaining to the planning phase of SPAR. Within FD, the Director of Resources (DOR) is one of the Co-Chairs and his representative in the DCS, G–8-FD, Programs and Priorities Division Programming Branch works to synchronize/facilitate activities pertaining to the execution phase of SPAR. Additional specificity with reference to AFC roles will be included in SPAR Implementation Guidance. The draft Implementation Guidance is sent to the stake-holders for review, recommendations, and concurrence. Stakeholder comments and recommendations are adjudicated dur-ing the final review. After final review, the SPAR Implementation Guidance is published.

b. Generating and staffing Strategic Portfolio Analysis Review implementation guidance. Action officers from SAAL–RI and DOR work together to plan, execute and evaluate the SPAR process with the support and assistance of the Director of Material (DOM) Operations Division. Specific tasks and responsibilities are addressed in annual SPAR Imple-mentation Guidance staffed at the Council of Colonels and General Officer Steering Committee level through joint task tracking systems (for example, Task Management Tracker). SAAL–RI adjudicates and compiles inputs from participants

to add to or change the process to ensure it is relevant and meets the intent laid out in the purpose and concept. Changes are then reviewed in AO level meetings including SAAL–RI, DOR, and DOM action officers as well as any additional agencies or staff sections required to adjudicate the recommended changes. Approved changes are added to the SPAR Implementation Guidance and reviewed by all agencies included in the initial review in order to facilitate transparency and concurrence. After the initial review, adjudication and final review at the action officer level, a review is conducted with the same steps at the Council of Colonels and General Officer level.

c. Strategic Portfolio Analysis Review implementation guidance publication. After the SPAR implementation guidance has been staffed and approved by co-chairs and the quorum, it is published to Army Equipment Enterprise System (AE2S).

9–3. Strategic Portfolio Analysis Review execution

To get specific information about SPAR execution and timelines for a given year please sign a SPAR Non-Disclosure Agreement on AE2S and review the SPAR Implementation Guidance.

9–4. Strategic Portfolio Analysis Review security information

SPAR is conducted at the secret level and participation in person or via Video Teleconference is limited to individuals who have signed the specific non-disclosure agreement and submitted security information through their organization's security point of contact (POC) using the SPAR Security Management Office Code to get on the security cleared roster. If either security check is not met the individual will not be admitted to the forum.

9–5. Strategic Portfolio Analysis Review documentation

The current repository for SPAR documents/read-a-heads/executive summaries, and dueouts is maintained on the SIPRNET at Army Knowledge Online–Secret. When individuals are cleared and provide their AKO–S user name (not to be confused with SIPR email) they will be added to the user group and have access to read-a-heads. Access requires a secure account and a non-disclosure agreement for the specific SPAR cycle.

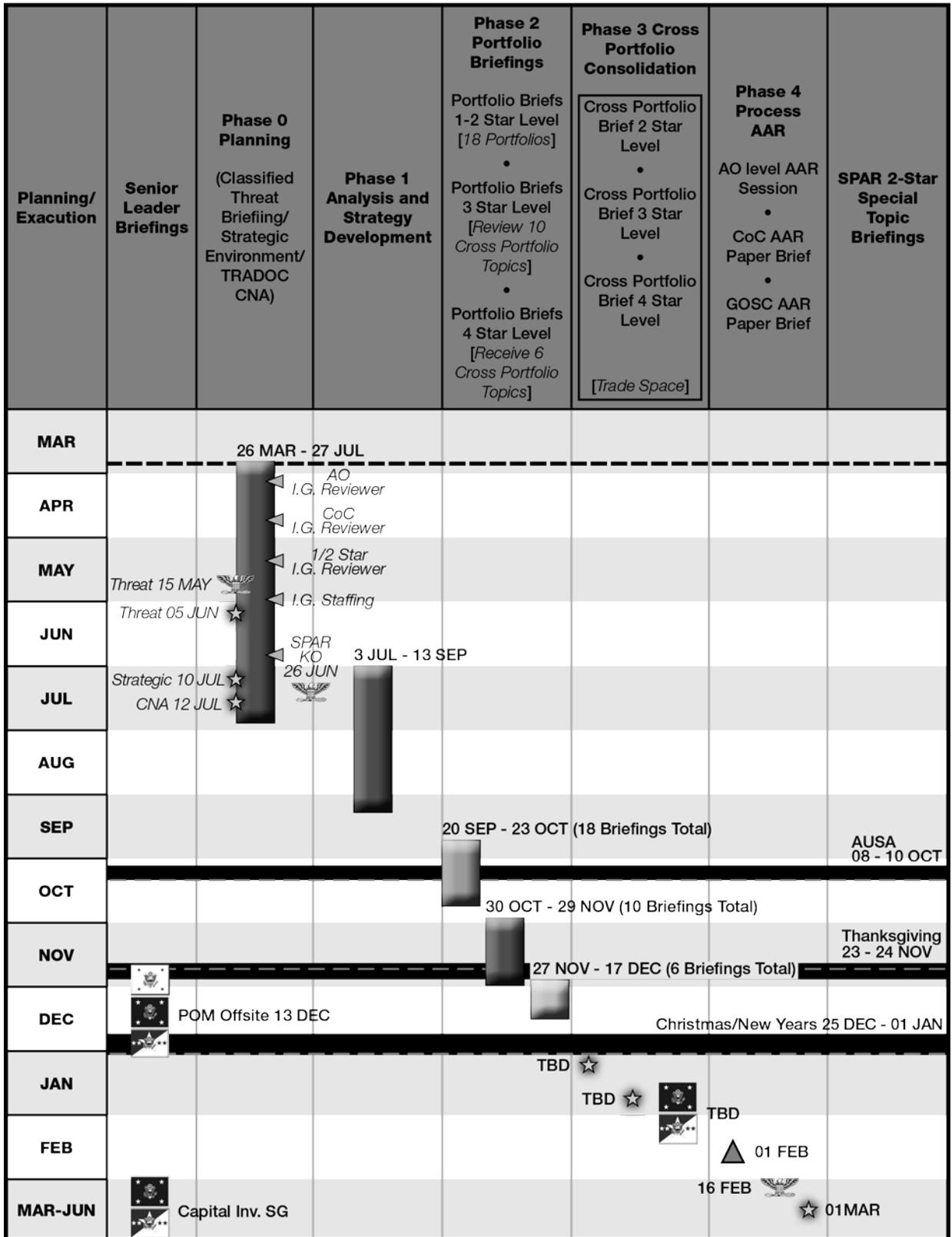| Planning/ Execution	Senior Leader Briefings	Phase 0 Planning (Classified Threat Briefiing/ Strategic Environment/ TRADOC CNA)	Phase 1 Analysis and Strategy Development	Phase 2 Portfolio Briefings Portfolio Briefs 1-2 Star Level [18 Portfolios] • Portfolio Briefs 3 Star Level [Review 10 Cross Portfolio Topics] • Portfolio Briefs 4 Star Level [Receive 6 Cross Portfolio Topics]	Phase 3 Cross Portfolio Consolidation Cross Portfolio Brief 2 Star Level • Cross Portfolio Brief 3 Star Level • Cross Portfolio Brief 4 Star Level [Trade Space]	Phase 4 Process AAR AO level AAR Session • CoC AAR Paper Brief • GOSC AAR Paper Brief	SPAR 2-Star Special Topic Briefings
MAR		26 MAR - 27 JUL					
APR		AO I.G. Reviewer CoC I.G. Reviewer					
MAY	Threat 15 MAY	1/2 Star I.G. Reviewer I.G. Staffing					
JUN	Threat 05 JUN	SPAR KO 26 JUN					
JUL	Strategic 10 JUL CNA 12 JUL		3 JUL - 13 SEP				
AUG							
SEP				20 SEP - 23 OCT (18 Briefings Total)			AUSA 08 - 10 OCT
OCT				30 OCT - 29 NOV (10 Briefings Total)			
NOV				27 NOV - 17 DEC (6 Briefings Total)			Thanksgiving 23 - 24 NOV
DEC	POM Offsite 13 DEC					Christmas/New Years 25 DEC - 01 JAN	
JAN				TBD	TBD	TBD	
FEB						01 FEB 16 FEB	
MAR-JUN	Capital Inv. SG						01MAR

Figure 9–1. Example of a Strategic Portfolio Analysis Review overview timeline

Chapter 10
Determination and Management of Army Acquisition Objective, Army Procurement Objective, and Retention Objective

10–1. General

a. These procedures apply to the Regular Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve for managing requirements for equipment over the system line item number (LIN) life cycle.

b. This chapter establishes Army procedures for the determination and maintenance of the: AAO (the number of major end items the Army will acquire to meet requirements), APO (the number of major end items the Army will procure in a budget year) and retention objective (RO) (the number of major end items the Army intends to retain in the force to meet requirements) for major end items of equipment based on the modernization path requirement (MPR).

c. These procedures support force modernization planning and programming for the acquisition of Equipment to meet specified Army requirements. The Army Equipping Enterprise System (AE2S), maintained by the DCS, G–8, is the official repository for approved AAO, APO, RO, and MPR and quantities. All programming and acquisition documents that describe required quantities will use the data reported in AE2S.

d. The Army conducts annual reviews of all major end items (Class 7) and Medical materiel (Class 8) in conjunction with production of the Structure and Composition System (SACS) file to revalidate AAO, APO and RO, in order to inform annual planning, programming and budgeting Activities to support the Strategic Portfolio Assessment and Review (SPAR) and POM development.

10–2. Joint Capabilities Integration and Development System, Defense Acquisition System and basis of issue plan processes

a. Army Acquisition Objective. Army CDD will include the AAO and its sub-elements along with AAO-basis of issue guidance (BOIG) prior to submission by the force modernization proponent through AFC to DCS, G–8 to the AROC for validation and approval. The full operational capacity (FOC) quantity provided in the program summary paragraph of the CDD will equal the AAO. The basis of issue (BOI) contained in the AAO and BOIG will be written at the level of specificity required for submission of the BOI in the basis of issue plan feeder data (BOIPFD). The AAO is further refined as the requirement matures through the milestones of the program. The CDD or capability production document (CPD) will provide sufficient detail to support development of the BOIPFD.

b. Army Requirements Oversight Council. The AROC forum is the venue through which the AAO and APO are approved. The AROC will validate AAO–BOIG concurrently with the validation and approval of capability documents (for example, CDD or CPD). Following AROC approval, the DCS, G–8 will document the AAO in the AE2S database based on the CDD until the basis of issue plan (BOIP) is approved. Maintaining the AAO begins with an approved BOIP and continues throughout the acquisition program's production and deployment phase. The RO is established once the program achieves FOC, signifying completion of procurement or modification.

c. Affordability. The MDD will inform the initial estimates of AAO to support an AOA and affordability analysis. All elements of AAO must be estimated to effectively establish the affordability constraints. MDD AAO is reported through DCS, G–3/5/7 to DCS, G–8 AE2S with decision documents.

d. Tracking. Materiel solution analysis and Milestone A (MS A) and CDD, if included, must contain the AAO by sub-element to effectively track the requirements and to continue to assess affordability and SPAR planning. The MS A and combatant command AAO are reported through DCS, G–3/5/7 (DAMO–FM) to DCS, G–8 AE2S with decision documents.

e. Milestone B–capability development document. The AAO–BOIG included in the supporting documents of a CDD identifies the AAO and sub-elements using associated facts and assumptions for the materiel solution. This AAO is used for planning and programming, but is to be considered an estimate since the BOIP will not be approved until after a MS B decision. The CDD, AAO–BOIG, and other supporting documents are validated by the AROC in accordance with AR 71–9. Once approved, DCS, G–8 (DAPR–FD) updates the AAO data in AE2S. The CDD AAO–BOIG provides estimated quantities for each sub-element and identifies existing equipment to be replaced. The FOC quantity provided in the CDD will equal the AAO.

f. Milestone C–capability development document. The AAO–BOIG is a supporting document of a CDD identifying the AAO and sub-elements using the BOIP force impact from the approved BOIP and associated sustainment and strategic readiness plans. If the need to establish an APO is identified during CDD validation, the AAO and supporting document will also include the APO, described by sub-element, with associated risk mitigation strategies. The FOC quantity equals

the AAO. If not affordable, an APO will be established based on the operational risk the Army is willing to assume by not fully fielding the capability across the force.

g. Initial basis of issue plan feeder data. The BOIPFD is a compilation of information about a new or improved item of equipment. It contains functions, capabilities, intended use, BOI from the AAO–BOIG, and personnel and support requirements. The MATDEV prepares BOIPFD to initiate BOIP upon receipt of an approved CDD or CPD and an approved MS B or C decision. The MATDEV submits BOIPFD in Standard Study Number-Line Item Number Automated Management and Integrating System (SLAMIS) BOIPFD module for acceptance by the ARSTAF stakeholders and the U.S. Army Force Management Support Agency (USAFMSA). As the system matures, the MATDEV may submit amended BOIPFD to inform future amendments of the approved BOIP. When the BOI in the initial BOIPFD is inconsistent with the approved AAO–BOIG in a CDD or CPD, the DCS, G–8 must render a decision in SLAMIS to either accept BOI deviations or reject and return via the MATDEV with instructions to seek assessment by the force modernization proponent and potential AAO–BOIG update through a CDD or CPD amendment.

h. Basis of issue plan. A BOIP is a requirements document that states the planned placement of quantities of new equipment and associated support items of equipment and personnel, as well as the reciprocal displacement of equipment and personnel. The BOIP is developed by USAFMSA, staffed and approved by the Organizational Requirements Document Approval Board (ORDAB) Council of Colonels (COC) or GOSC hosted by the DCS, G–3/5/7 (DAMO–FM). The BOIP brief provides an overview of the BOIP, AAO or APO with sub-elements and procurement plan by fiscal year. The approved BOIP represents the total requirement for the objective table of organization and equipment (OTOE), Army pre-positioned stocks (APS) unit sets, and training base along with other AAO sub-elements. As part of the BOIP process, the ORDAB COC/GOSC will review and approve AAO or APO adjustments and will refer those BOIP AAO or APO adjustments outside of the ORDAB approving authority to the AROC for decision. Materiel quantity distribution per an APO is not reflected in the BOIP but is governed through managed application of the BOIP to the MTOE through annual command planning guidance and DA Forms 4610-R-E (Equipment Changes in MTOE/TDA (EGA) for TDAs during the Equipment Requirements Validation Board (ERVB). The BOIP will be developed and approved prior to AROC consideration of the associated CDD in support of the Army's MS C decision.

i. Staffing. The ARSTAF stakeholders, ASCCs, and other special interest stakeholders participate in the staffing of the BOIP packet with AAO sub-elements prior to the decision by the ORDAB COC/GOSC and/or AROC process. Once approved, DCS, G–3/5/7 (DAMO–FMD) will publish a decision memorandum with validated AAO/APO adjustments to stakeholders for updating AE2S.

j. Outliers. The initial BOIP should be consistent with the AAO–BOIG from the AROC-validated CDD or CPD. If noted during the HQDA Staffing phase of BOIP that the BOI includes outliers, these outliers will be highlighted on the BOI slide and briefed at the ORDAB COC.

k. Adjustments. Once the BOIP with AAO/APO adjustments is approved, the process shifts to maintaining and updating AE2S.

10–3. Army Acquisition Objective, Army Procurement Objective, and retention objective reviews

a. The summer force lock and resulting SACS file is the governing document to conduct annual validation of AAO, APO and RO for major end items of equipment. Annual review of AAO, APO and RO begins with production of the June SACS file, which 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.

b. HQDA stakeholders will review approved AAO, APO and RO during the SPAR to determine whether proposed changes in LIN quantities for procurement will result in a 10% or greater change in the previously approved AAO or if procurement costs will increase by more than $10M. The AROC will determine whether LINs falling into these criteria should be fully resourced to procure the AAO or if an APO should be established. Proposed changes to an approved AAO or APO, or initial creation of an APO, will be approved via the AROC. AAOs or APOs that do not experience variance will not be referred to the AROC process.

c. Given approved SPAR results, program evaluation groups will program resources adequate to attain the AAO, or APO if established, within the timeframe specified in the JCIDS document or per SPAR decisions. Upon approval of the AAO or APO change or initial creation of APO, the RO for legacy LINs in this modernization path will be adjusted to ensure the overall MPR is met.

d. When the MATDEV proposes changes to required quantities (AAO or APO) documented in the APB for approval by the CSB process, an out of cycle adjustment request will be prepared and submitted for AROC consideration prior to the CSB. This requirement review process applies to both the annual "de-scoping CSB" and the as required "trigger CSB."

e. Review of AAO, APO and RO in conjunction with production of the June SACS file will serve as the annual validation of Army requirements to inform planning, programming and budgeting activities. Cyclic review of LINs in accordance with the LIN validation process in AR 71–32, will not validate or revalidate of AAO, APO and RO.

f. Out of cycle AAO and APO adjustment request submission procedures—

(1) Requesting authorities, including HQDA leads for AAO or APO sub-elements, AFC and other force modernization proponents (such as U.S. Army Special Operations Command, U.S. Army Space and Missile Defense Command/Army Force Strategic Command, U.S. Army Intelligence and Security Command) and AMC are authorized to submit to the DCS, G–8 a formal request memorandum with justification under the signature of a general officer.

(2) DCS, G–8 generates 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. However, no BOIPFD will be submitted in SLAMIS for processing "new increases" to the BOI of an approved BOIP beyond the approved AAO or without a "bill-payer" until a formal adjustment request is submitted and approved.

(3) DCS, G–8 prepares and staffs AAO or APO adjustment request packet. The packet includes: memorandum of justification on DCS, G–8 letterhead with adjustments captured as an enclosure along with other supporting documents as needed. An adjustment to any AAO or APO sub-elements will cause all sub-elements to be revalidated by the HQDA leads. During the formal staffing process, the packet will be staffed with all HQDA leads for sub-elements and DCS, G–3/5/7 (DAMO–SSG) via a formal HQDA tasker (HQDA Task Management Tracker), with a suspense of 14 business days. COL or GS–15 level concurrence is required.

(4) Following staffing, the DCS, G–8 action officer will submit packet with an affordability assessment to DCS, G–8 requirements integration and assessments (DAPR–FDJ) for AROC approval.

(5) Once approved, 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. The decision memorandum will identify the CARDS reference number and an assigned change tracking number.

g. Out of cycle RO adjustment request submission procedures—

(1) DCS G–3/5/7 (DAMO–SSG) is the lead for Army prepositioned sets, activity sets, Army War Reserve Stocks, Army Reserve Stock for Allies, Operational Projects but not Repair Cycle Floats, Operational Readiness Float, objective table of organization and equipment, or training base.

(2) DCS, G–4 generates a RO adjustment request packet when a submitter determines a need to adjust the Army's RO.

(3) DCS, G–4 prepares and staffs RO adjustment request packet. The packet includes: memorandum of justification on G–3/5/7 letterhead with format enclosure at Annex C capturing proposed changes along with other supporting documentations. The packet will be staffed with all HQDA leads for sub-elements and DCS, G–3/5/7 (DAMO–FM/TR/OD/SSG) via a formal tasker in the HQDA Task Management Tracker, with a suspense of 14 business days. COL or GS–15 level concurrence is required.

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

(5) Once approved, DCS, G–3/5/7 will publish to AMC and other stakeholders a decision memorandum with the adjusted RO and will ensure the RO is updated in AE2S. The decision memorandum will include an assigned change tracking number.

10–4. Army Acquisition Objective, Army Procurement Objective, and retention objective stakeholder responsibilities

a. ASA (ALT) and materiel developers—

(1) Ensure MATDEVs reflect the approved AAO or APO (if established), in the APB.

(2) Ensure initial program life cycle cost estimates are updated once a determination is made to acquire an APO versus an AAO quantity.

(3) Ensure the MATDEVs participate in the APO determination when requested.

(4) Ensure MATDEVs use the AFC produced AAO and AAO–BOIG supporting document to the approved CDD or CPD to complete CAPDEV's portion of their BOIPFD submission.

(5) Advise DCS, G–8 programs and priorities (DAPR–FDR) and DCS, G–8 portfolios when acquisition is within two fiscal years of reaching FOC and two fiscal years prior to end of procurement.

(6) Provide AAO quantities within the BOIPFD module in SLAMIS, for new and future amendments for LINs that do not have an AAO documented within the module.

(7) Confirm planning quantities for "Other Requirements" sub-element of the AAO or APO.

b. DCS, G–3/5/7—

(1) Serves as the office of primary responsibility (OPR) for AAO, APO, and RO procedures. In addition, serve as the OPR for staff review of out of cycle AAO/APO adjustments prior to hand-off to DCS, G–8 (DAPR–FDJ) for AROC approval.

(2) Serves as the HQDA lead for prioritization of requirements, BOIPs, and force structure adjustments.

(3) Supports AAO/APO/RO functional forums, AROC forums, and ensure force structure and BOIP changes are fully integrated into the AROC and SPAR process.

(4) Ensures all BOIPs are fully applied to the OTOE position in the SACS file to support the calculation of the Army's requirements for the modernization path and the determination of AAO for new equipment that is expected to replace currently documented LINs.

(5) Serves as the HQDA lead for AAO sub-elements as part of the BOIP process for OTOE, APS unit sets, and training base, and serves as the approving authority for other APS sub-elements recommendations when presented by DCS, G–4 for decision.

(6) Provides the force modernization proponents the approved force impact when requested for completing AAO–BOIG for draft CDDs.

(7) Determines required munitions quantities in accordance with AR 5–13.

(8) Determines non-system specific training device AAO, APO and RO, and provides to AE2S. Update AAO or APO annually.

(9) Provides additive associated support items of equipment quantities not contained in the SACS file to DCS, G–8 for inclusion in the calculations of the MPR or the consolidated TOE update.

(10) Assists DCS, G–8 with maintaining the AAO, APO, RO, and MPR in AES2.

(11) Provides DCS, G–8 with the approved SACS master force file at least annually.

(12) Serves as the AFC and force modernization proponents' single POC for collection, integration and staffing of all 11 sub-elements of the AAO contained in AAO–BOIG.

(13) Coordinates with DCS, G–4 management decisions which will affect the RO.

(14) Provides DCS, G–8 (DAPR–FD) with the unit identification codes that constitute the training base and any Regular Army (COMPO 1) unit sets in which equipment to accompany troops (TAT) requirements are not additive to the AAO until the training base identification is in the SACS file to automate the process.

(15) Serves as approving authority for BOIPs and as part of the BOIP and LIN validation processes, reviews and approves AAO/APO adjustments and will defer those adjustments outside of the ORDAB approving authority to the AROC process for decision.

(16) Serves as approving authority for the RO of LINs.

(17) Maintains a Share Point portal on the DCS, G–3/5/7 Bolte portal to serve as the interim staff coordination and storage site for annual AAO, APO and RO revalidation actions until such time as DCS, G–8 completes modernization of AE2S.

c. DCS, G–4—

(1) Serves as the HQDA lead for the compiling of the following sub-elements of AAO and APO for Class 7 end items:

(a) APS Activity Sets.

(b) APS Army War Reserve Sustainment Stocks.

(c) APS War Reserve Stocks for Allies.

(d) APS Operational Project Stocks.

(e) Repair cycle float.

(f) Operational readiness float.

(2) Gains DCS, G–3/5/7 (DAMO–SSG) approval of APS requirements and DCS, G–8 approval of operational readiness float and repair cycle float requirements prior to forwarding to DCS, G–3/5/7 (DAMO–FMD) POC for inclusion in AAO–BOIG of capability documents by the force modernization proponents.

(3) Serves as the HQDA lead for staffing out of cycle RO adjustment requests for DCS, G–3/5/7 approval on receipt of recommendations.

(4) Submits divesture recommendations for DCS, G–3/5/7 and DCS, G–8 approval as part of the divesture working group initiative.

d. DCS, G–8—

(1) Integrates AAO and APO into AROC, SPAR, and POM forums and establishes metrics for AAO/APO review to include decision points for reviews.

(2) Calculates 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.

(3) Determines, in conjunction with DCS, G–3/5/7 and ASA (ALT), the affordability of the AAO and establishes APO (constrained procurement objectives) as necessary.

(4) Serves as the HQDA lead for the "AAO other requirements" not documented in the SACS file and provides requirements to the force modernization proponents for inclusion in the CDD when requested by DCS, G–3/5/7 (DAMO–FMD).

(5) Serves as the HQDA lead for staffing out of cycle AAO/APO adjustment requests for AROC processing.

(6) Establishes and maintains AE2S as the Army's authoritative repository for AAO, APO, RO, and MPR quantities and the sub-elements for each LIN. Documents periodic review decisions in CAMS and AE2S in a timely manner.

e. Commanding Generals, U.S. Army Training and Doctrine Command, U.S. Army Special Operations Command, U.S. Army Space and Missile Defense Command/Army Force Strategic Command, U.S. Army Intelligence and Security Command, and U.S. Army Medical Command—

(1) Amend approved AROC CDD or CPD when applicable. This change may generate MATDEV submission of amended BOIPFD.

(2) Update and maintain the JCIDS writing guides, and add AAO and sub-elements table to CDD briefing template.

(3) Submit CDD with AAO–BOIG to DCS, G–8 for AROC validation.

(4) Coordinate with the DCS, G–3/5/7 (DAMO–FMD) central POC to collect requirements for AAO sub-elements to complete the AAO–BOIG for draft CDDs.

(5) Assist DCS, G–8, and DCS, G–3/5/7 to determine the acceptable level of operational risk and suitable mitigation strategies when the need to establish an APO is identified.

*f. Commanding General, U.S. Army Materiel Command—*Sustains the Army's RO for major end items of equipment and submits recommendations for RO adjustments to DCS, G–4 when required.

g. The Surgeon General—

(1) Sustains the Army's RO for medical materiel and submits recommendations for RO adjustments to DCS, G–4.

(2) Serves as the HQDA lead for the compilation and submission of AAO and APO sub-elements for Class 8 items.

*h. Commanding General, U.S. Army Force Management Support Agency—*Provides support as required to complete initial validation and annual revalidation of AAO, APO and RO.

Appendix A

References

Section I
Required Publications

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*g*.)

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 220–1
Army Unit Status Reporting and Force Registration-Consolidated Policies (Cited in para 7–3*f*.)

CJCSI 5123.01H
Charter of the Joint Requirements Oversight Council (JROC) and Implementation of the Joint Capabilities Integration and Development System (JCIDS) (Cited in title page.)

DA Pam 25–1–1
Army Information Technology Implementation Instructions (Cited in para 1–6*m*.)

DOD Architecture Framework
Available at https://dodcio.defense.gov. (Cited in para 1–6*f*.)

DODD 5000.01
The Defense Acquisition System (Cited in title page.) (Available at http://www.dtic.mil.)

DODD 5000.71
Rapid Fulfillment of Combatant Commander Urgent Operational Needs (Cited in para 1–6*b*(1).) (Available at http://www.dtic.mil.)

DODI 5000.02
Operation of the Defense Acquisition System (Cited in title page.) (Available at http://www.dtic.mil.)

Section II
Related Publications

AGO 2006–04
Redesignation of the United States Army Training and Doctrine Command Futures Center as the Army Capabilities Integration Center

AGO 2019–01
Assignment of Functions and Responsibilities within Headquarters, Department of the Army

AR 1–1
Planning, Programming, Budgeting, and Execution

AR 5–5
Army Studies and Analyses

AR 5–13
Total Army Munitions Requirements and Prioritization Policy

AR 5–22
The Army Force Modernization Proponent System

AR 11–2
Managers' Internal Control Program

AR 11–18
The Cost and Economic Analysis Program

AR 15–41
Chemical, Biological, Radiological, and Nuclear Survivability Committee

AR 25–30
Army Publishing Program

AR 34–1
Multinational Force Interoperability

AR 40–5
Preventive Medicine

AR 40–10
Health Hazard Assessment Program in Support of the Army Acquisition Process

AR 40–60
Army Medical Materiel Acquisition Policy

AR 56–4
Distribution of Materiel and Distribution Platform Management

AR 70–25
Use of Volunteers as Subjects of Research

AR 70–31
Standards for Technical Reporting

AR 70–38
Research, Development, Test, and Evaluation of Materiel for Extreme Climatic Conditions

AR 70–47
Engineering for Transportability Program

AR 70–57
Army Technology Transfer

AR 70–75
Survivability of Army Personnel and Materiel

AR 73–1
Test and Evaluation Policy

AR 75–15
Policy for Explosive Ordnance Disposal

AR 200–1
Environmental Protection and Enhancement

AR 350–1
Army Training and Leader Development

AR 350–38
Policies and Management for Training Aids, Devices, Simulators, and Simulations

AR 350–52
Army Training Support System

AR 380–5
Department of the Army Information Security Program

AR 380–10
Foreign Disclosure and Contacts with Foreign Representatives

AR 380–381
Special Access Programs (SAPs) and Sensitive Activities

AR 381–11
Intelligence Support to Capability Development

AR 530–1
Operations Security

AR 602–2
Human Systems Integration in the System Acquisition Process

AR 700–15
Packaging of Materiel

AR 700–90
Army Industrial Base Process

AR 700–101
Joint Operating Procedures Management and Standardization of Mobile Electric Power Generating Sources

AR 700–127
Integrated Product Support

AR 700–142
Type Classification, Materiel Release, Fielding, and Transfer

AR 702–6
Ammunition Stockpile Reliability Program

AR 702–11
Army Quality Program

AR 710–2
Supply Policy Below the National Level

AR 735–5
Property Accountability Policies

AR 750–1
Army Materiel Maintenance Policy

AR 750–43
Army Test, Measurement, and Diagnostic Equipment

CJCSI 3010.02E
Guidance for Development and implementation Joint Concepts

CJCSM 3500.04F
Universal Joint Task Manual

DA Pam 25–403
Guide to Recordkeeping in the Army

DA Pam 746–1
Pallets and Storage Aids for Army Use

Defense Acquisition Guidebook
Defense Acquisition Guidebook

DODI 3224.03
Physical Security Equipment (PSE) Research, Development, Test, and Evaluation (RDT&E)

MIL–STD–882E
System Safety

Risk Management Guide for DOD Acquisition
Sixth Edition (v1.0)

SB 700–20
Army Adopted/Other Items Selected for Authorization/List of Reportable Items

10 USC
Armed Forces

10 USC 153
Chairman: Functions

10 USC 163
Role of Chairman of Joint Chiefs of Staff

10 USC 167
Unified Combatant Command for Special Operations Forces

10 USC 181
Joint Requirements Oversight Council

10 USC 2222
Defense business systems: business process reengineering; enterprise architecture; management

10 USC 2446b
Requirement to address modular open system approach in program capabilities development and acquisition weapon system design

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

DA Form 4610–R–E
Equipment Changes in MTOE/TDA (EGA)

Appendix B

Operational Needs Statement Format

This format is also self-contained within the equipment common operating picture 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 line item number or national stock number and noun nomenclature. If a nonstandard piece of equipment is required, describe pertinent operational, physical, and logistical requirements, for example how far to fire, how fast to operate, how heavy or light, specific interoperability requirements, what type of power generation requirements are best suited.

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, required for specific Capabilities Development Workforce positions or as prerequisites for designated Core Courses.

a. Core Courses to achieve Capabilities Development Workforce Certification.

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

(2) *How the Army Runs.* This month-long 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 and required for Certification Level C. Senior leaders may mandate this training for certain members who require Level A or B certification. Training should be completed within the first six months of assignment to a Capabilities Development Workforce position, dependent upon seat availability.

(3) *Action Officer Integration Course.* This one-week in-residence course provides a basic overview of PPBE, JCIDS, Defense Acquisition System (DAS), and Force Management. This is mandatory instruction for personnel assigned to the ARSTAF and is required for Certification Levels A and B. Training should be completed within the first six months of assignment to a Capabilities Development Workforce position, dependent upon seat availability.

(4) *CLR 101. Introduction to the Joint Capabilities Integration & Development System.* This on-line 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 six months of assignment to a Capabilities Development Workforce position.

(5) *RQM 110. Core Concepts and Requirements Management.* This on-line course focuses on the requirements manager role and requirements management 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 six months of assignment to a Capabilities Development Workforce position.

(6) *RQM 310. Advanced Concepts and Skills for Requirements Managers.* 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 upon seat availability.

(7) *RQM 403. Requirements Executive Overview Workshop.* This one 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/SES Certification Level D (no prerequisites). This training should be completed within six months of assignment to a GO/SES Capabilities Development Workforce position.

(8) *Requirement.* Level D certification is required for AROC members at the 3 Star AROC Capabilities Board, the 1/2 Star AROC Review Board which includes flag-level representatives from FORSCOM, TRADOC, AFC, AMC, ATEC, and ARCYBER.

(9) *RQM 413. Senior Leader Requirements Course.* This one-on-one course provides HQDA Level D 4-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 length and scope are tailored to meet of the needs of the senior leaders (no prerequisites). This training should be completed within six months of assignment as an AROC Principal.

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

(11) *TRADOC Capabilities Development Course (TRADOC CDC).* This ten-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 two years of assignment to a Capabilities Development Workforce position, dependent upon 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/agency instruction or policy.

(1) *Analysis of alternatives.* This on-line course provides professionals who lead or directly support AOAs with a comprehensive introduction to conducting AOA activities.

(2) *C–BA.* This on-line course provides professionals who lead or directly support CBAs with a comprehensive introduction to conducting C–BA activities (also a prerequisite for TRADOC CDC).

(3) *Developing Performance Attributes.* This on-line 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/KSA measures of effectiveness, measures of performance, and measures of suitability (also a prerequisite for TRADOC CDC).

Table C–1
Sample of Army Program Affordability table

Training course/title	Analysis of Alternatives[1]	Capability Based Assessments[1]	Developing Performance Attributes[1]
Estimated time to complete	3 to 5 hours	3 to 5 hours	3 to 5 hours

Notes:
[1] DAU–administered courses

C–2. Capabilities Development Training Program Management and Reporting
All HQDA staff principals, staff agencies, ACOMs, ASCC, and DRU with members of the Capabilities Development Workforce will—

a. Designate a primary and alternate point of contact in writing to identify, train, certify, and manage their organization's Capabilities Development Workforce—

(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. 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 training and certification is tracked to enforce compliance.

b. Capabilities Development Workforce Status Reports. Quarterly (31 December, 30 March, 30 June, and 30 September). All HQDA staff principals, staff agencies, ACOMs, ASCC, and DRUs with members of the Capabilities Development Workforce within their organizations will provide the following information to the office of primary responsibility:

(1) Number of Capabilities Development Workforce Level A personnel (Military/Civilian, Contractor).

(2) Number of Capabilities Development Workforce Level B personnel (Military/Civilian, Contractor).

(3) Number of Capabilities Development Workforce Level C personnel (Military/Civilian, Contractor).

(4) Number of Capabilities Development Workforce Level D personnel (Military/Civilian, Contractor).

(5) Number of Capabilities Development Workforce Level A personnel trained/certified (Mil/Civ, Contractor).

(6) Number of Capabilities Development Workforce Level B personnel trained/certified (Mil/Civ, Contractor).

(7) Number of Capabilities Development Workforce Level C personnel trained/certified (Mil/Civ, Contractor).

(8) Number of Capabilities Development Workforce Level D personnel trained/certified (Mil/Civ, Contractor).

Table C–2
Sample of Army Program Affordability table

Certification level	Level A MIL/CIV/CTR	Level B MIL/CIV/CTR	Level C MIL/CIV/CTR	Level D MIL/CIV/CTR	Total MIL/CIV/CTR
Required	24/16/8	15/22/10	88/120/56	6/2/0	133/160/74
Certified	12/5/2	5/10/2	32/34/0	4/1/0	53/50/4

Appendix D

Directed Requirement Information

D–1. General
A request for directed requirement 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 directed requirement 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); basis of issue 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 directed requirement.

f. Statement indicating the directed requirement does not serve as the sole justification for sole source or non-competitive 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 execute 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 shall be prevented or reduced at the source whenever feasible.

b. The CAPDEV, in coordination with the MATDEV, shall ensure that acquisition ESOH staff reviews 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 systematically identify, reduce or eliminate those impacts. 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. System threat assessment report (Replace w/ Validated On-line Life Cycle Threat Report)

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

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

c. The STAR will be—

(1) Approved by DCS, G–2 and validated by the Defense Intelligence Agency for all ACAT I programs at MS A and updated for all ACAT ID programs at MS B and C.

(2) Prepared for DCS, G–2 review and approval for ACAT II and III programs, to include highly sensitive classified programs unless specifically waived by the MDA.

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 full operational capability 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 outlined by type aircraft.

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

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

Appendix F

U.S. Army Rapid Equipping Force 10 Liner (Request for Capability)

F–1. Request for capability

a. Date of Submission: DDMMMYYYY.

b. (U) <u>Requesting unit information</u>: Unit name, Location, Shipping Address, Date arrived in theater, Date departing theater.

c. (U) <u>Requestor information</u>: Requestor name and position, POC Name, Email address and Phone number.

d. (U) <u>Tactical problem</u>: Summarize the problem or capability gap; describe enemy tactics, techniques, and procedures, Photos, Sketches, and so forth.

e. (U) <u>Concept of employment</u>: Describe how the unit will employ the material solution and how you expect it to solve the problem.

f. (U) <u>System characteristics</u>: Describe the physical characteristics of the requirement and what you need it to do. Be as specific as possible.

g. (U) <u>Procurement objective</u>: Total number requested and Basis of Issue/distribution (number per platoon, number per battalion and so forth).

h. (U) <u>Support requirements</u>: Tell REF what support the unit needs for this capability: Maintenance, Training, Field Service Representative support, Spares/Supply, Consumables, and so forth.

i. (U) <u>Available solutions</u>: If the unit has conducted market research or identified available commercial or government off-the-shelf solutions, provide specific information.

j. (U) <u>Coordination accomplished</u>: Describe what efforts have already been made to acquire this capability.

k. (U) <u>Comments</u>: For REF use only.

F–2. Classified document

If this is a classified document, include this block at the bottom of the page—

CLASSIFIED BY: Name and Organization
DERIVED FROM: List applicable Security Classification Guide or other Source Document and date
DECLASSIFY ON: YYYYMMDD

Appendix G

Asymmetric Warfare Group Request for Support Format

G–1. General
Organizations desiring AWG support initiate the request process by submitting an RFS message to the AWG Asymmetric Warfare Operations Center via official e-mail (usarmy.meade.tradoc.mbx.usarmy-ft-meade-tradoc-list-awg-opcen@mail.mil or usarmy.meade.hqda.mbx.meade-awg-opcen@mail.smil.mil), the Army Message Handling System, or other government-approved communication methods.

G–2. Format
a. Who. Originating / requesting (supported) unit designation, and supported unit primary POC information. An AWG RFS is initiated / approved by the supported unit's Command Group or S3.

b. What/Problem. Define the capability gap; what is it the unit is unable to operationally accomplish. Detailed description of what the supported unit wants from AWG in relation to the defined capability gap(s). This enables AWG to determine the appropriate resources.

c. Why/Justification. Reason for urgency such as impact to mission accomplishment. Describe the context of the capability gap(s) and scope.

d. Where. Identify the location(s) where AWG will travel to and provide support. If there are multiple locations, describe the phases of support by location.

e. When. Identify the dates / duration of the requested support. Provide primary and alternate time frames. If there are multiple locations (see above), identify the time frames by location.

Appendix H

Internal Control Evaluation

H–1. Function
The functions covered by this evaluation are for the warfighting capabilities determination.

H–2. Purpose
The purpose of this evaluation is to assist DCS, G–8 CAPDEVs in evaluating the key internal controls listed. It is intended as a guide and does not include all controls.

H–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 five years. Certification that the evaluation has been conducted must be accomplished on DA Form 11–2 (Internal Control Evaluation Certification).

H–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 Materiel Development Decision review provided to ASA (ALT)?

e. Was final approval memoranda, 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 H–4 are answered affirmatively, find the original documents (signed requirements documents, records of the decision, or other correspondence.) in the CAMS.

H–5. Supersession
This is the initial internal control evaluation for AR 71–9.

H–6. Comments
Help make this a better tool for evaluating internal controls. Submit comments to: Deputy Chief of Staff, G–8 (FD–DJI–FDJ), 700 Army Pentagon, 2C349, Washington, D.C. 20301–0700.

Glossary

Section I

Abbreviations

AAE
Army Acquisition Executive

AAO
Army Acquisition Objective

ABC
Army Business Council

ACAT
acquisition category

ACB
AROC Capabilities Board

ACF
Army concept framework

ACOM
Army command

ACSIM
Assistant Chief of Staff for Installation Management

AFC
Army Futures Command

AGO
Department of the Army General Order

AMA
analysis of materiel/non-materiel approaches

AMC
U.S. Army Materiel Command

AMEDDC&S
U.S. Army Medical Department Center and School

AOA
analysis of alternatives

APB
acquisition program baseline

APO
Army Procurement Objective

APS
Army pre-positioned stocks

AR
Army regulation

AR2B
Army Requirements and Resourcing Board

ARB
AROC Review Board

ARCIC
Army Capabilities Integration Center

ARCYBER
U.S. Army Cyber Command

AROC
Army Requirements Oversight Council

ARSTAF
Army Staff

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

ASA (FM&C)
Assistant Secretary of the Army (Financial Management and Comptroller)

ASA (I&E)
Assistant Secretary of the Army (Installations, 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

ATD
advanced technology demonstration

ATEC
U.S. Army Test and Evaluation Command

AWG
AROC Working Group

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
capability and AROC management system

CAPDEV
capability developer

CAPE
Cost Analysis and Program Evaluation

CARDS
catalog of approved requirements documents

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

CCP
concept capability plan

CDC
Capabilities Development Course

CDD
capability development document

CG
commanding general

CIO
Chief Information Officer

CJCSI
Chairman of the Joint Chiefs of Staff instruction

CJCSM
Chairman of the Joint Chiefs of Staff manual

CNA
capability needs analysis

CNGB
Chief, National Guard Bureau

COC
Council of Colonels

COE
Chief of Engineers

COI
critical operational issues

COL
colonel

CONS
Coalition operational needs statement

CPD
capability production document

CSA
Chief of Staff of the Army

CSB
Configuration Steering Board

DAB
Defense Acquisition Board

DAS
Defense Acquisition System

DAU
Defense Acquisition University

DCR
DOTMLPF–P change recommendation

DCS
Deputy Chief of Staff

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

DND
do not deploy

DOD
Department of Defense

DODAF
Department of Defense Architecture Framework

DODD
Department of Defense directive

DODI
Department of Defense instruction

DOM
Director of Materiel

DOR
Director of Resources

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

DOTMLPF–P
doctrine, organization, training, materiel, leadership and education, personnel, facilities and policy

DRRS–A
Defense Readiness Reporting System–Army

DRU
direct reporting unit

ECOP
Equipment Common Operating Picture

ERVB
Equipment Requirements Validation Board

ESD
equipment sourcing document

ESOH
environment, safety, and occupational health

FAA
functional area analysis

FCB
Functional Capabilities Board

FD
Force Development

FFME
future force modernization enterprise

FFR
force feasibility review

FMP
Force Modernization Proponents

FNA
functional needs analysis

FOC
full operational capacity

FORSCOM

FoS
family of systems

FSA
functional solution analysis

FY
fiscal year

GEOINT
geospatial intelligence

GO
general officer

GOSC
General Officer Steering Committee

GS
General Schedule

HQDA
Headquarters, Department of the Army

HRC
U.S. Army Human Resources Command

ICD
initial capabilities document

ICDT
integrated capabilities development team

INFOSEC
information security

INSCOM
U.S. Army Intelligence and Security Command

IO
information operations

IOC
initial operational capability

IPS
integrated product support

IPT
integrated product team

ISR
intelligence, surveillance, and reconnaissance

IT
information technology

JCA
Joint capability area

JCB
Joint Capabilities Board

JCD
Joint capabilities document

JCIDS
Joint Capabilities Integration and Development System

JCTD
Joint capability technology demonstration

JEON
Joint emergent operational need

JFP
Joint Force Provider

JIEDDO
Joint Improvised Explosive Device Defeat Organization

JRAC
Joint Rapid Acquisition Cell

JROC
Joint Requirements Oversight Council

JUON
Joint urgent operational need

KPP
key performance parameter

KSA
key system attribute

LIN
line item number

M&S
Modeling and Simulation

MANPRINT
manpower and personnel integration

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
U.S. Army Medical Command

MEEL
Mission Essential Equipment List

MIL–STD
military standard

MPR
modernization path requirement

MTOE
modified table of organization and equipment

NSS
National Security System (information technology)

NSTD
non-system training device

OBT
Office of Business Transformation

OIPT
overarching integrated product team

OMS/MP
operational mode summary/mission profile

ONS
operational needs statement

OPR
office of primary responsibility

ORDAB
Organizational Requirements Document Approval Board

OSD
Office of the Secretary of Defense

OTOE
objective table of organization and equipment

PEG
program evaluation group

PEO
program executive officer

PM
program/project/product manager

POC
point of contact

POM
program objective memorandum

PPBE
planning, programming, budgeting, and execution

QRC
quick reaction capability

R&D
research and development

RCO
Rapid Capabilities Office

RDA
research, development, and acquisition

RDT&E
research, development, test, and evaluation

REF
rapid equipping force

RFI
rapid fielding initiative

RFP
request for proposal

RFS
request for support

RISE
REF Information Sharing Environment

RISM
requirements integration synchronization meeting

RISO
requirements integration staff officer

RO
retention objective

RSO
requirements staff officer

S&T
science and technology

SACS
Structure and Composition System

SAG
Study Advisory Group

SES
senior executive service

SIGINT
signals intelligence

SIPRNET
secret internet protocol router network

SLAMIS
Standard Study Number-Line Item Number Automated Management and Integrating System

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

SPAR
Strategic Portfolio Analysis Review

SRC
standard requirements code

SRP
sustainable readiness process

STAR
system threat assessment report

STRAP
System training plan

TADSS
training aids, devices, simulators, and simulations

TCS
tasks/conditions/standards

TDA
table of distribution and allowance

TJAG
The Judge Advocate General

TMDE
test measurement and diagnostic equipment

TNGDEV
training developer

TOE
table of organization and equipment

TPE
theater provided equipment

TRADOC
U.S. Army Training and Doctrine Command

TSG
The Surgeon General

TSS
Training Support System

U.S. Army Forces Command

UFR
unfunded requirements

UON
urgent operational need

USACE
U.S. Army Corps of Engineers

USAFMSA
U.S. Army Force Management Support Agency

USAMRMC
U.S. Army Medical Research and Materiel Command

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

USASOC
U.S. Army Special Operations Command

USD (AT&L)
Under Secretary of Defense (Acquisition Technology and Logistics)

USJFCOM
U.S. Joint Forces Command

VCSA
Vice Chief of Staff of the Army

Section II

Terms

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

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

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

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

Advanced technology demonstration (ATD)
A demonstration of the military utility of a significant new technology and an assessment to clearly establish operational utility and system integrity. A determination that the life cycle cost of an acquisition program is in consonance with the U.S. Army's long-range investment and force structure plans.

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

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

Approval
The formal or official sanction of the identified capability described in the capability documentation. Approval also certifies that the documentation has been subject to the JCIDS process.

Architecture
See Enterprise Architecture and Army Enterprise Architecture.

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

Army Capabilities Integration Center (ARCIC) Future Force Developments Directive (AF2D2)
ARCIC directive which supports F2025B efforts and Army modernization by identifying, designing, developing, and integrating required capabilities into the current and future force. The plan is a living document informed by Strategic Guidance and provides concept and capability guidance to the Centers of Excellence in TRADOC.

Army concept framework (ACF)
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, and CG-directed concepts. They are published as TRADOC 525-series pamphlets. Designated proponents develop concepts per the Army Future Force Developments Directive through ICDTs.

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

Automated information system
A combination of computer hardware and computer software, data, and/or telecommunications that performs functions such as collecting, processing, storing, transmitting, and displaying information. Excluded are computer resources, both hardware and software, that are: physically part of, dedicated to, or essential in real time to the mission performance of weapons systems; used for weapon system specialized training, simulation, diagnostic test, and maintenance or calibration; or used for research and development of weapon systems.

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 encompasses DOD validated business operational activities. It ensures that the right capabilities, organization, resources, and materiel are reliably delivered to the operating force.

Capabilities development document (CDD)
A document that captures the information necessary to develop a proposed program(s), normally using an evolutionary acquisition strategy. The CDD outlines an affordable increment of militarily useful, logistically supportable, and technically mature capability. The CDD may define multiple increments if there is sufficient definition of the performance attributes (key performance parameters, key system attributes, and other attributes) to allow approval of multiple increments.

Capabilities Needs Analysis
AFC, in coordination with TRADOC headquarters, centers, and proponents, conducts an annual capabilities-based current and future force Capabilities Needs Analysis coordinated with HQDA and Joint Staff. HQDA and AFC use the products to inform capabilities developments and programming processes.

Capabilities–based assessment (CBA)
The CBA is the Joint Capabilities Integration and Development System analysis process. In the Army it includes three phases: the functional area analysis, the functional needs analysis, and the functional solution analysis. The results of the CBA are used to develop a Joint capabilities document (based on the FAA and FNA) or ICD (based on the full analysis). A CNA or other analysis may be used in lieu of a CBA as long as the analytic rigor and results support the initiation of an ICD or DCR/DICR when required.

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

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

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

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 force development process.

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

Capability production document (CPD)
A document that addresses the production elements specific to a single increment of an acquisition program. No longer initiated in Joint Capabilities Integration and Development System. However, existing CPDs are still present in JCIDS and authorizes the capability throughout its life cycle.

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

Comment priorities
a. Critical. Indicates non-concurrence in the document, for both the O–6 and flag review, until the comment is satisfactorily resolved. *b. Substantive.* Provided because a section in the document appears to be or is potentially unnecessary, incorrect, misleading, confusing, or inconsistent with other sections.

Community of practice
A community of practice (CoP) is a group of people who regularly interact to collectively learn, solve problems, build skills and competencies, and develop best practices around a shared concern, goal, mission, set of problems, or work practice. CoP cut across formal organizational structures and increase individual and organizational agility and responsiveness by enabling faster learning, problem solving, and competence building; greater reach to expertise across the force; and quicker development and diffusion of best practices. CoP structures range from informal to formal and may also be referred to as structured professional forums, knowledge networks, or collaborative environments.

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

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

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

Cost–benefit analysis
C–BA is a narrowly focused economic analysis that applies rigorous analytical techniques to complement, but not replace, experience, judgment, and subject matter expertise. It is 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. 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 and risks associated with that course of action. (U.S. Army Cost-Benefit Analysis Guide-V 3.1)

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

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

DOTMLPF–P change recommendation (DCR)
DOTMLPF–P change recommendation supports Joint requirements to change other than materiel solutions and or Joint policy.

DOTMLPF–P integrated capabilities recommendation (DICR)
Term used to describe/discuss the components of a capability limiting the materiel component to existing, type-classified equipment as the primary system or as required supporting equipment for a new materiel system.

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

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

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

Family of systems (FoS)
A set of systems that provide similar capabilities through different approaches to achieve similar or complementary effects. For instance, the warfighter may need the capability to track moving targets. The FoS that provides this capability could include unmanned or manned aerial vehicles with appropriate sensors, a space-based sensor platform or a special operations capability. Each can provide the ability to track moving targets but with differing characteristics of persistence, accuracy, timeliness, and so forth.

Force feasibility review (FFR) process
The FFR uses results of the Total Army Analysis qualitative analyses as the input for further analysis of the base force. The FFR provides rapid assessment of the affordability and executability of the proposed force structure. If problems result from this assessment, the FFR provides a general officer steering committee with alternatives to field the most capable force possible within available resources. The FFR examines the Total Army Analysis force alternatives and determines whether these can be equipped, manned, trained, sustained, mobilized, and provided facilities within the time and resources available. From these alternatives, the SA and CSA select and lock the POM force.

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.

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

Gatekeeper
Army Gatekeepers assigned to DCS, G–8, 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 Army Gatekeeper has one primary and one alternate point of contact in CAMS for staffing execution, usually to a staff action control officer but it is by the directorate's or agency's call. AFC has a Gatekeeper to function as above on its behalf.

Increment
A militarily useful and supportable operational capability that can be effectively developed, produced or acquired, deployed, and sustained. Each increment of capability will have its own set of threshold and objective values set by the user.

Initial capabilities document (ICD)
Documents the requirement for a materiel or nonmateriel approach or an approach that is a combination of materiel and nonmateriel to satisfy a specific capability gap(s). It defines the capability gap(s) in terms of the functional area, the relevant range of military operations, desired effects, time, and DOTMLPF and policy implications and constraints. The ICD summarizes the results of the DOTMLPF–P analysis and the DOTMLPF–P approaches (materiel and nonmateriel) that may deliver the required capability. The outcome of an ICD could be one or more Joint DOTMLPF–P change recommendations or CDD.

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

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

Integrated Capabilities Develop Team (ICDT)
The ICDT is made up of multi-disciplined personnel, to develop concepts (when required), capability requirements, and DOTLMPF–P solutions. The ICDT Chair, the Deputy Chair, the core membership, and the staffing membership are usually the basic elements of an ICDT. Specific composition is directed in each will be different in the execution.

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

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

Joint Capabilities Board (JCB)
The JCB functions to assist the JROC in carrying out its duties and responsibilities. The JCB reviews and, if appropriate, endorses all Joint Capabilities Integration and Development System and Joint DOTMLPF–P change recommendation documents prior to their submission to the JROC. The JCB is chaired by the Joint Staff Director of Force Structure, Resources and Assessment (J–8). It is comprised of general and flag officer representatives of the Services.

Joint capabilities document (JCD)
The JCD identifies a set of capabilities that support a defined mission area utilizing associated Joint Operations Concepts (JOpsC), CONOP, Unified Command Plan, or other assigned missions. The capabilities are identified by analyzing what is required across all functional areas to accomplish the mission. The gaps or redundancies are then identified by comparing the capability needs to the capabilities provided by existing or planned systems. The JCD will be used as a baseline for one or more functional solution analyses leading to the appropriate ICDs or Joint DOTMLPF–P change recommendation, but cannot be used for the development of capability development or capability production documents. The JCD will be updated as changes are made to the JOpsC, CONOP, or assigned missions.

Joint capability area (JCA)
JCAs are collections of similar capabilities logically grouped to support strategic investment decisionmaking, capability portfolio management, capability delegation, capability analysis (gap, excess, and major trades), and capabilities-based and operational planning. JCAs are intended to provide a common capabilities language for use across many related DOD activities and processes and are an integral part of the evolving capabilities-based planning process. *a. Tier 1 JCA.* A Tier 1 JCA is a high-level capability category that facilitates capabilities-based planning, major trade analysis, and decisionmaking. Tier 1 JCAs are comprised of functional-, operational-, domain-, and institutional-based Joint capabilities. All DOD capabilities can be mapped to a Tier 1 JCA. *b. Tier 2 JCA.* A Tier 2 JCA is a comprehensive capability area logically placed within a Tier 1 JCA. Tier 2 JCAs are capability areas with sufficient detail to help identify operationally required military capabilities, or to help identify Joint Force generation and management capabilities. A Tier 2 JCA scopes, bounds, clarifies, and better defines the intended capability area of its 'parent' Tier 1 JCA. Tier 2 JCAs are intended to reduce duplication between Tier 1 JCAs, and are not Service, mission, or platform specific.

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

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

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

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

Joint potential designator (JPD)
A designation assigned by the Gatekeeper to determine the JCIDS validation and approval process and the potential requirement for certifications/endorsements. a. "JROC interest" designation will apply to all ACAT I/IA programs and ACAT II and below programs where these capabilities have a significant impact on Joint warfighting or have a potentially significant impact across Services or interoperability in allied and coalition operations. All Joint capabilities documents and Joint (DCRs will be designated JROC interest). This designation may also apply to intelligence capabilities that support DOD and national intelligence requirements. These documents will receive all applicable certifications, including a weapon safety endorsement when appropriate, and be staffed through the JROC for validation and approval. An exception may be made for ACAT IAM programs without significant impact on Joint warfighting (that is, business oriented systems). These programs may be designated either Joint integration, Joint information, or independent. b. "Joint integration" designation will apply to ACAT II and below programs where the capabilities and/or systems associated with the document do not significantly affect the Joint Force and an expanded review is not required. Staffing is required for applicable certifications (information technology and NSS interoperability and supportability and/or intelligence), and for a weapon safety endorsement, when appropriate. Once the required certification(s)/weapon safety endorsement are completed, the document may be reviewed by the FCB. Joint integration documents are approved by the sponsoring component. c. "Joint information" designation applies to ACAT II and below programs that have interest or potential impact across Services or agencies but do not have significant impact on the Joint Force and do not reach the threshold for JROC Interest. No certifications or endorsements are required. Once designated Joint information, staffing is required for informational purposes only and the FCB may review the document. Joint Information documents are validated and approved by the sponsoring component.

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

Key performance parameters (KPPs)
Those attributes or characteristics of a system that are considered critical or essential to the development of an effective military capability and those attributes that make a significant contribution to the characteristics of the future Joint Force as defined in the Capstone Concept for Joint Operations. KPPs must be testable to enable feedback from test and evaluation efforts to the requirements process. The KPPs are validated by the JROC for JROC Interest documents, and by the DOD component for Joint Integration, Joint Information, or Independent documents. Capability development and capability production document KPPs are included verbatim in the APB.

Key system attribute (KSA)
An attribute or characteristic considered crucial in support of achieving a balanced solution/approach to a KPP or some other key performance attribute deemed necessary by the sponsor. Key system attributes provide decision makers with an additional level of capability performance characteristics below the KPP level and require a sponsor 4–Star, Defense Agency commander, or Principal Staff Assistant to change. Mandatory KSAs for ACAT I and select ACAT II/III programs include the JROC mandated KSAs described in the JCIDS manual including Reliability. Maintainability is also an Army required KSA, mandated by AD 2017–31.

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

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

Manpower and personnel integration (MANPRINT)
The comprehensive technical effort to identify and integrate all relevant information and considerations regarding the full range of manpower, personnel capabilities, training development and delivery, human factors engineering, system safety, health hazards, and Soldier survivability into the system development and acquisition process to improve Soldier performance, total systems performance, and reduce the cost of ownership to an acceptable level throughout the entire life cycle of a system. MANPRINT is the Army's human systems integration process for systems acquisition.

Materiel developer (MATDEV)
The RDA command, agency, or office assigned responsibility for the system under development or being acquired. The term may be used generically to refer to the RDA community in the materiel acquisition process (counterpart to the generic use of 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
Correction of a deficiency, satisfaction of a capability gap, or incorporation of new technology that results in the development, acquisition, procurement, or fielding of a new item (including ships, tanks, self-propelled weapons, aircraft, and so forth, and related software, spares, repair parts, and support equipment, but excluding real property, installations, and utilities) necessary to equip, operate, maintain, and support military activities without disruption as to its application for administrative or combat purposes. In the case of systems and system of systems approaches, an individual materiel solution may not fully satisfy a necessary capability gap on its own.

Measures of effectiveness (MoE)
Measures designed to correspond to accomplishment of mission objectives and achievement of desired effects.

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

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

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

National Security System
Any telecommunications or information system operated by the United States Government, the function, operation, or use of which—a. Involves intelligence activities.b. Involves cryptology activities related to national security.c. Involves command and control of military forces.d. Involves equipment that is an integral part of a weapon or weapons system.e. Is critical to the direct fulfillment of military or intelligence missions.

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

Net–ready key performance parameter (NR–KPP)
The NR–KPP assesses information needs, information timeliness, information assurance, and net-ready attributes required for both the technical exchange of information and the end-to-end operational effectiveness of that exchange. The NR–KPP consists of measurable and testable characteristics and/or performance metrics required for the timely, accurate, and complete exchange and use of information to satisfy information needs for a given capability. The NR–KPP is comprised of the following elements: a. Compliance with the Net-Centric Operations and Warfare Reference Model. b. Compliance

with applicable global information grid key interface profiles. c. Verification of compliance with DOD information assurance requirements. d. Supporting integrated architecture products required to assess information exchange and use for a given capability.

Non–developmental item (NDI)
Any previously developed item used exclusively for governmental purposes by a Federal agency, a state or local government, or a foreign government with which the United States has a mutual defense cooperation agreement.

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

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

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

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

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

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

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

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

Sponsor
The DOD component, principal staff assistant, or domain owner responsible for all common documentation, periodic reporting, and funding actions required to support the capabilities development and acquisition process for a specific capability proposal. The only exception is for the sponsor of a Joint capabilities document. A combatant command or Functional Capability Board may be the sponsor for the JCD. In this usage, the responsibilities of the sponsor are limited to performing the capabilities-based assessment and developing the JCD for JROC validation and approval.

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

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

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

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

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

System of systems (SoS)
A set or arrangement of interdependent systems that are related or connected to provide a given capability. The loss of any part of the system will significantly degrade the performance or capabilities of the whole. The development of an SoS solution will involve trade space between the systems as well as within an individual system performance.

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

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

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

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

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

Theater provided equipment (TPE)
The TPE is equipment identified by HQDA and positioned forward to offset equipment requirements in the CCDR's area of responsibility. The TPE is distinct from Army prepositioned stock equipment unless otherwise directed by HQDA. The DCS, G–3/5/7 is the validation authority for individual equipment items or entire equipment groups' addition or deletion from the TPE list, to include commercial off-the-shelf equipment. The supported ASCC for that combatant command area of responsibility will manage the property and the local Theater Property Book Office will account for the property in accordance with published accountability guidance.

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

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

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

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

Training devices
TADSS which simulate or demonstrate the function of equipment or weapon systems. These items are categorized as follows: a. *Standalone TADSS.* An autonomous item of training equipment designed to enhance or support individual or collective training. *b. Embedded.* Training that is provided by capabilities designed to be built into or added onto operational systems to enhance and maintain the skill proficiency necessary to operate and maintain that system. Embedded training capabilities encompass four training categories: *(1) Category A–Individual/operator.* To attain and sustain individual, maintenance, and system orientation skills. *(2) Category B–Crew.* To sustain combat ready crews/teams. This category builds on skills acquired from Category A. (3) *Category C–Functional.* To train or sustain commander, staffs, and crews/teams within each functional area to be utilized in their operational role. (4) *Category D–Force Level (Combined Arms Command and Battle Staff).* To train or sustain combat ready commanders and battle staffs utilizing the operational system in its combat operational role. (5) *System.* A TADSS item that supports a specific materiel system or of systems program. *(6) Non-system.* All TADSS not defined as system TADSS. (7) *Simulators.* A training medium that replicates or represents the functions of a weapon, weapon system, or item of equipment generally supporting individual, crew, or crew subset training. Simulators may stand alone or be embedded. *(8) Simulation.* A training medium designed to replicate or represent battlefield environments in support of command and staff training. Simulations may stand alone or be embedded.

Training Support System (TSS)
The TSS provides networked, integrated, interoperable training support capabilities necessary to enable operationally–relevant, full–spectrum, JIIM training for Soldiers, units, and DA civilians through the delivery of products, services, and facilities.

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

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

Validation authority
The individual within the DOD components charged with overall capability definition and validation. In his role as Chairman of the JROC, the Vice Chairman of the Joint Chiefs of Staff is the validation authority for all potential major defense acquisition programs. The validation authority for Joint Capabilities Integration and Development System documents is dependent upon the Joint potential designator of the program or initiative as specified below: a. The JROC Interest—JROC or as delegated. b. Joint Integration—Sponsor. c. Joint Information—Sponsor. d. Independent—Sponsor.