SECNAVINST 5000.2E
1 September 2011

DEPARTMENT OF THE NAVY IMPLEMENTATION AND OPERATION OF THE DEFENSE ACQUISITION SYSTEM AND THE JOINT CAPABILITIES INTEGRATION AND DEVELOPMENT SYSTEM

RECORD OF CHANGES

IDENTIFICATION OF CORRECTION OR CHANGE	DATE OF CHANGE	DATE OF ENTRY	ENTERED BY

DEPARTMENT OF THE NAVY
OFFICE OF THE SECRETARY
1000 NAVY PENTAGON
WASHINGTON DC 20350-1000

SECNAVINST 5000.2E
DASN(RD&A)AP
1 September 2011

SECNAV INSTRUCTION 5000.2E

From: Secretary of the Navy

Subj: DEPARTMENT OF THE NAVY IMPLEMENTATION AND OPERATION OF THE DEFENSE ACQUISITION SYSTEM AND THE JOINT CAPABILITIES INTEGRATION AND DEVELOPMENT SYSTEM

Ref: (a) DoD Directive 5000.01 of 12 May 2003
(b) DoD Instruction 5000.02 of 8 Dec 2008
(c) CJCSI 3170.01G
(d) Manual for the Operation of the Joint Capabilities Integration and Development System, of 31 Jan 2011
(e) MCO 3900.15B
(f) SECNAVINST 5430.7Q
(g) SECNAVINST 5400.15C
(h) SECNAVINST 5090.8A
(i) SECNAVINST 5200.35E
(j) SECNAVINST 5710.25B
(k) SECNAVINST 5223.2
(l) DEPSECDEF Memorandum, Global Information Grid Enterprise Services (GIG ES): Core Enterprise Services (CES) Implementation, of 10 Nov 2003

1. Purpose

a. To issue mandatory procedures for Department of the Navy (DON) implementation of references (a), (b), (c), and (d) for major and non-major defense acquisition programs and major and non-major information technology (IT) acquisition programs. This instruction is a complete revision and should be reviewed in its entirety.

b. Summary of major changes in this revision:

(1) Changed the names of the initial pre-systems acquisition decision point, phase, and the initial systems acquisition phase per reference (b).

(2) Revised the format of the instruction to a Navy manual-type instruction with multiple chapters.

(3) Added Joint Capabilities Integration and Development System (JCIDS) regulatory requirement for a sustainment key performance parameter (KPP) which consists of three key factors:

availability, reliability, and ownership cost. The sustainment KPP (availability) and two mandatory supporting key systems attributes (KSAs) (materiel reliability and ownership cost) will be developed for all acquisition category (ACAT) I programs. For ACAT II and below programs, the sponsor will determine the applicability of the KPP.

(4) Revised the statutory and regulatory requirements of the instruction to be in compliance with current statutes and regulations including Public Law 111-23 of 22 May 2009.

(5) Added the requirement for independent management reviews (peer reviews) of supplies and services contracts.

(6) Added the statutory requirement for program management agreements.

(7) Added the requirement for post-preliminary design review assessments and post-critical design review assessments.

(8) Clarified earned value management (EVM) dollar threshold applicability.

(9) Updated references and hyperlinks.

(10) Updated DON requirements and acquisition Two-Pass and Six-Gate Process.

(11) Added requirement for programs to assess the long-term technical data needs of their systems and to reflect that assessment in a data management strategy per reference (b).

(12) Added the DON Urgent Needs Process.

(13) Added the Rapid Development and Deployment Process.

(14) Added the IT Contract and Procurement Management Approval Process.

(15) Added Navy implementation of JCIDS "IT Box."

2. Cancellation. SECNAVINST 5000.2D.

3. Background. Reference (b) provides mandatory Defense Acquisition System policy. To aid the acquisition workforce in its implementation, a Defense Acquisition Guidebook (DAG) was developed. This guidebook provides best practices, lessons learned, and expectations to support development of the information required by reference (b). The DAG can be found at https://dag.dau.mil/. An updated SECNAV M-5000.2, DON Acquisition and Capabilities Guidebook, will be issued as a companion to this instruction and will be available on the DON Issuances Web site, https://doni.daps.dla.mil/, under "Manuals" and the DON Research, Development and Acquisition Web site, https://www.acquisition.navy.mil/, under "Policy and Guidance." This guidebook will contain citations from this instruction and other mandatory references only for clarification. SECNAV M-5000.2 will not introduce new or additional mandatory guidance. Reference (e) contains the Marine Corps requirements generation procedures.

4. Discussion. Chapters 1 through 8 provide procedures to implement references (a), (b), (c), and (d).

5. Applicability and Precedence

a. The provisions of this instruction apply to all DON organizations and to all ACAT acquisition programs, including naval intelligence and naval cryptologic ACAT programs, abbreviated acquisition programs (AAPs), non-acquisition programs, and rapid deployment capability programs. The designation ACAT I, when used in this instruction, signifies both ACAT ID (defense) and IC (component) programs. Similarly, the designation ACAT IA (major automated information system), when used in this instruction, signifies both ACAT IAM (defense major automated information system) and IAC (component major automated information system) programs.

b. References (a), (b), (c), (d), this instruction, and revisions thereto, take precedence over any issuances conflicting with them, except for policy, direction, or guidance embodied in current and future statute, the Federal Acquisition Regulation, the Defense Federal Acquisition Regulation Supplement, and the Navy-Marine Corps Acquisition Regulation Supplement.

6. Acquisition Process Integrity. Program executive officers (PEOs), systems command (SYSCOM) commanders, direct reporting program managers (DRPMs), and program managers (PMs) shall ensure separation of functions so the authority to conduct oversight, source selection, and or contract negotiations and award does not

reside in one person. As stewards of the national interest, all DON employees have an obligation to accept responsibility for ensuring the highest ethical conduct and shall question any perceived impropriety. These high ideals shall be continually emphasized to industry partners and within the acquisition community. Further information is available through the DON Acquisition Integrity Office on line at http://ogc.navy.mil/content/aio.aspx.

7. Responsibilities

a. The Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN(RD&A)) is the DON component acquisition executive (CAE) and service acquisition executive (SAE) responsible for DON acquisition per references (f) and (g). ASN(RD&A) is the reporting senior for PEOs and DRPMs. ASN(RD&A) shall provide performance input to Chief of Naval Operations (CNO) and Commandant of the Marine Corps (CMC) for SYSCOM commanders for assigned acquisition programs; Commander, Naval Supply Systems Command for assigned logistics support; and Commander, Naval Facilities Engineering Command for assigned facilities, infrastructure and environmental support of the acquisition process and programs. ASN(RD&A) shall provide performance input to CNO/CMC for SYSCOM commanders' support of PEOs and DRPMs.

(1) ASN(RD&A) provides overall guidance and direction for the DON acquisition community's participation in the FORCEnet implementation process. FORCEnet is the Navy and Marine Corps initiative to achieve joint transformation through information sharing and naval and joint capabilities and acquisition collaboration (see paragraphs 2.1.2.3 and 2.1.2.5 for further explanation of FORCEnet). As CAE, ASN(RD&A) ensures compliance with FORCEnet policies, integrated architecture, and technical standards during program reviews and milestone decisions.

(2) The FORCEnet roles and responsibilities are available in enclosure (1), chapter 7, of the SECNAV M-5000.2.

(3) Per Public Law 111-23 of 22 May 2009, section 102, the CAE is responsible for development and implementation of plans that ensure DON has provided the appropriate personnel and funding resources for developmental testing and systems engineering.

(4) ASN(RD&A) is responsible for ensuring DON science and technology (S&T) projects and acquisition programs comply with DON environmental protection, natural resources, and cultural resources programs policy per reference (h).

b. CNO/CMC are responsible for the DON's joint capabilities integration and development process, operational test and evaluation (OT&E), sustaining and continuously improving material readiness, planning and programming to satisfy operational capability needs including logistics life-cycle support at optimal total ownership cost, and providing acquisition logistics assistance to ASN(RD&A) (Deputy ASN(Acquisition and Procurement)) as well as all of the specific additional responsibilities listed in reference (g). CNO and CMC IT functional area managers (FAMs), listed at the DON chief information officer (CIO) Web site (www.doncio.navy.mil), are responsible for initially identifying IT requirements and evaluating functional portfolios based on the operational activities and needs of the DON enterprise architecture (EA). CNO program sponsors are responsible for identifying naval warfare, functional area, Sea Warrior/Integrated Learning Environment, and IT, including national security systems (NSS), program capability needs and requirements. The legacy term "requirements" as used in this instruction may be interpreted to mean "capability needs" as defined in reference (c). CNO resource sponsors are responsible for specific appropriation categories and may also have dual responsibility as program sponsors. CNO/CMC are the reporting seniors for SYSCOM commanders. CNO/CMC shall provide performance input to ASN(RD&A) for military and civilian PEOs and DRPMs for in-service support. Note: Wherever "CNO/CMC" is used throughout this instruction, it should be interpreted to include, "or designee," unless otherwise stated.

(1) The Resources and Requirements Review Board (R3B) is the Navy’s 3- and 4-star forum for reviewing and making decisions on Navy requirements and resource issues. The R3B acts as the focal point for decision-making regarding Navy and JCIDS ACAT I through IV and abbreviated acquisition requirements; the validation of non-acquisition related, emergent, and Joint requirements; the coordination of service input to Planning, Programming, Budgeting, and Execution (PPBE) processes; and the resolution of cross-enterprise or cross-sponsor issues. Deputy Chief of Naval Operations (Integration of Capabilities and Resources (CNO (N8)) serves as the chairperson, but may invite another R3B member to serve as co-chair if the issue warrants.

The CNO or Vice Chief of Naval Operations (VCNO) may serve as chairperson of the R3B if the issue requires a 4-star level decision.

(2) CNO/CMC shall ensure that investment decision processes are aligned to the requirements of the DON EA.

c. Deputy Chief of Naval Operations (Manpower, Personnel, Training and Education) (CNO (N1)) and CMC (Deputy Commandant, Combat Development and Integration (DC, CD&I)) are responsible for supporting the PEOs, SYSCOM commanders, and DRPMs by assisting in options that maximize technology to reduce manpower and personnel requirements and associated life-cycle cost. CNO (N1) is the primary advisor for manpower and personnel for Navy acquisition coordination teams (ACTs). CMC (DC, CD&I) and CMC (Deputy Commandant, Manpower and Reserve Affairs (DC, M&RA)) are the primary advisors for manpower and personnel for the Marine Corps ACTs. CNO (N1) and CMC (DC, CD&I) shall assist the warfare directors (Surface Warfare (OPNAV (N86)); Submarine Warfare (OPNAV (N87)); Air Warfare (OPNAV (N88)); Expeditionary Warfare (OPNAV (N85)); Oceanographer and Navigator of the Navy (OPNAV (N84)); and Special Programs (OPNAV (N89))), PEOs, SYSCOM commanders, and DRPMs in identifying previous manpower shortfalls, determining legacy manpower, assessing the cumulative affects of manpower requirements across a system of systems (SoS) or family of systems (FoS), and projecting manpower availability. The Navy Manpower Analysis Center is responsible for assisting Navy PMs and integrated product teams (IPTs) with manpower requirements estimates, independent manpower impact statements, and contractor developed manpower estimates. The Special Assistant for Safety Matters (CNO (N09F)), Naval Facilities Engineering Command (NAVFACENGCOM), and Bureau of Naval Medicine (BUMED) ergonomic experts may be consulted on ergonomic and safety measures to reduce manpower and human factors risks.

d. CNO (N1) is the resource sponsor for manpower, personnel, and individual training and education. Director, Total Force Requirements Division (OPNAV (N15)) serves as human systems integration (HSI) and human performance advocate, and is the Navy HSI policy authority. In this role, OPNAV (N15) serves as the single governance authority for HSI policy and resources; participates in the identification of enterprise manpower, personnel, training (MPT) and education shortfalls; and investigates innovative approaches and solutions to optimize manpower and improve performance.

e. The Deputy Chief of Naval Operations (Information Dominance) (CNO (N2/N6)) is responsible for optimizing Navy network investments through centralized coordination of Navy warfighting and warfighting support analysis and assessments, Navy network capability development and integration, joint and Navy requirements development, and resource programming. CNO (N2/N6) is responsible for threat intelligence and for validating threat tactics supporting capabilities development, program development, and test and evaluation (T&E) of Navy acquisition programs. The Defense Intelligence Agency (DIA) will validate CNO (N2/N6) threat assessments for ACAT ID programs. CNO (N2/N6) will act as principal advisor to CNO for network matters, battlespace awareness (BA), and information operations; act as principal advisor to Deputy Chief of Naval Operations (Operations, Plans and Strategy (CNO (N3/N5)) for command and control (C2); and serve as the Navy's top level advocate for information management (IM) and IT resources throughout the Navy. CNO (N2/N6) will also serve as the DON deputy chief information officer (Navy) (DDCIO(N)). CNO (N2/N6), in the assigned role of DDCIO(N), chairs the Information Technology Management Council (ITMC). The ITMC is the senior Navy forum to review and establish Navywide IT, IM, NSS guidance, direction, policy, planning, procedures, and standards; and to align these with DON, Department of Defense (DoD), and Federal laws, regulations, policies, and guidelines.

f. The Deputy Chief of Naval Operations (Fleet Readiness and Logistics) (CNO (N4)) assists ASN(RD&A) in the execution of acquisition-related logistics policy. CNO (N4) responsibilities include developing and recommending policy for ASN(RD&A) approval in all matters dealing with life-cycle logistics throughout the defense acquisition process. CNO (N4)'s role and advocacy include JCIDS specification (reliability, availability, maintainability, and cost (RAM-C)), readiness resource sponsorship, and assessment of systems sustainment effectiveness and life-cycle cost affordability.

g. Director, Test and Evaluation and Technology Requirements, CNO (N091), as the DON T&E executive, reports to VCNO and Assistant Commandant of the Marine Corps (ACMC) on matters pertaining to T&E policy, requirements, and operational test resources pursuant to ASN(RD&A) memorandum, Realignment of Deputy Assistant Secretary of the Navy, Research, Development, Test and Evaluation (DASN RDT&E) Functions and Creation of the Department of the Navy Test and Evaluation Executive, of 7 Jan 2008. For T&E matters pertaining to ASN(RD&A) title 10, United

States Code (U.S.C.), acquisition authorities and responsibilities, the DON T&E executive reports to ASN(RD&A).

h. CNO (N09F) shall support program and resource sponsors, ASN(RD&A), PEOs, SYSCOM commanders, DRPMs, and PMs in developing safety and occupational health requirements; assisting in policy implementation; reviewing related documentation; providing guidance for reporting mishaps; and identifying safety and occupational health risk factors.

i. Commander, Operational Test and Evaluation Force (COMOPTEVFOR) and Director, Marine Corps Operational Test and Evaluation Activity (Director, MCOTEA) are responsible for independent OT&E of assigned Navy, Marine Corps, and Joint acquisition programs that require OT&E. Aviation programs sponsored by CNO undergo independent OT&E by COMOPTEVFOR.

j. The DON CIO heads the Office of the DON CIO and is the DON's senior IM, IT, and information resources management (IRM) official. The DON CIO is responsible for ensuring the creation, maintenance, and implementation of the DON EA, in coordination with ASN(RD&A), Deputy Under Secretary of the Navy (Business Operations and Transformation) (DUSN(BO&T)), CNO/CMC, and SYSCOMs. The DON CIO is also responsible for confirming that ACAT I, IA, and II IT systems, and, when requested, ACAT III, IV, and AAP IT systems, comply with the Clinger-Cohen Act (CCA) (see chapter 3, paragraph 3.1.2) and that mission critical (MC) or mission essential (ME) IT systems are registered in the DON variant of the Defense Information Technology Portfolio Repository (DITPR-DON), https://www.dadms.navy.mil/ (For Official Use Only Web site). Additionally, pursuant to the CCA, the DON CIO recommends to the Secretary of the Navy (SECNAV) whether to continue, modify, or terminate IT programs. The DON CIO shall:

(1) Direct development, maintenance, use, and enforcement of the DON EA.

(2) Implement the provisions of division E of the CCA of 1996, pursuant to chapter 25 of title 40, U.S.C., as amended.

(3) Provide policy on interoperability and supportability of IT, including NSS, pursuant to section 2223 of title 10, U.S.C., and subtitle III of title 40, U.S.C.

(4) Review information support plans' architecture artifact contents, in order to ensure alignment and compliance with the DON EA.

(5) Review and approve information assurance (IA) strategies where required by this instruction.

(6) Develop and issue IA policies to ensure that IA and information systems security engineering are employed in the acquisition of all DON Automated Information System (AIS) applications.

(7) Lead the development and use of IT, including NSS, portfolio management policy, guidance, and processes and act as the DON portfolio manager for the Enterprise Information Environment Mission Area (EIEMA).

k. PEOs, SYSCOM commanders, and DRPMs are accountable for the specific responsibilities listed in reference (g), including administration of assigned acquisition programs, and reporting directly to the CAE for such programs. PEOs, SYSCOM commanders, DRPMs, and PMs have authority, responsibility, and accountability for life-cycle management of all acquisition programs within their cognizance. PEOs, SYSCOM commanders, and DRPMs shall implement appropriate management controls as required by references (a), (b), (i), and (j) to ensure the policies contained in this instruction are implemented to the maximum extent practical. SYSCOM commanders shall also provide support, including independent technical authority evaluations and certifications, as applicable, to PEOs, DRPMs, and PMs. PEOs and DRPMs shall report to CNO/CMC via the applicable SYSCOM commander for in-service support. The exception will be that Director, Strategic Systems Programs (DIRSSP), as a DRPM and an echelon 2 command, serves as the technical and certification authority for strategic weapon systems and reports directly to CNO for in-service support. Per reference (k), SYSCOM commanders will provide comprehensive cost analysis support for all acquisition, non-acquisition, rapid deployment, and special interest programs. SYSCOM cost organizations, as cost competency leads, will support PEO’s and PM’s cost analysis, cost estimates, and EVM analysis.

l. DIRSSP shall identify acquisition programs or research efforts most likely to be affected by arms control treaties, coordinate with affected PMs to ensure that plans and designs for these programs are compliant with treaty requirements, and assist PMs in meeting arms control certifications as required by this instruction. Additionally, DIRSSP shall identify and conduct reviews of programs and projects at DON warfare centers, other shore activities, and operating forces that are most likely affected by arms control treaties, and assist these DON activities to ensure treaty compliance.

m. Commander, Space and Naval Warfare Systems Command (COMSPAWARSYSCOM), dual-hatted as the Navy chief system/technical architect and, when delegated by DON CIO, the DON EA mission-area chief engineer for the C2, BA, Net-centric (NC) segment reference architectures (SRAs), leads the development of Navy EA system views (SVs) and technical views (TVs) and selected DON EA SRAs. These functions are performed in coordination with DON CIO and with Marine Corps Systems Command (MARCORSYSCOM), and integrated with the operational views (OVs) developed by the Navy's chief operational architect – Commander, Naval Network Warfare Command (NETWARCOM), and the Marine Corps' Operational Architect – Marine Corps Combat Development Command (MCCDC).

n. The Chief of Naval Research (CNR) is responsible for S&T planning and implementation supporting the requirements set forth in this instruction. The CNR, as the DON S&T executive, shall approve technology readiness assessments (TRAs) for ACAT I, IA, and II programs.

o. NAVFACENGCOM shall support ASN(RD&A), PEOs, SYSCOM commanders, DRPMs, and PMs in performing ergonomic risk analysis as part of the shore facility design process. NAVFACENGCOM manages the Ergonomics Center of Expertise, in support of the CNO Mishap Prevention and Hazard Abatement (MPHA) Program, providing products, services and technical support in the prevention of musculoskeletal disorders, and reduction of associated costs.

p. Commander, NETWARCOM and Commanding General, MCCDC, have the lead, when delegated by DON CIO, in developing DON EA SRA OV's, which include FORCEnet.

q. The Chief of BUMED shall support ASN(RD&A), PEOs, SYSCOM commanders, DRPMs, PMs, and CNR in integrating occupational health considerations into S&T projects and the systems engineering process for acquisition programs.

r. The DASN(RDT&E) chief systems engineer (CHSENG) is the naval technical authority within the acquisition structure for ensuring compliance with overall DON EA policy and integration and interoperability of current and future DON acquisition programs. DASN(RDT&E) CHSENG provides senior leadership and

focus within the acquisition structure on integration and interoperability across all Navy and Marine Corps PEOs, SYSCOM commanders, DRPMs, and PMs. DASN(RDT&E) CHSENG shall:

(1) Ensure that the functional design of combat and command, control, communications, computers and intelligence (C4I) systems is compatible with the overall integrated architecture as described in reference (d) and implemented by DON EA;

(2) Ensure that component systems are engineered and implemented to operate coherently with other systems as part of a larger naval, joint, and multinational force;

(3) When directed by ASN(RD&A), conduct integration and interoperability assessments of SoS and FoS after coordination with test and certification agencies to determine adherence to interoperability requirements, architectural and technical standards in the DoD IT Standards Registry (DISR), and interface specifications, and advise ASN(RD&A) and SoS and FoS management authorities of the results of these assessments;

(4) Assess proposed architectural and technical standards in the DISR for their impact on acquisition programs, and advise ASN(RD&A) on the results of these assessments;

(5) Provide architectural and technical standards inputs to the DON EA (TV-1, TV-2, and technical reference model) in order to guide and support PMs; and,

(6) Assign mission-area systems engineers (MASEs) to the U.S. Fleet Forces Command (USFFC) warfare areas to perform as the senior engineering representative to the USFFC functional capability team. These MASEs will be responsible to conduct SoS engineering within the capability areas described by the warfare areas.

s. The Deputy Assistant Secretary of the Navy (International Programs) (DASN(IP)), who is also the Director, Navy International Programs Office (Navy IPO), is responsible for formulating, developing, and managing international policy and oversight of the DON’s international programs. Areas of responsibility, per references (g) and (j), include armaments cooperation programs; cooperative research; development and acquisition agreements; information and personnel exchange agreements; security assistance programs; export controls; and, technology transfer and disclosure policy.

t. The Deputy Assistant Secretary of the Navy (Cost and Economics) (DASN(C&E)) is dual-hatted as the Director of the Naval Center for Cost Analysis (NCCA). DASN(C&E) serves as the principal advisor to DON leadership on issues of cost analysis and reports directly to the Assistant Secretary of the Navy (Financial Management and Comptroller) (ASN(FM&C)). Reference (k) fully defines NCCA's responsibilities, which include:

(1) Preparing life-cycle independent cost estimates (ICEs) for major defense acquisition programs (MDAPs) designated ACAT IC at milestones B and C and full-rate production decision reviews per section 2434 of title 10, U.S.C., and developing component cost analyses of ACAT IAC programs at milestone A, and milestone B, and full deployment decision reviews. NCCA also conducts component cost analyses for joint ACAT IAM programs for which DON is the lead.

(2) Assessing SYSCOM-generated program life-cycle cost estimates for all ACAT I programs and selected ACAT II programs as directed by ASN(FM&C).

(3) Collaborating with SYSCOM cost organizations to determine a common DON service cost position on all ACAT I and IA programs, and selected ACAT II programs, and approving a common DON service cost position.

Detailed responsibilities for the foregoing organizations, including those for IT, are found in chapters 1 through 8.

u. DON activities shall:

(1) Ensure that the policies, procedures, documentation, and reports as required by references (a), (b), (c), (d), and (l), and this instruction are followed.

(2) Review existing guidance and instructions and cancel or update to comply with references (a), (b), (c), (d), (l), and this instruction.

(a) Unless prescribed by statute or specifically authorized herein, the acquisition policies and procedures of this instruction will not be supplemented without the prior approval of ASN(RD&A).

(b) Implementing directives, instructions, regulations, memorandums, and related issuances shall be kept to a minimum.

(c) CNO and CMC may issue minor revisions to the JCIDS procedures of this instruction via a change transmittal.

(3) Distribute this instruction to appropriate command personnel.

8. Records Management. All acquisition program records shall be created and managed for the life-cycle of the program pursuant to SECNAV Manual 5210.1, Department of the Navy Records Management Program, Records Management Manual, of November 2007.

9. Reports and Forms

a. Reports. The following reports, listed in chapter 2, have been assigned report symbols and approved per SECNAV Manual 5214.1 of December 2005:

(1) Selected Acquisition Report (SAR), DD-AT&L (Q&A) 823 (5000).

(2) Unit Cost Report (UCR), DD-AT&L (Q&R) 1591 (5000).

(3) Registration of Mission-Critical and Mission-Essential Information Systems (RMC&MEIS), DD-C3I (AR) 2096 (5000).

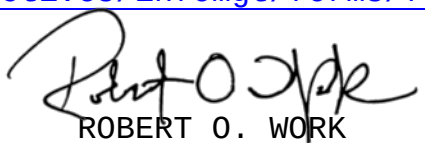
(4) Defense Acquisition Executive Summary (DAES), DD-AT&L (Q) 1429 (5000). Data shall be electronically provided monthly from Dashboard (ASN(RD&A) program information database) to the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L))'s Defense Acquisition Management Information Retrieval (DAMIR) System and Service Oriented Architecture (SOA) System.

b. Forms

(1) Standard Form (SF) 298 Report Documentation Page is available on the General Services Administration (GSA) Web site at http://www.gsa.gov/Portal/gsa/ep/formslibrary.do?formType=SF.

(2) DD Form 1586 Contract Funds Status Report is available on the DoD Forms Management Program Web site at http://www.dtic.mil/whs/directives/infomgt/forms/formsprogram.htm.

(3) DD Form 1494, Application for Equipment Frequency Allocation, is available on the DoD Forms Management Program Web site at http://www.dtic.mil/whs/directives/infomgt/forms/formsprogram.htm.



ROBERT O. WORK
Under Secretary of the Navy

Distribution:
Electronic only, via Department of the Navy Issuances Web site: https://doni.daps.dla.mil/

TABLE OF CONTENTS

Chapter 1
Capabilities Development and Acquisition Management Processes

References:
(a) Manual for the Operation of the Joint Capabilities Integration and Development System, of 31 Jan 2011
(b) OPNAVINST 5420.108D
(c) CJCSI 3170.01G
(d) SECNAVINST 5200.40
(e) SECNAVINST 5400.15C
(f) U.S. Navy Regulations, 1990
(g) SECNAVINST 5000.36A
(h) Under Secretary of the Navy Memorandum, Designation of Department of the Navy (DON) Functional Area Managers, of 14 May 2002
(i) DoD Directive 4630.05 of 5 May 2004
(j) VCNO memo 5420 N09, Naval Capabilities Board (NCB) Charter, Revision 1, of 19 Sep 2008 with Enclosures (1), (2), and (3)
(k) VCNO memo 5420 N09, Resources and Requirements Review Board (R3B) Charter, of 25 Jul 2008
(l) MCO 3900.15B
(m) DoD Instruction 5000.02 of 8 Dec 2008
(n) USD(P&R) Memorandum, Interim Policy and Procedures for Strategic Manpower Planning and Development of Manpower Estimates, of 10 Dec 2003
(o) CJCSI 6212.01E
(p) DoD Directive 5000.01 of 12 May 2003
(q) NAVSO P-35
(r) OPNAVINST 3104.1A
(s) SECNAVINST 4105.1B
(t) USD(AT&L) Memorandum, Total Life Cycle Systems Management and Performance Based Logistics, of 24 Oct 2003
(u) SECNAVINST 5710.23C
(v) Under Secretary of Defense (Acquisition, Technology and Logistics), National Security Space Acquisition Policy Interim Guidance for DoD Space System Acquisition Process, of 23 Mar 2009 (FOUO)
(w) Public Law 108-375, Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, Section 332, Defense Business Enterprise Architecture, System Accountability, and Conditions for Obligation of Funds for Defense Business System Modernization, of 28 Oct 2004

(x) Goldwater-Nichols Department of Defense Reorganization Act of 1986, Public Law 99-433, of 1 Oct 86
(y) CMC Policy Memorandum 1-02, Marine Requirements Oversight Council (MROC), of 17 Jan 2002
(z) USD(AT&L) Memorandum, Configuration Steering Boards, of 30 Jul 2007

1.1 Capabilities Development Process

The Department of the Navy (DON) uses a capabilities-based approach to define, develop, and deliver technologically sound, sustainable, and affordable military capabilities. This approach is implemented via the Naval Capabilities Development Process (NCDP), the Expeditionary Force Development System (EFDS), and the Joint Capabilities Integration and Development System (JCIDS) to improve existing and develop new warfighting capabilities. Coordination among Department of Defense (DoD) Components and among DON is an essential element of these processes. Joint concepts, DON concepts, concepts of operation (CONOPs), and DON enterprise architecture (EA) are used to identify and prioritize capabilities gaps and integrated doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) solutions. The following paragraphs and applicable references outline the major roles and responsibilities and provide the process for DON capabilities development.

1.1.1 DON Principal Capabilities Points of Contact

1.1.1.1 Chief of Naval Operations (CNO)/Commandant of the Marine Corps (CMC) Responsibilities

As user representatives, CNO/CMC (program and resource sponsor) shall execute the responsibilities defined in references (a) through (f) to identify, define, validate, make affordability determinations, and prioritize required mission capabilities through JCIDS and allocate program resources to meet those requirements and needs through the Planning, Programming, Budgeting, and Execution System (PPBES). In addition, CNO/CMC shall coordinate the test and evaluation process as described in chapter 4. Continuous interaction with the Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN(RD&A)) is required throughout the acquisition process.

CNO/CMC is designated as the approval and validation authority for JCIDS documents not approved and validated by the Joint Requirements Oversight Council (JROC) or Joint Capabilities Board (JCB).

1.1.1.2 Program and Resource Sponsor Responsibilities

Program sponsors are responsible for identifying program capability needs. They shall provide the key interfaces among the JCIDS, the NCDP, the EFDS, the PPBES, and the Defense Acquisition System. A requirements officer (RO) shall be assigned for each platform, system, or initiative for which funding is programmed or planned. The RO is responsible for ensuring that capabilities are properly defined and approved for each platform, system, or initiative for which funding is programmed or planned, prior to program initiation. The resource sponsors are responsible for managing specific appropriation categories. Resource sponsors may also have dual responsibility as program sponsors. Resource sponsors have AAP requirements memorandum approval authority. The definition, change, or clarification of capabilities for ACAT programs is not allowed via any type of memorandum or letter.

The program and resource sponsor shall:

a. Act as the user representative;

b. Establish and provide user-based cost, schedule, and total force performance requirements through validated capabilities needs documents and other associated documentation;

c. Provide explicit direction for systems interoperability within an operations and support environment associated with all capabilities needs;

d. Program the funds necessary to develop and sustain programs that satisfy capabilities needs evolution and development;

e. Define the thresholds and performance parameters for operational testing; and

f. For information technology (IT) systems, including national security systems (NSS):

(1) Ensure capabilities documents are reviewed by DON functional area managers (FAMs) per references (g), (h), and (i). A current list of FAMs responsible for each respective naval functional area is available in reference (g).

(2) Define mission-related, outcome-based performance measures for IT systems, including NSS.

(3) Ensure operational need is documented in the DON EA and shared with the PM via an enterprise reference architecture (ERA)-based integrated architecture hosted in the Naval Architecture Repository System (NARS). NARS is available at the NARS Web site (https://nars.nswc.navy.mil).

1.1.1.3 Deputy CNO (Integration of Capabilities and Resources) (CNO (N8)) Responsibilities

CNO (N8) shall coordinate staffing, validation, and approval of Navy initial capabilities documents (ICDs), capability development documents (CDDs), capability production documents (CPDs), and DOTMLPF change recommendations (DCRs) for all Navy and joint systems within the JCIDS process. Additionally, CNO (N8) shall coordinate the Navy staffing of capabilities documents developed by other Services. For Navy documents, CNO approval authority has been delegated to CNO (N8) for non-ACAT I JCIDS documents designated as joint integration, joint information, and independent.

Per the joint ASN(RD&A) and CNO (N8) memorandum 4000 Ser N8/7U162072, Navy Urgent Needs Process Implementation, of 26 Jul 2007, CNO (N8) also serves as the Navy urgent needs gatekeeper for assignment of action for Navy urgent operational needs submitted by Navy component commanders and joint urgent operational needs statements assigned to the Navy for action.

1.1.1.4 Deputy CNO (Information Dominance) (CNO (N2/N6)) Responsibilities

CNO (N2/N6) shall coordinate staffing, validation, and approval of Navy architecture artifacts within ICDs, CDDs, and CPDs for assessment and compliance with the DON EA for all Navy and joint systems within the JCIDS process.

1.1.2 DON Capabilities Development and Processing Procedures

1.1.2.1 Naval Capabilities Development Process (NCDP)

The NCDP translates strategic guidance and operational concepts to specific warfighting capabilities. The NCDP is a capabilities-based assessment process used to develop the naval warfare Integrated Capabilities Plan (ICP). The ICP serves as the Navy's "warfare investment strategy" for programming operational capabilities. The product of the ICP and resource sponsor programming and analysis will be the sponsor program proposal (SPP), detailing systems required to deliver the warfighting capabilities identified in the ICP. These systems will be acquired through the Defense acquisition process.

See references (a) and (b) for capabilities documentation development procedures. The Naval Capabilities Board (NCB), the Resources and Requirements Review Board (R3B), or Gate Reviews shall be the only forums in which JCIDS documents are vetted and approved by CNO (N8), Vice Chief of Naval Operations (VCNO), or CNO prior to entry into the Joint Staff for processing and joint review. Specific NCB and R3B procedures can be found in references (j) and (k), respectively. SECNAV M-5000.2, DON Acquisition and Capabilities Guidebook, details the specifics of JCIDS document flow through the Navy process and shall be followed except as waived by CNO (N8) or the Joint Staff (Force Structure, Resources, and Assessment Directorate (J8)), as required.

The NCB and R3B will review and endorse all Navy JCIDS documents, including the initiation and results of Navy-level capabilities based assessments (CBAs). The NCB and R3B recommends validation of all warfighting requirements, including key performance parameters (KPPs) and key system attributes (KSAs) (see paragraph 1.1.2.3 for definition). For capabilities documents that require Navy-level approval, the NCB and R3B provides a recommendation for validation.

For the Navy, CNO, VCNO, and CNO (N8) have the authority to approve capabilities documents, or changes to previously approved capabilities documents, unless that authority has not been delegated by the JROC. Table E1T1 in SECNAV M-5000.2 outlines the staffing and approval authorities for changes to previously approved capabilities documents. When documented by a Navy board (either NCB, R3B, or Gate Review) decision memorandum, approval authority for document production annexes may be further

delegated for those programs operating under the "Information Technology (IT) Box" approach to JCIDS per reference (a), enclosure C.

1.1.2.2 Marine Corps Capabilities Development Process for Programs with Navy Fiscal Sponsorship

For capabilities development process with Marine Corps fiscal sponsorship, see references (b) and (l). The following specific procedures shall apply to Marine Corps programs that have Navy fiscal sponsorship (e.g., aviation programs). The capabilities documents shall be prepared and submitted by the CMC (Deputy Commandant, Combat Development and Integration (DC, CD&I)) to the applicable Office of the Chief of Naval Operations (OPNAV) program sponsor, via Joint Requirements and Acquisition Branch (OPNAV (N810)), for concurrence, prioritization, staffing, and endorsement. Prior to joint review, review of these capabilities documents within the Navy and Marine Corps should be accomplished in parallel, with only one board of appropriate membership (NCB, R3B, Marine Requirements Oversight Council (MROC), or Gate Review) to endorse the document prior to joint review. CMC (DC, CD&I) shall coordinate validation and approval as follows:

a. JCIDS documents with a joint potential designator (JPD) of JROC interest or JCB interest shall be approved and validated by the JROC or JCB, respectively. The JROC and JCB may delegate approval authority for non-KPP changes to the Marine Corps. JROC and JCB review of JROC interest and JCB interest CDDs and CPDs is required any time a recommendation is made to change a KPP. Marine Corps programs designated JROC interest or JCB interest shall be endorsed by CNO (N8) and shall be reviewed by the Assistant CMC (ACMC), VCNO, and CNO; shall be approved by the CMC when such authority is delegated by the JROC.

b. JCIDS documents with a JPD of joint integration, joint information, or independent shall be endorsed by CNO (N8) and forwarded to CMC (DC, CD&I) for final approval and validation processing. Approval and validation of Marine Corps ICDs and CDD/CPDs designated joint integration, joint information, and independent shall be accomplished by ACMC.

1.1.2.3 Weapon and Information Technology Systems Capabilities Development and Processing Procedures

The CBA serves as the core input for an ICD. For potential ACAT I, ACAT IA, or selected ACAT II programs, the gate

1 review discussed in chapter 1, paragraph 1.11.4.1.1.1, will grant authority for a DON-initiated ICD to be submitted for joint review per references (a) and (c). Gate 1 will also authorize a program to proceed to materiel development decision (MDD). For non-gate interest programs, similar review and authorizations will be performed by the NCB and R3B. Per reference (m), the MDD precedes entry into any phase of the DoD acquisition process. Following the MDD, the milestone decision authority (MDA) may authorize the initiation of the materiel solution analysis phase or authorize entry into the acquisition management system at any point consistent with phase-specific entrance criteria and statutory requirements. This decision will be based on the need for and the results of an analysis of alternatives (AoA), technology development (TD) strategy, acquisition strategy, preliminary CONOPS, and compliance with all statutory and regulatory requirements for entry at the appropriate milestone or decision review.

An approved ICD is required to support the materiel solution analysis phase of the acquisition system, including the TD strategy, and the subsequent milestone A acquisition decision. In the case of programs based on capability gaps from one or more existing, approved ICDs, the program, in context of the new intended mission, shall either document the existing gaps within their NCB and R3B board brief or develop a summary document incorporating them. The existing gaps and proposed capabilities to close the gaps shall be prioritized.

An approved CDD or CPD is required before initiating an ACAT program, and a program/resource sponsor requirements memorandum is required before initiating an AAP. Programs initiated at milestone A or B require a CDD. An initial Service-approved CDD, approved at a gate 3 review, is required at milestone A for Gate Review programs. The initial CDD at milestone A shall be updated to an approved final CDD for joint staffing and JROC and JCB validation prior to milestone B. Programs initiated at milestone C (or later) require a CPD. Normally program initiation will occur at milestone B, but may occur at the start of TD, milestone A, for shipbuilding programs. For shipbuilding programs not started at milestone A, the CDD will be validated and approved prior to program initiation. See references (a) and (c) for additional guidance on ICDs, CDDs, and CPDs.

Capabilities needs may be evolutionary in nature and become more refined as a result of AoA and test program updates as the program proceeds. The AoA study guidance and AoA study

plan shall specify the use of a CNO (N8) or CMC (DC, CD&I) accredited campaign analysis model, if required, per reference (d). Cost analysis is an element of the AoA. The AoA study plan will describe the approach to life-cycle cost (LCC) and total ownership cost (TOC) analysis. TOC is defined as LCC in the VCNO (Ser N09/9U103026), ACMC, and ASN(RD&A) joint letter 5000, Total Ownership Cost (TOC) Definition in the Department of the Navy (DON), of 28 Jul 2009. LCC and TOC definitions are included in the DON Total Ownership Cost (TOC) Guidebook (restricted link) and will be included in the update of SECNAV M-5000.2 subsequent to the issuance of this instruction. Cost analysis is normally performed in parallel with operational effectiveness analysis. Both analyses are equal in importance as part of the overall AoA process. Cost analysis will estimate the total LCC and TOC of each alternative, and its results are later combined with the operational effectiveness analysis to portray cost-effectiveness comparisons. The cost analysis will include an assessment of the impact of developing technologies to achieve initial capabilities, and the impact of these technologies on existing operating, maintenance, training, and manpower costs. What is important to emphasize is that the cost analysis will be a major effort that will demand the attention of experienced, professional cost analysts. The program sponsor shall apply the results of the AoA to identify performance parameters and potential system(s) that would satisfy the need. The ICD and its subsequent AoA shall provide the general framework for the derivation of the CDD and CPD key performance parameters. The cost as an independent variable (CAIV) concept may additionally be considered among cost affordability methodologies. The CDD and CPD shall delineate performance parameters and critical systems characteristics, in terms of thresholds and objectives.

The CDDs and CPDs must be validated and approved per reference (c) before each milestone B and milestone C decision, respectively. Changes to these documents will be validated and approved based on the type of change, program ACAT level, and JPD as outlined in table E1T1 of the SECNAV M-5000.2. Capabilities document changes will be developed and managed by CNO program sponsors and CMC (DC, CD&I). Approval and validation of these changes to Navy programs shall be coordinated with CNO (N8) via the NCB and R3B. Program and resource sponsors shall not generate or use any memoranda or letters to change an approved JCIDS document.

KPPs are those system attributes considered most critical or essential for an effective military capability. KSAs are those system attributes considered critical or essential for an

effective military capability, but not selected as KPPs. Reference (a) provides a list of both required and selectively applied KPPs and KSAs, as well as guidance for determining applicability and development of those listed. Changes to approved KPPs and KSAs may undergo less than 21 days of Navy staffing prior to a Navy board decision as determined by OPNAV (N810). Changes may bypass joint staffing and proceed directly to JROC and JCB as determined by the J8 gatekeeper.

KSAs provide senior Navy leadership an additional level of cost, schedule, and performance insight and prioritization below the KPP, and require CNO (N8), VCNO and CNO visibility and approval for changes. When compared to KPPs, KSAs are less critical to accomplishment of a system's core mission. Per reference (a), all CDD KPPs (and KSAs supporting the sustainment KPP) shall be inserted verbatim in the performance section of the acquisition program baseline (APB); however, failure to satisfy a KSA should not be used by the MDA as sole justification to cancel a program. The MDA should consult with the program and resource sponsor to determine the importance of a specific KSA in this situation, and use that input to determine if a program should continue.

In addition to those KPPs and KSAs identified in reference (a), manpower may be a KPP for selected systems. For Navy programs, that determination will be jointly made by the program sponsor and the manpower sponsor (CNO (N1)). Program sponsors should assume a default consideration of manpower as a KSA unless they obtain prior agreement with the CNO (N1) sponsor. For Marine Corps programs, the determination will be made by CMC (DC, CD&I), in consultation with Deputy Commandant, Manpower and Reserve Affairs (DC, M&RA) and CNO staff elements as appropriate.

Manpower requirements and human performance are key considerations in affordability determinations. Manpower thresholds and objectives shall be established so as to encourage options that maximize the use of technology in reducing manpower, personnel, and training (MPT) requirements and TOCs. Personnel inventory shortfalls (i.e., unique skills sets) or manpower requirements that may impact end strength, shall be identified as early as possible in the capabilities development process using the systems engineering process as described in chapter 6. Human performance is a key element of system performance and shall be included as a measure of system performance to ensure that systems perform as intended. As such, human performance thresholds and objectives shall be considered during (1) materiel solution analysis and (2) TD, and included during (3) engineering

and manufacturing development and (4) production and deployment phases. DOTMLPF analyses, conducted during the CBA, shall address all seven human systems integration (HSI) domains including safety and occupational health. Navy programs shall follow CNO memorandum Ser N4/8U156042, Environmental Readiness in Systems Acquisition, of 29 Jul 2008 regarding environmental readiness. Manpower estimates for acquisition programs shall be developed using reference (n). The estimated quantity and distribution of knowledge, skill, and abilities for future personnel capabilities shall be coordinated with the projected personnel inventory.

All IT systems, including NSS, or IT services acquired, procured, or operated by DON shall comply with reference (o). CDDs and CPDs for IT programs, including NSS programs, shall include clearly defined interoperability and supportability requirements and shall be staffed for review of the net-ready (NR) KPP per reference (o). Program and resource sponsors shall use the current FORCEnet consolidated compliance checklist (FCCC) to determine the applicable NR KPP requirements for both tactical (warfighting) and non-tactical (business and support) IT systems, including NSS. The FCCC shall be validated, maintained, and updated by Deputy CNO (Information Dominance) (CNO (N2/N6)), and is available in the CNO memorandum Ser N6N7/5U916222, FORCEnet Requirements/Capabilities and Compliance Policy, of 27 May 2005. CNO (N2/N6) shall assist program and resource sponsors by reviewing all Navy JCIDS documents against the current FCCC to ensure that applicable FORCEnet requirements are being correctly and consistently incorporated into these documents. Commander, Space and Naval Warfare Systems Command (COMSPAWARSYSCOM) (FORCEnet Chief Engineer (CHENG)) and Naval Network Warfare Command (NETWARCOM) will use the FCCC to assess individual DON acquisition programs for FORCEnet compliance, and shall make appropriate reports of these assessments to Commander, United States Fleet Forces Command (COMUSFLTFORCOM), CNO (N2/N6), and ASN(RD&A). COMSPAWARSYSCOM (FORCEnet CHENG) and NETWARCOM, using the FCCC, shall assist program managers (PMs) in assessing and achieving FORCEnet compliance for their programs and shall report results of these assessments to the PMs as necessary.

The DON EA will support the capabilities development and acquisition management processes by providing an approved segment reference architecture (SRA)-based integrated architecture to be used as a reference and guide as program specific solution architectures are developed. The DON EA content is accessible from the DON EA Repository, located on https://nars.nswc.navy.mil. Policy, guidance, processes, and

additional details about the DON EA can be found at http://www.intelink.gov/DONEA (requires a login account).

The JROC created the "IT Box" approach to JCIDS in JROCM 008-08, and provided further details and guidance in reference (a). The approach provides oversight and flexibility allowing programs to plan for and incorporate evolving technologies. It is meant to lighten the burden of JCIDS as the program integrates system enhancements described by the CDD, and allow programs to take full advantage of evolving commercial technologies. This approach normally applies to systems that do not need to develop hardware systems (i.e., they use commercial off-the-shelf (COTS) hardware, or hardware has already been developed) and research and development (R&D) funding is spent solely on software development. However, some materiel development may be allowed. The approach is defined by four critical elements: definition of threshold capability levels based upon today's technology, a defined process for oversight and approval of future evolution, a defined plan for delivering those capabilities, and a defined level of funding.

The Navy's implementation of the above approach may be used by programs progressing through a pre-planned series of software developments and or hardware refreshment, including those programs progressing through technology evolution via advanced capability builds (ACB), advanced processing builds (APB), or technology insertions (TI). The Navy's "IT Box" implementation adds additional oversight (beyond the "IT Box" description in reference (a)) to ensure adequate long-term planning and flexibility, maintain positive control of program requirements, and provide the information that allows testing to occur. Under the Navy's implementation, the sponsor writes a CDD (or updates existing documentation) that includes the four critical elements of this approach. Once the CDD is approved, the sponsor then defines specific capabilities enhancements via a production annex (in lieu of writing a CPD) to the CDD. The annex, a result of the planning and oversight process, is meant to clearly define the enhancement in terms that show positive control over program requirements and allow testing of that program enhancement. Approval authority for the production annex may be delegated below the level of CDD approval authority when clearly documented in the CDD's Navy board (NCB, R3B and Gate) decision memorandum. The CDD shall be updated or revalidated by the original Navy approval authority using the Navy's JCIDS review and board processes either: (1) every 6 to 8 years (three to four enhancements); or (2) when changes to the document are required. This revalidation and approval must occur before

developing any additional production annexes. Under some circumstances, this approach may be utilized by programs with existing CDDs, CPDs, or ORDs. Any Navy program wishing to utilize this approach to JCIDS shall first discuss the applicability of its approach with the Navy JCIDS process gatekeeper OPNAV (N810) before writing or updating any JCIDS documentation. Use of the approach shall also be discussed with and endorsed by the MDA, since the production annexes may be presented for production decisions.

Per reference (a), interoperability and supportability certifications by the Joint Staff (Command, Control, Communications, and Computer Systems Directorate (J-6)) are required for JROC interest, JCB interest, and joint integration CDDs and CPDs for IT, including NSS, acquisition programs prior to milestones B and C, respectively. Interoperability and command, control, communications, computers, and intelligence (C4I) supportability certifications by J-6 are also required for such programs prior to the full-rate production decision review (FRP DR). The Defense Information Systems Agency (DISA) (Joint Interoperability Test Command (JITC)) provides a joint system interoperability test certification to J-6 for the interoperability certification required prior to the FRP DR.

1.1.2.4 Navy Modernization Plan

The Navy Modernization Plan (NMP) process for surface ships, aircraft carriers, and submarines (with the exception of the Ohio class) replaced the former Fleet Modernization Program (FMP) and ship maintenance (SHIPMAIN) processes. Type commander (TYCOM) representatives shall review JCIDS documents and relevant acquisition program documentation for ship modernization decision purposes and shall ensure that NMP approvals are consistent with JCIDS documentation.

The NMP process shall not infringe upon the MDA's, program executive officer's (PEO's), direct reporting program manager's (DRPM's), and PM's authority and responsibility to execute their program and make programmatic decisions.

1.1.2.5 DON Enterprise Architecture (which includes FORCEnet)

The DON EA is a means for the DON to describe the entire enterprise in all its dimensions and complexities. It provides a means to centrally capture this descriptive information organized through the DON EA framework. The content of the DON EA is

focused on documenting key IT and NSS attributes associated with achieving stated goals, objectives and outcomes of the Department. In addition, the DON EA is intended to assist and guide the development of program-specific solutions architectures, which are required as part of the JCIDS and Defense Acquisition System (DAS) processes.

The DON EA is applicable to all naval organizations, applied to all naval programs, projects and initiatives that result in systems, capabilities, data, and or processes. This includes all in-progress and future naval architecture development efforts that provide or maintain DON, Navy, or Marine Corps capabilities, including associated standards developed under or incident to programs, projects, capabilities, systems and initiatives.

The release of DON EA version on 31 July 2009 includes an enclosure entitled "Department of Navy Enterprise Architecture Description" which describes how the DON EA will be developed and implemented. Compliance with the DON EA must be demonstrated for all IT systems, including NSS, as part of subtitle III of title 40, U.S.C./Clinger-Cohen Act confirmation process discussed in chapter 3 of this instruction. In addition, compliance with the DON EA must be demonstrated, prior to obligation of development and modernization funding, as part of the DON IM and IT investment review process, as described in the DON IM and IT Investment Review Process Guide and paragraph 1.9.4 of this instruction. Additional assessments of compliance with the DON EA, at appropriate points throughout a program’s lifecycle, will be added as the content and processes associated with the DON EA continue to mature.

As the DON EA matures, legacy FORCEnet, the Navy and Marine Corps initiative to achieve joint transformation by providing robust information sharing and collaboration capabilities across the naval and joint force, compliance processes will be used for the capabilities development process and acquisition management process. FORCEnet requirements apply to new start and legacy IT systems, including NSS, that exchange information with external systems. In the future these requirements will be found in the DON EA SRAs for command and control (C2), battlespace awareness (BA), and net-centric (NC). Legacy systems shall be considered for retrofit if sufficient time remains in their life-cycle to warrant funding as determined by the program and resource sponsor. The retrofit decision shall be based on: (1) an assessment that considers the remaining life of the system; (2) the system’s importance to future net-centric

joint and multinational operations; (3) the level of maturity and compliance with the FORCEnet integrated architecture and FCCC (Navy) and Marine Corps Systems Command (MARCORSYSCOM) C4I integration and interoperability management plan criteria; and (4) the feasibility and cost of compliance-related modifications.

1.2 Acquisition Management Process

1.2.1 General Purpose

This chapter describes a model for managing all DON weapon system and IT system acquisition programs. The management model acknowledges that every acquisition program is different and the PM and the MDA shall structure the program to ensure a logical progression through acquisition phases defined in references (m) and (p).

For purposes of this instruction, a "weapon system" is a system that can be used by the Armed Forces to carry out a combat mission, including a host platform (e.g., ship, submarine, or aircraft), missile, weapon, munitions, training system, combat system, subsystem(s), component(s), equipment(s), associated software, or principal items that may be acquired collectively or individually and are of such importance that management techniques require centralized, individual item management.

For purposes of this instruction, an "IT system" is any system that is an interconnected system or subsystem of equipment, that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information, including computers, ancillary equipment, software, firmware and similar procedures, services (including support services), related resources, automated information systems (AIS) and IT systems such as electronic commerce and electronic data interchange, non-tactical networks, messaging systems, base level infrastructure, etc.

1.2.2 Specific Application

The acquisition process described in this instruction applies to all DON programs managed by DON organizations, including programs that are part of a specified system of systems (SoS) or a family of systems (FoS) as defined in references (a) and (c) and also activities operating on a reimbursable, non-

appropriated, or cost-recovery basis. IT programs funded by direct citation of funds from one or more foreign military sales case(s) are exempt.

Acquisition of electronic publishing, printing, and micropublishing equipment and services, which are subject to the Congressional Joint Committee on printing notification requirement, shall be managed concurrently under both this instruction and reference (q). Acquisition of visual information productions and equipment is prohibited except as authorized in reference (r).

1.3 Overview of the Acquisition Management Process

ASN(RD&A) is the DON component acquisition executive (CAE) and is responsible for all DON research, development, and acquisition. The Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) is the MDA for ACAT ID and IAM acquisition programs. The Assistant Secretary of Defense (Networks and Information Integration) (ASD(NII)) may be the MDA for ACAT IAM acquisition programs, when delegated by USD(AT&L). ASN(RD&A) is the MDA for ACAT IC, IAC, and II acquisition programs. For ACAT III, IV, and AAPs, ASN(RD&A) delegates MDA and program decision authority (PDA) to PEOs, commanders of systems commands (SYSCOM), and DRPMs. ASN(RD&A)-designated PEOs, SYSCOM commanders, DRPMs, and other designees are responsible for executive management of assigned acquisition programs and will assign PMs to execute acquisition programs per approved cost, schedule, and performance thresholds.

The MDA shall conduct milestone reviews for all DON assigned ACAT programs and, the CAE and CNO or CMC, or designee, shall conduct applicable Gate Reviews (see paragraph 1.11) for ACAT I, IA, and selected ACAT II programs. Prior to, or at program initiation, the PM shall propose appropriate program decision points to the MDA, advise of mandatory program information to be presented at proposed decision points, and provide any discretionary program information considered essential for MDA decision-making. Based on technology maturity and acquisition strategy, a program may enter the acquisition process at any decision point. See paragraph 1.5 of this chapter for information on tailoring of program information content. Prior to each subsequent program decision point, the PM shall provide the MDA with the opportunity to review the program information required to assess program status and support a decision for the upcoming review. Integrated product teams (IPTs) or acquisition coordination teams (ACTs) shall be

established per the criteria in paragraphs 1.3.1 and 1.3.2 by the PM, or designated official if a PM has not been assigned, or the MDA, respectively. An IPT supports the PM in program execution and the ACT is an advisory body to the MDA.

1.3.1 Integrated Product Teams (IPTs)

IPTs are an integral part of the defense acquisition process used to maintain continuous and effective communications and to execute programs. IPTs may address issues regarding requirements and capabilities needs, acquisition strategy and execution, financial management, milestone and decision review preparation, etc. MDAs and PMs are responsible for making decisions and leading execution of their programs through IPTs. The PM shall structure, tailor, and lead IPTs to resolve issues, provide assessments, and execute programs at the lowest level. IPTs may be established to address issues and needs in a specific functional, topic, and or product area, such as cost, and performance, design, test, or contracting, or to address integration of all program functions and products. IPTs may utilize working level staff, managers at various levels, and program support personnel. Members are selected based on their knowledge and or responsibility in the designated focus area(s). See reference (p), paragraphs E1.2 and E1.20, for IPT implementation requirements for DON ACAT programs. There are generally two levels of IPTs: overarching IPTs (OIPTs) and working IPTs (WIPTs).

1.3.1.1 Overarching Integrated Product Teams (OIPTs)

OIPTs are established by the MDA for ACAT ID and IAM programs to evaluate the overall program prior to a milestone or formal program review (PR), to address issues that may impact milestone or PR decisions, and to facilitate program communications among major stakeholders as required by reference (m), enclosure 2, paragraph 9e.

1.3.1.2 Working Integrated Product Teams (WIPTs)

WIPTs are formed to address issues and needs in a specific functional and topic area or to address integration of all program functions and products. WIPTs may utilize working level staff, managers at various levels, and program support personnel.

Functional WIPTs generally focus on a particular function, topic such as cost and performance, design, test, environment,

safety, and occupational health (ESOH), corrosion prevention and control, or contracting. Members are selected based on their knowledge and or responsibility in the designated focus area.

1.3.2 Acquisition Coordination Teams (ACTs)

The ACT is a team of stakeholders from the acquisition community who represent the principal advisors to the MDA. An ACT shall be established for each DON ACAT IC, IAC and II program. For ACAT ID and IAM programs, an ACT is not required since a similar function is performed by the OIPT.

ACTs are co-chaired by the cognizant Deputy Assistant Secretary of the Navy (DASN) or DASN action officer and the PM (or a PM's representative). Prior to the assignment of a PM, the ACT shall be co-chaired by an appropriate program sponsor (or a program sponsor's representative).

ACT members shall be empowered and authorized by the executing commands to make commitments for the organizations they represent, and are responsible for keeping their principals appraised of the program status. The ACT does not replace the PM's IPT and it shall neither abrogate the responsibility of the PM nor delay or prevent unresolved issues from being raised to the MDA.

1.4 Categories of Acquisition Programs and Milestone Decision Authorities

An ACAT designation shall be assigned per this chapter after approval of a CDD or CPD establishing the need for a new program. While a proposed ACAT designation shall be provided on the cover of the ICD and the proposed CDD, the cognizant PEO, SYSCOM, DRPM, PM, or designee shall request an ACAT designation or designation change as appropriate. ACAT designations shall be forwarded as soon as they are approved to Deputy Assistant Secretary of the Navy (Acquisition and Procurement) (DASN(AP)) for input into the ASN(RD&A) Acquisition Program listing. An approved ACAT designation does not mean that the program has entered the acquisition process. After the MDD, the MDA will approve entry into an acquisition phase and program initiation at a milestone entry point based on entrance criteria of that phase and compliance with statutory requirements.

Reference (m), enclosure 3, and table E1T1 of this chapter, provide the description, dollar thresholds, and the decision authority for ACAT I-IV acquisition programs and AAPs.

The category of an acquisition program shall generally be determined based upon an assessment of cost, complexity, and risk. Potential ACAT programs are not to be artificially divided into separate entities for the purpose of qualifying as lower ACAT categories, or as AAPs. For ACAT programs that are also joint programs, see chapter 8 for implementation requirements.

ASN(RD&A) shall resolve any question of classification of a program below the ACAT I or IA level, or potential program, as a weapon system or IT system acquisition program.

Once a program has delivered greater than 90 percent of its total quantity or expended greater than 90 percent of total program cost (research, development, test, and evaluation (RDT&E) and procurement as defined in the APB), the PM should request from DASN(AP) that the program be removed from the ASN(RD&A) ACAT listing.

1.4.1 ACAT I (Major Defense Acquisition Program (MDAP))

USD(AT&L) designates MDAPs as ACAT ID or ACAT IC. The USD(AT&L) is the MDA for ACAT ID (Defense Acquisition Board) programs. ASN(RD&A) is the MDA for DON ACAT IC (Component) programs. Section 2430a of title 10, U.S.C., as implemented by USD(AT&L) memorandum, Designation of Subprograms for Major Defense Acquisition Programs, of 23 June 2009, authorizes USD(AT&L) and ASN(RD&A) to designate subprograms of ACAT ID and ACAT IC programs, respectively. When an ACAT I MDAP requires the delivery of two or more categories of end items that differ significantly in form and function, subprograms may be established for baselining and reporting purposes. See paragraph 2.9.2 for APB implementation requirements for subprograms of ACAT I MDAPs. See reference (m), enclosure 3, for implementation requirements for DON ACAT I programs.

1.4.2 ACAT IA (Major Automated Information System (MAIS))

USD(AT&L) designates MAIS programs as ACAT IAM or ACAT IAC and is the MDA for ACAT IAM programs, unless delegated to ASD(NII). The ASN(RD&A) is the MDA for DON ACAT IAC programs unless this authority is specifically delegated. See reference (m), enclosure 3, for implementation requirements for DON ACAT IA programs.

1.4.3 ACAT II

ACAT II programs are major system programs that do not meet the criteria for an ACAT I program. ASN(RD&A) shall designate ACAT II programs and shall serve as MDA for such programs unless this authority is specifically delegated. By definition, there are no IT ACAT II programs. See reference (m), enclosure 3, for implementation requirements for DON ACAT II programs.

1.4.4 ACAT III

PEOs, SYSCOM commanders, and DRPMs shall designate ACAT III programs and may delegate MDA authority for such programs to a designated flag officer or Senior Executive Service (SES) official or position. DASN(AP) shall be notified of all ACAT III program designations for entry into the ASN(RD&A) Acquisition Program listing.

1.4.5 ACAT IV

There are two categories of ACAT IV programs. ACAT IVT (Test) programs require operational test and evaluation (OT&E), while ACAT IVM (Monitor) programs do not. Commander, Operational Test and Evaluation Force (COMOPTEVFOR) or Director, Marine Corps Operational Test and Evaluation Activity (Director, MCOTEA) may elect to monitor ACAT IVM programs.

PEOs, SYSCOM commanders, and DRPMs shall designate ACAT IV programs and may delegate MDA authority for such programs to a designated flag officer, SES official, or to the PM. The operational test agency (OTA) (COMOPTEVFOR or Director, MCOTEA) shall concur in writing with all ACAT IVM designations. All Navy disputes concerning ACAT IV designations shall be arbitrated by the Director, Test and Evaluation and Technology Requirements (CNO (N091)) through the Test and Evaluation Coordination Group (TECG) process per paragraph 4.4.4 in chapter 4 of this instruction. All Marine Corps disputes concerning ACAT IV designations shall be resolved by ACMC.

DASN(AP) shall be notified of all ACAT IV program designations for entry into the ASN(RD&A) Acquisition Program listing.

1.4.6 Abbreviated Acquisition Programs (AAPs)

Small DON acquisitions and modifications may be designated an AAP if they do not require OT&E and they meet dollar threshold and other criteria in table E1T1 below. The OTA must concur in writing that OT&E is not required.

DASN(AP) shall be notified of all AAP designations for entry into the ASN(RD&A) Acquisition Program listing.

1.4.6.1 Weapon System and Information Technology (IT) System AAP Procedures

Potential ACAT programs shall not be artificially divided into separate entities for the purpose of having the entities qualify as separate AAPs. PEOs, SYSCOM commanders, DRPMs, and flag officers or SES designees are assigned PDA and designation authority for their AAP weapon system and IT system programs. PDA may be delegated to the PM. Prior to final approval of an AAP designation, the OTA (COMOPTEVFOR or Director, MCOTEA) shall concur in writing that OT&E is not required. The CNO (N091) will arbitrate disputes concerning the need for OT&E per the TECG process. In addition, ASN(RD&A) or designated MDA may elect to treat any program meeting the AAP criteria listed in table E1T1 as an ACAT program if circumstances warrant, such as joint service involvement or high risk, or if greater visibility is justified.

Designated PEOs, SYSCOM commanders, and DRPMs shall be responsible for developing AAP policies and procedures for assignment of PDA, conducting PRs, and reporting and tracking program status. The PDA shall document all major program decisions. Only ASN(RD&A) shall assign PDA to organizations other than SYSCOM commanders, PEOs, and DRPMs.

AAPs shall not be initiated without funding and a documented requirement. As a minimum, requirements or capabilities shall be documented by a sponsor and approved at the appropriate level (e.g., CNO (program or resource sponsor) and CMC (DC, CD&I)). Program and resource sponsors shall use reference (o) and the FCCC as a guide to determine the net-centric performance requirements for IT systems, including NSS, being acquired by an AAP.

The PM for AAPs shall develop a cost analysis requirements description (CARD); obtain a program life-cycle cost estimate (PLCCE); conduct a tailored MPT analysis; develop a plan for test

and evaluation; conduct a tailored analysis of the system's ability to operate in the intended electromagnetic environment (per Military Standard 464 (MIL-STD-464)); establish a system safety program tailored (per MIL-STD-882) to identify ESOH hazards; complete Clinger-Cohen Act (CCA) compliance and information assurance strategy for IT systems, including NSS; complete IT registration for mission-critical (MC) and mission-essential (ME) IT systems, including NSS; and provide any other statutory or program information required by the PDA. The PM shall comply with the DoD PPBES and configuration management requirements and reporting procedures.

1.4.7 Program Modifications

Table E1T2 and paragraph 1.5.5 of this chapter provide guidance for implementation and documentation of weapon system and IT system modifications.

Table E1T1 Description and Decision Authority for ACAT I-IV and AAP Programs

Acquisition Category	Criteria for ACAT or AAP Designation	Decision Authority
ACAT I	• Major Defense Acquisition Programs (MDAPs) (10 U.S.C. §2430) • RDT&E total expenditure > $365 million in Fiscal Year (FY) 2000 constant dollars, or • Procurement total expenditure > $2.190 billion in FY 2000 constant dollars, or • MDA designation as special interest	ACAT ID: USD(AT&L) ACAT IC: SECNAV, or if delegated, ASN(RD&A) as the CAE (not further delegable)
ACAT IA [1/]	• Major Automated Information Systems (MAISs) • Program costs/year (all appropriations) > $32 million in FY 2000 constant dollars, or • Total program costs > $126 million in FY 2000 constant dollars, or • Total life-cycle costs > $378 million in FY 2000 constant dollars • MDA designation as special interest	ACAT IAM: USD(AT&L), or designee ACAT IAC: SECNAV, or if delegated, ASN(RD&A), as the CAE (not further delegable)
ACAT II	• Does not meet the criteria for ACAT I • Major Systems (10 U.S.C. §2302(5)) • RDT&E total expenditure > $140 million in FY 2000 constant dollars, or • Procurement total expenditure > $660 million in FY 2000 constant dollars, or • ASN(RD&A) designation as special interest • Not applicable to IT system programs	ASN(RD&A), or the individual designated by ASN(RD&A)
ACAT III	• Does not meet the criteria for ACAT II or above • Weapon system programs: • RDT&E total expenditure ≤ $140 million in FY 2000 constant dollars, or • Procurement total expenditure ≤ $660 million in FY 2000 constant dollars, and • Affects mission characteristics of ships or aircraft or combat capability • IT system programs: • Program costs/year ≥ $15 million ≤ $32 million in FY 2000 constant dollars, or • Total program costs ≥ $30 million ≤ $126 million in FY 2000 constant dollars, or • Total life-cycle costs ≤ $378 million in FY 2000 constant dollars	Cognizant PEO, SYSCOM commander, DRPM, or designated flag officer or SES official. ASN(RD&A), or designee, for programs not assigned to a PEO, SYSCOM, or DRPM.
ACAT IVT	• Does not meet the criteria for ACAT III or above • Requires operational test and evaluation • Weapon system programs: • RDT&E total expenditure ≤ $140 million in FY 2000 constant dollars, or • Procurement total expenditure ≤ $660 million in FY 2000 constant dollars • IT system programs: • Program costs/year < $15 million, or • Total program costs < $30 million, or • Total life-cycle costs ≤ $378 million in FY 2000 constant dollars	Cognizant PEO, SYSCOM commander, DRPM, or designated flag officer, SES official, or PM. ASN(RD&A), or designee, for programs not assigned to a PEO, SYSCOM, or DRPM.

Table E1T1 Description and Decision Authority for ACAT I-IV and AAP Programs (cont'd)		

ACAT IVM	• Does not meet the criteria for ACAT III or above
	• Does not require operational test and evaluation as concurred with by OTA
	• Weapon system programs:
	  • RDT&E total expenditure ≥ $10 million ≤ $140 million in FY 2000 constant dollars, or
	  • Procurement expenditure ≥ $25 million/year, ≥ $50 million total ≤ $660 million total in FY 2000 constant dollars
	• Not applicable to IT system programs
		Cognizant PEO, SYSCOM commander, DRPM, or designated flag officer, SES official, or PM.
		
		ASN(RD&A), or designee, for programs not assigned to a PEO, SYSCOM, or DRPM.

Abbreviated Acquisition Program	• Does not meet the criteria for ACAT IV or above
	• Does not require operational test and evaluation as concurred with in writing by OTA
	• Weapon system programs:
	  • Development total expenditure < $10 million, and
	  • Production or services expenditure < $25 million/year, < $50 million total
	• IT system programs:
	  • Program costs/year < $15 million, and
	  • Total program costs < $30 million
		Cognizant PEO, SYSCOM commander, DRPM, or designated flag officer, SES official, or PM.
		
		ASN(RD&A), or designee, for programs not assigned to a PEO, SYSCOM, or DRPM.

1/ In some cases, an ACAT IA program, as defined above, also meets the dollar threshold definition of an MDAP. Per DoD Instruction 5000.02 of 8 Dec 2008, enclosure 3, table 1, footnote 1, the statutory requirements that apply to MDAPs or MAIS programs shall apply to such programs, as designated by the Secretary of Defense. Public Law 111-84 of 28 Oct 2009, section 817, subsections (a) and (b), (FY 2010 National Defense Authorization Act), amended section 2445d of title 10, U.S.C., whereby the Secretary of Defense may, as a general rule, designate a MAIS program that requires the development of customized hardware to be treated ONLY as an MDAP under chapter 144 title 10, U.S.C., subject to chapter 144 MDAP requirements, and a MAIS program that does not require development of customized hardware to be treated ONLY as a MAIS program under chapter 144A of title 10, U.S.C., subject to chapter 144A MAIS program requirements.		

1.5 Capabilities Development and Program Decision Points and Phases

1.5.1 User Needs and Technology Opportunities

Mission needs identify deficiencies in current operational capabilities. ICDs are baseline documents for FoSs and prescribe FoS capabilities per references (a) and (c). Additionally, ICDs and CDDs are baseline documents for SoSs and prescribe SoS capabilities per references (a) and (c).

Naval capabilities and warfare sponsors and the Chief of Naval Research (CNR) shall identify projected deficiencies and future naval capabilities (FNC) that require investment in science and technology (S&T) projects. The most viable S&T projects should be expeditiously demonstrated and transitioned into new and legacy systems to support the warfighter and reduce system TOC. Naval capabilities and warfare sponsors and the CNR shall consider use of technologies developed under the small business innovation research (SBIR) and small business technology transfer (STTR) program, giving these technologies favorable

consideration in addressing current and future S&T needs. See reference (m), enclosure 2, paragraphs 3 and 5, for implementation of technology opportunities activities during pre-systems acquisition.

In developing system requirements and capabilities needs, consideration shall be given to modifying performance requirements to permit international cooperation, either through information exchange, R&D, international agreements, foreign comparative testing, or industrial cooperation. Industrial base assurance factors shall be considered per DON's Critical Infrastructure Protection (CIP) initiative. Public Law 111-23 of 22 May 2009, section 303, modifies the requirement for industrial capability assessments (performed pursuant to section 2505 of title 10, U.S.C.) to require that DoD consider the effects of the termination of ACAT I programs on the industrial base. These assessments are reported annually to Congress.

If the potential solution to a newly identified need could result in new or significantly modified IT systems, including NSS, the appropriate IT FAMs listed at the DON CIO Web site (www.doncio.navy.mil) shall review the documented need to ensure compliance with the DON EA and coordinate with principal staff assistants for joint potential. IT programs are discussed in chapter 3 of this instruction.

See reference (m), enclosure 2, paragraphs 3, 3a, 3d, and 5d(1)(b), and reference (a) for implementation of the capabilities integration and development process.

1.5.2 Program Tailoring

All MDAs should promote maximum flexibility in tailoring programs under their oversight.

Prior to formal program initiation (normally milestone B) and after consideration of the views of the ACT and IPT members, the PM shall propose a tailored execution, management, program information and documentation, and oversight structure for the program. The PM proposal shall consider program size, complexity, system service-life, total force structure, and associated risk. The MDA shall approve in writing a tailored execution, management, program information and documentation, presentation medium, and oversight structure. Upon approval, all deviations from the program's documented tailoring plan require

MDA approval. The MDA tailoring determinations made at program initiation shall be reexamined at each program decision point in light of then-current program conditions.

Required program information for all DON ACAT programs shall be determined using the concept of "tailoring in" (versus "tailoring out") program information, i.e., there is no program information required beyond: (1) that required by statute and regulation (reference (m)); (2) this instruction, chapter 2, tables E2T1, E2T2, and E2T3; and (3) any additional information required by the MDA. Program information may be tailored to: (1) combine program information and documents with similar information and approval authorities; (2) establish a common reference for basic system and program information; and (3) eliminate non-applicable information.

Both MDAs and PMs should be aware that there are statutory and regulatory requirements listed in chapter 2, tables E2T1 and E2T2, that cannot be tailored out of a program's milestone information requirements. Failure to comply with these requirements will preclude the successful completion of applicable milestone reviews.

1.5.3 Program Decision Points Tailoring

The MDA must rigorously evaluate a program's core activities before making a program decision. The MDA shall establish tailored program decision points for each ACAT program as early as possible in the program life-cycle. An ACAT program does not require a set number of program decision points.

DON new start ACAT programs shall follow the acquisition life-cycle model established by reference (m). Ongoing ACAT programs will follow the guidance provided in enclosure 2, paragraph 1b of reference (m) and paragraph 4.3.1 of reference (p).

The MDA shall not approve program initiation or entry into any phase that requires milestone approval and may not release a final RFP, leading to award of a contract for any ACAT program that contains an IT system, including NSS, until subtitle III of title 40, U.S.C., and CCA confirmation has been granted, following the procedures specified in chapter 3 of this instruction.

See reference (m), enclosure 2, paragraphs 1 through 9, for implementation requirements for pre-systems acquisition, systems acquisition, and sustainment of DON ACAT programs.

1.5.4 Program Decision Points and Phases

1.5.4.1 Materiel Development Decision (MDD)

Per reference (m), the MDD precedes entry into any phase of the DoD acquisition process. Following the MDD, the MDA may authorize the initiation of the materiel solution analysis phase or authorize entry into the acquisition management system at any point consistent with phase-specific entrance criteria and statutory requirements. The AoA study guidance approved per table E2T2 (see paragraph 5.4.1) at MDD shall provide for conduct of the AoA in the context of an SoS or FoS when an SoS or FoS is applicable, and will assign a study director. Following approval of the study guidance, the study director shall prepare an AoA study plan to assess preliminary materiel solutions, identify key technologies, and estimate life-cycle costs. The AoA study guidance and AoA study plan shall be designed to show the value of each individual system in an SoS or FoS and its contribution to a mission capabilities package. Where appropriate, each individual system shall be analyzed using multiple concepts for that system. Where C4I systems or subsystems with similar functions or capabilities exist within the DON inventory, the decision to provide a new or modified C4I system or subsystem shall be addressed from a TOC perspective within the AoA. See reference (m), enclosure 2, paragraph 4, for implementation requirements for pre-systems acquisition of potential DON ACAT programs at this decision point.

1.5.4.2 Materiel Solution Analysis (MSA) Phase

The most promising systems concepts shall be defined, in part, by broad objectives for performance and the identification of interoperability and integration requirements within an FoS or SoS. DASN(RDT&E) chief systems engineer (CHSENG), COMSPAWARSYSCOM (FORCEnet CHENG), and NETWARCOM shall assist the requirements officer and the PM, or designee, with the translation of these concepts into operational and systems views and the associated component advanced development.

An AoA shall be conducted to assess how alternative approaches to a proposed Navy or Marine Corps system contribute to the total mission capabilities of an SoS or an FoS. Program documentation for a program that is part of an SoS or FoS shall

be developed and written in the SoS or FoS context. The requirements officer (RO) and the PM should develop a system performance matrix for the preferred alternative to support the preparation of the corresponding CDD(s) and APB(s). The RO and PM shall consider SBIR and STTR developed technologies during the development of the system performance matrix. Detailed information, company contacts and Navy contacts for SBIR and STTR developed technologies are available at www.navysbirsearch.com. See reference (m), enclosure 2, paragraph 4, for materiel solution analysis implementation requirements for pre-systems acquisition.

1.5.4.3 Milestone A

Milestone A occurs at the beginning of the TD phase. Milestone A is also a statutory requirement of section 2366a of title 10, U.S.C., as amended by Public Law 110-181 of 28 Jan 2008, section 943 (Fiscal Year (FY) 2008 National Defense Authorization Act) and Public Law 110-417 of 14 Oct 2008, section 813 (FY 2009 National Defense Authorization Act), to begin the TD phase for a major defense acquisition program (pre-ACAT I and ACAT I program). At milestone A, an MDA review shall be held to evaluate the results of the AoA, technology maturity, technical risk, and international availability or potential for international cooperation; to approve the preferred system solution and TD strategy including competitive prototypes of the system and or key system elements (subsystems) per reference (m), paragraph 5c(9); and to authorize entry into the TD phase. See reference (m), enclosure 2, paragraph 5, for implementation for pre-systems acquisition of potential DON ACAT programs at this milestone. ACAT I, IA, and selected ACAT II Gate Review programs shall conduct a gate 3 prior to milestone A for an initial Service-approved CDD and CONOPS, which will guide the development of the service cost position, prototyping scope, and the overall scope of the TD phase. The initial CDD at milestone A shall be updated to an approved final CDD for joint staffing and JROC and JCB validation prior to milestone B. The MDA may approve program initiation for shipbuilding programs at milestone A, the beginning of the TD phase. See reference (m), enclosure 2, paragraph 5d(1)(a), for implementation requirements for shipbuilding program initiation.

1.5.4.4 Technology Development (TD) Phase

TD is normally part of pre-systems acquisition effort conducted prior to program initiation. Technology to be used in the initial and subsequent increments of a program shall have been demonstrated in a relevant environment.

Shipbuilding programs may be initiated at milestone A in order to start ship design concurrent with sub-system and component TD. See reference (m), enclosure 2, paragraph 5, for TD implementation requirements for pre-systems acquisition. See reference (m), enclosure 2, paragraph 5d(1)(a), for implementation requirements for shipbuilding program initiation that will take place at entry to or during the TD phase.

Public Law 111-23 of 22 May 2009, section 205, requires ACAT I programs to complete a preliminary design review (PDR) prior to milestone B. As described in reference (m), a successful PDR will inform requirements trades; improve cost estimation; and identify remaining design, integration, and manufacturing risks. Additionally for ACAT I programs, a post-PDR assessment, and an independent review and assessment by the Director Defense Research and Engineering (DDR&E) will be conducted in association with milestone B preparations and will be formally considered by the MDA at milestone B. PDRs for other than ACAT I programs will be approved by the MDA when consistent with the technology development strategy (TDS) or acquisition strategy objectives. When the PDR is conducted before milestone B, a post-PDR assessment will be conducted in association with the milestone B review and formally considered by the MDA at the milestone B review. If the PDR is conducted after milestone B, the MDA will conduct a post-PDR assessment at a time reflected in the approved acquisition strategy. The system requirements review (SRR) and system functional review (SFR) are also conducted during the TD phase. Detailed descriptions of the SRR, SFR, and PDR are contained in the Defense Acquisition Guidebook (DAG) at https://dag.dau.mil/.

For pre-ACAT I, ACAT I, and selected ACAT II programs whose TD strategy require competitive system prototypes, a program decision meeting (PDM) or PR shall be conducted to review the system performance specification (SPS) and the request for proposal (RFP) (less non-disclosure sections) for the TD phase as follows:

a. For Gate Review programs, gate 3 shall be conducted for an initial Service-approved CDD and CONOPS before milestone A, a PDM or PR shall be conducted after milestone A and before gate 4.

b. Additional PDMs or PRs shall be conducted, as determined by the MDA, to review program progress during the TD phase.

c. Principal and advisory members of Gate Reviews shall be invited to attend these PDMs or PRs. See paragraph 1.9.1 for additional guidance.

The gate 4 review of chapter 1, paragraph 1.11.4.2.1.1, occurs during the TD phase, approves the formal system design specification (SDS) for ACAT I, IA, and selected ACAT II programs, and authorizes a program to proceed to gate 5 (RFP) or milestone B. The formal SDS shall be used to develop the technical performance specifications of the formal engineering and manufacturing development (EMD) phase RFP. Gate 4 may be combined with gate 5 as determined by the Secretary of the Navy (SECNAV) or ASN(RD&A).

1.5.4.5 Milestone B

Milestone B occurs at the beginning of the EMD phase. At milestone B, an MDA review will be held to assess technology maturity and technical risk for entry into EMD. At milestone B, the MDA normally approves program initiation, the low-rate initial production (LRIP) strategy, and the quantities for which LRIP will be requested at milestone C. For Gate Review programs, the initial Service-approved CDD and CONOPS shall be updated prior to gate 4, with results of the TD phase to date, and the updated CDD shall be submitted for joint staffing and JROC and JCB validation prior to milestone B. The updated CDD shall inform the SDS and the service cost position for milestone B and the EMD phase. Initial LRIP quantities are determined following consultation between PM and Director, Operational Test and Evaluation (DOT&E) for programs on Office of the Secretary of Defense (OSD) T&E oversight list or the PM and OTA for programs not on the OSD T&E oversight list. An evolutionary acquisition strategy is the preferred approach to satisfy time-phased CDDs; however, a single step to a full capabilities acquisition strategy may be used whether or not CDDs are time-phased. In the case of shipbuilding, lead and initial follow ships are normally approved at milestone B. The follow ships that are approved at milestone B shall be sufficient quantities to maintain shipyard

construction continuity until the FRP DR. Critical sub-systems such as command, control, communications, computers, and intelligence (C4I) suite and combat systems shall be demonstrated prior to lead and follow ship installation as directed by the MDA given the level of technology maturity, associated risk, and alignment with the NMP. Per reference (m), at milestone B, the PM shall submit application(s) to ASD(NII)/DoD CIO, via the cognizant PEO or SYSCOM, for the review and assessment of new or modified communications waveforms. See reference (m), enclosure 2, paragraph 6, for milestone B implementation requirements for systems acquisition of DON ACAT programs.

The gate 5 review of chapter 1, paragraph 1.11.4.3.1.1, ensures that the Service has completed needed actions for formal EMD RFP release and recommends to the MDA approval of the release of the formal EMD RFP to industry. A gate 5 review may occur before, concurrent with, or after milestone B depending upon the chosen acquisition strategy and the related program risk. A gate 5 and milestone B may be combined for ACAT IC, IAC, and selected ACAT II programs as determined by ASN(RD&A).

1.5.4.6 Engineering and Manufacturing Development (EMD) Phase

PMs of systems within an SoS or FoS shall coordinate with each other to provide sufficient information to ASN(RD&A) and the MDAs so that appropriate decisions can be made across platform and system domains. See reference (m), enclosure 2, paragraph 6, for EMD implementation requirements for systems acquisition of DON ACAT programs.

The PDR (if not required prior to milestone B), critical design review (CDR) and test readiness review (TRR) are conducted during the EMD phase. Detailed descriptions of the PDR, CDR, and TRR are contained in the DAG at https://dag.dau.mil/.

The gate 6 review of chapter 1, paragraph 1.11.4.3.1.2, assesses overall program health including readiness for production, the sufficiency of the SDS, the Earned Value Management System (EVMS) performance measurement baseline (PMB), and the integrated baseline review (IBR) (see The Program Managers' Guide to the Integrated Baseline Review Process). The initial gate 6 occurs following award of the EMD contract and satisfactory completion of the IBR. Follow-on gate 6 reviews will be conducted to endorse or approve the CPD, review program health prior to the FRP DR, and serve as forums for annual

configuration steering boards (CSBs) for ACAT I and IA programs. A gate 6 review conducted to endorse or approve a CPD will be chaired by CNO/CMC, or designee.

1.5.4.6.1 Integrated System Design

ASN(RD&A) may designate selected programs for special interest. These programs may be components of a specified FoS or SoS. During the EMD phase, the DASN(RDT&E) CHSENG shall assist these programs by reviewing functional designs and interface specifications that impact system interoperability per reference (o). Assistance will be provided through the program's established IPT or ACT processes.

See reference (o) and reference (m), enclosure 2, paragraphs 6a and 6c(6)(a), for system integration and integrated system design implementation requirements for systems acquisition of DON ACAT programs.

1.5.4.6.2 Post-Preliminary Design Review (PDR) and Post-Critical Design Review (CDR) Assessments

The post-CDR assessment provides an opportunity at the end of the integrated system design phase for assessment of design maturity. Major system integration and integrated system design issues have been addressed and programs are preparing for the system capability and manufacturing process demonstration effort. MDAs may determine the form and content of the post-PDR assessment and the post-CDR assessment. See reference (m), enclosure 2, paragraphs 6c(6)(b) and 6c(6)(c), for implementation requirements for systems acquisition of DON ACAT programs.

1.5.4.6.3 System Capability and Manufacturing Process Demonstration

This effort is intended to demonstrate the ability of the system to operate in a way consistent with approved KPPs. See reference (m), enclosure 2, paragraph 6c(6)(d), for system capability and manufacturing process demonstration implementation requirements for systems acquisition of DON ACAT programs.

1.5.4.7 Milestone C

Milestone C occurs at the completion of the EMD phase. At milestone C, an MDA review will be held to assess and evaluate program status, risk, CDR results, and readiness to enter the production and deployment phase. At milestone C, the MDA

approves one of the following: (1) LRIP for those programs that require LRIP; (2) full-rate production (or full deployment) or procurement for those programs that do not require LRIP and have completed required initial operational test and evaluation (IOT&E); or (3) limited deployment for those IT programs or software-intensive programs with no production components, but that require completion of IOT&E. For those programs that do not require LRIP and have completed required IOT&E or for shipbuilding programs where follow ships are initially approved at milestone B, milestone C and the FRP DR may be combined into a single program decision point as long as all of the required program information for both milestone C and FRP DR are satisfied. See reference (m), enclosure 2, paragraph 7, for milestone C and LRIP implementation requirements for systems acquisition of DON ACAT programs.

1.5.4.8 Production and Deployment Phase

The purpose of this phase is to achieve operational capabilities that satisfy mission needs. See reference (m), enclosure 2, paragraph 7, for production and deployment implementation requirements for systems acquisition of DON ACAT programs.

The system verification review (SVR) and production readiness review (PRR) are conducted during the production and deployment phase. Detailed descriptions of the SVR and PRR are contained in the DAG at https://dag.dau.mil/.

1.5.4.8.1 Low-Rate Initial Production (LRIP)

The MDA shall initially justify and approve the LRIP quantities for all ACAT I, II, III, and IV programs as part of the milestone B acquisition strategy and acquisition decision memorandum (ADM). With MDA approval, LRIP quantities may be adjusted to meet program requirements. The LRIP quantity shall not be less than one complete unit. Further LRIP restrictions on ACAT programs are contained in reference (m), enclosure 2, paragraph 7c(1). See reference (m) for specific ADM requirements for LRIP justification, cumulative LRIP quantities, and the percent of the total inventory objective that the cumulative LRIP quantities represent. LRIP procurement of greater than 10 percent of a program’s inventory objective shall be justified in the ADM, acquisition strategy, and selected acquisition report (SAR) (for ACAT I programs). Follow-on gate 6 reviews will be conducted to review program health post milestone C and prior to FRP DR.

1.5.4.8.2 Full-Rate Production Decision Review (FRP DR)

An FRP DR is conducted prior to a program entering into full-rate production and deployment. At the FRP DR, the MDA shall evaluate program status, risk, and readiness to enter full-rate production and procurement and deployment, or to authorize deployment for IT programs or software-intensive programs after completion of IOT&E. In the case of shipbuilding programs, the FRP DR shall be held to provide the MDA the results of the completion of IOT&E, authorize the construction of the remaining follow ships, and satisfy the requirements of this instruction, chapter 2. See reference (m), enclosure 2, paragraph 7c(2), for FRP DR implementation requirements for systems acquisition of DON ACAT programs. See this instruction, chapter 1, and paragraph 1.5.4.7, for those cases where milestone C and FRP DR are combined. Follow-on gate 6 reviews will be conducted annually to review program health post FRP DR.

1.5.4.8.3 FRP and Deployment

See reference (m), enclosure 2, paragraph 7c(3), for production and deployment implementation requirements for systems acquisition of DON ACAT programs.

1.5.4.9 Operations and Support Phase

1.5.4.9.1 Sustainment

Support concepts shall satisfy the program sponsor’s specified requirements for sustaining support performance at the lowest possible life-cycle cost. System life-cycle planning and execution shall reflect a continuity of sustainment plans, resources, and metrics sufficient to execute and measure the following four mandatory logistics support concepts for each evolutionary increment of capabilities to be delivered:

a. Minimal total life-cycle (ownership) cost to own and operate;

b. Maintenance concepts that optimize both organic and industry sources;

c. Availability of support to meet warfighter-specified levels of sustained war and peacetime material readiness; and

d. Logistics support that sustains and continuously improves both short and long-term material readiness.

See reference (m), enclosure 2, paragraph 8c(1), for sustainment requirements for DON ACAT programs.

1.5.4.9.1.1 Sustainment Support

PM responsibility for total life-cycle systems management (TLCSM) requires that all fundamental program decisions weigh heavily on those decision alternatives that are most conducive to total system life-cycle sustainment effectiveness and to life-cycle sustainment affordability. These decisions are prefaced by cost and business case analyses and presented to Gate Reviews and to the MDA for decision or concurrence. The same, high degree of decision alternative weighting is applied to lesser program decisions that also affect life-cycle sustainment affordability; continuous improvement of system long-term material readiness; increase reliability; and a reduction in the logistics footprint. PMs shall develop and implement performance based life-cycle sustainment strategies as described in reference (s) and expanded upon in reference (t).

1.5.4.9.2 Disposal

Disposal planning occurs at the earliest possible stage in a system’s life-cycle and shall consider the cost and risk of hazardous materials management and disposal. Systems shall be designed for safe, low cost disassembly.

1.5.5 Modifications

For the purpose of this instruction, the term "modification" means any configuration change to a produced configuration item regardless of cost or test requirements, e.g., engineering change proposals, pre-planned product improvements, upgrades, or technology enhancements.

A modification to any active ACAT program (i.e., any ACAT program that has not realized 90 percent of total deliveries or has not expended 90 percent of its total program cost), where the modification causes the program to breach an existing APB threshold, shall result in a revision to the APB and any other program information, as needed, per paragraph 2.9.2. If the modification causes a threshold breach of an active ACAT I program’s APB program acquisition unit cost (PAUC) or average procurement unit cost (APUC) of at least 15 percent over the

currently approved APB objective, or of at least 30 percent over the original APB objective, the PM shall ensure compliance with Congressional unit cost reporting requirements per section 2433 of title 10, U.S.C. (see this instruction, paragraph 2.9.5, and DAG, paragraph 10.9.3.2., for unit cost threshold breach reporting guidance).

Modifications will normally be considered part of the modified ACAT program, but may be managed as a separate program at the discretion of the MDA. Any identified new functionality or capability must be identified in an approved capabilities document. Modifications to programs that are not ACAT programs shall be evaluated using table E1T2 to determine whether an ACAT designation is necessary.

If the modification causes the program information of an ongoing or former ACAT or AAP program to be changed, that information shall be revised and approved by the proper authority. Additionally, if the modification causes a change in ACAT level for the ongoing program, an ACAT designation change request shall be submitted for approval. See reference (m), enclosure 2, paragraphs 8c(1)(d), 8c(1)(e), and 8c(1)(f), for implementation requirements for sustainment of DON ACAT programs. PMs of programs that are part of an SoS or FoS shall assess the impact, including electromagnetic compatibility, of their respective system modifications on other systems within the SoS or FoS, and advise the affected MDAs, PEOs, and PMs.

A modification to a program or system that is no longer an active ACAT program (i.e., a program that has achieved at least 90 percent of total deliveries or has expended 90 percent of total cost) should be treated as a separate program with its own assigned ACAT or AAP designation.

See the "Modification Process" table E1T2 below for appropriate actions by the PM, CNO/CMC, and the MDA. Actions are based on criteria shown in the top row of table E1T2.

Table E1T2 Modification Initiation Process Conditions

(The answers to the questions in columns 1 through 4 will determine the row that most closely relates to your ongoing program (pgm) characteristics and proposed modification (mod))

Pgm being modified is an active ACAT?	Mod breaches APB threshold?	Mod requires additional funding?[7/]	Mod cost exceeds "Abbreviated Acquisition Program" $criteria[4,5/]	PM action	CNO/CMC action[6/]	Program Decision Authority or MDA action
YES	NO	NO	YES [5/] or NO	Execute mod	Approve/validate CDD/CPD [2,5/]	None
YES	NO	YES	YES [5/] or NO	Prepare funding request Execute mod	Approve/validate CDD/CPD [2,5/] or requirement Provide funding	None
YES	YES	NO	YES [5/] or NO	Revise APB [1/] Revise test and evaluation master plan (TEMP) [2/] Execute mod	Approve/validate CDD/CPD [2,5/] or requirement Endorse APB [1/] Endorse TEMP [2/]	Approve APB [1/] Approve TEMP [2/]
YES	YES	YES	YES [5/] or NO	Prepare funding request Revise APB [1/] Revise TEMP [2/] Execute mod	Approve/validate CDD/CPD [2,5/] or requirement Provide funding Endorse APB [1/] Endorse TEMP [2/]	Approve APB [1/] Approve TEMP [2/]
NO	N/A	NO	NO	Prepare/submit AAP designation request to approval authority Execute mod	Approve requirement	Approve AAP designation request
NO	N/A	YES	NO	Prepare/submit AAP designation request to approval authority Prepare funding request Execute mod	Approve requirement Provide funding	Approve AAP designation request
NO	N/A	YES	YES	Prepare funding request Prepare APB [1/] Prepare TEMP [2/] Prepare ACAT [3/] desig request Execute mod	Approve/validate CDD/CPD [2/] Provide funding Endorse APB [1/] Endorse TEMP [2/]	Approve APB [1/] Approve TEMP [2/] Approve ACAT [3/] designation request

1/ "Prepare APB" is for the "modification only" if the modification is to be managed as a separate program. "Revise APB" is for the original ongoing program. See APB format in Defense Acquisition Management Information Retrieval (DAMIR) section of the Defense Acquisition Guidebook.
2/ If a new, or change to an existing, CDD/CPD or TEMP is required, see formats for CDD/CPD and TEMP in reference (a) and Defense Acquisition Guidebook, respectively.
3/ "Prepare ACAT designation request" is for the "modification only", unless the original program is still ongoing (i.e., in production), in which case the ACAT designation request shall encompass both the original program and the modification(s). See the ACAT designation request and ACAT designation change request content memorandum in the SECNAV M-5000.2 DON Acquisition and Capabilities Guidebook.
4/ $ criteria for "Abbreviated Acquisition Programs" is less than: for weapon system programs, $10M total development expenditure, $25M production or services expenditure in any fiscal year, and $50M total production or services expenditure for all fiscal years; for IT programs, $15M program costs in any single year and $30M total program costs.
5/ If answer to column 4 is YES, an approved CDD/CPD or CDD/CPD revision is required.
6/ For IT programs, endorsement is provided by the IT functional area manager, approval is provided by the resource sponsor.
7/ For modifications that require additional funding, see ASN(RD&A) memorandum, Acquisition Program Cost Management, of 21 May 2010.

1.6 Review of the Legality of Weapons Under International Law and Review for Compliance with Arms Control Agreements

1.6.1 Review of the Legality of Weapons Under International Law

All potential weapons and weapons systems acquired or developed by DON shall be reviewed by the Judge Advocate General (JAG) of the Navy during the program decision process to ensure that the intended use of such weapons or systems is consistent with domestic and international law.

a. PMs shall ensure that:

(1) All potential weapons or weapon systems are reviewed by JAG before the award of the EMD contract and again before the award of the initial production contract.

(2) No weapon or weapon system may be acquired or fielded without a legal review. The following Law of Armed Conflict (LOAC) issues must be addressed when any weapon or weapon system is being reviewed:

(a) Whether the system causes unnecessary suffering that is disproportionate to the military advantage reasonably expected to be gained from its use;

(b) Whether the system may be controlled in such a manner that it is capable of being directed against a lawful target (i.e., it is not indiscriminate in its effect); and

(c) Whether there is a specific rule of law or treaty prohibiting the use of the system. To provide the information required to address these LOAC issues, the command requesting the initiation of the legal review shall prepare and forwarded to Navy Office of JAG Code 10 (International and Operational Law) a memorandum containing the following in commonly understood language:

1. A complete description of the weapon or weapon system to include: a list of all its parts, how it functions, what it does, the manning level required for its use, and whether it is self-propelled, mounted or attached to a platform, or portable.

2. The concept or method of employment planned for the use of the weapon or weapon system. This should

include detailed information from the final approved concept of operation or method of employment that describes exactly how the system will be used.

3. Information regarding the ability of the weapon and or weapon system to be directed at a specific target (accuracy), including a comparison of the accuracy of the new weapon or weapon system to similar weapons or weapons systems (or munitions) that have already been acquired or developed and have received a legal review.

4. Information regarding the impact of the weapon and or weapon system on the human body and on material objects.

5. Any additional information or testing data and pertinent conclusions arising from these tests.

b. The JAG shall maintain a permanent file of all opinions issued under this instruction. See reference (p), paragraph E1.15, for implementation requirements for DON programs.

c. Weapons or weapon systems for the purpose of the legal review of this paragraph are defined as all arms, munitions, materiel, instruments, mechanisms, devices, and those components required for their operation, that are intended to have an effect of injuring, damaging, destroying, or disabling personnel or property, to include non-lethal weapons. For purpose of the legal review described in this paragraph, weapons do not include launch or delivery platforms, such as, but not limited to, ships or aircraft, but rather the weapons or weapon systems contained on those platforms.

1.6.2 Review for Compliance with Arms Control Agreements

All systems developed or acquired by DON shall be reviewed by the Director, Strategic Systems Programs (DIRSSP) via the Naval Treaty Implementation Program (NTIP) Office (NT00), with the advice of Navy Office of General Counsel (OGC), to certify compliance with arms control agreements.

PMs shall ensure that:

a. As required by reference (u), all activities of programs affected by arms control agreements are reviewed for arms control compliance before such activity is undertaken.

OPNAV (N810) will staff all JCIDS documents through DIRSSP (NT00) for these reviews. For programs whose documents are not staffed through the JCIDS, PMs should provide existing official program documentation and program descriptions to DIRSSP (NT00) for these reviews. If additional information is required, DIRSSP (NT00) will coordinate with the PM. More information can be found at DIRSSP (NT00)'s Web site http://www.ntip.navy.mil.

b. Per reference (u), "arms control agreements" for the purpose of this instruction includes acceptance of any arms control measures by the United States and one or more other nations. It may include legally or politically binding arrangements and may be characterized as, among other things, a treaty, agreement, protocol, declarations, memorandum of agreement or understanding, or confidence and security building measure. Substantively, the term may encompass any agreement or arrangement governing any aspect of the following: the number, types of launch or delivery platforms (sea, air, or land-based), location, testing and performance characteristics of weapons systems (including command and control, logistics, support arrangements, and any related intelligence-gathering mechanism); the numerical strength, organization, equipment, deployment, or employment of the armed forces of the parties; and those measures taken for the purpose of reducing instability in the military environment.

1.7 Non-Acquisition Programs

The Research, Development, Test and Evaluation, Navy Appropriation account funds both acquisition and non-acquisition programs. A non-acquisition program is an effort that does not directly result in the acquisition of a system or equipment for operational deployment and does not require an ICD. Programming for the requirement shall be included in an SPP input to the Program Objective Memorandum and subsequent RDT&E budget item justification documentation. Program and resource sponsors shall use reference (o), the DON EA, and the FCCC as a guide to determine the net-centric performance requirements for IT systems, including NSS, being acquired by a non-acquisition program.

Non-acquisition programs shall use current documentation required by the PPBES for management control.

CNO sponsors and CMC shall conduct annual requirements-based assessments of all non-acquisition programs, which are outside of the FNC review process. CNO sponsors and CMC shall

provide ASN(RD&A) a listing annually of all ongoing non-acquisition programs. Non-acquisition programs that are FNC projects will be reviewed annually through the FNC process.

1.8 Urgent Capability Needs and Acquisition Processes

1.8.1 DON Urgent Needs Process (UNP)

An urgent need is an exceptional request from a Navy or Marine Corps component commander for an additional warfighting capability critically needed by operating forces conducting combat or contingency operations. Failure to deliver the capability requested is likely to result in the inability of units to accomplish their missions or increases the probability of casualties and loss of life.

The DON UNP encompasses Navy urgent operational need (UON) and Marine Corps urgent universal need statement (UUNS), and processes joint urgent operational needs (JUONs) that are assigned to the Department of the Navy.

The UNP streamlines the abbreviated requirements, resources, and acquisition processes to address mission-critical warfighting capability gaps more rapidly than the normal processes permit. Subject to statutes and regulations, this process is optimized for speed, and accepts risk with regard to DOTMLPF, integration, sustainment, and other considerations.

Processing and responding to urgent needs takes precedence over normal capability development. However, this process shall not be used to circumvent existing capability development processes. To reduce overall solution execution cycle time, concurrent execution of incremental interim and longer term solutions is strongly encouraged. To the maximum extent possible, streamlined acquisition, certification and testing processes will be used to expedite the delivery of solutions. The UNP ends with the delivery of a solution that meets an acceptable level of performance, timeline, and quantities as defined by the operating forces.

Each urgent need identified is unique and requires a unique DOTMLPF response. Therefore, the timeline required to execute the recommended solution strategy will vary depending upon the complexity of the requirement. However, the solution development team will provide the recommended solution strategy to the appropriate approval authority with a targeted timeline of 60 days from receipt of the certified urgent need. The UNP

includes three phases: needs identification and certification; solution strategy development and resourcing; and solution execution.

a. Needs Identification and Certification. Naval activities initially identify an urgent need via their service chain of command. The Service component commander is responsible for ensuring each urgent need meets the definition of urgent and cannot be solved internally with organic resources. The urgent need request will be certified by: the Navy component commander (NCC) supporting a combatant command (COCOM) for a fleet identified urgent need; or the supported COCOM-level Marine Corps component commander.

b. Solution Strategy Development and Resourcing. A solution strategy is developed through the consensus of a cross-functional team. As time permits, the recommended solution strategy shall consider the equities and concerns of all the stakeholders and provide appropriate DOTMLPF integration. This phase concludes with the Service approval of a recommended solution.

(1) Solution Strategy Development. The cross-functional team refines the details of the capability gap and provides a recommendation that shall include an interim solution and longer term solutions, as required. The solution strategy shall also define the appropriate path for assessment of the potential enduring need within the normal process. To reduce future rework, it is imperative that stakeholder issues are addressed during this phase of the process. The solution strategy will address materiel and non-materiel options and consider the relationship of the recommended solution elements to other available capabilities. The solution strategy shall:

(a) Define solution options that provide a level or multiple levels of capability in timeframes acceptable to the supported commander.

(b) Consider a mix of interim, mid-term, as well as longer term, solutions that include materiel and non-materiel elements. The solution mix shall optimize the balance between rapid response, technical development, and desired capability.

(c) Define the level of requested capability that will be provided by each solution element. Successive solution elements should increase the level of requested capability provided to the warfighter.

(d) Define the quantities of each materiel solution element and level of DOTMLPF support provided with each element.

(e) Include an execution timeline that defines the delivery schedule of new capabilities to the warfighter.

(f) Contain a recommended execution strategy that considers a combination of any or all of the following options: COTS and Government off-the-shelf; rapid deployment capability (RDC); rapid development and deployment (RDD); S&T programs; or the traditional capability development process.

(2) Resourcing. The solution set shall include: a strategy that defines a cost estimate for potential materiel, as well as non-materiel elements of the solution; identifies funding source(s) and potential offsets with respect to other capabilities and available resources; addresses cost implications for sustainment including transition to the normal process.

c. Solution Execution. This phase begins with the authority to execute the solution and ends with the delivery of a solution meeting an acceptable level of capability, timeline, and quantities, as defined by the operating forces, and includes a handoff for sustainment and consideration within the normal process.

1.8.2 Rapid Deployment Capability (RDC) Process and Procedures

The RDC process is a tailored approach for initiating and managing development of a capability for rapid deployment that may transition to an acquisition program.

1.8.2.1 Objectives of the RDC Process

RDC provides the ability to react immediately to a newly discovered enemy threat(s) or potential enemy threat(s) or to respond to significant and urgent safety situations through special, tailored procedures designed to:

a. Streamline the dialogue among the capabilities needs and requirements community, the PPBES community, and the acquisition management community.

b. Expedite technical, programmatic, and financial decisions.

c. Expedite the procurement and contracting processes.

d. Provide oversight of critical events and activities.

e. Ensure RDC units are interoperable and capable of being integrated with other systems as urgency permits. Program and resource sponsors shall use reference (o), the DON EA, and the FCCC as a guide to determine the net-centric performance requirements for IT systems, including NSS, being acquired as RDC units.

1.8.2.2 Procedures for RDC Initiation and Planning

RDC efforts shall be initiated as follows:

a. A memorandum requesting initiation of an RDC effort shall be prepared by the program sponsor and requirements division, validated by CNO (N8) and CMC (DC, CD&I), and forwarded to ASN(RD&A) for approval. The memorandum shall contain the following elements formatted per the RDC checklist guidance in ASN(RD&A) memorandum, Rapid Acquisition Processing Update, of 1 Aug 2007:

(1) Brief description of the threat or urgency.

(2) Description of the requirement and whether it is a Service or joint requirement.

(3) A description of known products, domestic and foreign, that can provide the urgently needed capabilities. A description of a rapid development and deployment program if products are not available to provide the urgently needed capabilities.

(4) Quantities required.

(5) Identification of funding (amount and source).

(6) Required deployment date for RDC units.

(7) Description of all testing completed to date, including contractor or other Service testing, and all testing required prior to deployment/fielding of the RDC.

(8) Description and or concept of logistics support required.

(9) Description and or concept of support required for long-term maintenance.

(10) A statement that a plan will be developed for conducting a quick reaction assessment to verify that deployment of the RDC unit will not adversely affect interoperability and integration, compatibility, or safety.

(11) Consideration of MPT requirements for fielding the RDC.

b. ASN(RD&A) shall approve or disapprove the RDC request. If approved, ASN(RD&A) shall assign an RDC program designation identifier, and forward the RDC requirement to the appropriate PEO, SYSCOM and or DRPM.

c. PEOs, SYSCOMs, and DRPMs shall develop and approve the following:

(1) An overall RDC strategy and specific expediting measures.

(2) A plan of action and milestones, which includes transition to an acquisition program, if appropriate.

(3) A plan for logistics and long-term maintenance support including demilitarization and disposal.

(4) A plan for PEO, SYSCOM, and DRPM oversight.

(5) A plan for testing to include interoperability, integration, safety, and quick reaction assessment per chapter 4.

d. Copies of the approved RDC strategy and plans shall be forwarded to ASN(RD&A), the appropriate Deputy ASN(RD&A), DASN(RDT&E) CHSENG, DASN(Acquisition and Procurement (AP)), and the program sponsor.

1.8.3 Rapid Development and Deployment (RDD) Process and Procedures

1.8.3.1 Objectives of the RDD Process

RDD efforts are established to demonstrate the ability of new technologies to meet the urgent needs of deployed forces. RDD efforts are to be initiated when a validated Navy UON, Marine Corps UUNS, or JUONs cannot be satisfied with an off-the-shelf

solution and a prototype solution can be developed within 18 months to demonstrate capabilities required to fully or partially meet the requirements. The objectives of the RDD process are to:

a. Expedite the development and demonstration of prototype systems to meet urgent needs.

b. Streamline the dialogue among the fleet and force, requirements community, the PPBES community, and the acquisition community.

c. Provide oversight of critical events and activities.

d. Ensure RDD prototypes are interoperable and capable of being integrated with other systems as urgency permits.

1.8.3.2 Procedures for RDD Initiation and Planning

RDD efforts shall be initiated as follows:

a. A memorandum requesting initiation of an RDD effort shall be prepared by the program sponsor and requirements division, validated by CNO (N8) and CMC (DC, CD&I), and forwarded to ASN(RD&A) for approval. The memorandum shall contain the following elements:

(1) Brief description of the threat or urgency. This shall include reference to the validated Navy UON, Marine Corps UUNS, or COCOM JUONs.

(2) Description of the capability required.

(3) Description of the prototype(s) to be developed to include quantities and required delivery date.

(4) Identification of funding required and source.

b. ASN(RD&A) shall approve or disapprove the RDD request. If approved, ASN(RD&A) shall assign an RDD program designation identifier, and forward the RDD requirement to the appropriate PEO, SYSCOM, and or DRPM for immediate initiation. ASN(RD&A) may delegate approval authority.

c. PEOs, SYSCOMs, and DRPMs shall develop and approve the following:

(1) An overall RDD development strategy and specific expediting measures.

(2) A plan of action and milestones, which includes transition to an acquisition program, if appropriate.

(3) A plan for logistics for 1 year.

(4) A plan for PEO, SYSCOM, and DRPM oversight.

(5) A plan for testing to include interoperability, integration, and safety, to verify that deployment of the RDD prototype will not adversely affect interoperability and integration, compatibility, or safety. A written recommendation as to the requirement for or conduct of a quick reaction assessment (QRA) (see paragraph 4.7.5) shall be obtained from the OTA.

(6) Consideration of MPT requirements for fielding the RDD prototype.

d. Copies of the approved RDD strategy and plans shall be forwarded to ASN(RD&A), the appropriate Deputy ASN(RD&A), Deputy ASN(AP)), and Deputy ASN(Expeditionary Warfare (ExW)).

1.9 Executive Review Procedures

1.9.1 DON Program Decision Process

The DON-level acquisition decision briefing shall be the PDM. ACAT ID and IAM programs shall be reviewed by an ASN(RD&A)-chaired PDM prior to an OSD-level decision meeting. See reference (m), enclosure 2, paragraphs 9a, 9b, and 9c, for program decision implementation requirements for ACAT ID and IAM programs.

PEOs, SYSCOM commanders, and DRPMs shall conduct an internal PR to prepare for the PDM for ACAT I, IA, and II programs, and shall issue schedules at least monthly for these reviews. Attendance is controlled by the PEO, SYSCOM, and DRPM.

PDMs or PRs shall be conducted by ASN(RD&A) during the TD phase for ACAT I and selected ACAT II competitive system prototypes. Gate membership of paragraph 1.11.4.4.2 (principal members) and 1.11.4.4.3 (advisory members) shall be invited to attend these PDMs or PRs. The cognizant PEO, SYSCOM commander, DRPM, or designee, is responsible for ensuring that life-cycle

sustainment strategy, planning, and execution are independently assessed prior to proceeding to milestones B and C, to FRP DR, and to sustainment Gate Reviews. Assessments shall be conducted per reference (s) and the results reported to the MDA, DASN(AP), cognizant system DASN, Deputy Chief of Naval Operations (Fleet Readiness and Logistics) (CNO (N4)), program sponsor, and CMC (DC, I&L) and MARCORSYSCOM for cognizant programs. All programmatic aspects that affect logistics support planning, budgeting, execution, and established long-term and sustained material readiness and supportability metrics shall be assessed. Results of an independent assessment shall be the basis for logistics certification for milestones B and C and FRP DR and the basis for operational command acceptance of sustainment performance and cost effectiveness at gate 6 sustainment reviews. Each PEO, SYSCOM commander, and DRPM shall assess logistics and material readiness for initial operational capability (IOC), full operational capability (FOC) in conjunction with the customer per references (e) and (s). Using the criteria provided in reference (s), the PEO, SYSCOM commander and DRPM shall certify to the MDA the adequacy of their ACAT program's life-cycle sustainment planning (LCSP), management, resources, and execution. For programs where the MDA is not the Navy or Marine Corps (e.g., ACAT ID or a joint program where a Service other than DON is the lead), the DON CAE (ASN(RD&A)) for ACAT I and II programs, or PEO, SYSCOM commander, and DRPM for ACAT III and IV programs, shall require completion of an independent logistics assessment (ILA) and obtain certification of the results prior to review by the MDA.

For ship and system alterations, the cognizant PM and claimant stakeholder is responsible for ensuring that the NMP decision requirements have been satisfied, concurrence has been received for readiness to proceed, and for reporting the results to the cognizant MDA. The NMP process shall inform the cognizant OPNAV sponsor in support of the resource and requirements processes.

PMs shall present NMP decision point decisions and approved program and resource sponsor and TYCOM ship modernization plans during milestone decision briefs. PMs, in conjunction with program, resource sponsors and TYCOMs, shall ensure alignment between JCIDS and NMP modernization plans and acquisition program production and construction schedules prior to contract award. Once a contract has been awarded, PMs shall inform the program, resource sponsor and TYCOM, and NMP decision boards of any contractual, cost, and funding implications of changing delivery quantities and schedules.

1.9.2 IT Acquisition Board (ITAB) Reviews

ACAT IAM programs are governed by reference (m), enclosure 2, paragraph 9c, for MAIS decision meetings. DON ACAT IAM programs follow PDM procedures prior to proceeding to an ITAB review.

1.9.3 DoD Space System Acquisition Process Guidance

The Under Secretary of Defense for Acquisition, Technology and Logistics is the DoD space MDA for all DoD space MDAPs (ACAT I programs). The responsibility for the execution of DoD space systems flows from the DoD space MDA through each CAE to the appropriate PEO and PM. Reference (v) provides the necessary interim guidance and procedures for these programs.

1.9.4 Defense Business System Management Committee (DBSMC) Certification and Approval

Section 2222 of title 10, U.S.C. (as added by reference (w)), prohibits obligation of any funds for any defense business system modernization that will have a total development and modernization cost of greater than $1 million until the proposed modernization is reviewed by the appropriate OSD investment review board (IRB), certified by the designated OSD approval authority, and approved by the DBSMC. The law specifically provides that obligation of any funds for a defense business system modernization costing more than the $1 million threshold without DBSMC approval is a violation of the Anti-deficiency Act (31 U.S.C. §1341(a)(1)).

The Web site http://www.doncio.navy.mil/ provides the full text of section 2222 of title 10, U.S.C. (as added by reference (w)), the DoD Information Technology Defense Business Systems Investment Review Process Guidance of Jan 2009, and the detailed DON information management (IM) and IT investment review process, which includes additional clarification and guidance for DON defense business system modernizations.

1.9.4.1 Defense Business System Definition

Section 2222 of title 10, U.S.C. (as added by reference (w)), defines defense business system as: "an information system, other than an NSS, operated by, for, or on behalf of the DoD, including financial systems, mixed systems, financial data feeder systems, and information technology and information assurance infrastructure, used to support business activities,

such as acquisition, financial management, logistics, strategic planning and budgeting, installations and environment, and human resource management."

1.9.4.2 Roles and Responsibilities

The processes described in the following subparagraphs can be performed concurrently where appropriate.

a. **Program Manager and System Owner**

The defense business system modernization PM and system owner is responsible for initiating the certification and approval process for a defense business system modernization with sufficient lead-time to receive DBSMC approval before development and modernization funds need to be obligated. If the system is not registered in DoD Information Technology Portfolio Repository (DITPR)-DON and the Naval Information Technology Exhibits/ Standard Reporting (NITE/STAR) system, it will be necessary to do so before certification and approval can begin. In addition to submitting certification documentation through DITPR-DON, the PM must assess the system's compliance with the latest version of the DON EA as well as the DoD business enterprise architecture (BEA) through the architecture compliance and requirements traceability (ACART) tool.

b. **DON Functional Area Manager (FAM)**

The appropriate DON FAM will perform a functional review of the defense business system modernization to ensure no duplication or overlap in functionality will exist; validate the PM's DON EA and BEA compliance assertion; determine the system's transition plan status; and validate that a sound business case exists for the modernization before recommending pre-certification approval.

c. **Core Business Mission Area FAM**

The DON FAM assigned as the lead FAM for the core business mission area (CBMA) (finance, acquisition and logistics, real property, or human resources management) will inquire at the associated DoD CBMA IRB in order to identify potential problems before the defense business system modernization's certification package is delivered to the IRB.

d. **DON Deputy CIO (Navy or Marine Corps)**

The DON Deputy CIO for the appropriate Service will verify the defense business system modernization's compliance with the DON EA and relevant IT policies and will review budget and economic viability data prior to recommending pre-certification approval.

e. **DON CIO**

DON CIO, as the DON pre-certification authority (PCA), performs a final defense business system modernization review and grants pre-certification approval, if appropriate. Pre-certified defense business system modernizations are then submitted to the appropriate CBMA IRB for certification and then to the DBSMC for approval.

1.10 Source Selection Authority (SSA)

The SSA policies below apply to competitively negotiated acquisitions covering the selection of one or more prime development and or production contractors (including materiel solution analysis or the initiation of preliminary, contract, or detailed design for ship development and acquisition programs). These SSA policies also apply to other competitively negotiated acquisitions approved in advance by the assigned PEO, SYSCOM commander, or DRPM; or the head of the contracting activity.

1.10.1 ACAT I, IA, and II Programs

ASN(RD&A) for assigned ACAT IA programs, and PEOs, SYSCOM commanders, and DRPMs for their assigned ACAT I, IA, and II programs, shall be the SSA, unless otherwise specified by the USD(AT&L), ASD(NII) for ACAT IA programs, SECNAV, or ASN(RD&A). The ACAT I SSA responsibility may not be further delegated. The ACAT IA SSA responsibility may be delegated. The ACAT II SSA responsibility may be delegated to an individual who:

a. If a member of the armed forces, is a flag or general officer; or

b. If a civilian, is a member of the SES (or in a comparable or higher position under another schedule).

1.10.2 ACAT III, IV, and AAP

PEOs, SYSCOM commanders, and DRPMs for their assigned ACAT III, IV, and AAPs, and ASN(RD&A) or designee for IT ACAT III, IVT, and AAPs not assigned to PEOs, SYSCOM commanders, and DRPMs, shall designate the SSA at the time approval is granted to use formal source selection procedures.

1.10.3 Other Competitively Negotiated Acquisitions

The SSA for other competitively negotiated acquisitions shall be as prescribed by the Federal Acquisition Regulations (FAR), the Defense FAR Supplement (DFARS), or the Navy-Marine Corps Acquisition Regulation Supplement (NMCARS), unless otherwise directed by ASN(RD&A).

1.10.4 Source Selection Advisory Council (SSAC) and Source Selection Evaluation Board (SSEB)

Per NMCARS, paragraph 5215.308 Source Selection Decision https://www.acquisition.navy.mil/rda/content/view/full/3464, advisory bodies, such as SSACs and or SSEBs, must make a recommendation to the SSA and the recommendation shall be in writing.

1.11 Two-Pass and Six-Gate DON Requirements and Acquisition Governance Process

1.11.1 Purpose

The purpose of the two-pass and six-Gate Review process is to improve governance and insight into the development, establishment, and execution of acquisition programs in the DON. The goal of the review process is to ensure alignment between Service-generated capability requirements and systems acquisition, while improving senior leadership decision-making through better understanding of risks and costs throughout a program’s entire development cycle. Throughout the process, the Services (Navy and Marine Corps) retain sole responsibility for capability development and approval while the ASN(RD&A) or designee within the Office of the Secretary of the Navy retains the sole authority to make acquisition determinations per reference (x). For nuclear powered ships, the Director Naval Nuclear Propulsion Program (CNO (N00N)) maintains cognizance on all matters pertaining to the propulsion plant. The process

changes identified herein apply to, but do not supersede, the processes of references (a), (c), (m), (p), and (v) and are integrated into the governance processes of this instruction.

1.11.2 Objective

The objective of paragraph 1.11 of this chapter is to establish a disciplined and integrated process for requirements and acquisition decision-making within DON. It will endorse or approve key JCIDS and acquisition documents, and facilitate decisions regarding required Navy and Marine Corps capabilities and acquisition of corresponding materiel solutions.

1.11.3 Scope and Applicability

The process, paragraph 1.11 of this chapter, will be implemented in an integrated, collaborative environment that includes participation by appropriate elements from the Office of the SECNAV, OPNAV, Headquarters Marine Corps (HQMC), and activities involved in developing JCIDS and acquisition documents. Paragraph 1.11 of this chapter applies to all pre-MDAP programs, all MDAP (ACAT I) programs, all pre-MAIS programs, all MAIS (ACAT IA) programs, and selected ACAT II programs as determined by CNO (N8) or DC, CD&I and ASN(RD&A). The Gate Reviews themselves and Service milestone PDMs or PRs should be combined when appropriate as determined by the SECNAV, CNO, CMC, or designee. If Gate Reviews and PDMs or PRs are combined, the acquisition requirements of references (m) and (w), and this instruction, including statutory and regulatory documentation, shall be satisfied and an ADM shall be issued by the MDA. Gate Reviews satisfy the program support review (PSR) risk assessment requirement of reference (m) for ACAT IC and IAC programs.

1.11.4 Organization and Procedures

Guidelines for selecting the membership of each review and procedures for how the DON requirements and acquisition process will operate are described below. Chapter 1, annex 1-A, contains a graphic that illustrates the Gate Review process. The graphic illustrates the process flow for programs that initiate at milestone A (e.g., selected shipbuilding programs) or milestone B. The process is overlaid on the acquisition process of references (m) and (v), and this instruction.

1.11.4.1 Materiel Development Decision and Materiel Solution Analysis Phase

1.11.4.1.1 Pass 1

Pass 1 is led by CNO or CMC, and encompasses three "requirements" gates. References (j), (k), and (y), the NCB, R3B, and MROC charters, respectively, detail processes employed by the Navy and Marine Corps to elevate requirements decisions to senior Service leaders. The pass 1 process will not modify original capability requirements determinations made by the Service chiefs. Pass 1 includes gates 1, 2, and 3. Pass 1 is a process that starts prior to MDD, continues through the materiel solution analysis phase, and ends after gate 3. Pass 1 includes DON, OSD, and joint processes leading to approval of an ICD and approval of the AoA study guidance and endorsement of an AoA study plan prior to MDD. Pass 1 also includes materiel solution analysis phase efforts that involve initiation of the AoA and assignment of the AoA study director at the MDD review, development and approval of an AoA study plan, selecting an optimal alternative based on the AoA, assuring consideration of SBIR and STTR developed technologies, endorsing or approving a CDD, developing and approving a detailed concept of operations (CONOPS), and approving the SDS development plan. All pass 1 Gate Reviews will review program health (as defined by a probability of program success (PoPS) criteria in the PoPS Guidebook at the Naval Systems Engineering Resource Center (NSERC) Web site https://nserc.navy.mil/ (Government only)) for satisfactory cost, risks, and budget adequacy.

1.11.4.1.1.1 Gate 1

The gate 1 review will grant authority for a DON-initiated ICD to be submitted for joint review per references (a) and (c). The corresponding CBA serves as the core input for the ICD. Gate 1 will also validate the proposed AoA study guidance, endorse the AoA study plan, and authorize a program to proceed to MDD. The gate 1 requirements meeting and the MDD acquisition meeting for pre-ACAT I and IA programs may not be combined since USD(AT&L) will most likely not have delegated milestone decision authority to DON this early in the acquisition cycle. Separate requirements and ADM will be issued by the gate 1 chair and by the MDD MDA for pre-ACAT I and IA programs. The gate 1 and the MDD meeting for selected pre-ACAT II programs may be combined and co-chaired as mutually determined by CNO (N8) or DC, CD&I and ASN(RD&A), but separate requirements and ADM shall be issued by

the gate 1 chair and the MDD MDA. Gate 1 will also approve DOTMLPF change recommendations (DCRs) generated as a result of the CBA.

1.11.4.1.1.2 Gate 2

The gate 2 review will occur after completion of the AoA and prior to a program submitting milestone A documentation to the MDA. It will: (a) review AoA analysis assumptions, TOC estimate for the preferred AoA alternative, cost estimates, conclusions, recommendations, and assess the operating and support implications of each alternative; (b) approve Service's preferred alternatives resulting from the AoA analysis, or provide Service's endorsement and forward the AoA report and preferred alternative to OSD Director of Cost Assessment and Program Evaluation (DCAPE) and USD(AT&L) for their approval; (c) provide approval to develop a CDD and CONOPS with guidance and assumptions, consistent with the preferred alternatives; (d) approve initial KPPs and KSAs (thresholds and objectives) for CDD and CONOPS development; (e) review program health, and discuss and resolve areas of concern; and (f) authorize a program to proceed to gate 3 prior to milestone A whether program initiation will be at milestone A or B.

1.11.4.1.1.3 Gate 3

The gate 3 review will: (a) grant authority for the initial CDD to be Service-approved prior to milestone A and submittal of the updated CDD for joint staffing and JROC and JCB validation per references (a) and (c) prior to milestone B; (b) approve CONOPS that will include a description of capability employment, sustainment, fielding, training, and manning to support life-cycle cost (LCC) and TOC estimates; (c) support development of the service cost position and the scope of the TD phase; (d) review the draft Technology Development Strategy (TDS), Test and Evaluation Strategy (TES), and Systems Engineering Plan (SEP); (e) provide full funding certification for milestone A; (f) validate that the SDS Development Plan and the SDS outline have traceability to all KPPs and KSAs and address all required areas and serve as the input for follow-on pass 2 gates 4, 5, and 6; (g) consider the use of new or modified C4I systems that are in current SoSs or FoSs; and (h) review program health for satisfactory cost, program and TOC risks, budget adequacy, and discuss and resolve areas of concern. Gate 3 will grant approval to continue with milestone A preparations.

1.11.4.2 Milestone A and Technology Development (TD) Phase

1.11.4.2.1 Pass 2

Pass 2 is led by the CAE, and encompasses three "acquisition" gates. Pass 2 includes gates 4, 5, and 6. Pass 2 starts after gate 3 and continues until disposal is completed (see annex 1-A). Gate 6 reviews will occur during the EMD, production and deployment, and operations and support phases. Pass 2 Gate Reviews will review the use of a system within a current SoS or FoS. All pass 2 Gate Reviews will review program health (as defined by PoPS) criteria in the PoPS Guidebook at the NSERC Web site https://nserc.navy.mil/ (Government Only)) for satisfactory cost, risks, and budget adequacy.

1.11.4.2.1.1 Gate 4

The gate 4 review approves the formal SDS and authorizes a program to proceed to gate 5 or milestone B. The SDS shall be used to develop the technical performance specifications of the formal EMD phase RFP. Gate 4 may be combined with gate 5 as determined by ASN(RD&A). Gate 4 review will ensure: (a) the SDS reflects the design parameters necessary to provide and satisfy the CDD KPPs, KSAs, and other attributes; (b) the system is designed for producibility, operability, interoperability, reliability and maintainability; (c) define DON critical design criteria in areas that are applicable; (d) CSB changes are addressed; and (e) review of program health for satisfactory cost, schedule, risks, and budget adequacy, and discuss and resolve areas of concern.

1.11.4.3 Milestone B and Engineering and Manufacturing Development (EMD) Phase

1.11.4.3.1 Pass 2

1.11.4.3.1.1 Gate 5

The gate 5 review ensures: (a) that the Service has completed needed actions and recommends to the MDA approval of the release of the formal EMD RFP to industry; (b) full funding certification for milestone B; (c) CSB changes are addressed; and (d) review of program health for satisfactory cost, schedule, risks, and budget adequacy, and discuss and resolve areas of concern. A gate 5 review may occur before, concurrent with, or after milestone B depending upon the chosen acquisition strategy

and the related program risk. Gate 5 and milestone B may be combined for ACAT IC, IAC, and selected ACAT II programs as determined by ASN(RD&A).

1.11.4.3.1.2 Gate 6

The gate 6 reviews assess overall program health including readiness for production, the sufficiency of the SDS, the EVMS PMB, and the IBR (see The Program Managers' Guide to the Integrated Baseline Review Process). The initial gate 6 occurs following award of the EMD contract and satisfactory completion of the IBR. Although the former gate 6 post-CDR review is no longer required, PMs shall continue to record and track the impacts of CDR decisions on their program's health assessment. These assessments will be conducted using the gate 6 post-CDR PoPS metrics and criteria. Gate 6 reviews will also be conducted to endorse or approve the CPD, review program sufficiency and health prior to FRP DR, and review sustainment post-IOC. Gate 6 review will also serve as forums for annual CSBs for ACAT I and IA programs as defined by references (m) and (z). A gate 6 review conducted to endorse or approve a CPD will chaired by CNO/CMC, or designee. Details for each gate 6 review listed above are provided in chapter 1, annex 1-B, table E1T3.

Gate 6 sufficiency (sustainment) reviews will be conducted post-IOC through to disposal decision and serve as forums for annual CSBs. The focus of a gate 6 sustainment review is on systems performance capability to KPP threshold parameter levels and the ability of the LCSP to affordably sustain systems performance to those threshold levels. Active management of TOC will be a focus at each gate 6 review, with considerations and decisions presented to leadership to ensure the capability requirement, system in development and affordability are in alignment. Gate 6 sustainment reviews determine if program TOC estimates are proving correct, in view of actual performance and cost data that is beginning to be collected and analyzed.

1.11.4.4 DON Requirements/Acquisition Gate Review Membership

1.11.4.4.1 Chairperson

Chapter 1, annex 1-B, table E1T3 includes the chair of the various gates. The CNO, CMC, ASN(RD&A), CNO (N8), DC, CD&I, or designee, will serve as the chair of Gate Reviews per paragraphs

1.11.5.1, 1.11.5.2, and 1.11.5.3 below. In cases of combined Navy and Marine Corps programs, gates 1 through 3 and CPD only gate 6 will be co-chaired.

1.11.4.4.2 Principal Members

Principal members are VCNO; ACMC; ASN(RD&A); Assistant Secretary of the Navy (Financial Management and Comptroller (ASN(FM&C)); Director, Naval Nuclear Propulsion Program (N00N) as required; Principal Military DASN(RD&A) (PMDASN(RD&A)); CNO (N1, N2/N6, N3/N5, N4, N8); Deputy Commandant for Programs and Resources (DC, P&R); DC, CD&I; Warfare Enterprise (WE) (Surface, Undersea, Naval Aviation; Naval Network Warfare (NETWAR)/FORCEnet; and Navy Expeditionary Combat) lead (TYCOM); and or Deputy, United States Fleet Forces Command (USFLTFORCOM) and Marine Forces (MARFOR), and cognizant SYSCOM commander. The chair shall determine the final membership for each Gate Review. However, the principal members may request attendance by other relevant commands. These members may include DON CIO; CNR; HQMC (Deputy Commandant for Aviation (DC, Avn)), Deputy Commandant for Manpower and Reserve Affairs (DC, M&RA), HQMC Director Intelligence, Deputy Commandant for Plans, Policies and Operations (DC, PP&O), Deputy Commandant for Installations and Logistics (DC, I&L), HQMC Director Command, Control, Communications, and Computer (C4)/CIO; cognizant PEO; and Director, Strategic Systems Programs (SSP). Attendance is limited to principal or deputy at the flag, general officer and SES level plus one.

1.11.4.4.3 Advisory Members

Advisory members include, but are not limited to, CNO (Director, Programming Division (OPNAV (N80)); Director, Assessment Division (OPNAV (N81)); Director, Fiscal Management Division (OPNAV (N82)); Associate Director, Assessment Division (OPNAV (N81D)); CNO (N091); resource sponsor); Deputy, USFLTFORCOM (Fleet Policy Capabilities Requirements, Concepts and Experimentation (N5/N8/N9)); DASN(Budget); DASN(Cost and Economics (C&E)); DASN(Acquisition and Procurement)(AP); HQMC (Counsel (CL), HQMC Program Analysis and Evaluation (PA&E)); Office of General Counsel (OGC); SYSCOM cost director; Director, Navy International Programs Office (NIPO); SECNAV Office of Program Appraisal (OPA); DASN(RDT&E) CHSENG; cognizant DASN; Commander, Operational Test and Evaluation Forces (COMOPTEVOR); and Director, Marine Corps Operational Test and Evaluation Activity (MCOTEA). For joint programs where the Navy or Marine Corps is the lead Service, the other participating Services shall

be invited to attend, as appropriate. Attendance is limited to principal or deputy at the flag, general officer and SES level plus one.

1.11.4.5 DON Requirements, Acquisition Individual Gate Review Membership and Entrance and Exit Criteria

Chapter 1, annex 1-B, contains table E1T3 consisting of the individual gate membership, entrance criteria, goals, exit criteria, and briefing content. Individual gate exit criteria templates will be contained in the updated SECNAV M-5000.2. Gate Reviews may be combined or tailored as determined by SECNAV, CNO, CMC, ASN(RD&A), or designee, for an individual program depending upon where the program enters, or is currently in, the acquisition life-cycle.

1.11.4.6 System Design Specification (SDS) Guidance

Chapter 1, annex 1-C, contains top-level SDS description. An SDS guidebook and platform appendices are available on the ASN(RD&A) Web site under Acquisition One Source under Program Assistance and Tools under Handbooks, Guides, and Reports for SYSCOMs, PEOs, and PMs for developing an SDS for individual systems.

1.11.5 Responsibilities

1.11.5.1 ASN(RD&A)

Execute CAE and delegated MDA responsibilities of references (m), (p), (v), and this instruction for pre-MDAP, pre-MAIS, ACAT I, IA, and selected ACAT II programs for MDD, all milestones, and FRP DR.

Chair gates 4, 5, 6 (non-CPD) reviews and co-chair gate 6 sustainment review with CNO or CMC, or designee.

Develop procedures to execute the Gate Review process.

1.11.5.2 CNO/CMC

Execute Service chief responsibilities of references (a) and (c) and this instruction for development, validation, and approval of JCIDS documents and concurrence with applicable acquisition documents per this instruction and as directed by higher authority.

Chair gates 2, 3, 6 (CPD) reviews, and co-chair gate 6 sustainment reviews with ASN(RD&A), or designate a chair or co-chair.

1.11.5.2.1 CNO (N8)/DC, CD&I

Develop procedures within the Navy and Marine Corps staffs to execute the Gate Review process.

Chair gate 1 reviews. Chair gates 2, 3, 6 (CPD) reviews, and co-chair gate 6 sustainment reviews with ASN(RD&A), when designated.

1.11.5.2.2 CNO/CMC Staff Principal and Advisory Members

Provide support and assistance to CNO (N8), DC, P&R/DC, CD&I, and ASN(RD&A), or any other designated Gate Review chair or co-chair.

1.11.5.3 Program Executive Officers (PEOs) and Systems Commands (SYSCOMs) Commanders

Provide support and assistance to CNO (N8), DC, P&R and DC, CD&I, and ASN(RD&A).

1.11.5.4 ASN(FM&C)

Coordinate efforts to identify and fund DON requirements and acquisition governance process within the PPBE process in coordination with CNO (N8), DC, P&R, and DC, CD&I.

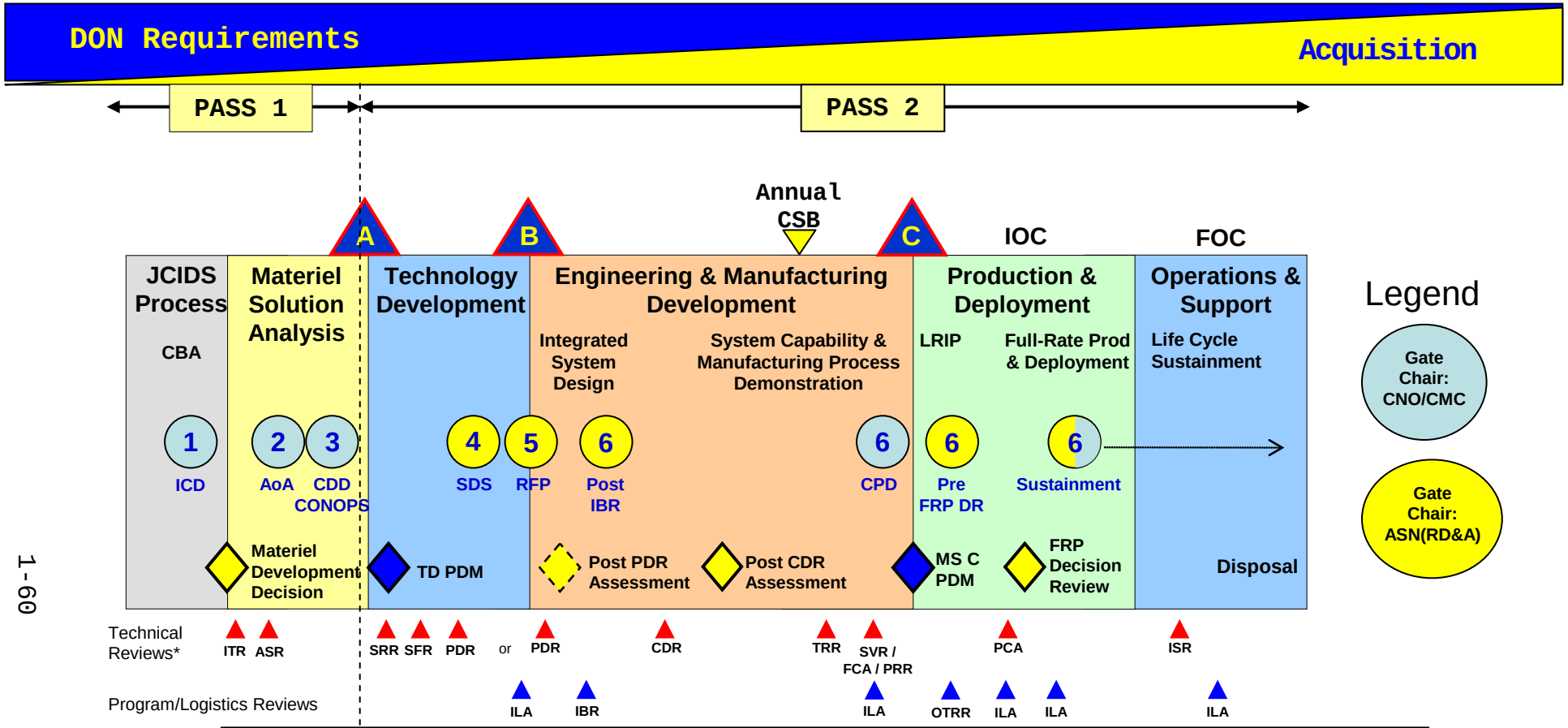
1.11.5.5 OGC

Advise ASN(RD&A), CNO/CMC, and other members on legal issues arising from individual Gate Reviews and CSBs, in consultation, as appropriate, with the JAG, Special Counsel to the CNO, or Staff Judge Advocate (SJA) to the CMC.

1.11.6 Industry Involvement

While not involved in the Gate Reviews themselves, industry involvement in the development of design concepts and assessment of industrial capabilities, cost, schedule, and technical risks should be sought at the earliest opportunity possible.

Annex 1-A - DON Requirements/Acquisition Two-Pass/Six-Gate Process with Development of a System Design Specification



DON CIO pre-certification, Investment Review Board certification, and Defense Business System (DBS) Management Committee approval prior to obligation of funding for a DBS program when cost > $ 1 million

AOA	Analysis of Alternatives	LRIP	Low-Rate Initial Production
ASR	Alternative System Review	OTRR	Operational Test Readiness Review
CBA	Capabilities-Based Assessment	PCA	Physical Configuration Audit
CDD	Capability Development Document	PDM	Program Decision Meeting
CDR	Critical Design Review	PDR	Preliminary Design Review
CONOPS	Concept of Operations	PRR	Production Readiness Review
CSB	Configuration Steering Board	RFP	Request for Proposal
FCA	Functional Configuration Audit	SDS	System Design Specification
FRP DR	Full-Rate Production Decision Review	SFR	System Functional Review
IBR	Integrated Baseline Review	SRR	System Requirements Review
ICD	Initial Capabilities Document	SVR	System Verification Review
ILA	Independent Logistics Assessment	TD	Technology Development
ISR	In-Service Review	TRR	Test Readiness Review
ITR	Initial Technical Review		

*See Technical Reviews in the DAG at https://dag.dau.mil/

Annex 1-B - Table E1T3 DON Requirements and Acquisition Gates, Membership, Entrance Criteria, Goals and Exit Criteria, and Briefing Content

Gate 1 (ICD)	Membership	Entrance Criteria	Goals/Exit Criteria	Briefing Content
Purpose: Validate ICD & AoA Study Guidance, authorize proceeding to materiel development decision (MDD). **Briefer**: RO, prospective PM, and AoA director (Dir)	**Chair**: CNO (N8)/DC, CD&I **Principal**: N1/DC, M&RA, N2/N6/MC Intel, N3/N5/DC, PP&O, N4/DC, I&L, DON CIO, DirC4/CIO, DC, P&R, ASN(RD&A), N00N, PMDASN, WE Lead &/or USFLTFORCOM/MARFOR, SYSCOM **As required**: PEO/DirSSP, CNR, DC Avn **Advisory**: DASN(RDT&E) CHSENG, DASNs, N80, N81, N82, N81D, N091, USFLTFORCOM(N8), HQMC(CL, PA&E), OGC, DASN(Budget), DASN(C&E), SYSCOM cost director, resource sponsor, DirNIPO, OPA	1. Completed Service review of ICD. 2. Identification of mutually shared needs with foreign countries. 3. Completed Service review of AoA Study Guidance.	1. Approval for ICD entry into joint review, or endorsement of ICD enroute to CNO/CMC for signature. 2. Validation of AoA Study Guidance, assumptions, & timeline and authorization for submittal to Director Cost Assessment and Program Evaluation (CAPE) (ACAT I & IA); or approval of AoA guidance, assumptions, & timeline (selected ACAT II). 3. Concur with associated DCRs. 4. Satisfactory review of program health. 5. Approval to proceed to the next Gate Review. 6. Approval to proceed to MDD.	1. ICD description. 2. AoA proposed Study Guidance. 3. Doctrine, organization, training, materiel, leadership & education, personnel, & facilities (DOTMLPF) change recommendations (DCRs) inputs. 4. Programmatics (projected costs, schedule, interdependencies). 5. Program health.

Entrance Criteria – is a requirement to convene a Gate Review
Exit Criteria – is a requirement to complete a Gate Review

Annex 1-B - Table E1T3 DON Requirements and Acquisition Gates, Membership, Entrance Criteria, Goals and Exit Criteria, and Briefing Content (cont'd)

Gate 2 (AoA)	Membership	Entrance Criteria	Goals/Exit Criteria	Briefing Content
Purpose: Validate AoA results, assess affordability, approval to develop CDD and CONOPS, recommend approval of technology development strategy (TDS) to MDA, concurrence to proceed to gate 3 or milestone (MS) A. **Briefer**: RO, prospective PM, and AoA director	**Chair**: CNO/CMC, or designee **Principal**: VCNO/ACMC, N8/DC, P&R/DC, CD&I, N1/DC, M&RA, N2/N6/MC Intel, N3/N5/DC, PP&O, N4/DC, I&L, DON CIO, DirC4/CIO, ASN(RD&A), ASN(FM&C), N00N, PMDASN, WE Lead &/or USFLTFORCOM/MARFOR, SYSCOM **As required**: CNR, DC Avn **Advisory**: DASN(RDT&E) CHSENG, DASNs, N80, N81, N82, N81D, N091, USFLTFORCOM(N8), HQMC(CL, PA&E), OGC, DASN(Budget), DASN(C&E), SYSCOM cost director, Resource Sponsor, PEO/DirSSP, DirNIPO, OPA	1. Approved ICD. 2. Completed Service review of AoA Report. 3. MS A documentation sufficiently mature for senior service leadership review. 4. Preferred alternative identified. 5. Completed initial technical review (ITR) & alternative system review (ASR). 6. MDD by the milestone decision authority.	1. Evaluation/ validation of AoA findings. 2. Approve initial capabilities thresholds and objectives (KPPs/KSAs). 3. Approval to develop CDD & CONOPS with guidance & assumptions documented in decision memorandum. 4. Satisfac-tory review of program health. 5. Concurrence to proceed to the next event (i.e., to gate 3).	1. Summarize AoA report including assumptions, findings, & implications of TOC for the selected alternative(s). 2. Warfighter review of AoA results. 3. Analysis of the relative cost risk of each proposed alternative. 4. Assessment of DOTMLPF DCRs. 5. MS A service cost position (SCP), assumptions, and cost risk for the selected alternative; S-curves by appropriation. 6. Cost arrayed per NCCA policy (i.e., MIL HDBK 881 and OSD CAPE protocols). 7. Initial sustainment strategy. 8. Proposed CDD/CONOPS guidance. 9. Present ITR & ASR results including TDS, TES, SEP, & technology maturation efforts. 10. Environmental issues/impacts. 11. TD RFP content (less non-disclosure sections)/assessment of industrial base. 12. Programmatics (schedule, interdependencies). 13. Program risks. 14. Program health.

Entrance Criteria – is a requirement to convene a Gate Review
Exit Criteria – is a requirement to complete a Gate Review

Annex 1-B - Table E1T3 DON Requirements and Acquisition Gates, Membership, Entrance Criteria, Goals and Exit Criteria, and Briefing Content (cont'd)

Gate 3 (CDD/CONOPS)	Membership	Entrance Criteria	Goals/Exit Criteria	Briefing Content
Purpose: CDD/CONOPS approval, assess affordability. **Briefer**: RO and PM	**Chair**: CNO/CMC, or designee **Principal**: VCNO/ACMC, N8/DC, P&R/DC, CD&I, N1/DC, M&RA, N2/N6/MC Intel, N3/N5/DC, PP&O, N4/DC, I&L, DON CIO, DirC4/CIO, ASN(RD&A), ASN(FM&C), N00N, PMDASN, WE Lead &/or USFLTFORCOM/MARFOR, SYSCOM **As required**: CNR, DC Avn **Advisory**: DASN(RDT&E) CHSENG, DASNs, N80, N81, N82, N81D, N091, USFLTFORCOM(N8), HQMC(CL, PA&E), OGC, DASN(Budget), DASN(C&E), SYSCOM cost director, resource sponsor, PEO/DirSSP, DirNIPO, OPA	1. Approved AoA/AoA update. 2. Completed Service review of CDD & CONOPS. 3. Completed SDS development plan and outline of SDS. 4. Draft cost reduction strategy. 5. Completed cost review board. 6. Draft TDS, TES, SEP have been reviewed by principal and advisory members.	1. Approval of initial CDD enroute to CNO/CMC for signature. 2. Approval, or endorsement, of CONOPS. 3. Validation of SDS development plan and outline. 4. Determination of potential for export/co-development. 5. Concur with initial life-cycle sustainment strategy. 6. Validate program assumptions as reflected in the CARD. 7. Satisfactory review of program health. 8. Concurrence with draft TDS, TES, and SEP. 9. Approval of full funding certification for MS A. 10. Approval to proceed to MS A.	1. The preferred alternative & any changes since AoA. 2. Summarized CONOPS. 3. CDD description. 4. Review capability & threat. 5. Updated SCP, assumptions, and cost risk; S-curves by appropriation. 6. Cost drivers by phase and by KPP/KSA, to include specific cost reduction strategies. 7. Cost arrayed per NCCA policy (i.e., MIL HDBK 881 and OSD CAPE protocols). 8. Initial life-cycle sustainment strategy. 9. Updated assessment of DCRs. 10. Preliminary acquisition strategy. 11. Consideration of potential export/co-development. 12. Modular, common, & open systems approach. 13. Summarize SRR & SFR results. 14. Environmental issues/impacts. 15. T&E strategy. 16. SDS development plan & outline of SDS traceability to KPPs, KSAs, & other attributes. 17. Programmatics (schedule, interdependencies). 18. Program risks. 19. Program health.

Entrance Criteria – is a requirement to convene a Gate Review
Exit Criteria – is a requirement to complete a Gate Review

Annex 1-B - Table E1T3 DON Requirements and Acquisition Gates, Membership, Entrance Criteria, Goals and Exit Criteria, and Briefing Content (cont'd)

Gate 4 (SDS)	Membership	Entrance Criteria	Goals/Exit Criteria	Briefing Content
Purpose: SDS approval, assess affordability **Briefer**: PM	Chair: ASN(RD&A) Principal: VCNO/ACMC, ASN(FM&C), N00N, N8/DC, P&R/DC, CD&I, N1/DC, M&RA, N2/N6/MC Intel, N3/N5/DC, PP&O, N4/DC, I&L, DON CIO, DirC4/CIO, PMDASN, WE Lead &/or USFLTFORCOM/MARFOR, SYSCOM, PEO/DirSSP **As required**: CNR, DC Avn Advisory: DASN(RDT&E) CHSENG, DASNs, N80, N81, N82, N81D, N091, USFLTFORCOM(N8), HQMC(CL, PA&E), OGC, DASN(Budget), DASN(C&E), SYSCOM cost director, resource sponsor, DirNIPO, OPA, COMOPTEVOR/DirMCOTEA	1. Approved CDD; approved CDD update, as required. 2. Approved CONOPS. 3. SDS has been signed by PM, SYSCOM CHSENG, and resource sponsor. 4. Completed cost review board. 5. Service review of program cost containment and cost reduction strategies. 6. Completed system requirements review (SRR), system functional review (SFR), & preliminary design review (PDR). 7. Completed procurement planning & strategy meeting.	1. Approved SDS. 2. Validate SDS trace-ability to CDD. 3. Acknowl-edgement of Configuration Steering Board (CSB) recommended capability changes. Approval to proceed to R3B/MROC, or CNO/CMC, for assessment & Service approval. 4. Sufficient-ly structured to operate within DON's business enterprise. 5. Satisfac-tory review of program health. 6. Approval to proceed to the next event.	1. Review capability & threat. 2. Program capability review focused on: traceability of SDS to CDD, identify SDS technical requirements, producibility. 3. CSB. 4. Updated SCP, assumptions, & cost risk; S-curves by appropriation. 5. Cost drivers by phase & by KPP/KSA to include specific cost reduction strategies. 6. Warfighter review of KPP/KSA cost drivers. 7. Cost arrayed per NCCA policy (i.e., MIL HDBK 881 and OSD CAPE protocols). 8. Draft acquisition strategy. 9. Draft life-cycle sustainment strategy. 10. Modular, common, and open systems plan. 11. Job task analysis (JTA), preliminary Navy training system plan (NTSP), & front end analysis (FEA). 12. Updated assessment of DCRs. 13. Update consideration of potential export/co-development. 14. RFP strategy. 15. Demonstration that financial, logistics, & procurement functions have agreement on the appropriate & compliance level of acquisition detail. 16. Post-PDR assessment. 17. Environmental issues/impacts. 18. Review the overall T&E program & results of key test events. 19. Programmatics (schedule, interdependencies). 20. Program risks. 21. Program health.

Entrance Criteria – is a requirement to convene a Gate Review
Exit Criteria – is a requirement to complete a Gate Review

Annex 1-B - Table E1T3 DON Requirements and Acquisition Gates, Membership, Entrance Criteria, Goals and Exit Criteria, and Briefing Content (cont'd)

Gate 5 (RFP)	Membership	Entrance Criteria	Goals/Exit Criteria	Briefing Content
Purpose: RFP approval, MS B PDM (if applicable), assess afford-ability **Briefer**: PM	Chair: ASN(RD&A) Principal: VCNO/ACMC, ASN(FM&C), N00N, N8/DC, P&R/DC, CD&I, N1/DC, M&RA, N2/N6/MC Intel, N3/N5/DC, PP&O, N4/DC, I&L, DON CIO, DirC4/CIO, PMDASN, WE Lead &/or USFLTFORCOM/MARFOR, SYSCOM, PEO/DirSSP **As required**: CNR, DC Avn Advisory: DASN(RDT&E) CHSENG, DASNs, N80, N81, N82, N81D, N091, USFLTFORCOM(N8), HQMC(CL, PA&E), OGC, DASN(Budget), DASN(C&E), SYSCOM cost director, resource sponsor, DirNIPO, OPA, COMOPTEVOR/DirMCOTEA	1. Approved SDS & technical data package. 2. Approved acquisition strategy. 3. Completed cost review board. 4. RFP has been reviewed by the source selection authority (SSA) & reviewed by principal & advisory members/staffs 5. Approved TEMP. 6. Approved alternate live-fire test and evaluation (LFT&E) plan and an approved LFT&E waiver from full-up testing. 7. Completed Service review of life-cycle sustainment plan (LCSP).	1. Approval for RFP release, & the next acquisition event, as authorized by the acquisition strategy. 2. Authoriza-tion to proceed to MS B Defense Acquisition Board (DAB) or approval of MS B if MDA is ASN(RD&A). 3. Approve APB & full funding certification for MS B. 4. Acknowl-edgement of CSB recommended capability changes. Approval to proceed to R3B/MROC, or CNO/CMC, for assessment and Service approval. 5. Satisfac-tory review of program health.	1. Review capability & threat. 2. Acquisition strategy. 3. Program schedule. 4. RFP content & issues. 5. All critical data deliverables & related intellectual property rights issues addressed. 6. Demonstration that financial, logistics, & procurement functions have agreement on the appropriate & compliant level of acquisition detail. 7. MS B SCP, assumptions, and cost risk; S-curves by appropriation. 8. Cost drivers by phase & by KPP/KSA to include specific cost reduction strategies. 9. TOC planning. 10. Cost arrayed per NCCA policy (i.e., MIL HDBK 881 and OSD CAPE protocols). 11. Independent logistics assessment (ILA) results and LCSP. 12. Updated assessment of DCRs. 13. JTA, FEA, final NTSP, and manpower estimate (ME). 14. Summarized results of PDR. 15. Environmental issues/impacts. 16. Review the overall T&E program & results of key test events. 17. Interdependencies. 18. CSB. 19. Program risks. 20. Program health.

Entrance Criteria – is a requirement to convene a Gate Review
Exit Criteria – is a requirement to complete a Gate Review

Annex 1-B - Table E1T3 DON Requirements and Acquisition Gates, Membership, Entrance Criteria, Goals and Exit Criteria, and Briefing Content (cont'd)

Gate 6 Sufficiency (Post-IBR)	Membership	Entrance Criteria	Goals/Exit Criteria	Briefing Content
Purpose: Sufficiency review, assess affordability. **Briefer**: PM and RO	Chair: ASN(RD&A) Principal: VCNO/ACMC, ASN(FM&C), N00N, N8/DC, P&R/DC, CD&I, N1/DC, M&RA, N2/N6/MC Intel, N3/N5/DC, PP&O, N4/DC, I&L, DON CIO, DirC4/CIO, PMDASN, WE Lead &/or USFLTFORCOM/MARFOR, SYSCOM, PEO/DirSSP **As required**: CNR, DC Avn Advisory: DASN(RDT&E) CHSENG, DASNs, N80, N81, N82, N81D, N091, USFLTFORCOM(N8), HQMC(CL, PA&E), OGC, DASN(Budget), DASN(C&E), SYSCOM cost director, resource sponsor, DirNIPO, OPA, COMOPTEVOR/DirMCOTEA Other Attendees: When CSB is part of the review: Joint Staff (JS), Office of the Under Secretary of Defense (OSD)	1. Contract awarded. 2. Integrated baseline review (IBR) complete. 3. Completed cost review board. 4. Completed PDR (if PDR held post MS B).	1. Performance measurement baseline (PMB) established and IBR results acceptable. 2. Contractor's PMB meets SDS requirements. 3. Acknowledgement of CSB recommended capability changes; approval to proceed to R3B/MROC, or CNO/CMC, for assessment & Service approval. 4. Satisfactory review of program health,	1. Summarized results of IBR and PDR (if PDR post MS B). 2. Program schedule. 3. Updated SCP, assumptions, and cost risk; S-curves by appropriation. 4. Cost drivers by phase & by KPP/KSA to include specific cost reduction strategies. 5. Cost arrayed per NCCA policy (i.e., MIL HDBK 881 and OSD CAPE protocols). 6. Updated LCSP. 7. CSB. 8. Review capability & threat. 9. Environmental issues/impacts. 10. Review overall T&E program, results of key test events, & system deficiencies discovered through testing activities. 11. Interdependencies 12. Updated assessment of DCRs. 13. Program risks. 14. Program health.

Entrance Criteria – is a requirement to convene a Gate Review
Exit Criteria – is a requirement to complete a Gate Review

Annex 1-B - Table E1T3 DON Requirements and Acquisition Gates, Membership, Entrance Criteria, Goals and Exit Criteria, and Briefing Content (cont'd)

Gate 6 Sufficiency (CPD)	Membership	Entrance Criteria	Goals/Exit Criteria	Briefing Content
Purpose: Sufficiency review, MS C PDM (if applicable), assess affordability. **Briefer**: RO and PM	**Chair**: CNO/CMC or designee **Principal**: VCNO/ACMC, ASN(FM&C), N00N, N8/DC, P&R/DC, CD&I, N1/DC, M&RA, N2/N6/MC Intel, N3/N5/DC, PP&O, N4/DC, I&L, DON CIO, DirC4/CIO, PMDASN, WE Lead &/or USFLTFORCOM/MARFOR, SYSCOM, PEO/DirSSP **As required**: CNR, DC Avn **Advisory**: DASN(RDT&E) CHSENG, DASNs, N80, N81, N82, N81D, N091, USFLTFORCOM(N8), HQMC(CL, PA&E), OGC, DASN(Budget), DASN(C&E), SYSCOM cost director, resource sponsor, DirNIPO, OPA, COMOPTEVOR/DirMCOTEA Other Attendees: When CSB is part of the review: Joint Staff (JS), Office of the Under Secretary of Defense (OSD)	1. Completed Service review of CPD & CONOPS. 2. Updated technical data package for LRIP. 3. Completed production readiness review (PRR) in support of LRIP. 4. Completed cost review board. 5. Updated TEMP has been approved.	1. Approval for CPD entry into joint review, or endorsement of CPD enroute to CNO/CMC for signature. 2. Authorization to proceed to DAB or MS C approval. 3. Approve full funding certification for MS C. 4. Satisfactory review of program health.	1. CPD description including KPPs, KSAs, & other attributes. 2. PRR results in support of LRIP. 3. Contract strategy. 4. Updated technical data package for LRIP traced to KPP/KSA capability thresholds. 5. CSB. 6. Review overall T&E program, results of key test events & system deficiencies discovered through testing activities. 7. Program schedule. 8. MS C SCP, assumptions, and cost risk; S-curves by appropriation. 9. Cost arrayed per NCCA policy (i.e., MIL HDBK 881 and OSD CAPE protocols). 10. Cost drivers by phase & by KPP/KSA to include specific cost reduction strategies. 11. Warfighter review of production baseline on operations & support (O&S) elements of SCP. 12. Updated LCSP to include logistics requirements & funding summary (LRFS). 13. Updated assessment of DCRs. 14. JTA, FEA, final NTSP, and ME. 15. Environmental issues/impacts. 16. Review capability & threat. 17. Summary of CONOPS. 18. Interdependencies. 19. Program risks. 20. Program health.

Entrance Criteria – is a requirement to convene a Gate Review
Exit Criteria – is a requirement to complete a Gate Review

Annex 1-B - Table E1T3 DON Requirements and Acquisition Gates, Membership, Entrance Criteria, Goals and Exit Criteria, and Briefing Content (cont'd)

Gate 6 Sufficiency (Pre-FRP DR)	Membership	Entrance Criteria	Goals/Exit Criteria	Briefing Content
Purpose: Sufficiency review, FRP DR PDM (if applicable), assess affordability. **Briefer**: PM	**Chair**: ASN(RD&A) **Principal**: VCNO/ACMC, ASN(FM&C), N00N, N8/DC, P&R/DC, CD&I, N1/DC, M&RA, N2/N6/MC Intel, N3/N5/DC, PP&O, N4/DC, I&L, DON CIO, DirC4/CIO, PMDASN, WE Lead &/or USFLTFORCOM/MARFOR, SYSCOM, PEO/DirSSP **As required**: CNR, DC Avn **Advisory**: DASN(RDT&E) CHSENG, DASNs, N80, N81, N82, N81D, N091, USFLTFORCOM(N8), HQMC(CL, PA&E), OGC, DASN(Budget), DASN(C&E), SYSCOM cost director, resource sponsor, DirNIPO, OPA, COMOPTEVOR/DirMCOTEA Other Attendees: When CSB is part of the review: Joint Staff (JS), Office of the Under Secretary of Defense (OSD)	1. Completed IOT&E. 2. Beyond LRIP Report submitted by DOT&E. 3. LFT&E Report has been submitted by DOT&E. 4. Completed Production Readiness Review (PRR) in support of FRP DR. 5. Updated TEMP has been approved. 6. Completed cost review board.	1. Approval to proceed to FRP DR DAB or FRP DR approval. 2. Acceptance of the disposition of the major system deficiencies identified during IOT&E. 3. Approve full funding certification for FRP. 4. Acknowledge-ment of CSB recommended capability changes; approval to proceed to R3B/MROC, or CNO/CMC, for assessment & Service approval. 5. Satisfac-tory review of program health.	1. PRR results in support of FRP. 2. Review DT&E/ technical evaluation (TECHEVAL), IOT&E/operational evaluation (OPEVAL), & JITC interoperability test results & major deficiencies discovered. 3. Review LCSP execution and ILA results (programmatics); costs; and affordability in context of allocated resources (i.e., LCSP/LRFS execution). 4. Review reliability growth. 5. Updated assessment of DCRs. 6. Schedule. 7. FRP SCP, assumptions, & cost risk; S-curves by appropriation. 8. Cost arrayed per NCCA policy (i.e., MIL HDBK 881 and OSD CAPE protocols). 9. Cost drivers by phase & by KPP/KSA to include specific cost reduction strategies. 10. Warfighter review of production baseline of O&S elements of SCP. 11. Demonstration that financial, logistics, & procurement functions have agreement on the appropriate level of acquisition detail. 12. Review capability & threat. 13. Environmental issues/impacts. 14. CSB. 15. Interdepen-dencies. 16. Program risks. 17. Program health.

Entrance Criteria – is a requirement to convene a Gate Review
Exit Criteria – is a requirement to complete a Gate Review

Annex 1-B - Table E1T3 DON Requirements and Acquisition Gates, Membership, Entrance Criteria, Goals and Exit Criteria, and Briefing Content (cont'd)

Gate 6 Sufficiency (Sustainment)	Membership	Entrance Criteria	Goals/Exit Criteria	Briefing Content
Purpose: Sufficiency review, readiness sustainability assessment, assess affordability. **Briefer**: PM and RO	**Co-Chair**: ASN(RD&A) & CNO/CMC, or designee **Principal**: VCNO/ACMC, ASN(FM&C), N00N, N8/DC, P&R/DC, CD&I, N1/DC, M&RA, N2/N6/MC Intel, N3/N5/DC, PP&O, N4/DC, I&L, DON CIO, DirC4/CIO, PMDASN, WE Lead &/or USFLTFORCOM/MARFOR, SYSCOM, PEO/DirSSP, CNI, NAVSUP/LOGCOM **As required**: CNR, DC Avn **Advisory**: DASN(RDT&E) CHSENG, DASNs, N80, N81, N82, N81D, N091, USFLTFORCOM(N8), HQMC(CL, PA&E), OGC, DASN(Budget), DASN(C&E), SYSCOM Cost Direcor, Resource Sponsor, DirNIPO, OPA, COMOPTEVOR/DirMCOTEA Other Attendees: When CSB is part of the review: Joint Staff (JS), Office of the Under Secretary of Defense (OSD)	1. Accomplished system FRP DR. 2. Achieved system IOC. 3. Completed ILA. 4. Updated program cost estimates per NCCA policy (i.e., MIL HDBK 881 and OSD CAPE protocols). 5. Updated Program LCSP and LRFS, including TOC initiatives.	1. Concur with selected recommendations to resolve asset and mission readiness issues and shortfalls. 2. Concur with TOC reduction opportunities. 3. Concur with risk assessments. 4. Satisfac-tory review of program health.	1. IOC/FOC schedule & definitions. 2. Review of LCSP (programmatics); costs; and affordability in context of allocated resources (i.e., LCSP/LRFS execution). 3. Results of ILA. 4. CPD parameter metric measurement. 5. Technical health. 6. T&E Major deficiencies & resolutions. 7. Budget and funding. 8. Threat and capability review. 9. Summary of CONOPS as employed. 10. CSB. 11. Evaluation of TOC reduction, initiatives, and investment. 12. Cost arrayed per NCCA policy (i.e., MIL HKBK 881 and OSD CAPE protocols. 13. Cost drivers by phase & by KPP/KSA to include specific cost reduction strategies. 14. Interdepend-encies. 15. Schedule. 16. Significant risks. 17. Program health. 18. OSD Sustainment "Quad" Chart.

Entrance Criteria – is a requirement to convene a Gate Review
Exit Criteria – is a requirement to complete a Gate Review

Annex 1-C - System Design Specification (SDS) Description

An SDS is produced upon successful completion of a system requirements review. The SDS development plan is developed during the materiel solution analysis phase for programs being initiated at milestone A or during the TD phase for programs being initiated at milestone B in conjunction with development of the CDD. The SDS is the end result of flowing down the CDD performance requirements into a document that specifies:

a. The basic functional requirements (as defined in the SDS Guidebook and usually documented in the system performance and design specifications) for the preferred alternative selected, and

b. Major programmatic actions required to deliver the system. At a minimum, these requirements should address:

(1) KPPs, KSAs, additional attributes and derived requirements that must be met by the design in advance of the detail system specification. These requirements should be identified in such a manner that they facilitate straightforward incorporation into the eventual system and ship specification.

(2) The family of system specifications including tailorable and non-tailorable specifications, interface requirements, and detailed design standards.

(3) Government oversight that delineates the key responsibilities and engagement points for ensuring effective prosecution of design and construction activities.

(4) Division of responsibilities document that addresses lead activities (both government and industry) for various aspects of design and manufacturing.

(5) Major industrial capability changes (e.g., facilities, design tools, staffing, unique skills) that need to be addressed to effectively deliver the designed system.

(6) Major processes that will be employed to ensure successful implementation of the SDS (e.g., integrated master schedule, manufacturing and assembly plan, work breakdown structure, commitment tracking system, earned value management, etc).

(7) Threshold attribute values for operability, producibility, reliability, and maintainability. The SDS should normally have significant industry input at the prime contractor and sub-contractor levels. This input may be achieved via the use of a draft RFP and a draft SDS when authorized by the MDA in the acquisition strategy.

The SDS is a tailored document that identifies TD risks, validates preferred system design solutions, evaluates manufacturing processes, refines system requirements, and is an input for the APB in order to inform decision makers earlier in the acquisition process. An SDS guidebook and platform appendices are available on the ASN(RD&A) Web site. The SDS is approved at gate 4.

Chapter 2
Statutory, Regulatory, and Contract Reporting Information and Milestone Requirements

References:
(a) DoD Instruction 5000.02 of 8 Dec 2008
(b) DoD Directive 5000.01 of 12 May 2003
(c) CJCSI 3170.01G
(d) Manual for the Operation of the Joint Capabilities Integration and Development System, of 31 Jan 2011
(e) USD(P&R) Memorandum, Interim Policy and Procedures for Strategic Manpower Planning and Development of Manpower Estimates, of 10 Dec 2003
(f) SECNAVINST 4105.1B
(g) CJCSI 6212.01E
(h) SECNAVINST 5000.36A
(i) DoD 4140.1-R, DoD Supply Chain Materiel Management Regulation, of 23 May 2003
(j) Public Law 108-136, National Defense Authorization Act for Fiscal Year 2004, Section 802, Quality Control In Procurement Of Aviation Critical Safety Items And Related Services, of 24 Nov 2003
(k) SECNAVINST 4140.2
(l) SECNAVINST 5100.10J
(m) OPNAVINST 8026.2B
(n) DoD Instruction 5200.39 of 16 Jul 2008
(o) SECNAVINST 3501.1B
(p) OPNAVINST 3811.1D
(q) DoD Instruction 4630.8 of 30 Jun 2004
(r) DoD Instruction 4650.01 of 9 Jan 2009
(s) DoD Directive 3222.3 of 8 Sep 2004
(t) DoD 5200.1-M, Acquisition Systems Protection Program, of 16 Mar 94
(u) OPNAVINST 3432.1
(v) OPNAVINST 1500.76B
(w) USD(A&T) Memorandum, Collection of Past Performance Information in the Department of Defense, of 20 Nov 97
(x) Federal Acquisition Regulation (FAR), Part 15, Contracting by Negotiation
(y) Federal Acquisition Regulation (FAR), Part 19, Small Business Programs
(z) Federal Acquisition Regulation (FAR), Part 42, Contract Administration and Audit Services

(aa) Defense Federal Acquisition Regulation Supplement (DFARS), Part 236, Construction and Architect-Engineer Contracts
(ab) Department of the Navy Guide, Contractor Performance Assessment Reporting System (CPARS), of Feb 2004

2.1 Program Information

See tables E2T1 (statutory), E2T2 (regulatory), and E2T3 (contract reporting) for acquisition category (ACAT) program and contract reporting information and milestone requirements. The format for reporting information is at the discretion of the milestone decision authority (MDA), except as indicated in the above three cited tables and or references (a) through (d). Program manager (PM)-prepared reporting information and milestone requirements may be tailored and combined when approved by the MDA.

The designation ACAT I, when used in tables E2T1, E2T2, and E2T3, signifies both ACAT ID and IC programs. Similarly, the designation ACAT IA, when used in tables E2T1, E2T2, and E2T3, signifies both ACAT IAM and IAC programs. Per reference (a), enclosure 3, table 1, footnote 1, the statutory requirements that apply to ACAT I and IA programs shall apply to ACAT I or IA programs, as designated by the Secretary of Defense per Public Law 111-84 of 28 October 2009, section 817, subsections (a) and (b), (FY 2010 National Defense Authorization Act), which amended section 2445d of title 10, U.S.C. (see chapter 1, table E1T1, footnote 1, in this instruction for the statutory general rule).

The designation ACAT IV, when used in tables E2T1, E2T2, and E2T3, signifies both ACAT IVT and IVM programs. The source of the statutory, regulatory, and contract reporting requirement for each entry (arranged in alphabetical order) in tables E2T1, E2T2, and E2T3, can be found in reference (a), or in this instruction. The Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN(RD&A)) is the component acquisition executive (CAE) cited in tables E2T1 and E2T2.

In tables E2T1 and E2T2, under the column titled "Presentation Medium," the remark "Optional" or "MDA option" does not mean that the program information or report itself is optional, but rather that the medium (e.g., written document, formal presentation, informal briefing) and format is at the option of the MDA.

Acquisition documentation for ACAT I and II programs requiring coordination with the Office of the Chief of Naval Operations (OPNAV), Headquarters Marine Corps (HQMC), and the Offices of the Assistant Secretaries of the Navy shall be distributed concurrently to all applicable offices. Individual signature sheets will be collated by the Office of ASN(RD&A). CNO (N091) will collate individual signature sheets for Navy test and evaluation master plans and forward them to the Office of ASN(RD&A) after approval. DON guidance for processing technology development strategies, acquisition strategies, and acquisition program baselines are provided in the SECNAV M-5000.2 DON Acquisition and Capabilities Guidebook.

The following information technology (IT) and national security systems (NSS) definitions are provided for clarification purposes relative to use of the terms in tables E2T1 and E2T2.

IT - Any equipment, or interconnected system or subsystem of equipment, that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information.

a. The term "equipment" means any equipment used by a component directly or is used by a contractor under a contract with the component that requires the use of the equipment, or the use, to a significant extent, of such equipment in the performance of a service or the furnishing of a product.

b. The term "IT" includes computers, ancillary equipment, software, firmware and similar procedures, services (including support services), and related resources. It does not include any equipment that is acquired by a Federal contractor incidental to a Federal contract.

The above "IT" definition is from the Clinger-Cohen Act (Public Law 104-106, 10 Feb 96, Section 5002) (codified in section 1401(3) of title, 40 U.S.C., and section 11101(6) of title 40, U.S.C.).

NSS - Any telecommunications or information system operated by the U.S. Government, the function, operation, or use of which:

a. Involves intelligence activities;

b. Involves cryptologic 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; and

e. Subject to the limitation below, is critical to the direct fulfillment of military or intelligence missions. This does not include a system that is to be used for routine administrative and business applications (including payroll, finance, logistics, and personnel management applications).

The above NSS definition is from the CCA (Public Law 104-106, 10 Feb 96, Section 5142) (codified in section 1452 of title 40, U.S.C., section 11103 of title 40, U.S.C., and section 2315 of title 10, U.S.C.).

The term "IT, including NSS" is used throughout this instruction to indicate when an IT statute, regulation, policy, or process is also applicable to an NSS.

Table E2T1 STATUTORY INFORMATION AND MILESTONE REQUIREMENTS					
Program Information and Reports	**Presentation Form**	**ACAT**	**Applicability *****	**Prepared By**	**Approved By**
OSD PREPARED					
Beyond LRIP Report [1/] (or equivalent report for MDAPs that are designated MAIS programs)	Optional	**I + OSD OT&E oversight pgms designated by DOT&E**	Full-Rate Production Decision Review (FRP DR)	DOT&E	DOT&E
Independent Cost Estimate (ICE) [2/]	MDA option	**I, IAM**	MS A Pgm Initiation for Ships MS B/C FRP DR (or Full Deployment DR (ACAT IAM))	CAPE NCCA [2/]	CAPE (ACAT ID/IAM) NCCA [2/] (ACAT IC)
Independent Review and Assessment	Optional	**I**	MS B	DDR&E, or designee	DDR&E
LFT&E Report* [3/] RCS: DD-OT&E(AR)1845	Optional	**OSD LFT&E oversight programs only**	FRP DR	DOT&E	DOT&E via Secretary of Defense (SECDEF)
COMPONENT PREPARED					
Acquisition Information Assurance Strategy (AIAS) (all IT - including NSS programs) per Public Law 106-398, Sec 811, Public Law 107-248, Sec 8088(c), DoD Instruction 5000.02, Encl 5, Table 8, of 8 Dec 2008	DON CIO Template, see SECNAVINST 5000.2E, chap 3, para 3.4	**All (IT, including NSS)**	MS A Pgm Initiation for Ships MS B MS C FRP DR (or Full Deployment DR)	PM	DON CIO (ACAT I/IA/II) (DON CIO submits ACAT ID/IA AIASs to DoD CIO for review prior to approval) Command IO (ACAT III/IV)
Acquisition Program Baseline*	See DAG**	**I**	Pgm Initiation for Ships MS B/C (updated as necessary) FRP DR (or Full Deployment DR)	PM	MDA
Analysis of Alternatives (AoA)	Optional	**All (IT, including NSS)**	MS A Pgm Initiation for Ships MS B/C (updated as necessary) Full Deployment DR (for AIS)	Indep Activity Analysis Director	CAE/CNO/CMC (ACAT ID/IAM) MDA/CNO/CMC (ACAT IC/IAC/II/III/IV)

* Not statutorily required for ACAT IA programs. **DAG is the Defense Acquisition Guidebook.
*** Information required at FRP DR is required at MS III for ongoing programs that were begun prior to the 23 Oct 2000 version of DoD Instruction 5000.02 of 8 Dec 2008 and were post-MS II as of 12 May 2003.
1/ Statutory for ACAT I programs and those ACAT IA, II, III, and IV pgms designated for OSD Test and Evaluation oversight.
2/ An ICE is required for ACAT ID/IAM for MS A/B/C and FRP DR/full deployment DR per Public Law 111-23. An ICE is required for ACAT ID/IC for MS B/C and Full-Rate Production Decision Review (FRP DR) per section 2434 of title 10, U.S.C. Naval Center for Cost Analysis (NCCA) in ASN(FM&C) is responsible when the MDA is delegated to DON (ACAT IC) and the independent cost estimate (ICE) is not prepared by the OSD Cost Assessment and Program Evaluation (CAPE).
3/ Statutory for LFT&E programs and product improvements thereto.

Table E2T1 STATUTORY INFORMATION AND MILESTONE REQUIREMENTS (cont'd)					
Program Information and Reports	**Presenta-tion Form**	**ACAT**	**Applicability *****	**Prepared By**	**Approved By**
COMPONENT PREPARED (cont'd)					
Assessment and Congressional Notification of the Certification of a MAIS Critical Program Change [4/]	Letter	**IA**	When a senior official (CAE, USD(AT&L), or ASD(NII)/DoD CIO) has formally determined a critical program change has occurred, but not later than 60 days after a MAIS quarterly report indicating a critical program change.	PM	CAE (after coordination with ASD(NII)/DoD CIO or USD(AT&L) when MAIS is above MDAP threshold)
Benefit Analysis and Determination (applicable to bundled acquisitions)	Acqn Strat	**All**	MS B MS C (if no MS B)	PM	MDA
Certification of compliance with the requirements of the Defense Business System (DBS) Management Committee (DBSMC) (see para 1.9.4)	DITPR-DON	**All IT ACAT & AAP DBS pgms & fielded IT DBSs**	Prior to obligating any development/ modernization funding when such cost > $1 million.	PM	Pre-certification by DON CIO, certification by the Investment Review Board & final approval by DBSMC
Clinger-Cohen Act (CCA) Compliance (all information technology (IT) - including national security systems (NSS) programs)	See DoD Instruction 5000.02, Encl 5, Table 8, of 8 Dec 2008	**All (IT, including NSS)**	MS A Pgm Initiation for Ships MS B MS C (if pgm init or equiv to full deployment DR) FRP DR (or full deployment DR) (or equivalent)	PM (coordi-nated with DASN(C4I & Space) for ACAT I/IA/II)	DoD CIO (ACAT I/IA) confirmation DON CIO (ACAT I/IA/II) confirmation Command IO (ACAT III/IV) confirmation
Competition Analysis (Depot-level Maintenance $3M rule)	Acqn Strat	**All**	MS B MS C (if no MS B)	PM	MDA
Congressional Annual Notification of MAIS program cost, schedule, and performance information (MAIS Annual Report to Congress)	Annual Report to Congress	**IA**	• Annually, after MDA designation, MS A, or MS B • Due 45 days after President's Budget is submitted to Congress	PM	ASD(NII)/DoD CIO
Congressional Quarterly Notification of variances in MAIS program cost, schedule, and performance parameters (MAIS Quarterly Report) [5/]	Quarterly Report to Congress	**IA**	Quarterly following initial submission of a MAIS Annual Report to Congress	PM	Senior Official [5/]

* Not statutorily required for ACAT IA programs. **DAG is the Defense Acquisition Guidebook.
*** Information required at FRP DR is required at MS III for ongoing programs that were begun prior to the 23 Oct 2000 version of DoD Instruction 5000.02 of 8 Dec 2008 and were post-MS II as of 12 May 2003.
4/ Section 2445c of title 10, U.S.C., defines a significant program change as either a schedule change that will cause a delay of more than 6 months, but less than a year; an increase in the estimated program development cost or full life-cycle cost for the program of at least 15%, but less than 25%; or a significant, adverse change in the expected performance of the MAIS to be acquired. A critical program change is defined as the system failed to achieve IOC within 5 years of MS A approval; a schedule change that will cause a delay of 1 year or more in any program schedule; an increase in the estimated program development cost or full life-cycle cost for the program of 25% or more; or a change in expected performance that will undermine the ability of the system to perform the functions anticipated.
5/ The Report to Congress shall identify any variance in the projected development schedule, implementation schedule, life-cycle costs, or Key Performance Parameters (KPPs) for the MAIS from such information as originally submitted to Congress in the first "Report to Congress of cost, schedule, and performance information" for this program. Section 2445c of title 10, U.S.C., refers to the senior official responsible for a MAIS program which is the USD(AT&L) or the component acquisition executive (CAE).

Table E2T1 STATUTORY INFORMATION AND MILESTONE REQUIREMENTS (cont'd)					
Program Information and Reports	**Presenta-tion Form**	**ACAT**	**Applicability *****	**Prepared By**	**Approved By**
COMPONENT PREPARED (cont'd)					
Congressional Notification of a MAIS Significant Program Change [4/]	Letter	**IA**	Not later than 45 days after receiving a PM'S report of a significant program change via a program deviation report or a MAIS quarterly report.	PM	CAE/senior official (after coordination with ASD(NII)/DoD CIO or USD(AT&L) when MAIS is above MDAP threshold)
Congressional Notification of a MAIS Program Cancellation or Significant Reduction in Scope	Letter	**IA**	60 days prior to an MDA decision to cancel or significantly reduce the scope of a fielded or post-MS C MAIS program.	PM	ASD(NII)/DoD CIO
Consideration of Technology Issues	TDS (MS A) Acqn Strat	**I, IA, II**	MS A MS B/C	PM	MDA
Cooperative Opportunities	TDS (MS A) Acqn Strat	**All**	MS A MS B/C	PM	MDA
Core Logistics Analysis/ Source of Repair Analysis	Acqn Strat & LCSP	**All**	MS B MS C (if no MS B)	PM	MDA
Data Management Strategy	TDS (MS A) Acqn Strat	**I, IA, II**	MS A MS B/C FRP DR or equivalent	PM	MDA
Economic Analysis (EA)	Optional	**IA**	MS A (may be combined with AoA) MS B Full Deployment DR (or equivalent)	SYSCOM Cost Director	PM
Industrial Base Capabilities Considerations*	Acqn Strat	**I, II, III, IV**	MS B/C	PM	MDA
IOT&E Completed	Optional	**I, II (only conventional weapons systems that are major systems for use in combat)**	FRP DR	OTA	OTA
LFT&E Waiver from Full-up, System-level Testing and Alternate LFT&E plan* [3/] (only for programs with waiver from full-up system-level testing)	MDA option	**OSD LFT&E oversight programs only**	MS B (or as soon as practicable after program initiation)	PM	USD(AT&L) (ACAT ID) CAE (ACAT IC/II/III/IV) DOT&E
LRIP Quantities*	ADM	**I, II**	MS B	PM	MDA
Manpower Estimate* (reviewed by OUSD(P&R))	See reference (e) sample format	**I**	Pgm Initiation for Ships MS B/C FRP DR	CNO/CMC	CNO/CMC
Market Research	TDS (MS A) Acqn Strat	**All**	Materiel Solution Phase MS A/B	PM	MDA
MDA Program Certification (see para 2.10)	Memorandum for the Record	**I**	MS A MS B	PM	MDA

* Not statutorily required for ACAT IA programs. **DAG is the Defense Acquisition Guidebook.
*** Information required at FRP DR is required at MS III for ongoing programs that were begun prior to the 23 Oct 2000 version of DoD Instruction 5000.02 of 8 Dec 2008 and were post-MS II as of 12 May 2003.
3/ Statutory for LFT&E programs and product improvements thereto.

Table E2T1 STATUTORY INFORMATION AND MILESTONE REQUIREMENTS (cont'd)					
Program Information and Reports	**Presentation Form**	**ACAT**	**Applicability *****	**Prepared By**	**Approved By**
COMPONENT PREPARED (cont'd)					
Military Equipment Valuation (Program Description)	Acqn Strat	**All**	MS C FRP DR or equivalent	PM	MDA
Nunn-McCurdy Critical Unit Cost Breach Assessment and Certification (see para 2.9.5)	Assessment memorandum and Congressional certification letters	**I**	Critical Unit Cost Breach (≥ 25% increase over current APB objective or ≥ 50% increase over original APB objective)	PM with support of USD(AT&L) staff	USD(AT&L) via ASN(RD&A)
Nunn-McCurdy Significant Unit Cost Breach Notification (see para 2.9.5)	Congressional notification letters	**I**	Significant Unit Cost Breach (≥ 15 ‹ 25% increase over current APB objective or ≥ 30 ‹ 50% increase over original APB objective)	PM	SECNAV via ASN(RD&A)
Operational Test Plan*	OTA option	**I + OSD OT&E oversight programs only**	Prior to start of OT&E	OTA	DOT&E
Post Implementation Review	MDA option	**All**	FRP DR (or Full Deployment DR) (submit plan) IOC + 1 yr (assessment) 3 year intervals (repeat) or as determined by MDA	PM	MDA
Post-PDR MDA Assessment	ADM	**I**	MS B (PL 111-23)	MDA	MDA
Program Deviation Report	PM option	**I, IA**	Immediately upon a program deviation	PM	PM Endorsed by PEO
Programmatic Environment, Safety, & Occupational Health Evaluation (PESHE) (including National Environmental Policy Act (NEPA)/Executive Order (EO) 12114 Compliance Schedule) (see chapter 6)	CAE option (ACAT I/IA) MDA option (ACAT II & below)	**All**	Pgm Initiation for Ships MS B/C FRP DR (or Full Deployment DR)	PM	PM (PESHE)
Registration of mission-critical (MC) and mission-essential (ME) information systems RCS: DD-C3I(AR)2096	See DAG**	**All (all MC or ME IT systems - including NSS)**	Program Initiation (after initial registration, update quarterly)	PM	PM
Replaced System Sustainment Plan	Stand-alone plan (see para 2.4.7)	**I**	Pgm Initiation for Ships MS B	PM	PM (Stand-alone)
Selected Acquisition Report (SAR)- * RCS: DD-AT&L(Q&A)823	See DAG**	**I**	Pgm Initiation for Ships Pgm Initiation (normally MS B), annually thereafter End of quarter following: MS B/C Breach (schedule/significant unit cost)	PM	CAE/PEO/SYSCOM USD(AT&L)

* Not statutorily required for ACAT IA programs. **DAG is the Defense Acquisition Guidebook.
*** Information required at FRP DR is required at MS III for ongoing programs that were begun prior to the 23 Oct 2000 version of DoD Instruction 5000.02 of 8 Dec 2008 and were post-MS II as of 12 May 2003.

Table E2T1 STATUTORY INFORMATION AND MILESTONE REQUIREMENTS (cont'd)					
Program Information and Reports	**Presentation Form**	**ACAT**	**Applicability *****	**Prepared By**	**Approved By**
COMPONENT PREPARED (cont'd)					
Submission of DD 1494 Application for Equipment Frequency Allocation and Certification of Spectrum Support [6/] (applicable to all systems/equipment that require use of the electromagnetic spectrum)	DD 1494	**All**	MS A [6/] MS B MS C (if no MS B)	PM coordinate with CNO(N2/N6)/ HQMC(C4)	NTIA [6/]
Technology Development Strategy (TDS)	MDA option	**potential I, potential IA**	MS A	PM	MDA
Unit Cost Report- * RCS: DD-AT&L(Q&R)1591	See para 2.9.5 See DAG**	**I**	Quarterly (part of DAES, provided via Dashboard)	PM	CAE/PEO/SYSCOM USD(AT&L)

* Not statutorily required for ACAT IA programs. **DAG is the Defense Acquisition Guidebook.
*** Information required at FRP DR is required at MS III for ongoing programs that were begun prior to the 23 Oct 2000 version of DoD Instruction 5000.02 of 8 Dec 2008 and were post-MS II as of 12 May 2003.
6/ If certification of spectrum support is initially obtained at MS A, the currency of the frequency allocation needs to be confirmed at MS B and C. National Telecommunications and Information Administration.

Table E2T2 REGULATORY INFORMATION AND MILESTONE REQUIREMENTS					
Program Information and Reports	**Presentation Form**	**ACAT**	**Applicability ****	**Prepared By**	**Approved By**
OSD/JOINT STAFF/DISA PREPARED					
Acquisition Decision Memorandum (ADM) (MDA Program Certification required for ACAT ID programs at MSs A and B before ADM is signed)	MDA option	**ID, IAM**	Pgm Initiation for Ships MS A/B/C, Each Review	MDA staff	MDA
Independent Technology Readiness Assessment	Optional	**ID (if required by DDR&E)**	MS B/C	DDR&E, or designee	DDR&E
Interoperability and Supportability Certification of CDD/CPD (JROC Interest and Joint Integration) and ISP	Optional	**All (IT, including NSS)**	MS B/C	Joint Staff	Joint Staff (J-6)
Joint Interoperability Test Certification	Optional	**All (IT, including NSS)**	FRP DR	DISA/JITC	Joint Staff (J-6)
COMPONENT PREPARED					
Acquisition Decision Memorandum (MDA Program Certification required for ACAT IC programs at MSs A and B before ADM is signed)	MDA option	**IC, IAC II, III, IV**	Pgm Initiation for Ships MS A/B/C, Each Review	MDA staff	MDA
Acquisition Program Baseline	See DAG*	**IA, II, III, IV**	Pgm Initiation for Ships MS B/C (updated as necessary) FRP DR (or Full Deployment DR)	PM	MDA
Acquisition Strategy	MDA option	**All**	Pgm Initiation for Ships MS B MS C (updated as necessary) FRP DR (or Full Deployment DR)	PM	MDA
Affordability Assessment	Optional	**All**	Pgm Initiation for Ships MS B/C	CNO/CMC	CNO/CMC
Analysis of Alternatives (AoA) 7/	Optional	**I, II, III, IV (non-IT & non-NSS)**	MS A Pgm Initiation for Ships MS B/C (updated as necessary)	Independent Activity Analysis Director	CAE/CNO/CMC (ACAT ID) MDA/CNO/CMC (ACAT IC/II/III/IV)
AoA Study Guidance	Optional	**All**	Materiel Development Decision (updated as necessary)	CAPE (ACAT ID/IAM) CNO/CMC (ACAT IC/IAC/II/ III/IV)	CAPE (ACAT ID/IAM) MDA/CNO/CMC (ACAT IC/IAC/II/III/IV)
AoA Study Plan	Optional	**All**	Immediately following Materiel Development Decision consistent with MDA Direction (updated as necessary)	Independent Activity Analysis Director	CAPE (ACAT ID/IAM) MDA/CNO/CMC (ACAT IC/IAC/II/III/IV)

*DAG is the Defense Acquisition Guidebook
** Information required at FRP DR is required at MS III for ongoing programs that were begun prior to the 23 Oct 2000 version of DoD Instruction 5000.02 of 8 Dec 2008 and were post-MS II as of 12 May 2003.
7/ CAE, or designee, co-approves ACAT ID and MDA, or designee, co-approves ACAT IC and below AoA.

Table E2T2 REGULATORY INFORMATION AND MILESTONE REQUIREMENTS (cont'd)					
Program Information and Reports	**Presentation Form**	**ACAT**	**Applicability ****	**Prepared By**	**Approved By**
COMPONENT PREPARED (cont'd)					
Component Cost Analyses	Optional	**I, IA**	MDAPs (CAE option) Pgm Initiation for Ships MS A/B/C/FRP DR MAISs MS A MS B (or equivalent) Full Deployment DR (or equivalent) (required when an EA is required by statute or MDA)	NCCA	NCCA
Component LFT&E Report	Optional	**OSD LFT&E oversight programs only**	Completion of LFT&E	DT&E Activity	DT&E Activity
Corrosion Prevention Control Plan	Stand-alone plan	**I**	MS B/C	PM	MDA
Cost Analysis Requirements Description [8/]	Optional see DoD Instruction 5000.02, Encl 7, of 8 Dec 2008	**All**	• For MDAPS Pgm Initiation for Ships MS A/B/C/FRP DR • For MAIS MS A/B/Full Deployment DR (required when an EA is required) • When any ACAT program life-cycle cost estimate is required	PM	SYSCOM Cost Director
Defense Acquisition Executive Summary (DAES), RCS: DD-AT&L(Q)1429, provided via Dashboard	See DAG*	**I, IA**	Quarterly Upon POM or BES submission Upon unit cost breach	PM	PM
DT&E Report [9/]	Optional	**All**	MS B/C OTRR for IOT&E FRP DR	DT&E Activity	DT&E Activity
Earned Value Management Systems (EVMSs) [10/]	See DAG*; OMB Circular A-11, Part 7; DoD Instruction 5000.02, Encl 4, Table 5, of 8 Dec 2008	**All**	Implement EVMS guidelines in ANSI/EIA-748 and conduct Integrated Baseline Reviews (IBRs) for cost or incentive contracts/agreements valued at or greater than $20 million in then-year dollars	Contractor implements EVMS PM conducts IBRs within 180 days of contract award, exercise of options, and major modifications	PM

*DAG is the Defense Acquisition Guidebook.
** Information required at FRP DR is required at MS III for ongoing programs that were begun prior to the 23 Oct 2000 version of DoD Instruction 5000.02 of 8 Dec 2008 and were post-MS II as of 12 May 2003.
8/ A Cost Analysis Requirements Description (CARD) shall be prepared by the PM whenever a life-cycle cost estimate is required, and updated annually. The CARD will be reviewed and approved by the SYSCOM cost director for all ACAT programs, coordinated with the OSD CAPE for ACAT ID/IAM programs, and coordinated with NCCA for ACAT IC/IAC and selected ACAT II programs.
9/ DT&E Report required for MS B if DT&E testing is accomplished prior to MS B.
10/ Cost or incentive contracts, subcontracts, or other agreements valued at or greater than $50 million in then-year dollars shall have an EVM system that has been formally validated and accepted by the cognizant contracting officer.

Table E2T2 REGULATORY INFORMATION AND MILESTONE REQUIREMENTS (cont'd)					
Program Information and Reports	**Presentation Form**	**ACAT**	**Applicability ****	**Prepared By**	**Approved By**
COMPONENT PREPARED (cont'd)					
Exit Criteria	ADM	**All**	Pgm Initiation for Ships MS A/B/C Each Review	PM	MDA
Independent Logistics Assessment (ILA) and Logistics Certification	See reference (f)	**All**	MS B/C FRP DR	ILA team leader	ILA (ILA team leader) Logistics Certification (PEO/SYSCOM/DRPM)
Information Support Plan [11/] (also summarized in acquisition strategy)	See DAG*	**All (IT, including NSS)**	Pgm Initiation for Ships (Initial) MS B (Initial) CDR (Revised, unless waived) MS C (ISP of Record)	PM	PEO/SYSCOM/DRPM, or designee
Initial Capabilities Document (ICD) [12/] Capability Development Document (CDD) [12/] Capability Production Document (CPD) [12/]	See JCIDS Manual	**All** [12/]	Materiel Development Decision (ICD) MS A/B (ICD) MS C (if pgm initiation)(ICD) Pgm Initiation for Ships (CDD) MS A/B (CDD) [12/] MS C (CPD) [12/]	Program Sponsor	JROC (JROC Interest) JCB (JCB Interest) CNO/CMC (Joint Integration, Joint Information and Independent)
Item Unique Identification (IUID) Implementation Plan	Stand-alone plan	**All**	MS A MS B MS C	PM	MDA (ACAT ID/IAM/III/IV) DASN(RDT&E) CHSENG (ACAT ID/IAM/ IC/IAC/II/special interest)
Life-Cycle Signature Support Plan (applicable to all systems/equipment that require use of the electromagnetic spectrum)	Stand-alone plan. Summarized in the TDS and Acqn Strategy	**All**	MS A Pgm Initiation for Ships MS B MS C (updated as necessary)	PM	PEO/SYSCOM/DRPM
Life-Cycle Sustainment Plan	Stand-alone plan (see para 2.9.1)	**All**	MS B/C FRP DR	PM	MDA
Manpower Estimate [13/]	See ref (e) sample format	**IA, II, III, IV**	MS B/C FRP DR	CNO/CMC	CNO/CMC
MDA Program Certification (see para 2.10.2)	Memorandum for the Record	**I**	MS C (if pgm initiation)	PM	MDA

*DAG is the Defense Acquisition Guidebook.
** Information required at FRP DR is required at MS III for ongoing programs that were begun prior to the 23 Oct 2000 version of DoD Instruction 5000.02 of 8 Dec 2008 and were post-MS II as of 12 May 2003.
11/ Information Support Plan per CJCSI 6212.01E is only required for IT, including NSS, programs that interconnect to the communications and information infrastructure.
12/ A system of systems ICD may satisfy ICD requirement for Materiel Development Decision for potential ACAT II, III, and IV programs. JROC Interest and Joint Integration CDDs and CPDs require interoperability and supportability certification by Joint Staff (J-6) prior to approval at MS B and C, respectively. In order to support Public Law 111-23 of 22 May 2009 requirement for an ICE for ACAT ID/IAM programs at MS A, a DoD requirement for a Service Cost Position (SCP) for ACAT I programs at MS A, and DON requirement for a SCP for ACAT I, IA, and selected ACAT II programs at MS A, an initial Service-approved CDD is required at MS A for ACAT I, IA, and selected ACAT II programs. The initial CDD at MS A shall be updated to an approved final CDD for Joint Staffing and JROC/JCB validation prior to MS B.
13/ Manpower estimates shall be developed for all manpower significant programs regardless of ACAT at the request of the Component Manpower Authority (e.g., programs with high personnel or critical skill requirements).

Table E2T2 REGULATORY INFORMATION AND MILESTONE REQUIREMENTS (cont'd)					
Program Information and Reports	**Presentation Form**	**ACAT**	**Applicability ****	**Prepared By**	**Approved By**
COMPONENT PREPARED (cont'd)					
Net-Centric Data Strategy	Summarized in the TDS and detailed in ISP	**All**	MS A Pgm Initiation for Ships MS B/C	PM	TDS (MDA) ISP (PEO/SYSCOM/DRPM, or designee)
Operational Test Agency Report of OT&E Results (when OT&E is conducted in the phase prior to MS B, MS C, FRP DR, and post FRP DR for follow-on operational; test and evaluation (FOT&E))	Optional	**I, IA, II, III, IVT**	MS B MS C (Operational Assessment (OA) is mandatory for OSD OT&E oversight programs) FRP DR Post FRP DR for FOT&E	OPTEVFOR MCOTEA Multi-Service OT&E (MOT&E) Lead OTA for joint programs	COMOPTEVFOR Dir, MCOTEA MOT&E Lead OTA
Operational Test Plan	OTA option	**IA + DOT&E oversight pgms**	Prior to start of OT&E	OTA	DOT&E
Post-CDR MDA Assessment	ADM	**All**	Post-MS B	MDA	MDA
Post-PDR PM Report	PM option	**I** **IA, II, III, IV**	MS B MS B or Post-MS B	PM	PM
Post-PDR MDA Assessment	ADM	**IA, II, III, IV**	MS B or Post-MS B	MDA	MDA
Program Deviation Report	PM option	**II, III, IV**	Immediately upon a program deviation	PM	PM Endorsed by PEO
Program Life-Cycle Cost Estimates	MDA option	**All**	Pgm Initiation for Ships MS A/B/C, and FRP DR/Full Deployment DR	SYSCOM Cost Director	SYSCOM Cost Director
Program Protection Plan (for programs with critical program information or critical technology) (includes Anti-Tamper Annex) (also summarized in acquisition strategy)	Optional	**All**	MS A (CPI in TDS) MS B (based on approved requirements in CDD) MS C	PM (Anti-Tamper Annex requires DASN(RDT&E) CHSENG's technical concurrence)	MDA
Risk Assessment	TDS (MS A) Acqn Strat	**All**	Pgm Initiation for Ships MS A/B/C, and FRP DR	PM	MDA
Service Cost Position	Optional	**I, IA, selected II Gate Review programs**	MS A/B/C, and FRP DR/Full Deployment DR	NCCA/PM/ SYSCOM Cost Director	DASN(C&E)
Spectrum Supportability Determination (applicable to all systems/equipment that use the electromagnetic spectrum in the U.S. and in other host nations)	See DoD Instruction 4650.01	**All**	MS B MS C	PM coordinate with CNO(N2/N6)/ HQMC(C4)/ DON CIO	PM
System Threat Assessment Report (STAR) (MAIS programs use DIA validated Information Operations Capstone Threat Assessment)	Optional	**I, IA + programs on the DOT&E oversight list**	Pgm Initiation for Ships MS B/C	Intell Activity (Technical Analysis Center (TAC) or Marine Corps Intelligence Activity (MCIA))	Intell Activity (TAC or MCIA) DIA validates ACAT ID programs DoD Component validates ACAT IC programs

*DAG is the Defense Acquisition Guidebook. TAC is the Farragut Technical Analysis Center that supports the Office of Naval Intelligence (ONI).
** Information required at FRP DR is required at MS III for ongoing programs that were begun prior to the 23 Oct 2000 version of DoD Instruction 5000.02 of 8 Dec 2008 and were post-MS II as of 12 May 2003.

Table E2T2 REGULATORY INFORMATION AND MILESTONE REQUIREMENTS (cont'd)					
Program Information and Reports	**Presentation Form**	**ACAT**	**Applicability ****	**Prepared By**	**Approved By**
COMPONENT PREPARED (cont'd)					
System Threat Assessment (STA) (AIS programs may use DIA validated Information Operations Capstone Threat Assessment)	Optional	**II, III, IV**	MS B/C	Intell Activity (TAC or MCIA)	Intell Activity (TAC or MCIA)
Systems Engineering Plan (SEP) [14/]	See SEP prep guide [14/]	**All**	Pgm Initiation for Ships MS A/B/C	PM	Director, Systems Engineering (ACAT ID/IC/IAM) DASN(RDT&E) CHSENG (ACAT ID/IAM/ IC/IAC/II/special interest) MDA (ACAT III/IV)
Technology Development Strategy (TDS)	MDA option	**potential II, III, IV**	MS A	PM	MDA
Technology Readiness Assessment	CNR option	**All**	Pgm Initiation for Ships (preliminary assessment pre-MS B for ships) MS B/C	ONR (ACAT I/IA/II) with PM support PM (ACAT III/IV)	CNR (ACAT I/IA/II) PEO/SYSCOM (ACAT III/IV)
Test and Evaluation Master Plan [15/]	see DAG*	**All**	MS B MS C (update, if necessary) FRP DR(or Full Deployment DR)	PM OPTEVFOR MCOTEA	CNO/CMC [15/] CAE/MDA DOT&E/Director, DT&E
Test and Evaluation Strategy [15/]	see DAG*	**All**	MS A	PM OPTEVFOR MCOTEA	CNO/CMC [15/] CAE/MDA DOT&E/Cognizant OIPT Leader
Training System Plan (TSP)	see footnote [16/]	**All** [17/]	MS B [17/] (preliminary) Phase B midpoint (final) MS C (update, if necessary)	PM	CNO/CMC

*DAG is the Defense Acquisition Guidebook.
** Information required at FRP DR is required at MS III for ongoing programs that were begun prior to the 23 Oct 2000 version of DoD Instruction 5000.02 of 8 Dec 2008 and were post-MS II as of 12 May 2003.
14/ See the SEP Preparation Guide, ver 2.01, Apr 2008, at http://www.acq.osd.mil/se/pg/guidance.html
15/ CAE and CNO (N091)/ACMC approve TEMPs and TESs for DON for ACAT I, IA, and II programs and all programs on the OSD T&E oversight list. MDA and CNO/CMC, or designee, approve TEMPs and TESs for DON for ACAT III and IVT programs. MDA approves TEMPs and TESs for DON for ACAT IVM programs. DOT&E and Director, DT&E approve TEMPs and TESs for programs on the OSD T&E oversight list. TEMPs and TESs may be tailored as appropriate for ACAT IVM programs.
16/ Mandatory format for the Navy TSP is in OPNAVINST 1500.76B. Mandatory format for the Marine Corps Manpower, Personnel, and Training Plan is the Marine Corps Systems Command format.
17/ See annex 1-B, table E1T3, Briefing Content, for ACAT I, IA, and selected ACAT II programs for gate 4 (SDS) preliminary TSP and gate 5 (RFP) final TSP.

Table E2T3 CONTRACT REPORTING INFORMATION REQUIREMENTS					
Program Information and Reports	**Presentation Form**	**ACAT**	**Applicability**	**Prepared By**	**Submitted To**
COMPONENT PREPARED					
Contractor Cost Data Report (CCDR)	CAPE format	**I, IA**	See DoD 5000.04-M-1, Chapter 2, of 18 Apr 2007 and DoD Instruction 5000.02, Encl 4, Table 4, of 8 Dec 2008	Contractor	PM (applicable ACATs)
Contract Performance Report (CPR)	DI-MGMT-81466A	**All**		Contractor	OSD's Defense Cost and Resource Center (DCARC) for ACAT I programs only
Integrated Master Schedule (IMS)	DI-MGMT-81650	**All**		Contractor	
Contract Funds Status Report (CFSR)	DI-MGMT-81468	**All**		Contractor	
Software Resources Data Report (SRDR) 1/	CAPE format	**I, IA (CAPE may waive)**	See DoD 5000.04-M-1, Chapter 2, of 18 Apr 2007 and DoD Instruction 5000.02, Encl 4, Table 4, of 8 Dec 2008	PM and Contractor	DCARC and PM

1/ The SRDR requirement on high-risk or high-technical-interest contracts priced below $20 million is left to the discretion of the PM with approval by the OSD CAPE.

2.2 Exit Criteria

For each acquisition phase, established exit criteria shall be met and demonstrated prior to entrance into the next phase. Reference (a), enclosure 4, requires MDAs for all ACAT programs to establish exit criteria in acquisition decision memorandums (ADMs) issued following milestone reviews and other key decision reviews. Exit criteria need not be part of the acquisition program baseline.

2.3 Technology Maturity

PMs shall ensure technology readiness assessments (TRAs) are conducted. PMs shall request the Chief of Naval Research (CNR) conduct TRAs for ACAT I, IA, and II programs with support from the respective PM. PMs shall conduct TRAs for ACAT III and IV programs. TRAs are required for milestones B and C. A preliminary TRA is required for ship programs that have program initiation at milestone A. The Assistant Secretary of Defense (Research and Engineering) (ASD(R&E)) TRA Deskbook provides suggested methods for conducting the TRA. Office of Naval Research (ONR) will provide amplifying information and guidance as required. The TRA shall be conducted on critical technologies as determined by the PM in coordination with ONR. A technology is defined as "critical" if the system being acquired depends on that technology to meet its capability development document (CDD) and capability production document (CPD) requirements and if its application is either new or novel in an area that poses major technological risk during detailed design or demonstration.

The CNR, as the Department of the Navy (DON) science and technology (S&T) executive, shall approve TRAs for ACAT I, IA, and II programs. CNR shall submit TRAs for ACAT I, IA, and II programs to ASN(RD&A) after discussion with the respective program executive officer (PEO), systems command (SYSCOM) commander, or direct reporting program manager (DRPM) and PM. TRAs for ACAT ID and IAM programs shall be submitted to the ASD(R&E) via ASN(RD&A). ASD(R&E) may conduct an independent TRA for ACAT ID programs. The Director, Naval Nuclear Propulsion Program (N00N) is solely responsible for all efforts associated with naval nuclear propulsion plants (sections 2406 and 2511 of title 50, U.S.C.) including identifying critical technologies and providing input for TRAs for nuclear propulsion plants.

PEOs and SYSCOM commanders, or their designees, as well as DRPMs shall approve TRAs for ACAT III and IV programs.

See reference (a), enclosure 2, paragraphs 3, 5d(4), and 6b, for implementation requirements for all DON ACAT programs.

2.4 Technology Development and Acquisition Strategies

2.4.1 General Considerations for a Technology Development Strategy and an Acquisition Strategy

The technology development and acquisition strategies will normally be competitive unless sole source is justified to meet the urgent needs of the warfighter and by the Federal Acquisition Regulation (FAR) and Defense FAR Supplement (DFARS). Per ASN(RD&A) memorandum, Prototyping and Competition (P07-005), of 27 Nov 2007 and its attached Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) memorandum of 19 July 2007 and reference (a), the technology development strategy for the technology development (TD) phase and the acquisition strategy for the engineering and manufacturing development (EMD) phase for pre-ACAT I and ACAT I programs shall provide for competitive prototypes of the system or key system elements (subsystems) through milestone B and be sustained thereafter where the benefits warrant the investment. These prototypes are to be used to demonstrate critical technologies in a relevant environment. Public Law 111-23 of 22 May 2009, section 203, requires that the acquisition strategy (interpreted to mean technology development strategy for TD phase) for each major defense acquisition program provide for competitive prototypes before milestone B unless the MDA waives the requirement on the basis that the cost of producing competitive prototypes exceeds the expected life-cycle benefits (in constant dollars) or on the basis that, but for such waiver, DoD would be unable to meet critical national security objectives. Whenever an MDA authorizes a waiver, the MDA shall notify the congressional defense committees, and the Comptroller General when the waiver is on the basis of excessive cost, in writing not later than 30 days after the waiver is authorized and include in such notification the rationale for the waiver and the plan, if any, for a producing a prototype of the system or critical subsystems of the system.

The technology development strategy and acquisition strategy should consider Navy small business innovation research (SBIR) and small business technology transfer (STTR) developed technology projects for incorporation.

PMs for all acquisition programs shall ensure language is included in the request for proposal (RFP) for the EMD phase efforts advising offerors that:

a. the government will not award a contract to an offeror whose proposal is based on critical technology elements that have not been demonstrated on prototypes in a relevant environment; and

b. that offerors will be required to specify the technology readiness level of the critical technology elements on which their proposal is based and to provide reports documenting how those critical technology elements have been demonstrated in a relevant environment.

PMs for all DON ACAT programs shall develop an acquisition strategy implementing a total systems engineering approach per references (a) and (b). For ACAT IC, IAC, and II programs, the PM shall develop the acquisition strategy in coordination with the Acquisition Coordination Team (ACT). The ACT is described in chapter 1, paragraph 1.3.2. The MDA shall approve a technology development strategy or an acquisition strategy, as appropriate, prior to the release of the formal solicitation (RFP) for the respective acquisition phase. The technology development strategy for the TD phase and the acquisition strategy for the EMD phase are normally approved by the MDA at milestones A and B, respectively. The strategies may be approved in advance of the milestones to permit release of the formal RFP prior to the respective milestone. An information copy of technology development strategies and acquisition strategies shall be provided to resource sponsors prior to MDA approval.

The acquisition strategy shall describe how the PM plans to employ contract incentives, and use of SBIR and STTR technologies, to achieve required cost, schedule, and performance outcomes. The acquisition strategy for an ACAT I development program shall provide for contract type selection by the MDA at milestone B per Public Law 109-364, section 818, of 17 October 2006 (FY 2007 National Defense Authorization Act). The contract type shall be consistent with the level of program risk and may be either a fixed-price or cost type contract. The MDA may authorize a cost type contract only upon written determination that:

a. The program is so complex and technically challenging that it would not be practicable to reduce program risk to a level that would permit the use of a fixed-price contract; and

b. The complexity and technical challenge of the program is not the result of a failure to meet the requirements of section 2366b of title 10, U.S.C. The MDA's written determination shall include an explanation of the level of program risk, and if the MDA determines that the program risk is high, the steps that have been taken to reduce program risk and the reasons for proceeding with acquisition strategy approval and or milestone B despite the high level of program risk.

If the technology development strategy or acquisition strategy for a major system calls for a lead system integrator, the MDA shall ensure that a contract is not awarded to an offeror that either has or is expected to acquire a financial interest in the development or construction of an individual system or an element of any system of systems (SoS). Exceptions may be granted as provided in section 2410p of title 10, U.S.C., that requires certification to the Committees on Armed Services of the Senate and House of Representatives.

The naval Gate Review process (see chapter 1, paragraph 1.11.4.3.1.1, gate 5) ensures that the Service has completed needed actions and recommends to the MDA approval of the release of the formal EMD RFP to industry.

Public Law 111-23 of 22 May 2009, section 202, requires that acquisition strategies for each major defense acquisition program include measures to preserve the option for competition, at both the prime and subcontract levels, throughout the life of the program. Competition-promoting measures listed in section 202 shall be considered during the development of acquisition strategies. Section 202 also requires that "make-buy" decisions made by a prime contractor are fair, by requiring prime contractors to give "full and fair consideration" to qualified sources other than themselves for major subsystems and components. The prime contractor should consider SBIR and STTR developed technologies and vendors as qualified sources during "make-buy" decisions. Detailed information, company contacts, and Navy contacts for SBIR and STTR developed technologies are available at www.navysbirsearch.com. The Defense Contract Management Agency and the PM shall oversee and assess the process the prime contractors use to make "make-buy" decisions. Such assessments shall be reflected in past performance evaluations. Public Law 111-23 of 22 May 2009, section 202, also requires that, to the maximum extent practicable and consistent with

statutory requirements, a contract for source of repair for maintenance and sustainment of a major weapon system shall be competitively awarded.

2.4.2 Requirements and Capability Needs

User requirements and capabilities needs for an acquisition shall be briefly synopsized in an acquisition strategy and are described in chapter 1, paragraph 1.1.

2.4.3 Program Structure

Each acquisition strategy shall include a program structure, the purpose of which is to identify in a top-level schedule the major program elements such as program decision points, acquisition phases, test phases, contract awards, and delivery phases.

2.4.4 Risk

Plans for assessing and mitigating program risk shall be summarized in the acquisition strategy. PMs, utilizing SYSCOM engineering, cost, and logistics technical authority expertise, shall conduct a risk assessment identifying all technical, cost, schedule, and performance risks. In conjunction with the risk assessment, plans for mitigating those risks shall be completed prior to each milestone decision and the full-rate production decision review (FRP DR). PMs for all DON programs shall, for the purpose of reducing or mitigating program risk, research and apply applicable technical and management lessons-learned during system development, procurement, and modification.

2.4.4.1 Interoperability and Integration Risk

For programs that are part of an SoS or FoS, the risk management strategy shall specifically address integration and interoperability as a risk area. The PM shall make use of naval technical databases for fleet integration and interoperability issues and assigned risks. The risk assessment for such programs that are part of an SoS or FoS shall include the following:

a. Identification of interoperability, net-centricity, and integration risks and actions needed for sufficient mitigation.

b. Assessment of the risk in the program’s ability to meet its net-ready key performance parameter (NR KPP) threshold.

c. An assessment of the technical merits and risks associated with a programmatic or business decision to provide a new or modified C4I system or subsystem as part of an overall proposed solution.

For ACAT I, IA, and II programs and applicable ACAT III and IV programs that are designated by ASN(RD&A) for integration and interoperability special interest, risk assessment planning shall be coordinated with DASN(RDT&E) chief systems engineer (CHSENG) 6 months prior to program decision briefings. Developed risk assessments and mitigation plans for such programs shall be submitted to DASN(RDT&E) CHSENG no later than 30 calendar days prior to program decision briefings. DASN(RDT&E) CHSENG shall advise ASN(RD&A) and the PM of the adequacy of the PM's integration and interoperability risk assessment and risk mitigation plan.

2.4.5 Program Management

The acquisition strategy shall be developed in sufficient detail to establish the managerial approach that shall be used to achieve program goals. PMs who have or use government property in the possession of contractors (GPPC) shall have a process in place to ensure the continued management emphasis on reducing GPPC and preventing any unnecessary additions of GPPC.

2.4.6 Design Considerations Affecting the Acquisition Strategy

2.4.6.1 Open Architecture

Naval open architecture precepts shall be applied across the Naval Enterprise as an integrated technical and business approach and shall be used for all systems, including support systems, when developing an acquisition strategy per ASN(RD&A) memorandum, Naval Open Architecture Scope and Responsibilities, of 5 August 2004 and CNO memorandum Ser N6N7/5U916276, Requirement for Open Architecture (OA) Implementation, of 23 Dec 2005 with enclosure (1).

2.4.6.2 Interoperability and Integration

For programs that are part of an SoS or FoS, interoperability and integration shall be a major consideration during all program phases per reference (g). The acquisition

strategy of all programs shall implement interoperability processes, procedures, and tools, per reference (h), as the foundation for information interoperability.

2.4.6.2.1 Integrated Architecture

All DON new start IT systems, including NSS, that exchange information with external systems shall comply with NR KPP and the DON EA as described by the CDD at program initiation (normally milestone B). These new start systems will be eligible for inclusion in SoS or FoS integration and interoperability validation efforts. The process described in chapter 1, paragraph 1.1.2.5, shall be the means of deciding if legacy systems are to be compliant.

PMs of IT, including NSS, programs shall implement as soon as possible the applicable technical standards that satisfy CDD and CPD requirements and do not require additional funding or adversely affect program execution.

2.4.6.3 Aviation and Ship Critical Safety Items

The Naval Air Systems Command is designated the aviation design control activity for aviation critical safety items (CSIs) to implement references (i), (j), and (k), and the Naval Sea Systems Command is designated the ship design control activity for ship CSIs to implement section 130 of the 2007 National Defense Authorization Act. As such, they are responsible for establishing processes to identify and manage the procurement, repair, modification, and overhaul of aviation and ship CSIs.

PMs of aviation, ship-air integration, or ship systems shall summarize the aviation and ship CSI approach in the acquisition strategy. The approach shall ensure that design, contracting, and support strategies address the proper and timely identification, technical documentation, marking or serializing and tracking, procurement, support, and disposal of aviation CSIs per references (i), (j), and (k), and NAVSEAINST 9078.1, Naval Ships' Critical Safety Item Program Non-Nuclear, of 01 May 2007, and NAVSEAINST 9078.2, Naval Ships Critical Safety Item Program Technical Requirements, of 08 May 2008. Logistics support organizations shall ensure that aviation and ship CSIs are properly catalogued and that approved sources of supply are identified by the design control activity. Contracting activities shall award contracts for the procurement of aviation and ship CSIs or for the modification, repair, or overhaul of aviation and ship CSIs only to sources approved by the Naval Air

Systems Command and Naval Sea Systems Command respectively. Furthermore, all aviation and ship CSIs or modifications, repair, and overhaul services shall meet all technical and quality requirements specified by the Naval Air Systems Command and Naval Sea Systems Command, respectively.

2.4.6.4 Information Assurance

Information assurance (IA) requirements shall be identified and included in the design, acquisition, installation, operation, upgrade, and replacement of all DON information systems per section 2224 of title 10, U.S.C., Office of Management and Budget Circular A-130, and reference (a). PMs shall develop an acquisition IA strategy and summarize the acquisition IA strategy in the program's overall acquisition strategy (for further information on developing an acquisition IA strategy, see chapter 3, paragraph 3.4).

2.4.6.5 Standardization and Commonality

Common systems and equipment can provide efficiencies that include inherently greater interoperability, lower total ownership costs, improved human performance, consistent and integrated roadmaps for system evolution, and planned dual-use functions. Acquisition strategies shall identify common systems and equipment integrated into an acquisition program.

Section 2451 of title 10 U.S.C., Defense supply management, directs the DoD to standardize supplies to the highest degree practicable by reducing the number of sizes and kinds of items that are generally similar. PMs shall describe in their acquisition strategy the process to evaluate and use standard parts and equipment that meet system performance requirements rather than program-unique items. Standard parts and equipment are those currently in the DoD inventory or produced per nationally recognized industry, international, federal, or military specifications and standards. Standardization shall consider use of common support systems and equipment. Evaluation of standardization shall consider safety, necessary redundancy, efficiency, and life-cycle cost.

2.4.6.6 Data Management and Technical Data Rights

PMs for ACAT I and II programs, regardless of planned sustainment approach, shall assess the long-term technical data needs of their systems and reflect that assessment in a data management strategy (DMS). The DMS shall:

a. Be integrated with other life-cycle sustainment planning and included in the acquisition strategy;

b. Assess the data required to design, manufacture, and sustain the system, as well as to support re-competition for production, sustainment, or upgrades; and

c. Address the merits of including a priced contract option for the future delivery of technical data and intellectual property rights not acquired upon initial contract award and shall consider the contractor's responsibility to verify any assertion of restricted use and release of data.

The DMS shall be approved in the context of the acquisition strategy prior to issuing a contract solicitation.

2.4.7 Support Strategy

Support planning shall show a balance between program resources and schedule so that systems are acquired, designed, and introduced efficiently to meet CDD and CPD and APB performance design criteria thresholds. The PM, as the life-cycle manager, designated under the tenets of total life-cycle systems management (TLCSM), shall document the product support strategy in the LCSP. The Logistics Requirements and Funding Summary (LRFS) is a required adjunct of the LCSP and the program's basis for relating LCSP execution to programmatic resources. Performance based logistics (PBL) is the preferred support strategy and method of providing weapon system logistics support. A comprehensive business case analysis, derived in large part from related and fielded systems' sustainment performance efficiency and the life-cycle cost affordability of that performance, will be the basis for selecting a support strategy and reflecting the associated tradeoffs (e.g., among all systems technical performance, infrastructure capabilities, and organic and commercial business considerations). A program level PBL implementation plan shall be developed for all programs using a PBL support strategy.

Oversight plans for PBL contracts shall be documented in an acquisition strategy if not included in an acquisition plan. PBL acquisition dollar thresholds, approval levels, and additional guidance will be provided in updates to SECNAV M-5000.2, DON Acquisition and Capabilities Guidebook, of December 2008.

The support strategy, documented in the LCSP and the sustainment strategy section of the acquisition strategy, shall address not only the support strategy for sustaining the new system, but also the support (and funding) strategy for sustaining the replaced system. Prior to beginning development of an ACAT I program, the PM of the replaced system shall prepare a replaced system sustainment plan (RSSP) required by section 2437 of title 10, U.S.C., that shall be summarized in the sustainment strategy section of the acquisition strategy and in the LCSP for the new system and integrated into the LCSP for the replaced system (see paragraph 6.1.3). The RSSP shall budget to sustain the existing system at operational availability (Ao) threshold levels throughout transition to the new system. The RSSP schedule and budget shall be updated to reflect development and fielding of the new system.

Per reference (a), enclosure 2, the Director, Defense Procurement and Acquisition Policy (DPAP) will conduct independent pre-award peer reviews of all supplies contracts with an estimated value greater than $1 billion (including options) and those supplies contracts designated as DoD special interest. Per DASN(A&LM) memorandum, Department of the Navy Peer Review Program, of 26 Mar 2009 with enclosure (1) DON Peer Review Program, DASN(AP) will conduct independent pre-award peer reviews of supplies contracts designated as DON special interest. The head of contracting activity or senior official in charge of contracting will conduct pre-award peer reviews of supplies contracts with an estimated value of $50 million to $1 billion (including options).

2.4.7.1 Human Systems Integration (HSI)

The acquisition strategy shall summarize HSI planning and budgeting, including how the program will meet HSI programmatic requirements, standards, and manpower availability. It shall describe how the system will optimize human performance by meeting the needs of the operators, maintainers, and support personnel. This includes manpower, personnel, and training (MPT); human factors engineering; personnel survivability; habitability; and, safety and occupational health.

2.4.7.2 Environment, Safety, and Occupational Health (ESOH) Considerations

References (a) and (l), and OPNAVINST 5100.24B require integration of system safety and ESOH risk management into the overall systems engineering and risk management process

consistent with military standard (MIL-STD) 882. MIL-STD 882 provides procedures to identify all ESOH hazards and provides a process to eliminate, mitigate, or accept risk.

The acquisition strategy shall incorporate a summary of the Programmatic ESOH Evaluation (PESHE), including ESOH hazards and associated risks and proposed mitigation plans, a strategy for integrating ESOH considerations including technology into the systems engineering process, identification of ESOH responsibilities, a method for tracking progress, and a schedule for National Environmental Policy Act (NEPA) (sections 4321-4370d of title 42, U.S.C.) and Executive Order 12114 compliance for events or proposed actions throughout a program's life-cycle. If the foregoing items are detailed in the program PESHE, then a brief summary of those items with a reference to the PESHE is sufficient. Program and technical reviews shall address all high and serious ESOH risks. See chapter 2, table E2T1, and chapter 6, paragraph 6.3.

2.4.7.3 Demilitarization and Disposal Planning

PMs shall plan for end of life-cycle demilitarization and disposal including munitions disposition per references (a) and (m). The acquisition strategy shall include a brief summary of demilitarization and disposal planning.

2.4.7.4 Post Deployment Performance Review

The acquisition strategy shall address the statutory requirement for a post deployment performance review for ACAT I and IA programs. In-service reviews (ISRs) may be conducted periodically until the end of the life-cycle is reached.

2.4.7.5 Program Protection Planning

Program protection plans for programs with critical program information (CPI) shall address the minimum requirements in reference (a), enclosure 2, paragraphs 3c, 5c(7)(e), and 5d(2), prior to milestone B. Reference (n) provides specific guidance on program protection planning. Per ASN(RD&A) memorandum, Required Use of Standardized Process for the Identification of Critical Program Information (CPI) in DON Acquisition Programs, of 20 February 2008, PMs shall use the standard operating procedures (SOP) for the Standardized Critical Program information identification process in DON acquisition programs, version 1.01, of 26 September 2007 to identify CPI in all acquisition programs.

Critical infrastructure protection (CIP) should be addressed throughout the acquisition phases through vulnerability assessments per reference (o). These vulnerability assessments shall be conducted prior to milestone decision points for any infrastructure items, public or private, deemed to be critical to the production or sustainment of weapon systems deemed critical to DON force and materiel readiness and operations in peacetime, crisis, and wartime.

2.4.8 Business Strategy

2.4.8.1 International Cooperation*

PMs for DON ACAT programs shall consult with the Navy International Programs Office (IPO) during development of the international element of the program's acquisition strategy to obtain:

a. Relevant international programs information.

b. ASN(RD&A) policy and procedures regarding development, review, and approval of international armaments cooperation programs.

c. DON technology transfer policy.

See the Defense Acquisition Guidebook for implementation guidance for all DON ACAT programs.

*Not normally applicable to IT programs.

2.4.8.1.1 International Cooperative Strategy

DON PMs and or PEOs considering international cooperation should consult with the Navy IPO to develop a strategy.

The acquisition strategy shall discuss the potential for increasing, enhancing, and improving our conventional forces and those of our allies, including reciprocal defense trade and cooperation, and international cooperative research, development, production, and logistics support. The acquisition strategy shall also consider the possible sale of military equipment.

The acquisition strategy should also consider security, information release, technology transfer issues, bilateral versus

multilateral cooperation, harmonization of military requirements, bilateral test and evaluation, and potential involvement of foreign industry and or technology in the DON program.

2.4.8.1.2 International Interoperability

PEOs and or PMs should be cognizant of the potential interoperability benefits resulting from international cooperation and sales to international partners.

The use of same or similar equipment, systems, or protocols resulting from cooperative development, production, or support of weapons systems contributes to overarching interoperability and coalition warfare goals with allies and friendly foreign nations, and should be a key factor when considering the merits of entering into an international cooperative relationship.

2.5 Intelligence Support*

Life-cycle threat assessment and intelligence support for ACAT I, II, III, and IV programs shall be provided by the Farragut Technical Analysis Center (TAC) per reference (p) or by the Marine Corps Intelligence Activity.

*Normally not applicable to IT programs.

2.6 Information and Command, Control, Communications, Computers, and Intelligence (C4I) Support

Per references (a) and (q), PMs shall develop information support plans (ISPs) for those IT, including NSS, ACAT, non-ACAT, and fielded systems that connect in any way to the communications and information infrastructure. ISPs shall be maintained and updated over the life-cycle of the system.

DASN(RDT&E) CHSENG is the DON principal point of contact for ISP issues, processes, and policies. As part of those responsibilities, DASN(RDT&E) CHSENG has developed the DON ISP process governing the pre-planning, development, and review of DON ISPs. PMs shall adhere to the DON ISP process to meet the requirements of reference (q).

Per the DON ISP process, DASN(RDT&E) CHSENG, in conjunction with appropriate Deputy Assistant Secretaries of the Navy (DASNs (RD&A)) and the DON Chief Information Officer (CIO), shall oversee the departmental-level review of ISPs for IT,

including NSS, ACAT I and II programs, and special interest programs designated by the Assistant Secretary of Defense (Networks and Information Integration) (ASD(NII)) that connect to the communications and information infrastructure. The DON review shall include DON CIO, CNO (N2/N6), all SYSCOMs, and others as applicable. ISPs for such programs will be forwarded by DASN(RDT&E) CHSENG to ASD(NII), Defense Information Systems Agency (DISA), and the Joint Staff (J-6) for review via the Joint C4I Program Assessment Tool-Empowered (JCPAT-E) per references (g) and (q). ISPs shall be approved by the cognizant PEO, SYSCOM commander, DRPM, or designee, upon completion of the coordination and review process. After approval, ISPs are to be entered into the JCPAT-E repository for retention. Should interoperability issues arise between IT, including NSS, ACAT I or II programs and any lower ACAT programs, PMs shall, if requested, provide ISPs to DASN(RDT&E) CHSENG to support issue resolution.

DASN(RDT&E) CHSENG may grant a waiver of the requirement for an ISP per the criteria in ASD(NII) memorandum, Information Support Plan (ISP) Acquisition Streamlining Pilot Program, of 26 August 2005. ASD(NII) concurrence is required for waivers of ISPs for all IT, including NSS, ACAT I programs.

2.7 Electromagnetic Environmental Effects (E3) and Electromagnetic Spectrum Supportability

The following paragraphs contain policy and procedures for implementing E3 and electromagnetic spectrum supportability for Navy and Marine Corps programs per references (a), (r), (s), and (t). These policies and procedures ensure that communications and electronic systems are designed to be survivable and mutually compatible with other electronic equipment and the operational electromagnetic environment, and are spectrum supportable. Additional information and guidance on the implementation of E3 and spectrum supportability requirements are available in both the Defense Acquisition Guidebook and the SECNAV M-5000.2 DON Acquisition and Capabilities Guidebook.

2.7.1 E3

E3 design requirements for communications and electronics systems and equipments shall be identified in performance specifications during the acquisition process and integrated into all developmental and operational tests per references (r) and (s). Tailorable platform level E3 performance requirements are

specified in MIL-STD-464, and subsystem and equipment level electromagnetic interference performance requirements are documented in MIL-STD-461.

2.7.2 Electromagnetic Spectrum Certification and Supportability

Electromagnetic spectrum certification (i.e., equipment frequency allocation) and supportability shall be initiated as soon as possible in a program's life-cycle and shall be obtained not later than milestone B (or milestone C if there is no milestone B). Currency of frequency allocation and supportability shall be confirmed at each subsequent milestone.

Before milestone B (or before the first milestone that authorizes contract award), if the system or equipment is spectrum-dependent and has not yet obtained certification of spectrum support from the National Telecommunication and Information Administration (NTIA) to proceed into the EMD phase, the PM shall develop a justification and a proposed plan to obtain spectrum support certification. Reference (r) requires the MDA and DoD CAE to provide such a justification and proposed plan to the USD(AT&L), the ASD(NII)/DoD CIO, the Director, Operational Test and Evaluation (DOT&E).

Before milestone C, if the system is spectrum-dependent and has not yet obtained the spectrum support certification required to allow the system to proceed into the production and deployment phase, the PM shall develop a justification and a proposed plan to obtain certification. Reference (r) requires the MDA and the CAE to provide such a justification and proposed plan to the USD (AT&L), ASD(NII)/DoD(CIO), and the DOT&E.

2.7.2.1 Electromagnetic Spectrum Certification Compliance

Spectrum certification requires coordination of the DD 1494 Application for Equipment Frequency Allocation with CNO (N2/N6) for Navy programs and with HQMC (C4) for Marine Corps programs. The DD 1494 is then submitted to the Navy and Marine Corps Spectrum Center for approval by the NTIA. PMs shall obtain approval of DD 1494 prior to milestone B, and confirm currency of the frequency allocation at each subsequent milestone.

2.7.2.2 Electromagnetic Spectrum Supportability

Electromagnetic spectrum supportability is obtained via approval of electromagnetic spectrum supportability assessment

factors, listed in table E2T4, by ASN(RD&A), or designee, for ACAT I, IA, and II programs, and by the MDA for ACAT III and IV programs. PMs shall ensure the items indicated in the table are completed prior to the appropriate milestone as noted in table E2T1 under the "Spectrum Certification Compliance" row. Additionally, PMs shall complete supportability assessment factors of table E2T4 prior to award of a contract for acquisition of any system that employs the electromagnetic spectrum.

Table E2T4 Electromagnetic Spectrum Supportability Assessment Factors

Assessment Factors	Applicable Program Information
Confirm that the system has obtained electromagnetic spectrum certification	DD 1494
Confirm that the cost of electromagnetic spectrum supportability has been included in the program life-cycle cost estimate (PLCCE) and the economic analysis (EA) for MAIS	PLCCE EA for MAIS
Confirm that the proposed frequency allocation and its application have been addressed in the applicable program information and are in compliance with Global Information Grid policies, architecture, and interoperability standards	APB (NR KPP) IA Strategy Information Support Plan (information exchange requirements (IERs)/NR requirements)
Specify the geographic location where the equipment will be deployed. Assess technical, cost, and schedule risk for any restrictions or barriers for use of the equipment in the specified geographic location	DD 1494 ICD/CDD/CPD Risk Assessment
Confirm that the system has been included in the DoD IT Portfolio Repository – DON (DITPR-DON)	DITPR-DON

2.8 Technology Protection

Each DON program that contains critical program information (CPI) shall prepare a program protection plan (PPP) per references (n) and (u). PPPs shall address effective CPI protection measures to include a PM-approved classified anti-tamper (AT) annex that has Naval Air Systems Command’s (NAVAIRSYSCOM’s) technical concurrence as DON’s AT technical authority. DASN(RDT&E) CHSENG is the DON point-of-contact for DoD and DON AT policy matters and for working with the DoD AT executive agent.

CNO (N2/N6 and N3/N5) shall provide operations security (OPSEC) and OPSEC enhancement planning guidance during ICD review. CNO (N2/N6 and N3/N5) shall coordinate guidance preparation and shall assist the PM’s staff in subsequent OPSEC and program protection planning involving critical program information. Detailed policy and procedures are found in reference (u).

2.9 Periodic Reporting

Periodic reports are status reports provided during acquisition phases. They serve to inform the MDA as to cost, schedule, and technical performance status. See reference (a) and this instruction, chapter 2, tables E2T1 and E2T2, for implementation requirements.

2.9.1 Program Plans

In some cases, program plans are mandatory and are program decision point documents that are included in the statutory and regulatory information and milestone requirements tables of this instruction, chapter 2, tables E2T1 and E2T2.

Mandatory program plans are the Test and Evaluation Strategy (TES) and Test and Evaluation Master Plan (TEMP); Operational Test Plan; Information Support Plan (formerly the C4I Support Plan) (for programs that interconnect to the communications and information infrastructure); Program Protection Plan (PPP) (for programs that have critical program information (CPI)); Training System Plan (TSP) (see reference (v) for the Navy TSP); Systems Engineering Plan (SEP); Replaced System Sustainment Plan (RSSP); Life-Cycle Sustainment Plan (LCSP); Corrosion Prevention Control Plan; Item Unique Identification (IUID) Implementation Plan; Life-Cycle Signature Support Plan (LSSP); and Diminishing Manufacturing Sources and Material Shortages (DMSMS) Plan (for programs that include embedded microelectronics) per ASN(RD&A)) memorandum, Diminishing Manufacturing Sources and Material Shortages (DMSMS) Management Guidance, of 27 Jan 2005 (the DMSMS Plan is an acquisition phase program plan, not a milestone program plan required by table E2T2). An IUID implementation plan is required by reference (a) and USD(AT&L) memorandum, Policy for Unique Identification (UID) of Tangible Personal Property Legacy Items in Inventory and Operational Use, Including Government Furnished Property (GFP), of 23 December 2004 as a stand-alone plan.

PMs shall approve program plans, except for the TEMP, operational test plan, PPP, TSP, SEP, LCSP, corrosion prevention control plan, IUID implementation plan, LSSP (summarized in the technology development strategy at milestone A and the acquisition strategy at program initiation for ships, and milestones B and C), and information support plan. Approval authority for these documents is stated in tables E2T1 and E2T2. Specific SEP development, review, and approval guidance is

provided in ASN(RD&A) memorandum, Amplification Policy for DON Systems Engineering Plan (SEP) Review and Approval, of 16 November 2007. SEP developmental guidance is also provided at the following Web site: http://www.acq.osd.mil/se/pg/guidance.html. The LCSP shall be reviewed by CNO (N4)/Deputy Commandant, Installations and Logistics (DC, I&L) prior to approval.

The acquisition plan (AP) is a procurement document that is required prior to contract award, not an acquisition program milestone document. The AP is mandatory for procurements above the dollar thresholds established by the DFARS.

2.9.2 Acquisition Program Baseline (APB) Reporting

All ACAT programs shall have APBs per tables E2T1 and E2T2. The APB shall record program objectives and thresholds for each cost, schedule, and performance parameter (KPPs and the KSAs (materiel reliability and ownership cost) that support the sustainment KPP). Cost parameters are based on the program's life-cycle cost estimate as approved by the MDA. Schedule parameters are derived from the program's planned overall schedule approved by the MDA as part of the acquisition strategy. Increments of evolutionary acquisitions shall have APBs. Public Law 111-23 of 22 May 2009, section 206, clarifies that the total program cost estimate at program initiation and subsequent milestones and decision reviews shall include all planned increments of an evolutionary acquisition program.

Subprograms of ACAT I MDAPs as authorized by section 2430a of title 10, U.S.C., as implemented by USD(AT&L) memorandum, Designation of Subprograms for Major Defense Acquisition Programs, 23 June 2009 shall have APBs. When an ACAT I MDAP requires the delivery of two or more categories of end items that differ significantly in form and function, subprograms may be established for baselining and reporting purposes. The statute stipulates that when one subprogram is designated within an ACAT I MDAP, all remaining elements (increments or components) of the program shall also be appropriately organized into one or more other subprograms.

The decision whether to establish subprograms for an ACAT I MDAP requires careful analysis and must be made on a case-by-case basis. Structuring an ACAT I MDAP with subprograms should reflect the way the program is being managed, and represent the

most efficient and informative way to convey information about a program to senior defense acquisition officials as well as to the Congress.

The OSD Director, Acquisition Resources and Analysis shall be notified of all proposed APBs that reflect new or revised subprogram designations at least 60 days before the proposed APB is submitted to the MDA for approval. USD(AT&L) is required to notify the congressional defense committees in writing not less than 30 days before a subprogram APB is approved by the MDA.

Program deviations from approved APB cost, schedule, and performance parameters shall be reported to the MDA immediately via a program deviation report. The reason for the deviation and planned actions shall be provided to the MDA within 30 days of a breach via a program deviation report.

Breaches shall be resolved within the existing APB threshold(s) within 90 days. If resolution cannot be achieved within 90 days, the PM shall obtain approval of an APB revision from the MDA. The PM shall report the current estimate of each APB parameter periodically to the MDA. The PM shall report the current APB estimates for ACAT I and IA programs and subprograms of ACAT I programs quarterly in Dashboard. Dashboard shall provide the current estimate to USD(AT&L)'s Defense Acquisition Management Information Retrieval (DAMIR) and Service Oriented Architecture (SOA) Systems on a timely basis.

The original and current APB shall be established and revised under the following conditions per section 2435 of title 10, U.S.C., and section 2433 of title 10, U.S.C.:

a. The original APB is established at program initiation.

b. The current APB shall be revised at subsequent milestones and at FRP DR.

c. The current APB may be revised due a major program restructure that is fully funded and approved by the MDA or if the MDA determines that a cost, schedule, or performance breach is due to external causes beyond the control of the PM.

d. The current APB for ACAT I programs shall be revised when there is a significant Nunn-McCurdy unit cost breach as defined in paragraph 2.9.5.

e. The current and original APB for ACAT I programs shall be revised to form a "new original" APB that reflects the Nunn-McCurdy certification approved by the MDA when there is a critical Nunn-McCurdy unit cost breach as defined in paragraph 2.9.5.

f. The current APB may be revised as determined by the MDA; however, multiple revisions to the current APB will not be authorized, and in no event will a revision to the current APB be authorized if proposed merely to avoid a reportable breach.

2.9.3 Defense Acquisition Executive Summary (DAES) -- (DD-AT&L(Q)1429)

DAES monthly charts and information are required for ACAT I and IA programs and subprograms of ACAT I programs. The DAES monthly charts shall be submitted to ASN(RD&A) no later than the 20th of each month, and the quarterly information shall be inputted into Dashboard for ASN(RD&A) review no later than the 20th day of the program's designated quarterly reporting month. Data will be electronically provided from Dashboard to USD(AT&L)’s DAMIR and SOA Systems by the 28th of each month.

2.9.4 Selected Acquisition Report (SAR) -- (DD-AT&L(Q&A)823)*

The Secretary of Defense is required to submit to Congress a SAR for each ACAT I MDAP and subprograms of ACAT I MDAPs. Waivers may be granted by the USD(AT&L) for certain pre-milestone B programs that do not have an approved APB. The SAR provides to Congress standard, comprehensive summary reporting of cost, schedule, and performance information on each ACAT I program. The annual SAR report, covering the period ending 31 December, shall be submitted to ASN(RD&A) no later than the 15th day after the President sends the budget to Congress.

Quarterly SARs, which are submitted on an exception basis, shall be forwarded no later than the 15th day after the end of the reporting quarter. Exception SAR reporting is required for programs when: 1) the current estimate exceeds the current APB objective for the program acquisition unit cost (PAUC) or the average procurement unit cost (APUC) by 15 percent or more; 2) the current estimate exceeds the original APB objective for PAUC or APUC by 30 percent or more; 3) the current estimate includes a 6-month or greater delay, for any APB schedule parameter, that has occurred since the current estimate reported in the previous SAR; or 4) milestone B or milestone C approval occurs within the reportable quarter.

Data will be electronically submitted into USD(AT&L)'s DAMIR System for each annual and quarterly SAR. Final SAR content shall be as specified by the USD(AT&L) and ASN(RD&A). Classified annual SARs and quarterly SARs shall be handled as working papers until approved and published by USD(AT&L).

*Not applicable to ACAT IA programs.

2.9.5 Unit Cost Reports (UCRs) -- (DD-AT&L(Q&R)1591)*

UCRs apply to all SAR reporting programs. See the Defense Acquisition Guidebook for implementation guidance. Notification of unit cost threshold breaches shall be made immediately, via the chain of command, to ASN(RD&A).

PMs shall immediately submit a unit cost threshold breach notification for ACAT I programs and subprograms of ACAT I programs via the chain of command to ASN(RD&A), whenever the PM has reasonable cause to believe that a significant or critical unit cost growth has occurred per section 2433 of title 10, U.S.C.

Notifications should include a cover memorandum explaining the breach.

If ASN(RD&A) determines that there is a significant or critical unit cost growth in the current estimate of program acquisition unit cost (PAUC) or average procurement unit cost (APUC) of at least 15 or 25 percent over the currently approved APB objective, or at least 30 or 50 percent over the original APB objective, ASN(RD&A) shall inform USD(AT&L) and SECNAV. If SECNAV subsequently determines that there is a significant or critical unit cost growth, SECNAV shall notify Congress in writing of a breach. The notification shall not be later than 45 days after the date of ASN(RD&A)'s reasonable cause report. Notification shall include the date that SECNAV determined a significant or critical unit cost growth.

In addition, SECNAV shall submit a SAR for either the fiscal year quarter ending on or after the determination date, or for the fiscal-year quarter that immediately precedes the fiscal-year quarter ending on or after the determination date. This SAR shall contain the additional, breach-related information.

Per Public Law 111-23 of 22 May 2009, section 206, for critical unit cost growth in the current estimate of PAUC or APUC of at least 25 percent over the currently approved APB objective, or at least 50 percent over the original APB objective per section 2433 of title 10, U.S.C., the Director of Cost Assessment and Program Evaluation, in consultation with the PM, shall provide USD(AT&L) via ASN(RD&A) a determination of the root cause or causes of the critical cost growth and an assessment of: (a) the projected cost of completing the program if current requirements are not modified; (b) the projected cost of completing the program based on reasonable modification of such requirement; (c) the rough order of magnitude of the costs of any reasonable alternative system or capability; and (d) the need to reduce funding for other programs due to growth in cost of the program. Per Public Law 111-23 of 22 May 2009, section 206, after the above reassessment, the Secretary of Defense shall terminate the ACAT I program, unless the Secretary of Defense; as supported by USD(AT&L), ASN(RD&A), and the PM; submits to Congress, before the 60-day period beginning on the date the quarterly or annual SAR containing the information described in section 2433(g) of title 10, U.S.C., is required to be submitted under section 2432(f) of title 10, U.S.C., letters to the congressional defense committees with the following written certification stating that: (a) the continuation of the acquisition program, and any subprograms, is essential to the national security; (b) there are no alternative programs which will provide acceptable capability to meet the joint military requirement (as defined in section 181(g)(1) of title 10, U.S.C.) at less cost; (c) the new estimates of the PAUC or APUC have been determined by the Director of Cost Assessment and Program Evaluation to be reasonable; (d) the program is a higher priority than programs whose funding must be reduced to accommodate the growth in cost of the program; and (e) the management structure for the acquisition program is adequate to manage and control the PAUC and the APUC.

If SECNAV makes a determination of significant unit cost growth in the current estimate of PAUC or APUC of at least 15 percent over the currently approved APB objective, or at least 30 percent over the original APB objective, and a SAR containing the additional unit-cost breach information is not submitted to Congress as required, funds appropriated for RDT&E, procurement, or military construction may not be obligated for a major contract under the program. If SECNAV makes a determination of critical unit cost growth in the current estimate of PAUC or APUC of at least 25 percent over the currently approved APB objective or at least 50 percent over the original APB objective, and a

certification by USD(AT&L) is not submitted to Congress as required, funds appropriated for RDT&E, procurement, or military construction may not be obligated for a major contract under the program, and any subprograms. A critical unit cost growth in the current estimate of PAUC or APUC of at least 25 percent over the currently approved APB objective or at least 50 percent over the original APB objective resulting from the termination or cancellation of an entire program will not require USD(AT&L) program certification.

Public Law 111-23 of 22 May 2009, section 206, requires the OSD Deputy Director for Program Evaluation to conduct a root cause analysis following a critical Nunn-McCurdy unit cost breach of an ACAT I program, or subprogram. If a program is not terminated after a critical Nunn-McCurdy unit cost breach, but is restructured, the most recent milestone approval shall be rescinded and a new milestone approval shall be required prior to proceeding. New contractual actions shall not be permitted until a new milestone approval is received. USD(AT&L) may grant an exception to this contractual restriction in order to restructure the program without unnecessarily wasting resources.

Following a critical Nunn-McCurdy unit cost breach of an ACAT I program, or subprogram, Public Law 111-23 of 22 May 2009, section 205, requires the Director, Performance Assessments and Root Cause Analysis (PARCA) to conduct semi-annual reviews of such programs that have not been terminated until 1 year after the date that such program received a new milestone approval pursuant to the new requirement of Public Law 111-23 of 22 May 2009, section 206.

Public Law 111-23 of 22 May 2009, section 206, requires the Secretary of Defense to submit a written report to the congressional defense committees, if an ACAT I program is terminating following critical Nunn-McCurdy unit cost growth, setting forth: (a) an explanation of the reasons for terminating the program; (b) the alternatives considered to address any problems in the program; and (c) the course the DoD plans to pursue to meet any continuing joint military requirements otherwise intended to be met by the program.

*Not applicable to ACAT IA programs.

2.9.6 Past Performance Reporting/Reports

The use of past performance information in source selection is required by references (w) through (aa). The DON automated system for reporting this information is the Contractor Performance Assessment Reporting System (CPARS) which is accessible via the Internet at http://www.cpars.csd.disa.mil/. PM's have the responsibility for providing an annual assessment of their contractors' performance in the CPARS.

The PMs shall report their contractor assessment information per the CPARS procedures of reference (ab) for those contracts that meet the following dollar thresholds:

a. Systems (new development and major modifications)	≥ $5 million
b. Ship Repair and Overhaul	≥ $0.5 million
c. Services	≥ $1 million
d. Information Technology (IT)	≥ $1 million
e. Operations Support	≥ $5 million

2.10 Program Certification and Assessments

2.10.1 Certification Requirements at Milestone A

As required by section 2366a of title 10, U.S.C., as amended by Public Law 110-181 of 28 January 2008, section 943 (FY 2008 National Defense Authorization Act), Public Law 110-417 of 14 October 2008, section 813 (FY 2009 National Defense Authorization Act), and Public Law 111-23 of 22 May 2009, the MDA for an ACAT I program shall sign a certification memorandum for the record per the guidance in USD(AT&L) Directive-Type Memorandum 09-027, Implementation of the Weapon Systems Acquisition Reform Act of 2009, of 4 December 2009 prior to milestone A approval. The ADM shall include the statement: "I have made the certifications required by section 2366a of title 10, United States Code."

Public Law 111-23 of 22 May 2009, section 101, subsection (d)(3), amended section 2366a(a)(4) of title 10, U.S.C., and requires the MDA, prior to granting milestone A approval for an

ACAT I program, to certify that a cost estimate for the system has been submitted "with the concurrence of the Director of Cost Assessment and Program Evaluation."

Public Law 111-23 of 22 May 2009, section 201, subsection (e), amended section 2366a of title 10 U.S.C., and requires the MDA, prior to granting milestone A approval for an ACAT I program, to certify that an analysis of alternatives (AoA) has been performed consistent with study guidance developed by the Director of Cost Assessment and Program Evaluation.

Public Law 111-23 of 22 May 2009, section 204, subsection (b), amended section 2366a(b) of title 10, U.S.C., and requires the PM to notify the MDA, if at any time prior to a milestone B decision, the estimate for the cost for an ACAT I program grows by more than 25 percent or the ACAT I program schedule for initial operational capability exceeds the schedule objective by more than 25 percent. Not later than 30 days after PM notification of either of the two foregoing situations, the MDA shall submit to the congressional defense committees a report that:

a. Identifies the root causes of the cost or schedule growth;

b. Identifies appropriate acquisition performance measures for the remainder of the development of the program; and

c. Includes one of the following:

(1) A written certification (with supporting explanation) stating that:

(a) The program is essential to national security;

(b) There are no alternatives to the program that will provide acceptable military capability at less cost;

(c) New estimates of the development cost or schedule, as appropriate, are reasonable; and

(d) The management structure for the program is adequate to manage and control program development cost and schedule.

(2) A plan for terminating the development of the program or withdrawal of milestone A approval if the MDA determines that such action is in the interest of national security.

Public Law 111-23 of 22 May 2009, section 204, subsection (c), requires section 2366a of title 10, U.S.C., certification for any ACAT I program that was initiated before the date of enactment of Public Law 111-23 of 22 May 2009, and had not otherwise been certified per section 2366a or 2366b of title 10, U.S.C., shall be certified within 1 year of the date of enactment of Public Law 111-23 (i.e., not later than 22 May 2010).

2.10.2 Certification Requirements at Milestone B

The business case analysis for ACAT I programs shall be prepared by officials designated by the MDA. The MDA, without authority to delegate, shall review the business case analysis and determine whether the program should be certified. The MDA's decision to certify shall be documented in a signed certification memorandum for the record per the guidance in USD(AT&L) Directive-Type Memorandum, Implementation of the Weapon Systems Acquisition Reform Act of 2009, 09-027 of 4 December 2009 prior to milestone B approval (Section 2366b of title 10, U.S.C., as amended by Public Law 110-181 of 28 January 2008, section 812 (FY 2008 National Defense Authorization Act), Public Law 110-417 of 14 October 2008, section 813 (FY 2009 National Defense Authorization Act), and Public Law 111-23 of 22 May 2009). If the program is initiated at a later decision point, i.e., milestone C, a similar memorandum shall be prepared, as a matter of DoD policy. The certification memorandum shall be submitted to the congressional defense committees, as defined in section 101(a)(16) of title 10, U.S.C., with the first SAR for the program after completion of the certification. The ADM shall include the statement: "I have reviewed the program and the business case analysis and have made the certifications required or executed a waiver of the applicability of one or more of the components of the certification requirement as authorized by subsection 2366b(d) of title 10, United States Code."

Public Law 111-23 of 22 May 2009, section 101, subsection (d)(4), amended section 2366b(a)(1)(C) of title 10, U.S.C., requires the MDA, prior to granting milestone B approval for an ACAT I program, to certify that reasonable cost and schedule estimates have been developed to execute "with the concurrence of the Director of Cost Assessment and Program Evaluation" the product development and production plan under the program.

Public Law 111-23 of 22 May 2009, section 201, subsection (f), amended section 2366b(a)(1)(B) of title 10, U.S.C., requires the MDA, prior to granting milestone B approval for ACAT I programs, to certify that "appropriate trade-offs among cost, schedule, and performance objectives have been made to ensure that" the program is affordable.

Public Law 111-23 of 22 May 2009, section 205, subsection (a), amended section 2366b(a)(2) of title 10, U.S.C. (new paragraph), requires that an ACAT I program may not receive milestone B approval until the MDA has received the results of a preliminary design review (PDR) and conducted a formal post-PDR assessment and certifies on the basis of such assessment that the program demonstrates a high likelihood of accomplishing its intended mission.

Public Law 111-23 of 22 May 2009, section 205, subsection (a), amended section 2366b(a)(3)(D) of title 10, U.S.C., requires that an ACAT I program may not receive milestone B approval until the MDA further certifies that the technology in the program has been demonstrated in a relevant environment "as determined by the MDA on the basis of an independent review and assessment by the Director of Defense Research and Engineering."

Public Law 111-23 of 22 May 2009, section 205, requires the MDA to at least annually review any ACAT I program that received milestone B approval on the basis of a waiver of any statutory certification criteria for milestone B. The annual MDA review shall continue until such time as the ACAT I program meets all of the statutory certification criteria for milestone B.

Public Law 111-23 of 22 May 2009, section 205, requires that any budget documentation submitted to the President for any ACAT I program that received milestone B approval on the basis of a waiver shall prominently and clearly indicate that such program has not fully satisfied such certification components until such time as the MDA makes the determination that such program has satisfied all such certification components.

Public Law 111-23 of 22 May 2009, section 205, requires that not later than 270 days after the date of enactment (16 February 2010), for each ACAT I program that received milestone B approval before 6 January 2006, and has not received milestone C approval, the MDA shall determine whether or not such program

satisfies all of the certification components of section 2366b of title 10 U.S.C., as amended by Public Law 111-23 of 22 May 2009, section 205, subsection (a).

2.10.3 Assessments Required Prior to Approving the Start of Construction on First Ship of Shipbuilding Program

2.10.3.1 Production Readiness Review Report and Certification

Section 124 of the National Defense Authorization Act for Fiscal Year 2008, Public Law 110-181 requires that SECNAV shall, concurrent with approving the start of construction of the first ship for any major shipbuilding program:

a. Submit a report to the congressional defense committees on the results of any production readiness review; and

b. Certify to the congressional defense committees that the findings of any such review support commencement of construction.

2.10.3.2 Production Readiness Review Report Assessment

The report required by subsection 2.10.3.1, item 1, shall include, at a minimum, an assessment of each of the following:

a. The maturity of the ship's design, as measured by stability of the ship contract specifications and the degree of completion of detail design and production design drawings.

b. The maturity of developmental command and control systems, weapon and sensor systems, and hull, mechanical and electrical systems.

c. The readiness of the shipyard facilities and workforce to begin construction.

d. The Navy's estimated cost at completion and the adequacy of the budget to support the estimate.

e. The Navy's estimated delivery date and description of any variance to the contract delivery date.

f. The extent to which adequate processes and metrics are in place to measure and manage program risks.

2.10.3.3 Definitions

For the purposes of subsection 2.10.3.1 and 2.10.3.2:

a. Start of construction. The term "start of construction" means the beginning of fabrication of the hull and superstructure of the ship.

b. First ship. The term "first ship" applies to a ship if:

(1) The ship is the first ship to be constructed under that shipbuilding program; or

(2) The shipyard at which the ship is to be constructed has not previously started construction on a ship under that shipbuilding program.

c. Major shipbuilding program. The term "major shipbuilding program" means a program for the construction of combatant and support vessels required for the naval vessel force, as reported within the annual naval vessel construction plan required by section 231 of title 10, U.S.C.

d. Production readiness review. The term "production readiness review" means a formal examination of a program prior to the start of construction to determine if the design is ready for production, production engineering problems have been resolved, and the producer has accomplished adequate planning for the production phase.

Chapter 3
Information Technology (IT) Considerations

References:
(a) DoD Instruction 5000.02 of 8 Dec 2008
(b) SECNAVINST 5000.36A
(c) DoD Directive 4630.05 of 5 May 2004
(d) DoD Instruction 4630.8 of 30 Jun 2004
(e) CJCSI 3170.01G
(f) Manual for the Operation of the Joint Capabilities Integration and Development System, of 31 Jan 2011
(g) CJCSI 6212.01E
(h) National Security Telecommunications and Information Systems Security Policy (NSTISSP) No. 11, Revised Fact Sheet National Information Assurance Acquisition Policy, of Jul 2003
(i) DoD Directive 8500.01E of 24 Oct 2002
(j) DoD Instruction 8500.2 of 6 Feb 2003
(k) DoD Instruction 8580.1 of 9 Jul 2004
(l) DoD Instruction 8510.01 of 28 Nov 2007
(m) SECNAVINST 5239.3B
(n) National Security Telecommunications and Information Systems Security Instruction (NSTISSI) No. 4009, National Information Systems Security Glossary, of Sep 2000 (NOTAL)
(o) OMB Circular A-130 Revised, Management of Federal Information Resources, Transmittal Memorandum No. 4, of 28 Nov 2000
(p) CJCSI 6510.02C (FOUO)
(q) DoD Instruction 8520.02 of 24 May 2011
(r) ICD 503, Intelligence Community Information Technology Systems Security Risk Management, Certification and Accreditation, of 15 Sep 2008
(s) SECNAVINST 3501.1B
(t) ASD(NII) Memorandum, Internet Protocol Version 6 (IPv6) Policy Update, of 16 Aug 2005
(u) SECNAVINST 5210.8D
(v) SECNAV Manual M-5210.1, of November 2007
(w) DoD Directive 5015.2 of 6 Mar 2000
(x) Public Law 107-217, 40 U.S.C., Subtitle III (formerly the Clinger-Cohen Act (CCA) of 1996), of 21 Aug 2002

3.1 Clinger-Cohen Act (CCA) (Title 40 U.S.C., Subtitle III) Compliance

Subtitle III of title 40, U.S.C./CCA was established to provide a structured approach to capital investment evaluation and decision-making for information technology (IT), including national security systems (NSS), by the Federal Government. Subtitle III of title 40, U.S.C./CCA requires certain principles be assessed by the Department of the Navy (DON) Chief Information Officer (CIO) for major DON IT, including NSS, investments. These are:

a. Implement effective information systems. For the purposes of the DON implementation of subtitle III of title 40, U.S.C./CCA, "effective" is defined as systems that are flexible, adaptable, non-proprietary, and are capable of sharing information as appropriate across the naval networking environment (NNE) and Global Information Grid (GIG);

b. Identify mission performance objectives and track improvements to them;

c. Deploy business process improvements before investing in IT, including NSS; and

d. Accommodate the fast-paced nature of the IT industry and avoid procurement approaches that do not reflect this.

Subtitle III of title 40, U.S.C./CCA applies to all IT systems, including NSS. All acquisition category (ACAT) programs for IT systems, including NSS, require CCA compliance confirmation. See reference (a), enclosure 5, for minimum requirements to demonstrate compliance with the CCA. The Web site www.doncio.navy.mil provides additional guidance, the CCA compliance table, and a sample signature page confirming CCA compliance for ACAT ID, IC, IAM, IAC, II, III, and IV programs, abbreviated acquisition programs (AAPs), and contracts that acquire IT systems, including NSS. Paragraph 3.6 provides additional information specific to IT contract reviews.

For pre-major defense acquisition programs (MDAPs), pre-major automated information system (MAIS), and selected ACAT II programs, the DON CIO shall align its assessment of subtitle III of title 40, U.S.C./CCA compliance with the two-pass/six-gate governance process (see chapter 1, paragraph 1.11). This shall be accomplished by participating, as a principal member, in all Gate Reviews for IT, including NSS, systems; reviewing subtitle

III of title 40, U.S.C./CCA related documents submitted during the Gate Review process; and accomplishing reviews of gate-relevant CCA requirements and acquisition documents during and throughout the acquisition management phases. For these to occur, DON CIO is authorized, as appropriate, to participate as a member of working group(s) and working integrated product teams (WIPTs) for developing Joint Capabilities Integration and Development System (JCIDS) and Defense Acquisition System (DAS) documents and reports. In addition, DON CIO is authorized to undertake other activities, as appropriate, to ensure a proactive approach to ensuring subtitle III of title 40, U.S.C./CCA compliance. By addressing subtitle III of title 40, U.S.C./CCA criteria early on and throughout the JCIDS and DAS processes, the Department can better ensure sound decision making consistent with DoD and DON policy and guidance as well as the overarching principles of subtitle III of title 40, U.S.C./CCA. When CCA requirements are embodied in initial program planning efforts and also in JCIDS and DAS documents throughout the acquisition process, the subtitle III of title 40, U.S.C./CCA confirmation process described in paragraphs 3.1.1 and 3.1.2 can be conducted more effectively and efficiently, avoiding unnecessary delays.

3.1.1 CCA Compliance Package Development and Processing for ACAT IAM, IAC, ID, IC, and II Programs containing IT Systems including National Security Systems (NSS)

The program manager (PM) shall prepare the CCA compliance package (the completed CCA table, signature page, and supporting documentation) in coordination with the command information officer (IO). The command IO for the Marine Corps is the DON Deputy CIO (Marine Corps). The PM may use an integrated product team (IPT) structure to aid in coordinated development. For the CCA table item requiring consistency with GIG policies and architecture – DON programs shall also demonstrate compliance with the DON enterprise architecture (EA). The PM shall forward the CCA compliance package to the command IO for concurring signature. The command IO shall review and then forward the CCA compliance package to DON CIO and Deputy Assistant Secretary of the Navy (DASN)(Communications, Command, Control, Computers, and Intelligence (C4I) and Space(S)) concurrently, at least 3 months prior to each scheduled program decision point. (In those instances where a command IO is not in the direct reporting chain (e.g., a direct reporting program manager (DRPM) or a PM who reports to a program executive officer (PEO) as opposed to a systems command (SYSCOM)), the PM may elect to involve the command IO in preparing the CCA compliance package and forwarding it or the PM may prepare and forward it directly up the chain of

command to DON CIO and DASN (C4I and Space) concurrently, at least 3 months prior to each scheduled program decision point.

DON CIO and DASN(C4I and Space) shall review the CCA compliance package. If the CCA compliance package contains the necessary information to demonstrate compliance with the requirements of subtitle III of title 40, U.S.C./CCA, compliance will be confirmed by DON CIO. In each case, DON CIO will forward a copy of the signed CCA compliance package to the PM and the milestone decision authority (MDA), and the supporting command IO. For MDAPs and MAIS programs a copy will also be forwarded to DoD CIO. Per reference (a), the MDA shall not initiate a program or an increment of a program, or approve entry into any phase of the acquisition process for a MAIS or MDAP until the DoD CIO confirms subtitle III of title 40, U.S.C./CCA compliance.

3.1.2 CCA Compliance Package Development and Processing for ACAT III, IV, and AAP Programs containing IT Systems including NSS

The PM shall prepare the CCA compliance package (the completed CCA table, signature page, and supporting documentation), in coordination with the command IO. The command IO for the Marine Corps is the DON Deputy CIO (Marine Corps), the Director for C4 at HQMC. For the CCA table item requiring consistency with GIG policies and architecture – DON programs shall also demonstrate compliance with the DON EA. The PM may use an IPT structure to aid in coordinated development. The PM shall forward the CCA compliance package to the command IO at least 3 months prior to each scheduled program decision point. In those instances where a command IO is not in the direct reporting chain (e.g., a DRPM or a PM who reports to a PEO as opposed to a SYSCOM), the PM may elect to involve the command IO in preparing the CCA compliance package and forwarding it or the PM may prepare and forward it directly up the chain of command to DON CIO and DASN(C4I and Space) concurrently, at least 3 months prior to each scheduled program decision point.

The command IO shall review the CCA compliance package. (DON CIO and DASN(C4I and Space) shall review those CCA compliance packages forwarded from a PEO PM or a DRPM when the PEO PM or DRPM opts not to involve the command IO for such review.) Once the package is determined to contain the necessary information to demonstrate compliance with the requirements of subtitle III of title 40, U.S.C./CCA, it will be confirmed by the command IO (or by DON CIO for those sent from a PEO PM or a DRPM) and a copy forwarded to the PM and the MDA. The DON CIO will

generally rely upon the command IO to confirm CCA compliance, but may conduct a more detailed review of the compliance documentation, on a case-by-case basis. The command IO shall maintain records of all ACAT III, IV, and AAP programs for which they have approved CCA confirmations and each Navy echelon 2 command IO and DON Deputy CIO (Marine Corps) (for Marine Corps programs) shall submit a report to DON CIO and DASN(C4I and Space) by the 30th day after the end of each calendar quarter, detailing ACAT III, IV and AAP CCA Confirmations conducted in the prior quarter.

3.2 Contracts for Acquisition of IT Systems including NSS

No request for proposal (RFP) shall be issued, leading to a contract that acquires an IT system, including an NSS, until:

a. The IT system is registered in the DoD IT Portfolio Repository-DON (DITPR-DON) (contact your command IO for assistance with IT registration);

b. The acquisition information assurance strategy for the IT system is coordinated with the DoD CIO for ACAT ID, IC, IAM, and IAC programs, and approved by the DON CIO for ACAT ID, IC, IAM, IAC, and II programs, or approved by the respective command IO for ACAT III, IV, and AAPs, (a PEO PM or a DRPM may have their ACAT III, IV, and AAP Acquisition Information Assurance Strategy approved by the DON CIO.);

c. Compliance with the CCA (including compliance with the DON EA) is confirmed for ACAT ID, IC, IAM, IAC, II, III, IV, and AAP program;, and

d. DASN(C4I and Space) insight review, detailed in paragraph 3.6 below, has been completed if required per paragraph 3.6.

Each echelon 2 command IO and the DON Deputy CIO (Marine Corps) (for Marine Corps IT system contracts) shall submit a report to DON CIO by the 30th day after the end of each calendar quarter, identifying ACAT III, IV and AAP acquisition information assurance strategies approved or rejected during the review required by subparagraph 3.2.d. above.

When the use of commercial IT is considered viable, maximum leverage of and coordination with the DoD Enterprise Software Initiative (DoD ESI) and the Federal SmartBUY program shall be made. The DoD ESI is an initiative led by the DoD CIO

to develop processes for DoD-wide software asset management. The DoD implements SmartBUY through the DoD ESI Team, which provides DoD commercial software requirements to SmartBUY and manages selected SmartBUY agreements. DoD ESI and SmartBUY have jointly established software agreements for commercial software and software maintenance that coordinate multiple IT investments to leverage the Federal Government's purchasing power for best-priced, standards-compliant products. DON activities purchasing software for which agreements have been awarded must follow DFARS 208.74 and consider use of DoD ESI agreements before buying elsewhere, and if there are existing SmartBUY agreements, they must use the SmartBUY agreements. The Web site http://www.esi.mil/ provides additional guidance.

3.3 Information Integration and Interoperability

Information integration and interoperability enables effective net-centric warfighting and combat support operations, both within DON and with joint activities, with our allied and coalition partners and non-DoD agencies. During the acquisition life-cycle, all IT, including NSS, programs shall implement interoperability, supportability, and data management processes, procedures, and tools per references (b) through (g).

3.4 Information Assurance (IA) Program Manager (PM) Responsibilities

PMs are responsible for ensuring that security requirements are addressed as part of the acquisition program. The PM shall develop, procure, and manage information systems, throughout the life-cycle of the program using appropriate DoD approved IA controls and processes. As part of this effort, the PM shall develop an acquisition IA strategy at milestones A, B, and C, full-rate production decision review (FRP DR), and prior to contract award for any IT system, including a NSS. The PM shall obtain approval of the acquisition IA strategy from the DON CIO for ACAT ID, IC, IAM, IAC, and II programs. The DON CIO staff will forward acquisition IA strategies for all ACAT ID, IAM, and IAC programs to the DoD CIO for review prior to approval by the DON CIO. The respective command IO will approve acquisition IA strategies for ACAT III, IV, and AAP programs. (A PEO PM or a DRPM may send their Acquisition IA Strategies for ACAT III, IV, and AAP programs to DON CIO for approval.) The PM shall use the most current template in the DON CIO Acquisition IA Strategy Guidance to develop the program acquisition IA strategy.

The template can be obtained at the Web site www.doncio.navy.mil, by searching for "Information Assurance Strategy Guidance Template."

The PM shall comply with the IA policy of references (h) through (t) for all weapon and IT systems. Compliance with references (h) through (t) specifically includes:

a. Routinely conducting risk assessment, documenting system threats and vulnerabilities including the test and remediation plans, and ensuring all risk assessment activities and documentations are current;

b. Evaluating all systems for the certification and accreditation (C&A) process (e.g., DoD Information Assurance Certification and Accreditation Process (DIACAP) and ensuring that systems requiring C&A undergo the process);

c. Ensuring that IA costs are included in the system budget;

d. Ensuring that IA requirements are fully implemented throughout the early design and development stages of the acquisition life-cycle;

e. Ensuring all IA solutions support interoperability and integration. (The PM shall ensure that appropriate IA controls are in place for all systems that directly or indirectly (indirectly refers to situations in which a system's data and information is transmitted unchanged by pass-through system(s)) connect with the GIG);

f. Incorporating public key infrastructure (PKI) and biometric solutions for all systems that require one or more of the following: integrity, confidentiality, authentication, non-repudiation;

g. Defining the mission assurance category (MAC) of the system (which signifies the required level of integrity and availability);

h. Designating the security classification of the system (which signifies the required confidentiality level of the system);

i. Ensuring compliance with Common Criteria National Information Assurance Partnership (NIAP) framework, per National

Security Telecommunications and Information Systems Security Policy (NSTISSP) Number 11 (see reference (h) fact sheet), National Policy Governing the Acquisition of IA and IA-enabled IT Products for all IA and IA-enabled commercial off-the-shelf (COTS) and government off-the-shelf (GOTS); and

j. Incorporating effective IA controls and appropriate policies for ensuring the survivability of the system and the information that it processes, stores, and transmits.

See reference (a), enclosure 5, for implementation requirements for all DON ACAT programs.

3.5 Records Management

Many electronic information systems retain information. For systems in which that information meets the definition of a Federal record (reference (u)), the system must incorporate record management requirements. This includes record retention and disposition requirements (i.e., the record schedule) approved by the National Archives and Records Administration (NARA) (reference (v)).

Therefore, per references (u) and (w), PMs shall ensure records management and archival functions are incorporated into the design, development, and implementation of information systems. NARA approved disposition instructions shall be incorporated into the system design of electronic information systems that retain information.

3.6 IT Contract and Procurement Management Approval ("Insight")

The oversight of DON-originated IT contracts and procurements shall be consistent with DoD IT investment management processes and procedures. The DON will conduct insight reviews on new major DON IT contracts and procurements that meet the conditions of paragraphs 3.6.1 and 3.6.2. Insight reviews are delegated to DON activities based on value and risk. It is not the intent of this oversight to add to procurement administration lead time; therefore oversight will be conducted, to the greatest practicable degree, concurrently with the normal acquisition cycle. Documentation requirements supporting the insight review process are provided in paragraph 3.6.3 below. This process is intended to provide insight into IT acquisition contracts and procurements not otherwise visible to DON and DoD acquisition oversight organizations.

3.6.1 Scope

3.6.1.1 IT Contract and Procurement

This paragraph provides policy and procedures required to effect an approval for the creation of IT acquisition contracts and procurements not executed as part of a specific ACAT program, including indefinite delivery and indefinite quantity (IDIQ) contracts, blanket purchase agreements (BPAs), contracts and procurements acquiring IT in support of rapid deployment capability (RDC) and rapid development and deployment (RDD) capability, and individual purchase orders from external sources such as the General Services Administration (GSA) Federal supply schedules. Insight reviews will be required per paragraph 3.6.2 for contracts and procurements (including BPAs, international agreements, interagency orders, or any "other transactions").

3.6.1.2 Exceptions

There is no separate insight review requirement for the following IT acquisition contracts and procurements:

a. Task orders or delivery orders that are within the scope of a DON IT acquisition contract and procurement that was previously reviewed by DASN(C4I and Space).

b. IT contracts and procurements that exclusively support a specific ACAT program. Insight will be gained through the IPT and DAS process.

c. IT contracts and procurements gaining approval through the services review process of chapter 7. If the IT contract and procurement involves IT services and or IT support services whose combined cost is equal to or greater than 50 percent of the total cost, the contract and procurement falls under the requirements of chapter 7.

3.6.2 Policy

DON insight reviews will be conducted by:

a. DASN(C4I and Space) for IT acquisition contracts and procurements whose total value is estimated to be equal to or greater than $50 million during the full contract life, or equal

to or greater than $25 million in any one fiscal year, or are determined to be of special interest to the ASN(RD&A) or DASN(C4I and Space).

b. Heads of contracting activities, PEOs or DRPMs, as appropriate, for IT contracts and procurements whose total value is less than $50 million during the full contract life.

3.6.3 Procedures

3.6.3.1 DON Review

DON organizations initiating new IT contracts and procurements meeting the paragraph 3.6.2 thresholds must submit an acquisition strategy (AS) per paragraph 2.4 to DASN(C4I and Space) no later than 55 calendar days prior to the release of the formal RFP. If other existing documentation has all the information contained in the AS, that documentation may be substituted for the AS. The AS, or other document, will include the following minimum information items:

a. Requirements analysis

(1) Mission needs expressed in the form of opportunities for increased economy and efficiency, new or changed program requirements, or deficiencies in existing capability.

(2) Capability-limited requirements description and certification data to support a requirement available from only one source

(3) Location, space and environmental requirements.

b. AS (i.e., full and open competition, Small Business Administration 8(a) vendor, less than full and open competition, etc.).

c. Type and numbers of units required for delivery.

d. Benefits of contract and procurement.

e. Funding (profile for each year).

f. Conformance with applicable standards and architectures.

g. Management structure and process (responsibilities of acquisition manager, user, and matrix support organizations).

h. Name, organization, e-mail address, and phone numbers for individuals assigned to manage the acquisition contract and procurement.

i. Risk assessment (e.g., technology, design, engineering, support, manufacturing, cost, and schedule).

3.6.3.2 DoD Level Review

For contracts and procurements valued at greater than or equal to $500 million, DASN(C4I and Space) will submit the documentation to ASD(NII) for their review, at least 45 days prior to release of the RFP. Formal RFPs shall not be released by the originating activity until after ASD(NII) review and concurrence. ASD(NII) is required to provide written approval or disapproval or comments within 20 working days of receipt. If no feedback is provided, and DASN(C4I and Space) has no issues, DASN(C4I and Space) shall notify the originating activity and allow release of the RFP. Coordination with ASD(NII) will be accomplished by DASN(C4I and Space).

3.6.3.3 Reporting

Oversight is a continuous process, thus reporting substantive issues is required. After the insight review has been completed, a substantive actions and issues report (see figure 1 in the SECNAV M-5000.2 DON Acquisition and Capabilities Guidebook, chapter 3, paragraph 3.6) is required to be submitted to the DASN(C4I and Space) documenting significant events and changes on those IT contracts and procurements for which an insight review was performed by DASN(C4I and Space). The report would be triggered by actions such as: protests and disputes; acquisition award; significant technical change in scope; or a Congressional inquiry and reply.

The report will include at least the following elements:

a. Acquisition manager and contracting officer name, organization, and phone number;

b. Contractor’s name, address, point of contact, organization, and phone number;

c. Award date and contract duration (e.g., 2-year base and three 1-year options);

d. Number of units planned for and actually purchased to date;

e. Assessment of contract and procurement characteristics:

(1) Schedule;

(2) Quality;

(3) Cost (i.e., number of dollars expended measured against the total expected);

(4) External interest (e.g., audits, Congressional inquiries, and substantive news articles); and

(5) Technical performance.

f. Compliance with applicable Federal, DoD, or DON IT and life-cycle management policy (e.g., appropriate CCA confirmation approvals, EA compliance, etc.).

3.6.4 Responsibilities

3.6.4.1 DASN(C4I and Space)

DASN(C4I and Space) shall:

a. Serve as the DON focal point on process and policy related to insight reviews of IT acquisition contracts and procurements;

b. Notify, by e-mail, the submitting DON organization of the receipt of the IT acquisition contract and procurement information submitted for insight review.

c. Review and approve insight documentation submitted for IT contracts and procurements (including those supporting NSS, as defined in reference (x), meeting the thresholds provided in paragraph 3.6.1.1;

d. Provide feedback within 20 calendar days to the submitting DON organization if there are questions and concerns regarding the planned IT acquisition contract and procurement;

e. Submit insight documentation to ASD(NII) for IT acquisition contracts and procurements (including acquisitions supporting NSS, as defined in reference (x)) meeting the thresholds provided in paragraph 3.6.3.2; and

f. Delay a formal RFP for an IT acquisition contract and procurement if questions remain unanswered or concerns remain unresolved.

3.6.4.2 Heads of Contracting Activities (HCAs), Program Executive Officers (PEOs), and Direct Reporting Program Managers (DRPMs)

HCAs, PEOs, and DRPMs shall develop:

a. An internal process for insight documentation review and submission to DASN(C4I and Space).

b. An insight review process for IT contracts and procurements valued at less than $50 million during the full contract life.

Chapter 4
Integrated Test and Evaluation

References: (a) DoD Instruction 5000.02 of 8 Dec 2008
(b) SECNAVINST 5200.40
(c) CJCSI 6212.01E
(d) DoD Instruction 8500.2 of 6 Feb 2003
(e) DoD Instruction 8510.01 of 28 Nov 2007
(f) SECNAVINST 5239.3B
(g) DoD Instruction 4650.01 of 9 Jan 2009
(h) OPNAVINST 5100.24B
(i) 32 CFR 775
(j) 32 CFR 187
(k) Assistant Secretary of the Navy (Installations and Environment) Memorandum 99-01, Requirements for Environmental Considerations in Test Site Selection, of 11 May 99
(l) DoD Instruction 4630.8 of 30 Jun 2004
(m) SECNAVINST 5000.36A
(n) SECNAVINST 5100.10J
(o) OPNAVINST 5090.1C
(p) OPNAVINST 5100.19E
(q) OPNAVINST 5100.23G
(r) Director Operational Test and Evaluation Memorandum, Procedures for Operational Test and Evaluation for Information Assurance in Acquisition Programs, of 21 Jan 2009
(s) DoD Directive 5230.24 of 18 Mar 87
(t) DoD Instruction 3200.14 of 13 May 97

4.1 Test and Evaluation (T&E) Overview

T&E is conducted continuously throughout the acquisition life-cycle of a system:

a. For statutory and regulatory reasons; and

b. To gain knowledge that can be used to:

(1) Advance system development;

(2) Make programmatic acquisition decisions; and

(3) Inform users about the system's operational characteristics and performance.

This chapter delineates the mandatory T&E roles, responsibilities, procedures, and requirements for Department of the Navy (DON) acquisition programs. While T&E is divided into developmental (contractor and government), operational, and live-fire testing, it shall be integrated and coordinated with the users, the system developers, and the testers to the fullest extent allowed by statute and regulation. The integration and coordination of T&E shall start early, preferably during materiel solution analysis. Where mandatory T&E procedures and requirements are not provided for herein or need clarification, guidance shall be requested for Navy programs from the Chief of Naval Operations (CNO), Director of Test and Evaluation and Technology Requirements (N091), or for Marine Corps programs from the Commander, Marine Corps Systems Command (Commander, MARCORSYSCOM) for developmental test and evaluation (DT&E) matters and Director, Marine Corps Test and Evaluation Activity (MCOTEA) for operational test and evaluation (OT&E) matters.

4.2 DON Responsibilities for T&E

To effect an efficient forum for collaboration, personnel who participate in T&E processes for the DON must have fundamental knowledge of the DoD practice of integrated product teams (IPTs) and the responsibilities of organizations contained in this instruction. The responsibilities contained herein are not meant to be restrictive in nature, but to provide a common base for all T&E participants to communicate organization, plans, and execution. In addition to understanding the intent of T&E guidance provided in this instruction, DON personnel should utilize Web-enabled knowledge forums to amplify their knowledge of standard and best practices, lessons learned, and to ensure compliance with legal statutes and regulations. DON personnel shall comply with reference (a) and utilize the Defense Acquisition Guidebook and SECNAV M-5000.2 DON Acquisition and Capabilities Guidebook for procedural guidance.

4.2.1 Principal Navy T&E Points of Contact and Responsibilities

4.2.1.1 Chief of Naval Operations (CNO) (N091), Director Test and Evaluation and Technology Requirements

CNO (N091) is the DON T&E executive reporting to Vice Chief of Naval Operations (VCNO) and Assistant Commandant of the

Marine Corps (ACMC) on T&E policy, requirements and resources for operational testing, and to ASN(RD&A) on T&E matters pertaining to ASN(RD&A) equities. CNO (N091) is responsible for establishing T&E policy, determining the adequacy of T&E infrastructure required to support systems testing, coordinating Navy participation in joint testing matters, reviewing capabilities documents (e.g., initial capabilities document (ICD), capability development document and capability production document (CDD and CPD)) for testability, and resolving developmental, live-fire, and operational test issues. CNO (N091) shall act as the final authority and signatory for CNO sponsored test and evaluation master plans (TEMPs) prior to component acquisition executive (CAE) approval and signature (see table E2T2 for TEMP approval authority). CNO (N091) shall be responsible for overseeing testing matters associated with Marine Corps aircraft, aviation equipment, and air traffic control and landing (ATCAL) equipment.

4.2.1.2 Program Manager (PM)

The PM shall, in concert with the developer, user, and testing communities, lead DT&E and live-fire test and evaluation (LFT&E), coordinate OT&E, family–of-systems interoperability testing, information assurance testing, and modeling and simulation (M&S) activity into an efficient continuum, closely integrated with requirements definition, integrated system design, development, production, and sustainment, that achieves the approved capability. The necessary time and resources shall be planned and budgeted to ensure adequate testing is conducted to support decision makers and the users throughout the life-cycle of the acquisition. The PM is responsible for documentation of T&E planning in the test and evaluation strategy (TES) and TEMP. The PM shall provide for the appropriate safety releases (to include formal environment, safety, and occupational health (ESOH) risk acceptance) and materiel certification prior to any developmental or operational tests using personnel (see paragraph 4.4.7.7).

4.2.1.3 Commander, Operational Test and Evaluation Force (COMOPTEVFOR)

COMOPTEVFOR is the designated operational test agency (OTA) for the United States Navy and for Marine Corps aviation programs assigned to CNO sponsorship. COMOPTEVFOR shall: plan, conduct, evaluate, and report the OT&E of acquisition category (ACAT) I, IA, II, III, IVT, and rapid deployment capability (RDC) programs; monitor ACAT IVM programs and AAPs; evaluate initial

tactics for systems that undergo OT&E; and make fleet release or introduction recommendations to CNO for all ACAT programs and those system configuration changes selected for OT&E. COMOPTEVFOR prepares the OT&E content and a listing of test resources needed to execute operational test for the TEMP. COMOPTEVFOR shall coordinate for multi-service and joint OT&E, and is the lead OTA when the Navy is assigned lead. COMOPTEVFOR is the designated research, development, test, and evaluation (RDT&E) fleet-support scheduling agent for CNO (N091).

4.2.1.4 Naval Systems Commands (SYSCOMs)

SYSCOMs shall manage assigned infrastructure (facilities, test ranges, land, and personnel) to ensure efficient and effective DT&E and LFT&E of systems within the SYSCOM's domain. When requested and funded, SYSCOMs will support programs with the resources needed to coordinate planning, scheduling, and executing T&E throughout the continuum of system development.

4.2.1.4.1 Naval Air Systems Command (NAVAIRSYSCOM)

NAVAIRSYSCOM, in support of PMs, shall conduct and report on DT&E and LFT&E for Navy and CNO sponsored Marine Corps aircraft, aviation systems, aircraft launch and recovery equipment (ALRE), and ATCAL equipment.

4.2.1.4.2 Weapons System Explosive Safety Review Board (WSESRB)

The WSESRB is the Navy's independent oversight agent for assessing DON weapons programs' safety compliance efforts associated with explosives, energetic systems, weapons, combat systems, and those systems that manage and control weapons. The WSESRB evaluates the applicable explosive safety criteria and environmental requirements, and advises the responsible Navy and Marine Corps commands, MDAs, PEOs, and PMs on the adequacy of compliance. The WSERB has final decision authority over the explosive safety planning for the conduct of final developmental and operational testing and overall explosive safety compliance for major acquisition decisions.

4.2.1.5 Farragut Technical Analysis Center (TAC)

Farragut TAC is the designated naval activity responsible for threat intelligence and validating threat tactics supporting T&E of Navy acquisition programs. Threat environments for T&E of ACAT ID programs will be based on a system threat assessment

report (STAR) that is validated by the Defense Intelligence Agency (DIA) per reference (a). T&E for ACAT IC or programs of lesser ACAT under OSD T&E oversight, will base threat scenarios on a STAR validated by the component. T&E for ACAT II programs require a system threat assessment (STA) validated by the component. Reference (a) identifies threat validation requirements.

4.2.2 Principal Marine Corps Points of Contact and Responsibilities

4.2.2.1 Deputy Commandant for Manpower and Reserve Affairs (DC, M&RA)

DC, M&RA assigns personnel per established manpower requirements for Marine Corps participation in joint test and evaluation (JT&E) and in support of OT&E for ACAT I and designated ACAT II programs within manpower guidelines established by the Deputy Commandant, Combat Development and Integration (DC, CD&I) and after consultation with Commander, MARCORSYSCOM and Director, MCOTEA.

DC, M&RA is designated the functional manager for Marine Corps Manpower Systems' Automated Information Systems (AISs). DC, M&RA is responsible for developing the concept of employment (COE) and mission-essential (ME) functions for manpower AISs and interoperability and standards requirements for CDDs and CPDs. DC, M&RA will provide representatives to coordinate with Commander, MARCORSYSCOM; PEO Land Systems (PEO-LS); and Director, MCOTEA, to assist in determining AIS program failure definition (FD) and scoring criteria (SC) for each manpower system’s AIS program under development and provide a voting member for reliability, availability, and maintainability (RAM) scoring conferences.

4.2.2.2 Deputy Commandant for Installations and Logistics (DC, I&L)

DC, I&L is designated the functional manager for Marine Corps Logistics Systems' AISs.

4.2.2.3 Director, Marine Corps Intelligence Activity (MCIA)

Director, MCIA shall provide a threat test support package (TTSP) based on the latest STA to Commander, MARCORSYSCOM; PEO-LS; and Director, MCOTEA. The TTSP should include all threat data required to support DT, OT and LFT&E.

4.2.2.4 Deputy Commandant for Combat Development and Integration (DC, CD&I)

DC, CD&I shall develop the COE, operational mode summary and mission profiles (OMS and MP), and mission essential functions for proposed non-AISs and interoperability and standards requirements for CDDs and CPDs. In coordination with the material developer and Director, MCOTEA, provide a representative to assist in determining non-AIS program FD and SC for each program under development and provide a voting member for scoring conferences.

DC, CD&I provides oversight of JT&E for the Commandant of the Marine Corps (CMC) and Headquarters Marine Corps (HQMC) staff to ensure T&E activities directly support the CMC's responsibilities for sustained material readiness and mission capability of the Marine operating forces.

When required, DC, CD&I shall act on OT&E deferral and waiver requests for Marine Corps ground systems as outlined in paragraph 4.6 below.

4.2.2.5 Commander, Marine Corps Systems Command (Commander, MARCORSYSCOM) and Program Executive Office for Land Systems (PEO-LS)

Commander, MARCORSYSCOM provides oversight of programming activities related to T&E for the CMC and HQMC staff to ensure T&E activities directly support the CMC's responsibilities for sustained material readiness and mission capability of the Marine operating forces. Commander, MARCORSYSCOM and PEO-LS PM shall provide a test support package (TSP) to the Director, MCOTEA, at least 1 year before scheduled OT start. The TSP should include, at a minimum, early T&E, a CDD and CPD, a STA, a threat scenario, a DC, CD&I-approved COE, program documentation addressing support and life-cycle management of hardware and computer resources, and an organizational structure to include a table of organization

and table of equipment. Upon request, the PM should provide software documentation. MCIA provides the STA no later than milestone A.

Commander, MARCORSYSCOM serves as the Marine Corps point of contact with Office of Secretary of Defense (OSD) on matters relating to LFT&E.

Commander, MARCORSYSCOM shall consolidate and process quarterly requests for use of naval fleet assets in support of RDT&E requirements.

Commander, MARCORSYSCOM shall represent the Marine Corps in all DT&E matters.

Commander, MARCORSYSCOM or PEO-LS shall be the primary interface with Joint Interoperability Test Command (JITC) on joint interoperability testing conducted during DT.

Commander, MARCORSYSCOM or PEO-LS shall exercise review and approval authority over TEMPs for assigned programs and multi-service programs.

Commander, MARCORSYSCOM PM or PEO-LS shall establish and chair a test and evaluation working integrated product team (T&E WIPT) for all assigned programs.

Commander, MARCORSYSCOM or PEO-LS shall certify that systems are safe and ready for DT&E.

Commander, MARCORSYSCOM shall manage the Marine Corps External Airlift Transportation (EAT) Certification Program and the Marine Corps Foreign Comparative Testing Program.

4.2.2.6 Director, Marine Corps Operational Test and Evaluation Activity (MCOTEA)

MCOTEA is the designated OTA for the United States Marine Corps. Director, MCOTEA shall ensure that the operational testing and evaluation of all ACAT programs is effectively planned, conducted, and reported; and shall coordinate the scheduling of resources for OT requiring Marine operating forces support through the Marine Forces Synchronization Conferences and the Two Year Master Test Plan (TYMTP) published annually with quarterly updates.

Director, MCOTEA, shall host and chair an FD and SC charter development conference for the development of an FD and SC charter for each program.

Director, MCOTEA, shall prepare the operational test content, with the exception of LFT&E, and a listing of resources required to execute operational test for input into the TEMP.

Director, MCOTEA, shall request, from the office of ACMC, the assignment of a test director (TD) for ACAT I and certain ACAT II programs and shall coordinate with the Marine operating forces and other commands in matters related to OT&E by publishing a test planning document (TPD).

Director, MCOTEA, shall manage those joint OSD-directed multi-service OT&Es for which the Marine Corps is tasked and coordinate Marine Corps support for other military Services' OT&Es.

Director, MCOTEA, shall prepare and provide directly to the ACMC, within 90 days (or as stipulated in the TEMP) after completion of OT&E, an OTA evaluation report for the system under test.

Director, MCOTEA, shall advise the ACMC on OT&E matters. When significant limitations are identified during system evaluation, the Director, MCOTEA, shall advise the MDA of risk associated in the procurement decision.

Director, MCOTEA, shall maintain direct liaison with OSD's Director, Operational Test and Evaluation (DOT&E), the Marine operating forces for OT&E matters, and other military activities and commands, as required.

Director, MCOTEA shall represent the Marine Corps in all multi-service OT&E matters.

Director, MCOTEA shall be the primary interface with JITC on joint interoperability testing conducted during OT.

For USMC programs not required by statute to conduct LFT&E, but where LFT&E is appropriate, the Director, MCOTEA shall concur with the LFT&E strategy as approved by the MDA in the TES or TEMP.

4.2.2.7 Marine Operating Forces

The Commanding Generals, Marine Forces Pacific (MARFORPAC) and Marine Forces Command (MARFORCOM) shall designate a test coordinator as a focal point for all T&E matters and support MCOTEA in the T&E of new concepts, equipment, and systems. The Marine operating forces shall provide a Marine operating forces officer in charge (OIC) for test who will lead the Marine operating forces participating in the operational test and be available to the MCOTEA evaluation team for at least 30 days after completion of OT&E. The Marine operating forces shall provide personnel and equipment to participate in JT&E programs, as required.

4.2.3 Acquisition Items Exempt from T&E Provisions within this Instruction

4.2.3.1 Items Exempt

The following items are tested by other organizations and are exempt from the T&E provisions of this instruction:

a. Cryptographic or cryptology equipment;

b. Naval nuclear reactors and associated systems;

c. Nuclear weapons and strategic weapons system components;

d. Medical and dental systems; and

e. Spacecraft and space-based systems.

4.2.3.2 T&E Considerations that Apply to Exempt Items

The exemption herein does not apply to the following aspects of these items:

a. Information technology (IT) administrative systems;

b. Ships or aircraft that carry these systems;

c. Other systems that these exempt items support; and

d. Testing conducted at the request of or in cooperation with above parent organizations.

When the performance of these exempted items affects the effectiveness, suitability, survivability, or lethality of a system not exempt (e.g., communications system with embedded cryptology subsystem, ship with nuclear propulsion), then the exempted item's performance may be considered in the T&E of the supported system. Such performance assessments must be coordinated with and approved by the organization with direct responsibility for the exempted item (e.g., National Security Agency (NSA) for cryptology systems or naval reactors for naval nuclear propulsion systems).

4.3 T&E Strategy

4.3.1 Preparation and Milestones

See reference (a), enclosure 6, for guidance in preparing a TES that is required at milestone A. The TES documents a strategy of realistic T&E concepts that support development decisions throughout the acquisition life-cycle. The TES must include a test plan that addresses the technology development phase, a description of the overall approach for integrating developmental, operational and live-fire testing, the T&E aspects of competitive prototyping, and the early demonstration of technologies in relevant environments with adequate detail to construct and evaluate pre-milestone B assessments and tests. The TES is the precursor to the TEMP that is required for milestone B and beyond. While specific program alternatives are generally unknown before milestone B, the TES needs to address: the maturity level of the technology; anticipated DT&E, OT&E, and LFT&E concepts; and early predictions of T&E support requirements that may need development or procurement. When M&S is part of the TES, the M&S proponent shall provide the strategy to comply with verification, validation and accreditation (VV&A) per reference (b). For OT&E events prior to milestone B, the TES shall identify objectives, scope, and funding, as well as overall evaluation strategy. Programs shall conform to OSD policies and guidelines when preparing TES documentation, unless granted relief by the TEMP approval authority.

4.3.2 Strategy Approval

The T&E strategies for programs on the OSD T&E oversight list require the approval of DOT&E and the Director, Developmental Test and Evaluation. Programs on the OSD T&E oversight list will prepare a T&E strategy and coordinate with CNO (N091) or Director, MCOTEA for submission via the same approval process for a TEMP.

4.4 T&E Planning

4.4.1 Early Planning for Integrated T&E

T&E expertise must be brought to bear at the beginning of the system life-cycle to provide early learning and early identification of technical, operational and system deficiencies. This ensures that appropriate and timely corrective actions can be developed prior to system fielding. Early involvement by test agencies is required to ensure successful execution of integrated testing and sharing of all appropriate test results in the overall system evaluation. The developing activity (DA), test agencies, and user representative and resource sponsor must share a common interpretation of the system capability needs so that DT and OT are tailored to optimize resources, test scope, and schedule. Early, active, and continuous participation by test agencies during the development of capabilities documents will support effective communication and common interpretation.

4.4.1.1 Early Planning Requirements

Test planning requires a coherent evaluation plan that aligns with the Systems Engineering Plan (SEP), acquisition strategy, and CDDs and must consider appropriate measures needed to support the RAM growth plan and the operational environment for which the system is being developed. Reference (a) requires the evaluation include a comparison with current mission capabilities using existing data, so that measurable improvements can be determined. If such evaluation is considered costly relative to the benefits gained, the PM shall propose an alternative evaluation approach. This alternative approach shall be introduced to the OTA and vetted through the TEMP stakeholders as early as possible, but no later than 6 months prior to TEMP approval due date.

4.4.2 Testing Increments in Evolutionary Acquisition

Developing agencies shall ensure adequate DT&E, OT&E, and LFT&E are planned, funded, and executed for each new increment capability, as required. The PM shall ensure an independent phase of OT&E is completed prior to release of each increment to the user. Potentially short cycle times between milestone decisions necessitate early collaboration between the OTA, JITC, test resource providers (labs, ranges, instrumentation sources, etc.), sponsors, requirements officers, and oversight agencies in test planning for efficiency and testability that effectively evaluates system capabilities and performance against earlier

increments to assess increased mission capability and determination if previous capabilities incurred any degradation. In addition to integrating test events to the fullest extent within statute and regulation, planners shall consider parallel development and review of the TEMP and relevant capabilities documents (e.g., CDD and CPD).

4.4.2.1 Innovative Testing

Short incremental development cycle times and simultaneous testing of multiple increments may require innovative methods not discussed in this or other acquisition documents. Innovative or irregular methods will be described within the appropriate sections of the TEMP. TEMP concurrence and approval will formalize the agreement to implement those methods for use in the program.

4.4.2.2 Initial Operational Test and Evaluation (IOT&E)

The PM shall ensure IOT&E is completed prior to proceeding beyond low-rate initial production (LRIP) for ACAT I and II programs as required by section 2399 of title 10 U.S.C., and for all other programs on the OSD T&E oversight list as required by reference (a). The PM shall ensure OT&E is conducted for each evolutionary acquisition increment for programs requiring OT&E. Following consultation with the PM, DOT&E, for programs on the OSD T&E oversight list, or the OTA, for programs not on the OSD T&E oversight list, shall determine the number of production or production-representative test articles required for IOT&E. To efficiently resource OT&E requirements, the OTA shall plan to leverage all operationally relevant T&E data and provide the PM with an early projection as to OT&E scope and resource requirements. See reference (a), enclosure 6, for implementation requirements for DON ACAT programs.

4.4.2.3 Software Intensive Systems

The OTAs are encouraged to use DOT&E and CNO (N091) best practice guidance for testing software intensive system increments (command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) and Major Automated Information System (MAIS) systems) in evolutionary acquisition. Although this decision process is discretionary, it effectively defines the scope and level of testing based on potential risk to mission areas, overall system complexity, and the complexity of changes in functionality within each increment.

Innovative approaches are encouraged, but require coordination with oversight agencies to ensure adequacy of testing.

Due to the dynamic nature of IT programs, the JROC created the "IT Box" approach to JCIDS as described in chapter 1 (paragraph 1.1.2.3). This approach applies to systems where there is no need to develop hardware systems (i.e., they use commercial off-the-shelf hardware, or already developed hardware) and research and development (R&D) funding is spent solely on software development. Implementation of the above approach may be used for preplanned series of software developments and or hardware refreshment, including programs executing advanced capability builds (ACB), advanced processing builds (APB), or technology insertions (TI). The "IT Box" is meant to lighten the burden of JCIDS as the program progresses through system enhancements within the parameters defined in the program's CDD. It ensures both the planning and flexibility are in place to incorporate evolving technologies over the lifecycle of a program. Test planning shall align with Navy implementation described in chapter 1, utilizing risk assessment for level of test required.

4.4.3 Test and Evaluation Working Integrated Product Team (T&E WIPT)

The T&E WIPT is a DoD and DON wide accepted forum for representatives from across program disciplines and oversight agencies to discuss, coordinate, and resolve T&E planning goals and issues. The PM or designated representative (normally a military O-6/O-5 or civilian equivalent) is responsible for initiating (early in the life of the program, preferably before milestone A) and chairing the T&E WIPT.

4.4.4 Navy Test and Evaluation Coordination Group (TECG)

When T&E issues arise that cannot be resolved by the T&E WIPT, a TECG should be convened. A TECG may also be used to implement urgent required changes to the TEMP. When used for urgent TEMP changes, either a page change or a formal report of the TECG resolution shall be attached to the TEMP as an annex until the next update or revision. When an activity determines a more formal solution is required to resolve an issue, the activity -- via formal correspondence -- will request that CNO (N091) or DC, CD&I, as the responsible authority for T&E issue resolution, convene a TECG. For programs on the OSD T&E oversight list, the TECG chair, CNO (N091) or DC, CD&I shall coordinate results with DOT&E and USD(AT&L).

4.4.5 T&E Funding Responsibility

4.4.5.1 Developing Activity Responsibilities

Except as noted below, the DA shall plan, program, budget, and fund all resources identified in the approved TEMP, to include early OT involvement costs. Funds for OT&E shall be transferred to the OTA for distribution as required. All T&E operating costs for OT squadrons (VX-1, VX-9, HMX-1, VMX-22) will be provided on a reimbursable basis by the DA to COMOPTEVFOR headquarters. The DA should not be required to fund:

a. Fleet operating costs for RDT&E support;

b. Fleet travel for training;

c. Non-program-related OTA travel and administrative costs;

d. Non-program-related Board of Inspection and Survey (INSURV) travel and administrative costs; and

e. Major range and test facility base (MRTFB) institutional costs.

4.4.5.2 Fleet Commanders' Responsibilities

Fleet commanders should plan, program, budget, and fund fleet travel for training, operating costs for RDT&E support provided by fleet units, and all costs associated with routine operational expenses except procurement costs of the systems tested and COMOPTEVFOR costs.

4.4.5.3 Board of Inspection and Survey (INSURV) Responsibilities

INSURV should plan, program, budget, and fund travel costs and costs not related to programs under test.

4.4.5.4 Non-Acquisition Programs Responsibilities

The R&D agency for a non-ACAT or pre-ACAT program has responsibilities equivalent to those of the DA for T&E costs.

4.4.6 Research, Development, Test and Evaluation (RDT&E) Support Provided by Fleet Commanders

A developing agency, PM, COMOPTEVFOR, INSURV, or R&D agency shall request support from fleet commanders for the accomplishment of T&E that is documented in a TEMP or other approved test document via CNO (CNO (N091)/Test and Evaluation Division (OPNAV (N912))). A request should normally be initiated 9 months prior to test event.

4.4.7 Test and Evaluation Master Plan (TEMP)

All DON ACAT programs shall implement a TEMP for all developmental, operational, and live-fire test and evaluation in compliance with reference (a), enclosure 6. Although the TEMP format is discretionary, deviations from the standard DOT&E policy require concurrence from the TEMP approval authority. The TEMP for all ACAT programs shall include a schedule of test phases and events integrated with key program objectives and decision points, and specify entry criteria and resources required for each phase of testing. The TEMP shall include a summary of cost estimates by fiscal year for the execution of the TEMP. For programs on DOT&E oversight, OT funding shall be clearly delineated in the summary. The TEMP shall identify anticipated use of M&S in system evaluation and the M&S proponent's VV&A strategy per reference (b). The TEMP documents the commitment between signatories to test events, schedules, and resources.

To meet milestones B and C and full-rate production decision reviews (FRP DRs), the PM for MDAPs, MAIS programs, and programs on the OSD T&E oversight list shall submit the TEMP via concurrence of primary DON stake-holders (PEO, OTA, sponsor) to the approval authority designated in chapter 2, table E2T2, of this instruction, sufficiently early to satisfy review timelines designated by those agencies. TEMPS for ACAT II programs shall be approved by ASN(RD&A). The MDA and CNO (N091) for Navy programs or ACMC for non-aviation Marine Corps programs of all other ACAT TEMPs shall have final approval authority. For CNO sponsored programs, CNO (N091) is the Office of the Chief of Naval Operations (OPNAV) single point of contact for TEMP coordination with OSD. The DA is responsible for distribution of an approved TEMP to all agencies involved in testing, providing support or resources, oversight, or that have a relevant and official need to access testing information.

4.4.7.1 Milestone B TEMP Approval for IT Systems, including NSS, and Spectrum Dependent Systems

National security systems (NSS), IT systems, and systems with Service and joint interoperability requirements, and or systems that require use of the electromagnetic spectrum must comply with DoD and Joint Chiefs of Staff integrated architecture guidance. The following integrated architecture-related items must be specifically addressed in milestone B TEMP:

a. Appropriate net-ready (NR) key performance parameter (KPP) products for IT, including NSS, programs per reference (c);

b. Information assurance mission assurance category (MAC) and confidentiality level per reference (d);

c. Security certification and accreditation phase 1 System Security Authorization Agreement (SSAA) or equivalent per references (e) and (f); and

d. Spectrum certification documentation: stage 3 DD 1494 or note to holders per references (a) and (g). As an alternative, the MDA may grant authorization to proceed into engineering and manufacturing development (EMD) phase if, per reference (g), justification and a plan to achieve spectrum supportability has been provided to USD(AT&L), Assistant Secretary of Defense (Networks and Information Integration) (ASD(NII))/DoD Chief Information Officer (CIO), DOT&E, and the National Telecommunications and Information Administration (NTIA).

4.4.7.2 Milestone C TEMP Approval for IT Systems, including NSS, and Spectrum Dependent Systems

As systems mature during the development process, more detailed information becomes available. The following integrated architecture-related items must be specifically addressed in milestone C and beyond test phases:

a. Information assurance MAC, and confidentiality level, and related IA controls per reference (d);

b. Security certification and accreditation phase 2 SSAA or equivalent per references (e) and (f);

c. Security certification and accreditation interim authority to test (IATT) and interim authority to operate (IATO) per references (e) and (f);

d. Appropriate NR KPP products for IT, including NSS, programs per reference (c);

e. JITC assessment of interoperability readiness for an OT phase or the Interoperability Certification and Evaluation Plan (ICEP) is in place per reference (c);

f. E3 verification and validation (V&V) reports and documentation per reference (g); and

g. Spectrum certification documentation: stage 4 DD 1494 or note to holders per references (a) and (g). As an alternative, either USD(AT&L) may grant authorization to proceed into production and deployment phase or ASD(NII) may grant a waiver if, per reference (g), justification and a plan to achieve spectrum supportability has been provided to USD(AT&L), ASD(NII)/DoD CIO, DOT&E, and the NTIA.

4.4.7.3 Capabilities, Key System Attributes (KSAs), and Key Performance Parameters (KPPs) Traceability to Critical Operational Issues (COIs)

For DON programs, traceability will be consistent among the analysis of alternatives, ICD, CDD and CPDs, acquisition program baseline (APB), and the TEMP. The TEMP shall document how specific capabilities, KSAs, and KPPs trace to COIs and how each will be addressed in T&E. Post milestone B test results will be tracked to monitor progress toward achieving KSA, KPP, and COI performance measures identified in the TEMP.

As described in chapter 1, section 1.1.2.3 of this instruction, KSAs are system or sub-system capabilities with priority to Navy leadership for cost, schedule or performance insight, but do not meet criteria as KPPs. KPPs are those capabilities that leadership considers of such significance that if not demonstrated are reason for program reassessment or possible termination.

4.4.7.4 Performance Thresholds and Critical Technical Parameters (CTPs)

Testable and measurable performance thresholds for DT, LFT&E, and OT shall be established, tracked, and reported throughout the acquisition life-cycle. The CTPs are engineering measures derived from capabilities documents and are established as appropriate to aid the DA during system development. Those CTPs that best relate system design maturity to achieve KPPs and KSAs shall be incorporated in the TES and TEMP by the PM. The operational parameters and critical issues derived from the ICD, CDD, and CPD to be used for OT shall be established and incorporated in the TEMP by the COMOPTEVFOR and Director, MCOTEA. The numerical values for DT and OT shall be the same as, the performance parameters established in the CDD and CPD. See reference (a), enclosure 6, for implementation requirements for all DON ACAT programs.

4.4.7.5 Test Planning for Commercial and Non-Developmental Items

Use of commercial products built to non-DoD specifications dictates the need for the PM and the T&E community to be cognizant of the commercial T&E data, standards, and methods used to provide assurance for these products. In some cases, commercial T&E data or use of commercial T&E practices by the DoD T&E community may provide adequate, reliable, and verifiable information to meet specific DT&E, OT&E, or LFT&E goals. When it can be shown that commercially available T&E data or use of commercial T&E practices meet specific DoD T&E needs and cost less than their DoD T&E counterpart, they should be considered by the PM or the OTA, and may be used to support T&E requirements. The PM shall ensure T&E planning includes an assessment and evaluation (as appropriate) of performance in the intended operational environment.

4.4.7.6 Use of Existing T&E Infrastructure

Planners shall use existing investment in DoD infrastructure (ranges, facilities, and land) and other DoD resources, to include embedded instrumentation for conduct of T&E unless it is demonstrated that the required capability does not exist within DoD or it is more cost effective to use a non-DoD resource. Projected T&E investment needs will be annotated in the TEMP. Infrastructure shortfalls that adversely impact the conduct of a specific T&E requirement will be identified in

limitations to test in the TEMP. To affect useful T&E data from embedded instrumentation, T&E expertise must be engaged in the capabilities development process and early design considerations.

4.4.7.7 Environment, Safety, and Occupational Health (ESOH) Considerations

The T&E Strategy and TEMP must address the PM's analysis of ESOH risks and mitigation measures, to include safety releases per reference (h), for the system or item. The intent is to ensure testers understand the ESOH hazards, the control measures adopted by the PM, and the risks accepted by the appropriate authority per reference (a).

Prior to any live fire, developmental or operational test decision that may affect the physical environment, the PM, per references (i) and (j), shall ensure that all applicable National Environmental Policy Act (NEPA) and Executive Order (EO) 12114 requirements are satisfied. Testing shall be planned to ensure sufficient time to comply with applicable environmental requirements including the NEPA and EO 12114. Environmental impact considerations that directly affect testing shall be addressed in the TEMP and respective test plan as limitations or conditions of the testing. Additionally, the PM's designated environmental manager in coordination with SYSCOM and fleet environmental staffs supporting ranges and fleet end-users, shall verify the review of potential environmental planning requirements for the system's T&E and will ensure that these requirements will be fully satisfied. The requirements will be considered fully satisfied only if the system's testing and usage is within the scope of existing environmental documentation and permits, or the test range, training range, and end users have verified they have the necessary information, time, and resources to meet the requirements before testing, training, or IOC occurs at their location. Test activities that may require NEPA and EO 12114 analyses shall be identified in the NEPA and EO 12114 compliance schedule, which is required as part of the program's programmatic environment, safety and occupational health evaluation (PESHE) and acquisition strategy. See reference (a), enclosure 8, paragraph 2f, and reference (k) for implementation requirements for all DON ACAT programs.

4.4.7.8 Modeling and Simulation (M&S)

Per reference (a), enclosure 6, M&S may be used during T&E of an ACAT program to represent conceptual systems that do not exist and existing systems that cannot be subjected to actual

environments because of safety requirements or the limitations of resources. M&S applications include hardware, software, operator-in-the-loop simulators, land-based test facilities, threat system simulators, C4I systems integration environments, facilities, and other simulations as needed. M&S shall not replace the need for OT&E and will not be the primary evaluation methodology. M&S shall not be the only method of meeting independent OT&E for beyond LRIP decisions per section 2399 of title 10, U.S.C. M&S is a valid T&E tool that per reference (b) requires VV&A to supplement or augment test data. The PM is responsible for V&V of M&S and the accreditation of M&S used for DT&E. The OTA is responsible for accreditation of M&S used for OT&E. The PM is required to complete V&V prior to an accreditation decision by the OTA. M&S previously accredited for other programs or test phases still requires accreditation for specific use by the OTA for each OT&E. Use of M&S shall be identified in the TEMP for each DT&E and OT&E phase it is intended to support. M&S required resources shall be listed in the TEMP.

The PM shall identify and fund required M&S resources early in the acquisition life-cycle. A robust, comprehensive, and detailed evaluation strategy for the TEMP, using both simulation and test resources, shall be developed. Planning shall allow for pre-test prediction and post-test reconciliation of M&S data. See reference (a), enclosure 6, for implementation requirements for all DON ACAT programs.

4.4.7.9 Interoperability Testing and Certification

The OTA has a responsibility to evaluate progress towards joint interoperability as part of each testing phase. Interoperability testing consists of inter-Service Navy-Marine Corps, joint Service, and where applicable, allied and coalition testing. Interoperability requirements, including requirement for incremental fielding of services and applications, are covered in detail by references (c), (l), and (m). Systems designated for FORCEnet compliance must achieve joint interoperability test certification. Testing for FORCEnet compliance will be in conjunction with DT and OT to the maximum extent possible. Lab environments used to conduct live, constructive, and virtual interface and interoperability testing must be verified, validated, and accredited by the PM and OTA per reference (b). See reference (a) for implementation requirements for DON ACAT programs. Some IT systems and NSS that meet the eligibility criteria outlined in reference (c),

enclosures C and E, may request waivers or test exemptions. The following general procedures apply to IT systems, including NSS:

a. Interoperability capabilities (requirements) will be documented in the CDD and CPD. The PM is responsible for developing the information support plan (ISP) for IT, including NSS, programs based upon documented requirements.

b. Marine Corps-unique interfaces shall be tested during DT&E by MARCORSYSCOM or PEO-LS, typically at Marine Corps Tactical Systems Support Activity (MCTSSA).

c. Navy-unique interfaces shall be tested during DT&E by DAs (e.g., PEO-C4I and PEO-Enterprise Information Systems (EIS)).

d. DON PMs will coordinate with JITC to develop and execute interoperability testing for certification of IT, including NSS, programs per reference (c). When appropriate, for complex IT systems, including NSS, the PM shall obtain an interoperability certification evaluation plan (ICEP) from JITC.

e. Navy systems processing data links (e.g., link 4/11/16/22) and character oriented messages for human readable text (e.g., United States message text format (USMTF) and optical transport hierarchy (OTH)-Gold) must be tested for joint interoperability by Naval Center for Tactical Systems Interoperability (NCTSI) and by JITC for joint certification.

f. Marine Corps systems processing data links (e.g., link 4/11/16/22) and character oriented message human readable text (e.g., USMTF and OTH-Gold) must be initially tested for joint interoperability by MCTSSA, then by JITC for joint certification.

g. Standard conformance testing with interoperability certification of specific data link interfaces should be accomplished prior to IOT&E. Per reference (c), a joint interoperability test certification or an interim certification to operate (ICTO) shall be accomplished prior to FRP DR.

h. Per references (a), (c), and (l) and table E2T2, all IT, including NSS, ACAT programs are required to receive Joint Staff (J-6) interoperability and supportability certifications by FRP DR. This certification shall be used as the basis for certification of compliance with the applicable FORCEnet technical standards.

4.4.7.10 Information Assurance (IA) and Information Systems Security Certification and Accreditation

IA is critical to net-centric warfare. The MAC and confidentiality level, as approved by the Deputy CIO for the Navy or Marine Corps, establish IA control measures that must be incorporated into a system. Control measures are implemented, verified and validated via security certification and accreditation (SCA). Reference (d) also requires V&V of control measures through vulnerability assessments and penetration testing. The DoD Information Assurance Certification and Accreditation Process (DIACAP) requires the independent V&V of IA control measures through vulnerability assessments and penetration testing. The PM coordinates with the OTA and the designated approving authority (DAA) (CNO/CMC, or designee) to determine the IA DT&E and OT&E test requirements in order to optimize test activity. The PM documents SCA and IA controls in the TEMP. An authorization to operate must be obtained prior to OT from the DAA. For early OT events, such as operational assessments, this can be an interim authority to test (IATT), interim authority to operate (IATO), or authority to operate (ATO). To begin IOT&E, an IATO or ATO must be obtained. The OTA will evaluate IA controls and ability to protect, detect, respond, and restore systems during OT based upon MAC and confidentiality level. The OTA does not certify the system for security or IA, but evaluates the effectiveness, suitability, and survivability of the system in its intended environment.

4.4.7.11 Anti-Tamper Verification and Validation Testing

Anti-tamper (AT) V&V is a requirement for all systems implementing an AT plan to ensure the AT techniques stated in the AT plan are fully implemented and respond appropriately in the event of tampering. This V&V must be accomplished by an independent team and be funded by the parent acquisition program. See reference (a) for implementation requirements for DON ACAT programs that contain critical program information and AT countermeasures. DON’s AT technical authority (NAVAIRSYSCOM), will assist acquisition programs in understanding AT V&V requirements, program test plan development, and interactions with the DoD V&V community.

4.4.7.12 Test and Evaluation Identification Number (TEIN) Assignment

A TEIN is required before requesting fleet support services. The TEIN assists in tracking T&E documentation, scheduling fleet services, and execution of oversight requirements. The PM shall request, in writing, a TEIN from CNO (N091) via the resource sponsor. Navy programs will utilize the TEIN to identify TEMP documents.

4.5 Developmental Test and Evaluation (DT&E)

The DA shall conduct adequate DT&E throughout the development cycle to support risk management, provide data on the progress of system development and attainment of performance criteria specified in TEMP, and to determine readiness for OT. For DON programs, DT&E shall be conducted by the DA through contractor testing or government test and engineering activities. DT&E will be sufficiently robust to adequately characterize system performance in an operational environment and provide clear expectations of performance at IOT&E. Developmental testing schedules require sufficient time to evaluate results before proceeding to independent OT phases. See reference (a), enclosure 6, for implementation requirements for all DON ACAT programs.

4.5.1 DT&E Data

Data and findings from DT&E may be used by the OTA to supplement OT data in system operational evaluation. Within proprietary, contractual, and regulatory considerations all DT data shall be available to appropriate oversight agencies. Data will normally be made available upon completion of analysis by the primary analyzing agency. DT results (data and reports, as applicable) shall be provided to the OTA on a regular basis to provide for periodic updates to subsequent DT and OT planning and execution. In preparation for IOT&E or a dedicated OT phase supporting a milestone, a DT report shall be provided to the OTA a minimum of 30 days prior to the start of OT in order to ensure the OTA’s test plans can be finalized. See reference (a), enclosure 6, for implementation requirements for all DON ACAT programs.

4.5.2 Information Assurance and Security Certification during DT

IA testing and system SCA shall be conducted by the PM as part of the development process to ensure that appropriate control measures are in place to support the assigned MAC and confidentiality level. The MAC and confidentiality level should be identified in capabilities development documents and have approval of the Deputy CIO for the Navy and Marine Corps, as appropriate. Security certification and accreditation testing shall be accomplished during DT by the PM in conjunction with the SCA agent as approved by the DAA to ensure the appropriate combination of security controls and procedures have been implemented to achieve the required level of protection. Per references (e) and (f), the appropriate DAA shall provide an accreditation statement prior to the FRP DR, full-rate production and deployment approval. The PM shall coordinate with the OTA, the security certification authority, and the DAA to optimize efficiency of testing requirements.

4.5.3 Production Qualification T&E

See reference (a), enclosure 6, for implementation requirements for all DON ACAT programs.

4.6 Certification of Readiness for Operational Testing

4.6.1 DON Criteria for Certification

Per reference (a), the following criteria for certification of readiness apply to all IOT&E for all DON programs. For all OT other than IOT&E, the PM with the support of the T&E WIPT and concurrence of the OTA may tailor criteria listed below in subparagraphs 4.6.1b through 4.6.1t. The MDA may add criteria as necessary to determine readiness for OT.

a. The TEMP is current and approved. Testing prior to milestone B shall have an approved TES as described in this chapter, paragraph 4.3.1.

b. T&E results indicate performance thresholds identified in the TEMP have been satisfied or are projected to meet system maturity for the CDD and CPD, as appropriate.

c. All significant areas of risk have been identified and corrected or mitigation plans are in place.

d. Test results have been provided to the OTA not less than 30 days prior to the commencement of OT, unless otherwise agreed to by the OTA.

e. Entrance criteria for OT identified in the TEMP have been satisfied.

f. System operating, maintenance, and training documents have been provided to the OTA no less than 30 days prior to the OTRR, unless otherwise agreed to by the OTA.

g. Logistic support, including spares, repair parts, and support and ground support equipment is available as documented. Discuss any logistics support which will be used during OT&E, but will not be used with the system when fielded (e.g., contractor provided depot level maintenance).

h. The OT&E manning of the system is adequate in numbers, rates, ratings, and experience level to simulate normal operating conditions.

i. Training has been completed and is representative of that planned for fleet units.

j. All ranges, facilities, and resources required to execute OT including instrumentation, simulators, targets, expendables, and funding have been identified and are available.

k. Models, simulators, and targets have been accredited for intended use.

l. The system provided for OT&E, including software, is production representative. Differences between the system provided for test and production configuration shall be addressed at the OTRR.

m. Threat information (e.g., threat system characteristics and performance, electronic countermeasures, force levels, scenarios, and tactics), to include security classification, required for OT&E is available to satisfy OTA test planning.

n. The system is safe to use as planned in the concept of employment and the PM has provided the appropriate safety release(s) per reference (h) for the phase of test to be conducted. Any restrictions to safe employment are stated. The ESOH program requirements have been satisfied per references (h),

(i), (j), (k), (n), (o), (p), and (q). The system complies with Navy and Marine Corps ESOH and hazardous waste requirements, where applicable. ESOH and hazardous waste reviews and reports have been provided to COMOPTEVFOR or Director, MCOTEA. When an energetic is employed in the system, WSESRB criteria for conduct of test have been met.

o. All software is sufficiently mature and stable for fleet introduction. All software trouble reports are documented with appropriate impact analyses. There are no outstanding trouble reports that:

(1) Prevent the accomplishment of an essential capability;

(2) Jeopardize safety, security, or other requirements designated "critical;"

(3) Adversely affect the accomplishment of an essential capability and no work-around solution is known; or

(4) Adversely affect technical, cost, or schedule risks to the project or to life-cycle support of the system, and no work-around solution is known.

p. For software qualification testing (SQT), a statement of functionality that describes the software capability has been provided to COMOPTEVFOR and CNO (N091). For programs to be tested by MCOTEA, the SQT statement of functionality has been provided to Director, MCOTEA.

q. For aircraft programs, there are no uncorrected NAVAIRSYSCOM deficiencies that affect:

(1) Airworthiness;

(2) Capability to accomplish the primary or secondary mission(s);

(3) Safety of the aircrew/operator/maintainer;

(4) Integrity of the system or an essential subsystem; and

(5) Effectiveness of the operator or an essential subsystem.

r. For programs with interoperability requirements (e.g., information exchange requirements in ICD, CDD, and CPDs), appropriate authority has approved the ISP and JITC concurs that program interoperability demonstrated in development has progressed sufficiently for the phase of OT to be conducted.

s. For spectrum management per reference (g), a stage 3 "Developmental" DD 1494 (at a minimum) is required for testing.

t. For IT systems, including NSS, the system has been assigned a MAC and confidentiality level. System certification accreditation documents, including the phase 2 SSAA and the IATT, IATO, or platform IT designation letter, as applicable, have been provided to the OTA.

4.6.2 DON Procedures for Certification

The SYSCOM commander, PEO, DRPM, and PM shall convene an OTRR prior to certifying readiness for IOT&E per reference (a). The need to conduct and the procedures for an OTRR for all OT other than IOT&E shall be determined by the SYSCOM commander, PEO, DRPM, and PM with the concurrence of the OTA and based on recommendations from the T&E WIPT. An OTRR shall consist of those members of the testing team who provide input to the certification criteria, and representatives from CNO (N091) and DC, CD&I, the program sponsor (Navy only), ASN(RD&A), and COMOPTEVFOR and Director, MCOTEA. For programs on OSD T&E Oversight, representatives from Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (OUSD(AT&L)) and DOT&E shall be included.

The SYSCOM commander, PEO, and DRPM shall evaluate and make a determination that a system is ready for OT&E (normally 30 days prior to OT&E). The SYSCOM commander, PEO, and DRPM shall, unless otherwise directed by ASN(RD&A) for programs on the OSD T&E oversight list, make one of the following certifications.

4.6.2.1 Certification for OT Without T&E Exceptions

Certify to COMOPTEVFOR or Director, MCOTEA by message that a system is ready for OT____(specific operational test phase), as required by the TEMP, without deferrals or waivers. Provide information copies to CNO (N091) and DC, CD&I, the program sponsor (Navy only), ASN(RD&A), fleet commands, INSURV for ships, NAVAIRSYSCOM Technical Assurance Board (NTAB) for

aircraft, other interested commands, and when a program is on the OSD T&E oversight list, to DOT&E. See this chapter, paragraph 4.6.4 for explanation of exceptions.

4.6.2.2 Certification for OT With T&E Exceptions

Certify to CNO (N091), DC, CD&I by message that a system is ready for OT____(specific operational test phase), as required by the TEMP, with waiver and or deferral requests. Provide information copies to the program sponsor (Navy only, who must provide formal concurrence with proposed exceptions), ASN(RD&A), COMOPTEVFOR and Director, MCOTEA, and when a program is on the OSD T&E oversight list, to DOT&E.

4.6.2.2.1 T&E Exceptions

There are two types of T&E exceptions to the certification for OT: waivers and deferrals.

4.6.2.2.1.1 Waivers

The term "waivers" applies to a deviation from the criteria identified for certification in paragraph 4.6.1 of this chapter. Waivers do not change or delay any testing or evaluation of a system.

4.6.2.2.1.2 Deferrals

The term "deferrals" applies to a delay in testing requirements directed by the TEMP. A deferral moves a testing requirement from one test period to a later period. Deferred items cannot be used in the analysis to resolve COIs; however, the OTA may comment on operational considerations in the appropriate sections of the test report. A deferral does not change the requirement to test a system capability, function, or mission, only the timeframe in which it is evaluated.

4.6.2.2.1.2.1 When Deferrals are Appropriate

Deferrals will not normally be granted for early operational assessments (EOAs), operational assessments (OA)s, or any OT&E prior to IOT&E. Performance shortfalls should be identified sufficiently early to document system capability maturity in the appropriate CDD, CPD, and TEMP. When unanticipated problems with system maturity or test resources

would unduly delay an OT period, deferrals provide for continued testing and efficient use of scheduled resources (e.g., ranges, operational units, and assets).

4.6.2.2.1.2.2 Limitations to Test

A deferral may result in limitations to the scope of testing that may preclude COMOPTEVFOR and Director, MCOTEA from fully resolving all COIs.

4.6.3 CNO (N091) and DC, CD&I Approval of a Deferral Request

Deferrals for OT&E periods may only be granted after the program and resource sponsor and DC, CD&I have justified that the system is necessary and useful, and adds capability to the operating forces despite deviating from testing of a particular TEMP requirement. COMOPTEVFOR and Director, MCOTEA will then make a determination on adequacy of the test and a recommendation to conduct or delay testing because of deferral requests. The necessary programmatic inputs or changes to account for required additional test periods in which the deferred items are to be tested must be provided to CNO (N091) via concurrence of resource sponsor (Navy only) or direct to DC, CD&I for Marine Corps programs. CNO (N091) and DC, CD&I will make final determination and authorize OTA to proceed to test. For programs on the OSD T&E oversight list, the deferral(s) must be coordinated with DOT&E prior to CNO (N091) and DC, CD&I approval. Approval of deferral requests do not alter the associated requirement and approved deferrals shall be tested in subsequent operational testing.

4.6.4 Waiver and Deferral Requests

Waivers and deferrals shall be requested in the OT&E certification message. If a waiver or deferral request is anticipated, the PM shall coordinate with the program sponsor (Navy only), CNO (N091) and DC, CD&I, and COMOPTEVFOR and or Director, MCOTEA prior to the OTRR or similar review forum. Deferrals shall be identified as early as possible, normally no later than 30 days prior to OTRR. Use of the T&E WIPT or similar forum is also recommended to ensure full understanding of the impact on operational testing.

When requesting a waiver or deferral, the PM shall outline the limitations that the deferral or waiver will place upon the system under test, and their potential impacts on fleet use.

Further, a statement shall be made in the OT&E certification message noting when approved deferrals will be available for subsequent OT.

4.7 OT&E

4.7.1 Independent OT&E

Reference (a) requires an independent organization be responsible for all OT&E. OT&E shall be conducted by the OTA (COMOPTEVFOR or Director, MCOTEA) or an agent designated by the OTA for ACAT I, IA, II, III, and IVT programs. COMOPTEVFOR and the Director, MCOTEA are responsible for planning and conducting OT&E, reporting results, providing evaluations of each tested system's operational effectiveness and suitability, and identifying and reporting system deficiencies. Additionally, COMOPTEVFOR is responsible for providing inputs to tactics, as appropriate, and making recommendations regarding fleet introduction. OTA shall determine whether thresholds in the CDD and CPD have been satisfied as part of the overall evaluation of the system’s performance. See reference (a), enclosure 6, for implementation requirements for all DON ACAT programs requiring OT&E.

4.7.1.1 Start of OT&E

COMOPTEVFOR and Director, MCOTEA may commence operational testing upon receipt of a certification message unless waivers or deferrals are requested. When waivers or deferrals are requested, COMOPTEVFOR and Director, MCOTEA may start testing upon receipt of waiver or deferral approval from CNO (N091) and DC, CD&I. The OTA shall issue a start test message when OT begins.

4.7.1.2 De-certification and Re-certification for OT&E

When evaluation of issued deficiency and anomaly reports or other information indicates the system will not successfully complete OT&E, de-certification may be originated by the SYSCOM commander, PEO, and DRPM, after coordination with the program sponsor and PM, to withdraw the system certification and stop the operational test. Withdrawal of certification shall be accomplished by message to CNO (N091) and DC, CD&I, and COMOPTEVFOR and Director, MCOTEA stating, if known, when the system will be evaluated for subsequent certification and restart

of testing. When a system undergoing OT&E has been de-certified for OT, the SYSCOM commander, PEO, and DRPM must re-certify readiness for OT&E prior to restart of OT per paragraph 4.6.2.

4.7.2 OT&E Plans

See reference (a), enclosure 6, for implementation requirements for all DON ACAT programs requiring OT&E. ACAT I, II, and programs on the OSD T&E oversight list require DOT&E approval. An ACAT I program or an OSD designated T&E oversight program requires an OA to support an LRIP decision. For programs on the OSD T&E oversight list, the OA test plans require formal approval by DOT&E. An OA does not have to use production representative articles.

4.7.3 Operational Test (OT) for Configuration Changes

The DA shall ensure that T&E planning includes OT&E for significant configuration changes or modifications to the system. OT&E events are necessary for the OTA to substantiate a Navy and Marine Corps release and introduction recommendation to the CNO and CMC for all such system changes.

4.7.4 OT for Information Assurance

All weapon, C4ISR, and IT programs shall be tested and evaluated for appropriate application of IA (reference (a)). Systems shall incorporate IA controls identified in reference (d), based upon the objective of MAC and confidentiality level. IA controls shall be evaluated for adequacy and the appropriate authority to operate approval shall be verified prior to entering OT. The OTA shall evaluate operational IA vulnerabilities and capabilities, to include the capability to protect and restore data and information, and to detect and react based on DIA/TAC validated IA threats per references (c) and (r).

4.7.5 Quick Reaction Assessment (QRA)

When an urgent operational need is identified for a system in development or when a system has been granted RDC or RDD status (as defined in chapter 1, paragraph 1.8) by ASN(RD&A), it may be necessary to modify the established OT process to rapidly deliver that capability to the fleet. In such cases, the program sponsor may obtain an OTA assessment of operational capabilities, limitations, and considerations for deploying the system. Navy program sponsors may request a QRA from CNO (N091). USMC program sponsors may request a QRA from Director, MCOTEA. When approved,

COMOPTEVFOR or Director, MCOTEA should conduct the assessment and issue a report as soon as possible. The following information should be included in the QRA request:

a. The purpose of the assessment and, specifically, what system attributes the program sponsor wants assessed;

b. The length of time available for the assessment;

c. The resources available for the assessment; and

d. Which forces will deploy with the system prior to IOC.

For an RDD system the OTA shall assess the need for a QRA and provide a recommendation in writing to the PEO, SYSCOM, or DRPM charged with developing a test plan for the RDD system.

QRAs do not obviate or replace scheduled OT in an approved TEMP for acquisition programs. Systems in RDC or RDD status that have completed QRA will normally undergo formal OT when they transition to program status.

4.7.6 OT&E Information Promulgation

See reference (a), enclosure 6, and this chapter, paragraph 4.11, T&E Reports, for implementation requirements for all DON ACAT programs requiring OT&E.

4.7.6.1 Milestone Decision Authority (MDA) Briefing

See reference (a), enclosure 6, for implementation requirements for DON ACAT I and IA programs and programs on the OSD T&E oversight list. The OTA will brief the results of program OTs at MDA decision meetings.

4.7.7 Use of Contractors in Support of OT&E

See reference (a), enclosure 6, for implementation requirements for all DON ACAT programs requiring OT&E.

4.7.8 Visitors

During operational testing, observers and other visitors are authorized at the discretion of COMOPTEVFOR, or Director, MCOTEA, as appropriate.

4.8 Annual Office of the Secretary of Defense (OSD) T&E Oversight List

The annual OSD T&E oversight list identifies those DON programs subject to OSD T&E oversight. ACAT I, II, and programs requiring LFT&E are generally included in oversight. Other programs that generate Congressional, public, or special interests are routinely included in the listing. DON T&E information related to programs on the OSD T&E oversight list will be coordinated through CNO (N091) for Navy programs. PMs for USMC programs subject to OSD T&E oversight will coordinate DT information, and Director, MCOTEA, will coordinate OT information.

4.9 Live-Fire Test and Evaluation (LFT&E)*

The DA is responsible for LFT&E strategy development, associated TEMP input, monitoring, and supporting the conduct of LFT&E. Per reference (a), DOT&E shall approve the LFT&E strategy for programs covered by statute prior to the decision to enter into EMD (normally milestone B). For USMC programs not required by statute to conduct LFT&E, but where LFT&E is appropriate, the Director, MCOTEA, shall concur with the LFT&E strategy as approved by the MDA in the TES or TEMP.

Per section 2366 of title 10, U.S.C., realistic survivability and lethality testing shall be completed, the report submitted, and results considered, prior to making a beyond LRIP decision.

Survivability and lethality tests required by statute must be completed early enough in the EMD phase to allow correction of any design deficiency before proceeding beyond LRIP.

LFT&E events deemed necessary prior to milestone B may be conducted under a stand-alone plan (in lieu of an approved TEMP). The intention of this policy is to facilitate agreement between developers and oversight agencies. This stand-alone plan for pre-milestone B LFT&E events will follow the same approval process as prescribed for a TEMP. The stand-alone plan should be limited in scope and address only objectives of the pre-milestone B LFT&E events. Subsequently, the stand-alone plan should be integrated into the TEMP.

Each program increment or modification requires a review for LFT&E requirements. If such requirements are found to exist, they must be addressed through the TEMP process.

See reference (a), enclosure 6, for implementation requirements for a program that is a covered major system, a major munitions program, a missile program, or a product improvement (modification) thereto. A covered major system means a vehicle, weapon platform, or conventional weapon system that provides some degree of protection to users in combat and is a major system per section 2302(5) of title 10, U.S.C. A major munitions program means a program that is planning to acquire more than a million rounds or is a conventional munitions program that is a major system.

*Not applicable to ACAT IA programs.

4.10 Comparative Testing

4.10.1 Programs Defined by Statute

Sections 2350a(g) and 2359b of title 10, U.S.C., establish two programs: the Foreign Comparative Testing (FCT) Program and the Defense Acquisition Challenge Program (DACP). The FCT program tests allied or friendly nations' defense equipment, munitions, and technologies to see if they can satisfy DoD needs. DACP allows non-DoD entities to propose technologies, products, or processes to existing DoD acquisition programs. At the OSD level, both FCT and DACP are managed by the Comparative Testing Office (CTO) (http://www.acq.osd.mil/cto) under USD (AT&L)DDR&E and Deputy Under Secretary of Defense Advanced Systems and Concepts (DUSD(AS&C)).

4.10.2 Developing Activity Comparative Testing Responsibilities

DAs shall follow comparative testing guidance provided by OSD (CTO). Where comparative testing is a major portion of an acquisition program, it should be included in the TEMP. Comparative testing derived components of an acquisition program shall be treated like contractor non-developmental items. Acquisition programs that include comparative testing derived items, are not exempt from DT, OT, or LFT&E provisions of this instruction. Reference (a), enclosure 6, provides DoD direction on comparative test programs.

4.11 Test and Evaluation Reporting

This paragraph describes mandatory T&E reporting requirements for DON ACAT programs as indicated in subsequent paragraphs. Per reference (a), enclosure 6, section 2c(7), DOT&E and the Deputy Director for DT&E and Office of Defense Systems (ODS) in the Office of the USD (AT&L) shall have full and timely access to all available developmental, operational, and LFT&E data and reports.

4.11.1 DoD Component (DON) Reporting of Test Results

See reference (a), enclosure 6, for implementation requirements for DON ACAT I, selected ACAT IAM, and other ACAT programs designated for OSD T&E oversight.

4.11.1.1 DT&E Reports

A report of results for all DT&E conducted in DON shall be provided to the appropriate decision authority and to the OTA as needed. For programs on the OSD T&E oversight list subject to DOT&E oversight, the DA shall provide copies of formal DT&E reports to the Deputy Director, DT&E in the ODS in OUSD(AT&L) and COMOPTEVFOR and Director, MCOTEA at a pre-agreed timeframe prior to program decision point reviews. Copies of DT&E reports for all ACAT I programs shall be provided to the Defense Technical Information Center (DTIC) with the SF 298 Report Documentation Page. Copies of Navy internal DT&E event reports shall be forwarded to CNO (N091); the Deputy Director, DT&E; and ASN(RD&A). Unless otherwise coordinated, DT&E reports shall be provided to the OTA at least 30 days prior to start of OT. See reference (s) for distribution statements required on technical publications and reference (t) for principles and operational parameters on DoD scientific and technical information programs.

4.11.1.2 OT&E Reports

COMOPTEVFOR and Director, MCOTEA shall issue operational test reports for ACAT I and IA programs within 90 days following completion of testing. All other operational test reports are due within 60 days of test completion. Programs subject to OSD T&E oversight shall provide copies of formal OT&E reports to DOT&E per pre-agreed timeframe prior to program decision reviews. When scheduling an FRP DR, schedulers shall consult DOT&E as to time required to prepare and submit the beyond LRIP report. Copies of OT&E reports for all ACAT I programs, except those which contain vulnerabilities and limitations data for key

war-fighting systems, shall be provided to the DTIC with the SF 298. For OSD oversight program T&E events, as defined in the TEMP, copies of Navy OT&E reports shall be forwarded via CNO (N091) to DOT&E and DASN(RDT&E) CHSENG. MCOTEA shall distribute its report to the ACMC, and upon release to other offices as appropriate (for example, the MDA, PM, Marine operating forces, ASN(RD&A), etc.) and DOT&E for ACAT I, selected ACAT IA, and other OSD T&E oversight programs. See reference (s) for distribution statements required on technical publications and reference (t) for principles and operational parameters on DoD scientific and technical information programs.

4.11.2 LFT&E Report for FRP DR*

For programs involving covered major systems, major munitions or missiles, or product improvements (modifications) thereto, the DA shall submit an LFT&E report to DOT&E, via CNO (N091) or Director, MCOTEA, as appropriate. The submission shall allow DOT&E sufficient time to prepare an independent assessment and submit it to Congress prior to the program proceeding into FRP. PMs shall keep CNO (N091) apprised of the program's LFT&E progress and execution. See reference (a), enclosure 6, for implementation requirements for programs subject to LFT&E statutes.

*Not applicable to ACAT IA programs.

4.11.2.1 LFT&E Waivers*

Request to waive full-up system-level live-fire survivability and lethality testing must be submitted by USD(AT&L) for ACAT ID programs or ASN(RD&A) for ACAT IC programs and below and approved by DOT&E prior to entry into EMD. Waiver requests not approved prior to EMD require Congressional relief granted to SECDEF on a case-by-case basis. Waivers shall be coordinated with the program sponsor and CNO (N091) or Director, MCOTEA, as appropriate. Programs seeking LFT&E waivers must provide an alternate LFT&E strategy and plan that are acceptable to DOT&E.

*Not applicable to ACAT IA programs.

4.11.3 Beyond Low-Rate Initial Production (BLRIP) Report

ACAT I programs and programs on the OSD T&E oversight list designated by DOT&E, shall not proceed beyond LRIP until DOT&E has submitted a written report to the Secretary of Defense and

the Congress as required by section 2399 of title 10, U.S.C. See reference (a), enclosure 6, for the BLRIP report for designated OSD T&E oversight programs.

4.11.3.1 Early Fielding or Interim BLRIP Report

For MDAP or DOT&E oversight programs, if a decision is made to proceed to operational use or to make procurement funds available for the program prior to a final decision to proceed beyond LRIP (or limited deployment for MDAPs that are AISs), DOT&E is required to submit the above report, but may decide to submit an interim or partial report if the operational testing completed to date is inadequate to determine operational effectiveness and suitability and survivability. If an interim or partial report is submitted, the DOT&E will prepare and submit the required final BLRIP report as soon as possible after a final IOT&E report is provided.

4.11.4 Director, Operational Test and Evaluation (DOT&E) Annual Report

DOT&E prepares an annual report of programs subject to OT&E on the OSD T&E oversight list and all programs covered by LFT&E during the preceding fiscal year. The report covers basic program description, T&E activity, and provides the Director's assessment of the T&E. OPNAV (N912) coordinates efforts to review and validate factual information to support DOT&E requests in the development of the report. DON acquisition and test agencies may be tasked by OPNAV (N912) to assist in this effort.

4.11.5 Foreign Comparative Test Notification and Report to Congress*

The DUSD (AS&C) shall notify Congress a minimum of 30 days prior to the commitment of funds for initiation of new foreign comparative test evaluations. See reference (a), enclosure 6, for implementation requirements for DON ACAT programs involved in foreign comparative testing.

*Not applicable to ACAT IA programs.

Chapter 5
Resource Estimation

References: (a) DoD Instruction 5000.02 of 8 Dec 2008
(b) SECNAVINST 5223.2
(c) USD(AT&L)ARA/CAIG Memorandum, Required Signed and Documented Component-level Cost Position for Milestone Reviews, of 12 Mar 2009
(d) ASN(FM&C) and ASN(RD&A) Memorandum, DON Service Cost Positions, of 7 Jan 2010
(e) DoD 5000.4-M, Department of Defense Cost Analysis Guidance and Procedures Manual, of Dec 92
(f) USD(P&R) Memorandum, Interim Policy and Procedures for Strategic Manpower Planning and Development of Manpower Estimates, of 10 Dec 2003
(g) DoD 5000.04-M-1, Cost and Software Data Reporting Manual, of 18 Apr 2007

5.1 Resource Estimates

Department of the Navy (DON) resource estimating follows the general Department of Defense (DoD) policy described in reference (a), enclosure 7, for all DON acquisition category (ACAT) programs. Additional implementation guidance is contained in references (b) through (g). The responsibilities of the Naval Center for Cost Analysis (NCCA) are described in paragraph 7t under the responsibilities paragraph of this instruction and reference (b).

5.1.1 Life-Cycle Cost Estimates and Service Cost Position

In addition to developing component cost analyses for ACAT IAC and joint IAM programs for which DON is the lead, NCCA develops life-cycle independent cost estimates (ICEs) for ACAT IC programs. NCCA also independently assesses the influence of cost drivers and the accuracy, completeness, and risks and uncertainties of life-cycle cost estimates (LCCEs) for ACAT ID programs. Systems commands' cost organizations develop LCCEs for all ACAT programs in support of program managers (PMs).

A DON service cost position (SCP) shall be established for ACAT I, IA, and selected ACAT II programs to serve as the DON component-level cost position to comply with OSD requirements

stated in reference (c). The process for preparing and approving the SCP is described in reference (d). The SCP is DON's official LCCE for ACAT I, IA, and selected ACAT II programs and provides an accounting of all resources and associated cost elements required to develop, produce, deploy, sustain, and dispose of a particular system. The SCP encompasses all past (or sunk), present, and future costs of the subject program, regardless of funding source. The life of a program is defined as program initiation through procurement of the last item plus the service life of the item plus the time for disposal.

In order to implement section 2334 of title 10, United States Code (U.S.C.), and the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) Directive-Type Memorandum 09-027, Implementation of the Weapon Systems Acquisition Reform Act of 2009, of 4 December 2009, the Deputy Assistant Secretary of the Navy (Cost and Economics) (DASN(C&E)) will state the confidence level used in establishing the cost estimate for ACAT I and IA programs and the rationale for selecting such confidence level. The confidence level statement shall be included in the acquisition decision memorandum (ADM) approving the acquisition program baseline (APB), and in any other cost estimates for ACAT I or IA programs prepared in association with the estimates for milestone A, program initiation for ships, milestone B, low-rate initial production (LRIP), full-rate production (FRP), any certification pursuant to sections 2366a, 2366b, or 2433a of title 10, U.S.C., and any report pursuant to section 2445c(f) of title 10, U.S.C. For ACAT I programs, the confidence level statement shall also be included in the next selected acquisition report (SAR) prepared in compliance with section 2432 of title 10, U.S.C., and for ACAT IA programs, in the next quarterly report prepared in compliance with section 2445c of title 10 U.S.C.

5.1.2 Cost Analysis Requirements Description (CARD)

A CARD is required per reference (b), generated according to reference (e), whenever a program LCCE is required (See table E2T2).

5.1.3 Manpower Estimates*

Manpower estimates are required by statute for ACAT I programs. Manpower estimates shall also be developed for other ACAT programs that are manpower significant at the request of the component manpower authority per reference (f). CNO (N1) and CMC (Deputy Commandant, Combat Development and Integration (DC,

CD&I)) are the designated Navy and Marine Corps Component manpower authorities, respectively. For ACAT ID programs, CNO (N1) and CMC (DC, CD&I) shall forward approved manpower estimates to the office of the Under Secretary of Defense (Personnel and Readiness). Additional policy and guidance on the development of manpower estimates (including required submission timeline, content and format, and use of manpower estimates) is provided in reference (f).

*Not applicable to ACAT IA programs.

5.2 Program Funding

No acquisition program shall be approved to proceed beyond program initiation unless sufficient resources are programmed in the most recent Future Years Defense Program (FYDP), or written assurance is given that it will be programmed in the Planning, Programming, Budgeting, and Execution System (PPBES) cycle. Program affordability analysis, including life-cycle costs, shall be assessed and reported at each program decision point. See reference (a), enclosure 2, paragraph 6d(4), for implementation requirements for all DON ACAT programs.

Full funding to support approved ACAT programs shall be included in each program's budget submission. Full funding shall include costs associated with interfaces with other programs. Full funding in this regard means annual submission of financial requirements by the PM for total program costs. CNO and CMC shall ensure funding requirements for ACAT programs, abbreviated acquisition programs (AAPs), non-acquisition programs, and rapid deployment capability (RDC) programs are satisfied in the development of each PPBES phase.

FYDP or budgeted funding shall be shown at each program decision point (except milestone A) or other program review (PR).

If the MDA selects an alternative which exceeds FYDP or budgeted resources, then the need for additional resources, termed as projected total beyond-FYDP life-cycle cost, shall be identified to CNO (N8) and CMC (DC, P&R). CNO (N8) and CMC (DC, P&R) shall forward the recommended resource action to Secretary of the Navy (SECNAV), ASN(RD&A), or MDA, as appropriate, with a copy to ASN(RD&A) (if not the MDA) and

ASN(FM&C) prior to formal ADM approval to proceed with the restructured program. SECNAV, ASN(RD&A), or the MDA, as appropriate, shall direct appropriate action.

5.3 Contract Management Reports

The reports prescribed below shall be used for all applicable defense contracts as they aid in effective resource management. Use of electronic data interchange shall be required as directed by the individual data item descriptions. The work breakdown structure (WBS) used in preparing reports covered by this section shall conform to the standard Department of Defense (DoD) WBS (see MIL-HDBK-881A). Earned value management (EVM) contract performance reports (CPRs), integrated master schedules (IMSs), and contract funds status reports (CFSRs) for ACAT I programs will be provided to the Office of the Secretary of Defense's (OSD's) Defense Cost and Resource Center (DCARC) at the earned value management central repository (EVM CR) at http://dcarc.pae.osd.mil/EVM/Index.aspx directly by the contractors. All ACAT I programs and contractors listed in EVM contract data requirements lists (CDRLs) shall register with the EVM CR at the above Web site. All ACAT I program EVM CDRLs are to list the DCARC as a distribution addressee for EVM reports. Prime contractors are responsible for flowing down EVM CDRL reporting requirements to subcontractors that meet the reporting thresholds. Subcontractors are also to submit EVM reports electronically direct to DCARC.

5.3.1 Cost and Software Data Reporting (CSDR) for Hardware and Software -- (DID DI-FNCL-81565B/81566B/81567B) and Software Resources Data Report (SRDR) –- (DID DI-MGMT-81739/81740)

Reference (a), table 4, and reference (g) describe all requirements for cost and software data reporting for contracts, subcontracts, intra-government work agreements, and other agreements, depending upon their value.

5.3.2 Contract Performance Report (CPR) -- (DID DI-MGMT-81466A)

PMs shall use the following guidelines in developing CPR reporting requirements:

a. CPRs are required for cost or incentive contracts, subcontracts, intra-government work agreements, and other agreements valued at or greater than $20 million in then-year

dollars per reference (a). CPRs may be tailored when such contracts, subcontracts, or agreements are valued at less than $50 million in then-year dollars per the Department of Defense Earned Value Management Implementation Guide (EVMIG). Additional CPR requirement thresholds, tailoring guidance, and submission formats are contained in the DoD EVMIG.

b. CPR detail shall be designated at the level of the contract WBS (CWBS) necessary to facilitate effective data collection, management, and reporting. Normally data will be collected at level 3 of the CWBS, but lower levels may be specified for high-cost or high-risk items.

c. Anytime CPRs are required, an integrated baseline review (IBR) is required. During this review, the contractor shall jointly engage with the Government's PM to evaluate the risks inherent in the performance measurement baseline. CPR data shall also be assessed to ensure that an effective Earned Value Management System (EVMS) is being used (see The Program Managers' Guide to the Integrated Baseline Review Process).

d. CPRs shall be provided in a readable digital format, e.g., the American National Standards Institute (ANSI) X12 standard (839 transaction set), the United Nations Electronic Data Interchange for Administration, Commerce and Transport (UN/EDIFACT) standard (project cost (PROCST) reporting message), or the Extensible Markup Language (XML) equivalent per the DoD EVMIG. Additionally for ACAT I programs, CPRs shall be distributed to the OSD's DCARC EVM CR.

5.3.3 Integrated Master Schedule (IMS) -- (DID DI-MGMT-81650)

PMs shall use the following guidelines in developing IMS reporting requirements:

a. IMS reporting is required for cost or incentive contracts, subcontracts, intra-government work agreements, and other agreements valued at or greater than $20 million in then-year dollars per reference (a). IMS reporting may be tailored when such contracts, subcontracts, or agreements are valued at less than $50 million in then-year dollars per the DoD EVMIG. Additional IMS requirement thresholds, tailoring guidance and submission formats are contained within the DoD EVMIG.

b. IMS detail shall be maintained at the contract WBS level necessary to facilitate data collection, management and reporting.

c. IMS shall be evaluated for risk during IBR (see The Program Managers' Guide to the Integrated Baseline Review Process).

d. IMSs shall be provided in native digital format to the PM for all applicable programs and for ACAT I programs shall include on distribution the DCARC EVM CR.

5.3.4 Contract Funds Status Report (CFSR) -- (DID DI-MGMT-81468)

PMs shall use the following guidelines in developing CFSR reporting requirements:

a. The PM shall obtain a DD 1586 Contract Funds Status Report (CFSR) on cost or incentive contracts and subcontracts over 6 months in duration and valued at or greater than the threshold in subparagraph 5.3.4b below. The CFSR provides the PM with information to update and forecast contract funding requirements; to plan and decide on funding changes; to develop funding requirements and budget estimates in support of approved programs; and to determine funds in excess of contract needs and available to be deobligated. PMs shall use DID DI-MGMT-81468 to obtain the CFSR.

b. The CFSR has a specific application threshold for all cost or incentive contracts and subcontracts valued at or greater than $20 million (in then-year dollars) for all ACAT programs; however, the PM shall carefully evaluate application to cost or incentive contracts and subcontracts of less than $20 million (in then-year dollars). The PM shall require only the minimum information necessary for effective management control. FFP contracts shall not require the CFSR unless unusual circumstances dictate specific funding visibility.

c. CFSRs shall be provided in a readable digital format, e.g., the ANSI X12 standard (839 transaction set), the UN/EDIFACT standard (PROCST message), or the XML equivalent per the DoD EVMIG. Additionally for ACAT I programs, CFSRs shall include on distribution the OSD's DCARC EVM CR.

5.4 Analysis of Alternatives (AoA)

The gate 1 and gate 2 processes of chapter 1, paragraphs 1.11.4.1.1.1 (gate 1) and 1.11.4.1.1.2 (gate 2) amplify the AoA processes defined below and the guidance in SECNAV M-5000.2 DON Acquisition and Capabilities Guidebook, paragraph 6.4.

AoAs shall consider the use of a system within a current system of systems (SoS) or family of systems (FoS). AoA study guidance shall including any affordability constraints or TOC guidance.

5.4.1 Weapon System AoA (and IT AoA where noted)

The cognizant program executive officer (PEO), SYSCOM commander and direct reporting program manager (DRPM), or ASN(RD&A), and Chief of Naval Operations (CNO) and Commandant of the Marine Corps (CMC), but not the PM, shall have overall responsibility for the AoA which shall be conducted per the guidance provided in reference (a). The CNO and CMC, or designee, as supported by the analysis director, shall propose the AoA study guidance for pre-ACAT IC, IAC, II, III, IV programs and an AoA study plan for all pre-ACAT programs in coordination with an AoA integrated product team (IPT), under the overall guidance of the Acquisition Coordination Team (ACT) where established. Common systems shall be included as one of the alternatives when one may provide the needed capability. An analysis director shall be assigned to conduct each AoA. The AoA study guidance shall be approved at materiel development decision (MDD) which begins the materiel solution analysis phase. The AoA study guidance for pre-ACAT ID and IAM programs is prepared by Director of Cost Assessment and Program Evaluation (DCAPE).

Preceding each AoA study, those related, current and legacy systems, targeted for replacement or upgrade, will be expressly analyzed, and results reported, for use as baselining data for the new AoA study in terms of those systems' sustainment performance and associated ownership costs. The AoA shall apply this assessment to the sustainment effectiveness and life-cycle affordability perspective of the preferred "materiel alternatives." AoA analysis shall include common and joint sustainment infrastructure capabilities and costs projected to be employed, including those associated with maintenance infrastructure, facilities, environmental compliance, transportation and supply chains, information systems, and major common support equipment.

AoA study guidance is approved by:

a. DCAPE, after coordination with: MDA, ASN(RD&A) or designee, and OPNAV (N81) and CMC (Deputy Commandant, Combat Development and Integration (DC, CD&I)) for pre-ACAT ID and IAM programs;

b. MDA or designee and OPNAV (N81) and CMC (DC, CD&I) for pre-ACAT IC, IAC, II, and III programs; and

c. MDA and OPNAV (N81) and CMC (DC, CD&I) for ACAT IV programs.

The AoA Study Plan is approved by:

d. DCAPE, after coordination with: MDA, ASN(RD&A) or designee, and OPNAV (N81) and CMC (Deputy Commandant, Combat Development and Integration (DC, CD&I)), CNO (N4) for pre-ACAT ID and IAM programs;

e. MDA or designee and OPNAV (N81) and CMC (DC, CD&I) for pre-ACAT IC, IAC, II and III programs; and

f. MDA and OPNAV (N81) and CMC (DC, CD&I) for pre-ACAT IV programs.

AoAs shall consider alternative ways for tactical systems to improve energy efficiency and also consider the fully burdened cost of energy in conducting trade-off analyses for all tactical systems that create a demand for energy.

Public Law 111-23 of 22 May 2009, Section 201, requires consideration of trade-offs among cost, schedule, and performance objectives in establishing requirements for acquisition programs. Officials outside the Joint Requirements Oversight Council (JROC) who are responsible for acquisition, budget, and cost estimation shall be given a chance to develop cost and schedule estimates before the JROC approves a capability development document (CDD) or capability production document (CPD) requirement. CDD and CPD requirements shall be structured in such a way that will allow for evolutionary and incremental development. The AoA process is an initial step in an ongoing process to implement the foregoing during a comparison of alternatives and associated cost, schedule, and performance trade-offs within and among the various alternatives analyzed during the materiel solution analysis phase. Cost, schedule, and performance trade-offs shall also be considered during the development of the system design specification during the technology development phase and also during the engineering and manufacturing development (EMD) phase

as part of the annual configuration steering board oversight process. The AoA shall determine whether or not each alternative can meet JROC established cost objectives and initial operational capability schedule objectives as defined in the initial capabilities document.

5.4.2 IT AoA

The process used for weapon system AoAs shall also be used for IT AoAs tailored as appropriate. All IT AoAs shall analyze DOTMLPF implications. New IT and NSS development shall not be pursued when "business" process reengineering is able to satisfy the identified capability gap. Process redesign shall be considered in the AoA as a key factor that impacts both the cost and effectiveness of each alternative evaluated. Total ownership cost thresholds and objectives in the CDD and CPD may reflect reduced costs associated with process redesign.

5.4.3 Navy AoA Environmental Reviews

Per the environmental readiness requirements and goals of CNO memorandum 5090 Ser N4/8U156042, Environmental Readiness in Systems Acquisition, of 29 Jul 2008, Navy AoA IPTs shall include an environmental expert who shall provide a review of the preferred system alternative from an environmental readiness and environment, safety, and occupational health (ESOH) standpoint, and provide an assessment of the likely environmental challenges in developing, testing, and training with the preferred system alternative. This assessment shall be provided to the fleet environmental staffs for situational awareness on system acquisition programmatic efforts to address environmental planning and ESOH requirements associated with the preferred system’s test and evaluation, home-porting and basing, post-IOC usage, and fleet training.

5.5 Cost as an Independent Variable (CAIV)

The CAIV concept shall be applied to all DON ACAT programs as described in the Defense Acquisition Guidebook.

Chapter 6
Systems Engineering and Human Systems Integration

References:
(a) DoD Directive 5000.01 of 12 May 2003
(b) DoD Instruction 5000.02 of 8 Dec 2008
(c) OPNAVINST 3960.16A
(d) SECNAVINST 4140.2
(e) DoD 4140.1-R, DoD Supply Chain Materiel Management Regulation, of 23 May 2003
(f) ISO 9001 Quality Management Systems - Requirements Supplemented by AS9100 International Aerospace Quality Standard
(g) CJCSI 3170.01G
(h) Manual for the Operation of the Joint Capabilities Integration and Development System, of 31 Jan 2011
(i) DoD Directive 4630.05 of 5 May 2004
(j) DoD Instruction 4630.8 of 30 Jun 2004
(k) CJCSI 6212.01E
(l) Department of Defense Net-Centric Services Strategy: Strategy for a Net-Centric Service-Oriented DoD Enterprise, of 4 May 2007
(m) ASN(RD&A) CHSENG Net-Ready Key Performance Parameter (NR-KPP) Implementation Guidebook Version 1.0, of 1 Oct 2009 (restricted link) (NOTAL)
(n) MCO 3093.1C
(o) SECNAVINST 5000.36A
(p) ASD(NII)/DoD CIO Memorandum, The Department of Defense Architecture Framework (DoDAF) Version 2.0, of 28 May 2009
(q) NAVSEAINST 9410.2/NAVAIRINST 5230.20/ SPAWARINST 5234.1
(r) MARCORSYSCOM, C4I Interoperability and Integration Management Plan, of 2 Sep 2005
(s) OPNAVINST 9070.1
(t) OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment, of 10 Feb 98
(u) CJCSI 3901.01C (limited link)
(v) OPNAVINST 5430.56
(w) DoD Instruction 4650.01 of 9 Jan 2009
(x) DoD Directive 3222.3 of 8 Sep 2004
(y) DoD Directive 1322.18 of 13 Jan 2009
(z) OPNAVINST 9640.1A

(aa) MIL-STD 882D, Standard Practice for System Safety, of 10 Feb 2000
(ab) SECNAVINST 5100.10J
(ac) 32 CFR 775
(ad) 32 CFR 187
(ae) OPNAVINST 5090.1C
(af) MCO P5090.2A
(ag) Assistant Secretary of the Navy (Installations and Environment) Memorandum 99-01, Requirements for Environmental Considerations in Test Site Selection, of 11 May 99
(ah) Under Secretary of the Navy Memorandum, Compliance with Environmental Requirements in the Conduct of Naval Exercises or Training at Sea, of 28 Dec 2000
(ai) CNO Memorandum, Mid Frequency Active Sonar Effects Analysis Interim Policy, of 6 Mar 2006
(aj) National Aerospace Standard (NAS) 411, Hazardous Materials Management Program, of Jul 93
(ak) DASN(A&LM) Memorandum, Updated DoD Green Procurement Strategy, of 16 Jan 2009, with enclosure (1) USD(AT&L) Memorandum, Updated Green Procurement Program (GPP) Strategy, of 2 Dec 2008, with attachment (DoD GPP Strategy of Nov 2008)
(al) OPNAVINST 8020.14/MCO P8020.11
(am) Public Law 108-136, National Defense Authorization Act for Fiscal Year 2004, Section 802, Quality Control In Procurement Of Aviation Critical Safety Items And Related Services, of 24 Nov 2003/10 U.S.C. §2319
(an) DFARS 209-270, Aviation and Ship Critical Safety Items, of 22 Feb 2005
(ao) Joint Aeronautical Logistics Commanders (JALC), Aviation Critical Safety Item Management Handbook, of 4 Aug 2005
(ap) NAVSEAINST 9078.2
(aq) NAVSEAINST 9078.1

6.1 Systems Engineering

The program manager (PM) is accountable for accomplishing program objectives for total life-cycle systems management, including sustainment (total systems approach, per references (a) and (b)). PMs shall employ systems engineering as a mechanism to achieve the program objectives of optimal total system

performance (hardware, software, human, firmware, safety, shock and vibration, training, maintenance, logistics, and other total system performance factors) at minimal total ownership cost (TOC). PMs shall employ a comprehensive, structured, integrated and disciplined systems engineering approach to the life-cycle design of weapons, information technology (IT), and support systems and their integration and interoperability (achieved through net-centric operations). Systems engineering focuses on defining user needs, usability, and required functionality early and throughout the development cycle, formally documenting those requirements, and then proceeding with design synthesis and system validation to achieve an operationally effective and suitable, and affordable total capability. It includes factors of hardware, software and human operators, maintenance and support personnel, within the operations and sustainment environment. It also focuses on individual systems and includes system of systems (SoS) and or family of systems (FoS) considerations. Reference (c) defines SoS as "a set or arrangement of systems that results when independent and useful systems are integrated into a larger system that delivers unique capabilities." Missions are performed by an SoS, an arrangement of platforms and systems that deliver the mission capability. Therefore, systems engineering considers the mission-level SoS as part of the design process.

The PM shall institute a rigorous systems engineering discipline necessary to ensure that the DON meets the challenge of developing and maintaining needed warfighting capability. Systems engineering shall be embedded in program planning and be designed to support PEOs, PMS, and the entire acquisition life cycle. The systems engineering approach shall be managed to optimize total system performance and minimize TOC.

PMs shall provide for independent system engineering technical reviews (SETRs) and independent technical risk assessments of programs. The SETR process provides a framework for structured systems engineering management, including assessment of predicted system performance. SETRs provide the PM with a better understanding of the program’s technical health. PMs shall follow the Naval SYSCOM Systems Engineering Policy of 19 January 2010. SETRs shall be led by a senior technical Government official who is independent from the program being reviewed and conducted by an extended integrated product team (IPT). Technical reviews of program progress shall be event-driven. At completion of the system level critical design review, the PM shall assume control of the initial product baseline for all class 1 configuration changes. Per reference

(b), the PM shall use a configuration management approach to establish and control product attributes and the technical baseline across the total life-cycle.

The SETR process is structured to support PMs in the use of Institute of Electrical and Electronics Engineers (IEEE) 12207 for software intensive systems by including IEEE 12207 process in an overarching review process.

SETRs shall be conducted for all DON acquisition category (ACAT) programs through out the acquisition process and should be tailored through the Systems Engineering Plan (SEP).

PMs shall use a systems engineering process to translate operational requirements and capability needs into a system solution that includes the design, test, manufacturing and support processes and products. The system engineering process shall be documented in a SEP describing how this process relates to the overall program, how the technical baseline will be managed, and how technical reviews and technical authority reports will be used as a means to ascertaining program technical risk. The Office of the Director, Defense Research and Engineering (DDR&E) provides a DoD approved recommended content for SEPs located on the OSD Software and Systems Engineering Web site http://www.acq.osd.mil/se/pg/guidance.html. Program executive officer (PEO) and systems command (SYSCOM) lead or chief systems engineer shall review assigned programs' SEPs and oversee their implementation. The SEP and contractor's SEMP shall be aligned to support the systems engineering processes.

The subject areas in this chapter shall be part of the systems engineering process and their impact on the development and production of the product design shall be determined with respect to total system life-cycle cost, schedule, performance, and technical risk (including interoperability, net-centricity, SoS and FoS, and integration).

6.1.1 Manufacturing and Production

Manufacturing and production planning considerations shall be identified early in the acquisition and design processes to identify key product and process characteristics and to ensure that validated process controls are implemented prior to production. This planning should include issues such as long-lead material, common and standard equipment, unique processes, unique identification (including radio frequency identification) [see http://www.acq.osd.mil/dpap/pdi/uid/about.html], tooling,

parts and material obsolescence, and calibration per reference (c). For aviation programs, reference (d) issues specific requirements for manufacture and production planning of critical safety items (CSIs) and associated critical and major characteristics and critical processes.

PMs shall establish a diminishing manufacturing sources and material shortages (DMSMS) program to proactively identify, resolve, and eliminate any negative impacts from DMSMS throughout all phases of a program's life-cycle as identified in reference (e).

A DMSMS plan is required for all ACAT programs (including joint programs) that include embedded microelectronics. A DMSMS plan shall cover all phases of a program's life-cycle. PMs shall manage obsolescence at the piece part level for all active microelectronics, unless otherwise supported by a business case analysis. Performance based logistics (PBL) agreements shall address mitigation of DMSMS risk to their program and the government.

6.1.2 Quality

A process shall be in place to assure product quality during design, development, manufacturing, production, and sustainment. Quality is determined by the extent that products and services meet requirements and satisfy the customer at an affordable cost. A quality system should monitor, measure, analyze, control and improve processes. Quality practices and quality requirements consistent with program complexity and criticality shall be used to assist in reducing risk, assuring quality, and controlling costs.

Reference (f) is a model for quality management systems. Contractors may propose alternative systems, as long as they are found technically acceptable by the SYSCOM technical authority and accomplish program objectives.

6.1.3 Acquisition Logistics and Sustainment

The PM shall use a life-cycle sustainment plan (LCSP) to plan, resource, and execute program life-cycle sustainment. The LCSP is integral to the acquisition strategy per reference (b). A required LCSP component is the logistics requirements and funding summary (LRFS), used to relate both program-specific and non-program (infrastructure) resource requirements to any and all aspect of LCSP execution. The LCSP and LRFS targets logistics

support, sufficient to enable all systems key performance parameters (KPPs) and key system attributes (KSAs) to perform at threshold performance values; beginning at initial operational capability (IOC), and specifically at ownership cost KSA threshold affordability. The LCSP must evolve in tandem with the SEP, to ensure that Joint Capabilities Integration and Development System (JCIDS) sustainment capabilities are integral to systems performance.

The LCSP should reflect the use of common and existing systems and equipment that may maximize and improve sustained readiness, minimize total life-cycle cost of ownership and mitigate parts and material obsolescence. All LCSPs will feature continual TOC planning for specific opportunities and investments intended to optimize life-cycle cost affordability. Each such initiative must set measurement metrics for initiative success, have as benchmarks current readiness, reliability, or ownership cost to be improved (if available); plus a timelined estimate for programmatic return on investment.

Program, resource, and assessment sponsorship shall coordinate to ensure adequate funding for life-cycle sustainment and execution. Recommendations for entry into subsequent phases should be based on adequate support resources being budgeted to meet and sustain support performance threshold values. The PM shall ensure that LRFS sustainment funding requirements are comprehensive, current, and incorporated into systems planning, budgets, and analyses. All Planning, Programming, Budgeting, and Execution System (PPBES) documentation shall demonstrate adequate funding has been budgeted, and projected to beyond the FYDP, to fully support the program through disposal.

PMs shall plan for and implement IUID to identify and track applicable major end items, configuration-controlled items, and Government-furnished property. Per reference (b), IUID planning and implementation shall be documented in an IUID implementation plan.

6.1.4 Open Architecture

PMs shall comply with naval open architecture (NOA) principles, which are a confluence of business and technical practices yielding modular, interoperable systems that adhere to open standards with published interfaces. Open architecture shall be addressed in the acquisition strategy and the SEP as

appropriate. PMs incorporating NOA principles in their contracts may use the Naval Open Architecture Contract Guidebook available at https://acc.dau.mil/oa.

6.1.5 Reliability, Availability, Maintainability, and Cost (RAM-C)

Quantitative RAM, including RAM-C parameters, per reference (b) and DoD Reliability, Availability, Maintainability, and Cost Rationale Report Manual, 1 June 2009, shall be specified in JCIDS CDDs and CPDs and integrated into systems design and development. RAM-C KPP and KSA capability criteria are critical for operationally effective and suitable systems. Program development shall include a reliability growth program per reference (b) which shall be documented in the SEP and LCSP. Per reference (b), each ACAT I program shall document its corrosion prevention and control (CPC) strategy in a corrosion prevention control plan at milestones B and C. For further CPC planning guidance, PMs should refer to SECNAV M-5000.2, DON Acquisition and Capabilities Guidebook, and the USD(AT&L) Corrosion Prevention and Control Planning Guidebook, Spiral 3, of September 2007. Other RAM-C related performance parameters may be specified as KPPs, KSAs, or other attributes that include energy, energy efficiency, and diagnostic and prognostic capability. These RAM-C and other related performance parameters shall be integrated fully into the systems engineering process and supportability analyses and testing.

Non-developmental items or commercial off-the-shelf (COTS) items shall be shown to be operationally effective and suitable for their intended use and capable of meeting their allocated RAM, including built-in-test requirements.

6.1.6 Interoperability and Integration

PMs shall ensure the interoperability and integration of all operations, functions, system interfaces, data, software based services, distributed decision-making systems, human processing capabilities, situational awareness systems, and other systems to reflect the requirements for all system elements: hardware, software, facilities, sustainment infrastructure, personnel, and data per references (g), (h), (i), (j), (k), and (l).

During the materiel solution analysis phase and the technology development phase, interoperability shall be addressed by including SoS or FoS considerations in applicable analyses.

If technology development activity is carried out, the PM shall ensure that the technologies developed will have no adverse effect on interoperability and integration at the SoS or FoS level. During the EMD phase, the PM shall ensure that interoperability is being maintained.

IT and NSS interoperability and supportability needs shall be managed, evaluated, and reported over the life of the system using an information support plan (ISP).

To assist PMs in applying relevant, appropriate, and well defined interoperability policies DASN(RDT&E) chief systems engineer (CHSENG) has created an NR-KPP guidebook (reference (m)). PMs should use the NR-KPP Guidebook to determine how to comply with DoD interoperability policies.

Reference (n) establishes Marine Corps management procedures to ensure compliance with integration, interoperability, and joint interoperability standards.

6.1.6.1 IT Design Considerations

As required by reference (o), in support of references (g), (h), (i), (j), and (k), documentation of database designs is an essential element of improving interoperability.

6.1.6.2 DoD Architecture Framework (DoDAF) and Global Information Grid Technical Guidance (GTG)

IT systems, including NSS, shall address interoperability and specify appropriate interoperability requirements. These requirements shall be consistent with DoD policies, standards (e.g., the GTG), the DoDAF, and DoD-level architectures (e.g., the DoD business enterprise architecture (BEA), the DoD defense information enterprise architecture (DIEA)). IT systems, including NSS, program new starts and block upgrades shall comply with the GTG. PMs shall coordinate with their respective Service requirements officers and resource sponsors and DASN(RDT&E) CHSENG to ensure GTG and DoDAF compliance with references (k) and (p).

DoD CIO requires that DoD and component architectures be developed using DoDAF version 2.0. In order to be compliant with this requirement, PMs shall develop their solution architectures so that the information contained in the architecture is captured

in a manner that is consistent with the DoDAF version 2.0 Meta Model (DM2). DON CIO has the lead, within the DON, for providing additional guidance on implementing DoDAF version 2.0.

6.1.6.3 System of Systems (SoS) and Family of Systems (FoS) Integration and Interoperability Validation

A testing certification and assessment process will be used to validate and assess the interoperability of selected SoS or FoS associated with mission threads developed by the operational community. Validation in this context means confirmation of interoperability through testing of actual systems supplemented as needed by high-fidelity simulation.

Interoperability validation and assessment of Navy SoS or FoS shall be aligned and coordinated with the Naval Warfare Systems Certification Policy per reference (q). Interoperability validation and assessment of Marine Corps SoS or FoS shall be conducted per the MARCORSYSCOM C4I Integration and Interoperability Management Plan (reference (r)). These processes shall take full advantage of the systems engineering integrated process teams and system performance documents prescribed in this instruction and of existing DoD, DON, and industry SoS or FoS engineering processes and test beds as well as modeling and simulation.

6.1.6.4 Interoperability and Integration Support

DASN(RDT&E) CHSENG shall support PMs in resolving interoperability and integration issues and shall advise ASN(RD&A) on all matters relating to interoperability and integration, including GTG.

6.1.6.5 Facilities and Infrastructure

To ensure the provision of interoperable support, facilities and infrastructure interface requirements shall be considered throughout the weapons system design and development process. Five to seven years are needed to acquire facilities, infrastructure and land, to ensure their timely availability to support system development, fielding and other supportability elements. Facilities and infrastructure affect such supportability elements as, training, maintenance, supply, environment, and support equipment. Effective design and planning increases system reliability by integrating design with the acquisition program.

6.1.7 Survivability

When developing survivability characteristics for critical weapon systems, PMs shall address all aspects of survivability including the effects of nuclear, chemical, biological, and radiological contamination and shall consider such effects in test and resource planning. PEOs, SYSCOM commanders, DRPMs, and PMs shall coordinate with the Joint Program Executive Office for Chemical Biological Defense (JPEO CBD), where appropriate. The requirements documents shall describe what standards from reference (s) will be required. The milestone decision authority (MDA) shall assess compliance with nuclear, chemical, biological, and radiological survivability requirements at milestone B and C.

6.1.8 Shipboard Systems Integration

Ship PMs shall develop a ship system design specification (SDS) that includes the performance and design requirements of chapter 1, annex 1-C, SDS Description, and the SDS Guidebook that will ensure integration of all embarked systems and subsystems (including aviation systems) in a manner that ensures established performance and support requirements are satisfied. Close coordination shall be established among PMs, PEOs, SYSCOM commanders, and DRPMs to ensure successful integration of all systems.

Ship PMs shall facilitate an integrated topside design (ITD) approach in both ship design and system development per NAVSEAINST 9700.2 of 11 September 1998.

Ship PMs shall facilitate lower TOC for new and legacy ships.

6.1.9 Performance Specifications

SDSs shall include the performance and design requirements of chapter 1, annex 1-C, SDS Description, and the SDS Guidebook for the procurement of new systems and subsystems and for the procurement of major modifications or upgrades to existing systems and subsystems and shall be written in performance-based terms to the extent practicable. When using performance-based strategies for the acquisition or sustainment of systems, subsystems, and spares, the use of military specifications and standards shall be limited to Government-unique requirements.

The gate 4 review of chapter 1, paragraph 1.11.4.2.1.1, approves the SDS and authorizes a program to proceed to gate 5 or milestone B. The SDS shall be used to develop the technical performance specifications of the EMD phase request for proposal (RFP).

Director, Naval Nuclear Propulsion Program (CNO (N00N)) shall determine the specifications and standards to be used for naval nuclear propulsion plants per Public Law 98-525 (section 7158 of title 42, U.S.C., note).

An order of preference for selection of specifications and standards shall be included in each contract per reference (t).

6.1.9.1 System Performance for SoS and FoS Programs

ASN(RD&A) shall establish a systems engineering IPT (SE IPT) for identified Navy or Marine Corps SoS or FoS. DASN(RDT&E) CHSENG will assist SE IPTs established for SoS or FoS, in systems integration and interoperability performance compliance. The SE IPT shall coordinate with their respective Service requirements officers and resource sponsors and DASN(RDT&E) CHSENG to assess appropriate analysis of alternatives (AoA) and CDDs and CPDs (per references (g) and (h)) to derive, allocate, and describe and document system performance and interfaces among the ACAT programs and modifications that provide SoS or FoS mission capability. For shipboard equipments, the SE IPT shall make use of the Naval Sea Systems Command ITD and ship design process to refine system design performance for effective integration into the platform.

6.1.9.2 Standardization and Commonality

References (a) and (b) direct the application of performance based strategies that reduce logistics costs and footprint, and facilitate interoperability. PMs shall seek and employ DON Enterprise-wide commonality to reduce the proliferation of non-standard parts, material, and equipment within and across system design and development. Non-standard parts are those items not currently in the DoD inventory or not produced per nationally recognized industry, international, federal, or military standards. The parts management process shall ensure the identification, life-cycle cost-benefit evaluation, and formal approval of proposed non-standard parts during EMD. The process shall include the periodic evaluation of

different items having similar capabilities, characteristics, and functions used in existing type, model, series, and class designs to reduce the number of distinct items.

Reference (c) designates the Navy's standard family of automatic test equipment. Reference (c) directs that acquisition of automatic test equipment, other than that designated for use at the intermediate, depot, or factory levels of maintenance, requires a waiver from ASN(RD&A).

6.1.10 Precise Time and Time Interval (PTTI) Support

The Superintendent of the U.S. Naval Observatory (USNO) is designated as the DoD and DON PTTI manager and shall maintain standard astrogeophysical products. Coordinated universal time (UTC) is mandated for the time of day information exchanged among DoD systems.

6.1.11 Geospatial Information and Services (GI&S)

Guidance for identifying and funding unique GI&S products required by a system under development is found in reference (u).

All DON GI&S support requirements will be coordinated with OPNAV (N84) and CMC, as appropriate.

6.1.12 Natural Environmental Support

Per reference (v), CNO is responsible for coordinating and implementing operational oceanographic, maritime weather, and astrogeophysical support requirements for all DoD users. PMs shall coordinate with OPNAV (N84) for meteorology and oceanography, GI&S, PTTI, and astrometry support as early as possible in the development cycle to ensure timely availability of essential products and services.

6.1.13 Electromagnetic Environmental Effects (E3) and Spectrum Supportability

References (w) and (x) provide guidance for E3 management and spectrum supportability. Per reference (b), PMs shall submit written determinations at milestones A, B, and C to the DON CIO that the electromagnetic spectrum necessary to support the operation of the system during its expected life-cycle is, or will be, available. Spectrum certification requires coordination of the DD 1494 with CNO (N2/N6) for Navy programs and with HQMC (C4) for Marine Corps programs. The DD 1494 is then submitted to

the Navy and Marine Corps Spectrum Center for approval by the NTIA. Approval of DD 1494 is required prior to milestone B as well as confirmation of the currency of the frequency allocation at each subsequent milestone. A life-cycle signature support plan (LSSP) approved by the cognizant PEO is required at milestone A, program initiation for ships, and milestones B and C. The LSSP shall be summarized in the technology development strategy and the acquisition strategy.

6.1.14 Software

PMs shall implement software acquisition and development policy. This policy addresses use of IEEE 12207 processes, mandated contract language including requirements for software development plan use by developers, and program office and developer implementation of four core software metrics. Policy details, as well as additional guidance for PMs, are available in the ASN(RD&A) Guidebook for Acquisition of Software Intensive Systems, available at https://www.acquisition.navy.mil/rda/home/organizations/dasns/rda_cheng.

6.2 Human Systems Integration (HSI)

The PM shall address HSI as part of a systems engineering approach which includes the extent to which humans will be required to operate, maintain, and support the resultant design, including analysis to reduce manpower, improve human performance, improve system reliability and usability, and minimize personnel risk. HSI is the integrated analysis, design, and assessment over the life-cycle of a system and associated support infrastructure of the following seven domains: manpower, personnel, training (MPT); human factors engineering (HFE); personnel survivability; habitability; and, safety and occupational health.

6.2.1 HSI in Acquisition

PMs and sponsors shall address HSI throughout all phases of the acquisition process to optimize total system performance, minimize TOCs, and ensure that the system is built to accommodate the characteristics of the user population that will operate, maintain, and support the system.

Per reference (b), the PM shall plan for HSI as early in the acquisition process as possible. Preparation of a separate human systems integration plan (HSIP) is at the discretion of the

MDA or PM. If the MDA or PM, when modifying a system for a Navy acquisition program, requires an HSIP, a copy of the HSIP shall be provided to OPNAV (N15).

When modifying a system (e.g., modernization or block upgrade), HSI issues and domains must be considered to ensure that configuration changes do not create new or unforeseen HSI issues. Life-cycle cost projections for capabilities and or systems shall include direct HSI costs (e.g., MPT), and should discuss indirect costs (e.g., medical benefits resulting from safety and occupational health risks).

6.2.2 Manpower, Personnel, and Training (MPT)

MPT requirements shall be optimized for the specific system in its operational context, and shall incorporate consideration for employment with distributed, collaborative systems and for similar and or related systems. Individual system and platform MPT requirements shall be developed in close collaboration with related systems (SoS and FoS) throughout the acquisition process to identify commonalities, distribute decision-making, merge requirements, and avoid duplication. These requirements shall include the requisite knowledge, skills, and abilities and associated reusable training elements. MPT analyses shall be conducted as part of the overall systems engineering process, and aligned with HFE analyses. Training products and simulations developed for initial and lifetime training shall be compatible with applicable Navy and Marine Corps integrated learning environments as required. Training shall be kept current as modifications occur throughout a program's life-cycle. A manpower estimate shall be developed for ACAT I programs per section 2434 of title, 10 U.S.C., and chapter 5, paragraph 5.1.3. A training system plan (TSP) shall be prepared as a program plan per chapter 2, paragraphs 2.1 and 2.9.1. The TSP shall comply with joint and coalition training requirements to ensure warfighter capability and efficiency per reference (y).

6.2.3 Human Factors Engineering (HFE)

The PM shall take steps to ensure ergonomics, HFE, and cognitive engineering is employed during systems engineering over the life of the program to provide for effective human-machine interfaces and to meet HSI requirements. Where practicable and cost effective, system designs shall minimize or eliminate system characteristics that require excessive cognitive, physical, or

sensory skills; entail extensive training or workload-intensive tasks; result in mission-critical errors; interfere with critical tasks or produce safety or health hazards.

6.2.4 Personnel Survivability

Per reference (b), PMs shall place a high priority on the personnel survivability requirements as defined by the survivability KPP. Personnel survivability requirements strive to reduce the risk of fratricide and personnel detection or targeting, and increase the odds of personnel survival if attacked or placed in a crash, ejection or egress and escape and evasion situation.

6.2.5 Habitability

The habitability standards in reference (z) shall be met for all ship programs. Where these standards cannot be achieved, a waiver shall be requested. The resource sponsor with concurrence from CNO (N4) and CNO (N1), or their designee, is the approval authority for such waivers. Waivers that affect health and safety must be evaluated via a system safety process per reference (b) and evaluated at a management level consistent with the risk.

6.3 Environment, Safety, and Occupational Health (ESOH)

PMs for all acquisition programs shall integrate life-cycle ESOH into their overall systems engineering and risk management processes. As part of risk reduction, the PM shall eliminate ESOH hazards where possible, and shall manage ESOH risks where hazards cannot be eliminated. Navy programs shall follow CNO memorandum 5090 Ser N4/8U156042, Environmental Readiness in Systems Acquisition, of 29 Jul 2008 regarding the integration of environmental readiness into acquisition.

DoD acquisition policy requires environment and safety to be addressed throughout the acquisition process. Occupational health is included in the DoD's list of safety considerations as are human and system interfaces, toxic and hazardous materials (HAZMAT) and substances, production and manufacturing, testing, facilities, infrastructure and land, logistical support, weapons, and munitions/explosives. DoD acquisition policy also requires the PM to apply HSI to optimize total system performance of which safety is a major domain.

Reference (b) implements the ESOH elements of the acquisition policy by requiring PMs to manage ESOH risks for their system's life-cycle using the methodologies described in reference (aa) (https://acc.dau.mil/CommunityBrowser.aspx?id=267125). PMs should focus resources upon the areas of greatest risk and greatest return on investment (ROI) per reference (ab). These areas are program dependent but include noise, vibration, heat stress, ergonomics, human factors, hazardous energy control, flight safety, survivability factors, and confined space, toxic gases control; environmental compliance HAZMAT and process management; and related ventilation and process controls.

ASN(RD&A) is the risk acceptance authority for high ESOH risks. PEOs and SYSCOM commanders, or flag-level or Senior Executive Service (SES) designees, DRPMs, and Chief of Naval Research (CNR) are the risk acceptance authorities for serious ESOH risks. PMs are the risk acceptance authorities for medium and low ESOH risks. The user representative must be part of this process throughout the life-cycle and must provide formal concurrence prior to all serious- and high-risk acceptance decisions. High, serious, and medium, low ESOH risks are defined in tables A-I to A-IV in reference (ab).

Reference (b) further requires the PM to ensure that appropriate ESOH efforts are integrated across disciplines and into systems engineering to determine system design characteristics that can minimize the risks of acute or chronic illness, disability, or death or injury to operators and maintainers; and enhance job performance and productivity of the personnel who operate, maintain, or support the system. Moreover, the PM in concert with the user and the test and evaluation communities, is required to provide safety releases per OPNAVINST 5100.24B that must include formal ESOH risk acceptance to the developmental and operational testers prior to any test using personnel.

Reference (b) requires that PMs support system-related class A and B mishap investigations by providing analyses of hazards that contributed to the mishap and recommendations for materiel risk mitigation measures, especially those that minimize human errors. Mishap data summaries and investigation reports of serious mishaps may be obtained from the Naval Safety Center.

Effective ESOH efforts encompass establishing ESOH responsibilities within an acquisition program’s organizational structure; developing strategies to ensure compliance with ESOH

regulatory requirements; identifying and managing HAZMATs, wastes, and pollutants for the life-cycle of the system (including demilitarization and disposal); identifying and tracking the mitigation of ESOH hazards and associated risks; and formally accepting and communicating identified ESOH risks and their associated mitigations, including obtaining formal user representative concurrence on high and serious risks.

PMs shall prepare a programmatic ESOH evaluation (PESHE) per reference (b), enclosure 12, and this instruction, chapter 2. During system design, the PM shall document HAZMATs used in the system and plan for the system's demilitarization and disposal. Engineering support during operations and sustainment shall be summarized in the PESHE. A summary of the PESHE shall be included in the acquisition strategy. The summary shall include the NEPA and EO 12114 compliance schedule stipulated by the National Environmental Policy Act, which outlines the PM's assessment on what environmental analyses are required for each proposed action associated with the system's life-cycle and milestone schedule. Prior to IOC, the PESHE shall be reviewed and updated to include the full consideration of fleet representative input associated with environmental issues relative to post-IOC operations at Navy training ranges and operating areas. The PESHE shall be coordinated with affiliated SYSCOM ESOH subject matter experts before being approved by the PM. The PESHE is required at program initiation for ships, milestones B and C, and full-rate production decision review (FRP DR) for all programs. PMs shall approve the PESHE. The PESHE shall be provided electronically to Deputy ASN(RD&A)(Acquisition and Procurement) (DASN(AP)), the Assistant Secretary of the Navy (Installations and Environment) (ASN(I&E)), a PM's supporting SYSCOM, CNO (CNO (N09F) and Deputy Director of Energy and Environmental Readiness Division (OPNAV (N45))) for Navy programs, and MARCORSYSCOM for Marine Corps programs for information. PMs shall integrate the ESOH risk management strategy into their program's SEP. PMs shall present the program's ESOH posture and status at program decision meetings (PDMs) and annex 1-B Gate Reviews. CNO (N09F) will assist CNO (N1) in establishing the requirements for the HSI areas of safety and occupational health.

ASN(RD&A) is responsible for ensuring DON science and technology (S&T) projects and acquisition programs comply with DON ESOH policy and is the focal point for all DON S&T and acquisition ESOH issues.

ASN(I&E) is responsible for formulating DON ESOH policy (reference (ab)). ASN(I&E), or designee, as a program decision principal advisor will attend PDMs, and also Gate Reviews, if there are ESOH issues.

CNO and CMC shall support ASN(RD&A) in developing acquisition ESOH requirements, recommending mandatory acquisition ESOH policy, assisting in ESOH policy implementation, reviewing ESOH related documentation, and providing ESOH advice and assistance to acquisition personnel.

The Chief of the Bureau of Medicine (BUMED) shall support ASN(RD&A) in integrating occupational health considerations into S&T projects and the systems engineering process of acquisition programs. The PM may request BUMED conduct health hazard assessments for evaluation of HAZMATs and processes per BUMEDINST 6270.8B of 3 April 2008.

The CNR and PMs shall ensure ESOH risk levels have been identified in S&T projects and acquisition programs, respectively, per the risk management processes of reference (ab). Program goals shall incorporate ESOH criteria where regulatory factors may impinge on fielding, range use, and deployment options or affect operators' health and safety.

6.3.1 ESOH Compliance

PMs shall comply with ESOH statutory and regulatory requirements, including references (ac), (ad), (ae) (for Navy), and (af) (for Marine Corps). The impact of ESOH requirements on a program's life-cycle cost, schedule, and performance and the ESOH impact of a program's system on the user and the operating environment shall be identified to the MDA.

6.3.2 National Environmental Policy Act (NEPA) and Executive Order (EO) 12114 Environmental Effects Abroad

Per NEPA and E0 12114, PMs shall assess the potential environmental impacts of specific program activities (referred to as proposed actions). Potential impacts shall be analyzed prior to actual implementation of an activity. PMs shall support NEPA and EO 12114 action proponents. The action proponent for each proposed action shall prepare the formal NEPA and EO 12114 documentation, establish the initiation date for each action, establish the type of NEPA and EO 12114 documentation prior to the proposed action start date, establish the start and completion dates for the final NEPA and EO 12114 documentation

and identify the specific approval authority. Final approval authority for acquisition program-related NEPA and EO 12114 documents is shown in tables E6T1 and E6T2. The PM shall also provide system-specific analyses and data to support other organizations' NEPA and EO 12114 analyses.

CNR shall provide final approval authority for S&T project-related NEPA environmental assessments (EAs) and EO 12114 overseas EAs. The PEO, SYSCOM commander, DRPM or CNR, as applicable, shall provide final approval authority for assigned non-acquisition program-related NEPA EAs and EO 12114 overseas EAs. Approval of records of decisions (RODs) under NEPA is at the ASN-level and may not be delegated. The environmental documentation process tables for NEPA and EO 12114 in this paragraph shall be followed by all acquisition programs where a PESHE or other evaluation determines there is a need for NEPA or EO 12114 documentation. Prior to OPNAV (N45) endorsement, the PEOs, SYSCOMs, and DRPMs for assigned programs, shall review NEPA EO 12114 documentation as a part of the NEPA EO 12114 process.

Reference (ag) provides DON policy for selecting sites per NEPA and EO 12114. Reference (ah) provides DON policy for those proposed actions that may involve Naval exercises and training at sea. Reference (ae) provides DON policy for those actions involving sonar or underwater devices actively placing sound in the water. Further, the Mid-Frequency Active Sonar Effects Analysis Interim Policy contained in reference (ai) applies to all Navy action proponents preparing environmental planning documentation either under this instruction or subject to CNO endorsement. PMs shall ensure test activity documents utilize the quantitative methodology contained in the interim policy for assessing the potential effects of mid-frequency active sonar use on marine mammals incident to applicable Navy military readiness and scientific research activities. See reference (b), enclosure 12, for implementation requirements for all DON programs.

Table E6T1 ENVIRONMENTAL DOCUMENTATION PROCESS--NEPA

DOCUMENT	PREPARED BY ACTION PROPONENT	REVIEW	CONCURRENCE/ ENDORSEMENT	APPROVAL/ SIGNATURE
Categorical Exclusion (CATEX)	PM, CNR, COMOPTEVOR/ Dir, MCOTEA, FLTFORCOM[8], or designee	PEO/SYSCOM/DRPM CNO (N00N)[1] Host Installation CO[2] ASN(I&E), Info Copy		PM, CNR, COMOPTEVOR/ Dir, MCOTEA, FLTFORCOM, or designee, Sign
Environmental Assessment (EA)	PM, CNR, COMOPTEVOR/ Dir, MCOTEA, FLTFORCOM[8], or designee	PEO/SYSCOM/DRPM CNO (N00N)[1] Host Installation CO[2] Office of Counsel ASN(I&E), Info Copy	CNO/CMC[3] FLTFORCOM[9] DON Regional Environmental Coordinator (REC)[9]	PEO/SYSCOM COMMANDER/ DRPM, CNR, COMOPTEVOR/ Dir, MCOTEA, COMLANTFLT /COMPACFLT, COMFLTFORCOM, or designee, Approve
Finding of No Significant Impact (FONSI)	PM, CNR, COMOPTEVOR/ Dir, MCOTEA, FLTFORCOM[8], or designee	PEO/SYSCOM/DRPM CNO (N00N)[1] Host Installation CO[2] Office of Counsel ASN(I&E), Info Copy	CNO/CMC[3]	PEO/SYSCOM COMMANDER/ DRPM, CNR, COMOPTEVOR/ Dir, MCOTEA, COMLANTFLT /COMPACFLT, COMFLTFORCOM, or designee, Sign[5]
Environmental Impact Statement (EIS) (NOI/DEIS/FEIS)	PM, CNR, COMOPTEVOR/ Dir MCOTEA, FLTFORCOM[8], or designee	PEO/SYSCOM/DRPM CNO (N00N)[1] Host Installation CO[2] Office of Counsel	CNO/CMC FLTFORCOM[9] DON REC[9] ASN(I&E)	ASN(RD&A), Approve[4]
Record of Decision (ROD)	PM, FLTFORCOM[8], or CNO/CMC	PEO/SYSCOM/DRPM CNO (N00N)[1] Host Installation CO[2] Office of Counsel	CNO/CMC ASN(I&E)	ASN(RD&A), Sign[4, 5]

(See footnotes for the NEPA table below the EO 12114 table on the next page.)

PM - Program Manager
PEO - Program Executive Officer
SYSCOM - Systems Command
DRPM - Direct Reporting Program Manager
CNR - Chief of Naval Research
COMOPTEVOR - Commander, Operational Test and Evaluation Force
Dir, MCOTEA - Director, Marine Corps Operational Test and Evaluation Activity
CO - Commanding Officer
NOI - Notice of Intent
DEIS - Draft Environmental Impact Statement
FEIS - Final Environmental Impact Statement
Info Copy – Information Copy
DON REC – Department of the Navy Regional Environmental Coordinator
FLTFORCOM - Fleet Forces Command
COMFLTFORCOM – Commander, Fleet Forces Command
COMLANTFLT – Commander, Atlantic Fleet
COMPACFLT – Commander, Pacific Fleet

Table E6T2 ENVIRONMENTAL DOCUMENTATION PROCESS -- EXECUTIVE ORDER 12114, ENVIRONMENTAL EFFECTS ABROAD

DOCUMENT	PREPARED BY ACTION PROPONENT	REVIEW	CONCURRENCE/ ENDORSEMENT	APPROVAL/ SIGNATURE
EO 12114 Negative Decision (Citing a previously approved OEA, OEIS, ER, or ES; an Overseas CATEX; or exemption)	PM, CNR, COMOPTEVOR/ Dir, MCOTEA, FLTFORCOM[8], or designee	PEO/SYSCOM/DRPM CNO (N00N)[1] Host Installation CO[2] Office of Counsel ASN(I&E), Info Copy		PM, CNR, COMOPTEVOR/Dir, MCOTEA, COMFLTFORCOM, or designee, Sign
Overseas Environmental Assessment (OEA)[6]	PM, CNR, COMOPTEVOR/ Dir, MCOTEA, FLTFORCOM[8], or designee	PEO/SYSCOM/DRPM CNO (N00N)[1] Host Installation CO[2] Office of Counsel ASN(I&E), Info Copy	CNO/CMC[3] FLTFORCOM[9] DON REC[9]	PEO/SYSCOM COMMANDER/ DRPM, CNR, COMOPTEVOR/ Dir, MCOTEA, COMFLTFORCOM/ COMPACFLT, or designee, Approve
Overseas EIS (OEIS)	PM, CNR, COMOPTEVOR/ Dir, MCOTEA, FLTFORCOM[8], or designee	PEO/SYSCOM/DRPM CNO (N00N)[1] Host Installation CO[2] Office of Counsel	CNO/CMC FLTFORCOM[9] DON REC[9] ASN(I&E)[7]	ASN(RD&A), Approve[4]
Environmental Review (ER)/ Environmental Study (ES)	PM, CNR, COMOPTEVOR/ Dir, MCOTEA, FLTFORCOM[8], or designee	PEO/SYSCOM/DRPM CNO (N00N)[1] Host Installation CO[2] Office of Counsel	CNO/CMC FLTFORCOM[9] DON REC[9] ASN(I&E)[7]	ASN(RD&A), Approve[4]
ER or ES Concluding No Significant Impact	PM, CNR, COMOPTEVOR/ Dir, MCOTEA, FLTFORCOM[8], or designee	PEO/SYSCOM/DRPM CNO (N00N)[1] Host Installation CO[2] Office of Counsel ASN(I&E), Info Copy	CNO/CMC[3] FLTFORCOM[9] DON REC[9]	PEO/SYSCOM COMMANDER/ DRPM, CNR, COMOPTEVOR/ Dir, MCOTEA, COMFLTFORCOM/ COMPACFLT, or designee, Approve

FOOTNOTES

1. Obtain concurrence from CNO (N00N) for acquisition programs involving nuclear propulsion matters.
2. The host installation CO (e.g., test facility CO) where the proposed action is occurring.
3. CNO/CMC may delegate endorsement when a PEO/SYSCOM/DRPM has a clear knowledge of the requirements as demonstrated by the preparation of acceptable EO 12114 documents.
4. ASN(RD&A) approval/signature authority may be delegated to PMDASN(RD&A).
5. The PM is responsible for ensuring public notification of FONSIs and RODs via appropriate medium. Where publication in the *Federal Register* is required, CNO/CMC will publish FONSIs and RODs.
6. The last page of the overseas EA concludes with a statement that either (1) no significant harm will occur to the global commons, or (2) significant harm may occur to the global commons and an Overseas EIS must be prepared.
7. ASN(I&E) may delegate endorsement and will coordinate with Department of State on actions (either unilateral or multilateral) affecting a foreign nation.
8. FLTFORCOM is the action proponent for homebasing/porting and sustaining actions.
9. FLTFORCOM, as the area environmental coordinator, will coordinate with appropriate DON regional environmental coordinator(s) for all environmental planning and compliance for proposed actions that affect resources in their region.

6.3.3 Safety and Health

CNO shall establish ESOH advisory boards to support the fleet and advise the PEOs, SYSCOM commanders, DRPMs, and PMs in areas where risks are identified and that actions are taken to either mitigate or to knowingly accept the risks. All ship installations for new or modified weapons or weapon systems shall be formally reviewed and safety approval received during the EMD phase. ESOH risks shall be identified and managed using a system safety process that is integrated into the systems engineering process per references (ac) and (ad).

6.3.4 Hazardous Materials (HAZMAT) Management

PMs shall use proven HAZMAT management procedures and processes in references (ae) and (aj) to develop and implement their HAZMAT management program. The PM shall identify HAZMAT used in the system and required during operations, sustainment, and disposal.

Standardization and commonality is supported by use of HAZMAT tracking, use of the least hazardous suitable and economical products and processes. Common material usage of safe, low risk products should be considered as possible approaches to risk and TOC management.

6.3.5 Pollution Prevention

PMs shall review their programs to ensure they are in compliance with relevant pollution control regulations and conduct pollution prevention (P2) planning for the system being developed.

Navy PMs shall ensure the system being developed is designed to operate in compliance with reference (ae). The P2 process shall support system life-cycle and sustainment by achieving cost effective, sustained compliance and enhanced personnel safety through innovative and reasonable use of P2 technologies.

PMs shall comply with the DoD Green Procurement Program (GPP) to the maximum extent practicable per reference (ak). The purpose of the GPP is to enhance and sustain mission readiness through cost effective acquisition that achieves compliance and reduces resource consumption and solid and hazardous waste generation. To that end, PMs shall establish a P2 process to help minimize environmental impacts and the life-cycle cost

associated with environmental compliance. The P2 hierarchy of source reduction, reuse and recycling, treatment, followed by environmentally safe disposal through all phases of the life-cycle shall be analyzed.

PMs will promote energy efficiency, water efficiency, recycled content, and use of environmentally preferable products; reduce the quantity of toxic chemicals and HAZMAT used in and for maintenance of the system; and reduce greenhouse gas emissions pursuant to EO 13423, Strengthening Federal Environmental, Energy, and Transportation Management, of 24 January 2007.

6.3.6 Explosives Safety

All acquisition programs that include or support munitions, explosives, or energetics shall comply with DoD and DON explosives safety requirements including the requirements of reference (al). The DON risk acceptance authorities of chapter 6, paragraph 6.3, of this instruction, shall accept all risks involving explosives safety for ships or systems under design or construction. The DON risk acceptance authorities shall consult with the SYSCOM technical authority managing explosives, ordnance, weapons, or combat system safety prior to accepting any explosives safety or ordnance safety risks. Where differences of opinion remain between the risk acceptance authority and the SYSCOM technical authority concerning the acceptability of any explosives safety or ordnance risks, such differences shall be forwarded to ASN(RD&A) for adjudication.

6.3.7 Aviation and Ship Critical Safety Items (CSIs)

References (d), (e), (am), (an), and (ao) establish requirements for the identification, cataloging, procurement, management, and disposal of aviation CSIs. References (ap) and (aq) describe requirements for ship CSIs. PMs shall ensure that CSIs, are properly identified prior to provisioning. For new system designs, major modifications, or upgrades, PMs shall ensure that prime contractors and original equipment manufacturers (OEMs) identify recommended CSIs, rationale, recommended sources, and CSI management approaches. PMs shall ensure timely Government technical evaluation of the contractor CSI recommendations and management approaches as well as the identification of CSIs not identified by the prime contractors and OEMs. Technical documentation used for reprocurement of CSIs shall identify critical characteristics or inspection requirements and serialization, marking, or unique identification requirements. A listing of qualified manufacturing, repair,

overhaul, or maintenance sources for the CSIs shall be provided to the logistics management organization prior to provisioning. PMs shall ensure timely responses to requests to evaluate item criticality, assess alternative CSI sources of supply, or evaluate changes to or variations from established CSI design, manufacturing, installation, overhaul, modification, or repair practices.

Chapter 7
Acquisition of Services

References: (a) 10 U.S.C. §2330
(b) DoD Instruction 5000.02 of 8 Dec 2008
(c) DoD Directive 5000.01 of 12 May 2003

7.1 Introduction

Services should be acquired as strategically and efficiently as practicable. Reference (a) required the Secretary of Defense to establish a management structure for the acquisition of services that is comparable to the process for the acquisition of hardware.

The Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) guidance per reference (b) clarifies that service acquisition is broader than contracting for services. It includes execution of one or multiple contracts, orders or other instruments for committing or obligating funds to acquire services that meet a specified requirement. The process described in the following paragraphs contains tiered approval levels based on the total estimated dollar value of the service acquisition.

In addition, reference (a) establishes specific acquisition management responsibilities for the decision authority.

7.2 Applicability

The acquisition of services process applies to services that are not included in, or managed and reviewed as part of, major and non-major defense acquisition programs (MDAPs) and major and non-major information technology (IT) acquisition programs.

7.3 Definitions

Decision Authority – the official with services review and approval responsibility as defined in table E7T1.

Service – engagement of the time and effort of a contractor whose primary purpose is to perform an identifiable

task, or tasks, rather than to furnish an end item of supply (See definition of "Service Contract" at Federal Acquisition Regulation 37.101).

Acquisition of Services – the execution of one or multiple contracts or other instruments committing or obligating funds (e.g., funds transfer, placing orders under existing contracts) for a specified requirement. Acquisition begins at the point when agency needs are established and includes all functions directly related to the process of fulfilling agency needs by contract, agreements, or funds transfer.

IT Services – the performance of any work related to IT and the operation of IT, including national security systems (NSS). This includes outsourced IT-based business processes, outsourced IT, and outsourced information functions.

Procurement Action – with respect to the acquisition of services, a procurement action includes the following:

a. Entry into a contract or any other form of agreement including, but not limited to, basic ordering agreements, blanket purchase agreements, indefinite quantity and indefinite delivery contracts and similar ordering agreements.

b. Issuance of a task order or any transfer of funds to acquire a service on behalf of the Department of Defense (DoD).

Total Estimated Dollar Value – the total estimated dollar value of an acquisition based on the value of the total planned requirement, including options, contingencies, fund transfers, provisioning, etc.

7.4 Responsibility

Oversight of service acquisitions within the Department of the Navy (DON) is the shared responsibility of requiring activities, contracting activities, and the Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN(RD&A)). The management and oversight process for acquisition of services is based on existing DON acquisition oversight structure with review and approval levels based on total estimated dollar value.

Requiring activities, in conjunction with supporting contracting activities, shall prepare an acquisition strategy containing the information required by reference (b) for the decision authority’s review. Acquisition strategies shall be

updated and submitted to the decision authority for review when significant changes occur. Contracting activities shall ensure the Federal socio-economic programs are given proper consideration.

7.5 Review and Approval Thresholds

USD(AT&L) will review and approve acquisition strategies for all services acquisition with a total estimated dollar value of $1 billion or more and non-IT service acquisitions identified by USD(AT&L) as special interest, regardless of the purpose or total estimated dollar value. Acquisition strategies for those non-IT service acquisitions to be approved by USD(AT&L) shall be submitted via ASN(RD&A).

The Assistant Secretary of Defense for Networks and Information Integration (ASD(NII))/DoD Chief Information Officer (DoD CIO) will review and approve IT service acquisitions per table E7T1 and any IT service acquisition identified by ASD(NII) as special interest. Proposed acquisitions of IT services with a total estimated dollar value greater than $500 million (base year and options) shall be referred to ASD(NII)/DoD CIO using the procedure in reference (b) for formal review at ASD(NII)/DoD CIO's discretion. ASD(NII)/DoD CIO will notify USD(AT&L) of any proposed acquisition of IT services with a total estimated dollar value greater than $1 billion (base year(s) and options) per reference (b).

ASN(RD&A) will review service acquisitions requiring USD(AT&L) or ASD(NII)/DoD CIO approval and will review and approve non-IT service acquisitions with a total estimated dollar value of $250 million or more, IT service acquisitions with a total estimated dollar value of $250 million or more but less than $500 million, and service acquisitions identified by ASN(RD&A) as special interest. The Deputy Assistant Secretary of the Navy (Acquisition and Procurement (DASN(AP))) will review service acquisitions requiring USD(AT&L), ASD(NII)/DoD CIO, or ASN(RD&A) approval.

The Deputy Assistant Secretary of the Navy (Command, Control, Communications, Computers, and Intelligence and Space) (DASN(C4I and Space)) will review IT service acquisitions requiring ASD(NII)/DoD CIO and ASN(RD&A) approval. Acquisition strategies for IT service acquisitions with a total estimated dollar value of $250 million or more or designated ASD(NII)/DoD CIO or ASN(RD&A) special interest service acquisitions shall be forwarded for ASN(RD&A) review via DASN(AP).

Program executive officers (PEOs), direct reporting program managers (DRPMs) and or heads of the contracting activity (HCAs) will review service acquisitions under their cognizance requiring USD(AT&L), ASD(NII)/DoD CIO, or ASN(RD&A) approval and will review and approve service acquisitions with total estimated dollar value below $250 million.

For service acquisitions identified by activities outside of the acquisition commands, the HCA normally providing contract support to the requiring activity will review and approve service acquisitions with a total estimated dollar value below $250 million.

Approval authority for service acquisitions below $250 million is delegable, but, for acquisitions with a total estimated dollar value over $100 million, is limited to flag or general officers, members of the Senior Executive Service (SES), or commanding officers.

Thresholds are summarized in table E7T1 on the next page.

Table E7T1 Review and Approval Thresholds				
Acquisition of Non-IT Services				
Services Category	**Total Estimated Dollar Value**	**Requirements Review**	**Acquisition Strategy Review**	**Decision Authority**
USD(AT&L) Special Interest	As designated by USD(AT&L) or other senior official	Budget Submitting Office	ASN(RD&A) DASN(AP)	USD(AT&L) or senior officials via ASN(RD&A)
ASN(RD&A) Special Interest	As designated by ASN(RD&A)	Budget Submitting Office	DASN(AP)	ASN(RD&A)
Cat I	≥ $250 million (see Note 1 for ≥ $1 billion (B))	Budget Submitting Office	DASN(AP) HCA	USD(AT&L) ≥ $1B ASN(RD&A) < $1B
Cat II	≥ $10 million < $250 million	Requiring Activity	HCA	PEO, DRPM or HCA
Cat III	> the simplified acquisition threshold < $10 million	Requiring Activity	To Be Determined (TBD) by Decision Authority	PEO, DRPM or HCA
Acquisition of IT Services				
ASD(NII)/ DoD CIO Special Interest	As designated by ASD(NII)/DoD CIO	DASN(C4I & Space)	ASN(RD&A) DASN(C4I & Space) via DASN(AP)	ASD(NII)/DoD CIO via ASN(RD&A)
ASN(RD&A) Special Interest	As designated by ASN(RD&A)	DASN(C4I & Space)	DASN(C4I & Space) via DASN(AP)	ASN(RD&A)
Cat IA	≥ $500 million (see Note 2 for ≥ $1 billion (B))	DASN(C4I & Space)	DASN(C4I & Space) via DASN(AP) HCA	ASD(NII)/DoD CIO or as designated via ASN(RD&A)
Cat IB	≥ $250 million < $500 million	DASN(C4I & Space)	DASN(C4I & Space) via DASN(AP) HCA	ASN(RD&A)
Cat IIA	≥ $10 million < $250 million	Requiring Activity	HCA	PEO, DRPM or HCA
Cat IIIA	> the simplified acquisition threshold < $10 million	Requiring Activity	TBD by Decision Authority	PEO, DRPM or HCA

NOTES:

1. Proposed acquisitions of non-IT services with a total estimated dollar value equal to or greater than 1 billion dollars (base year and options) shall be reviewed and approved at USD(AT&L)'s or designee's discretion.

2. Proposed acquisitions of IT services with a total estimated dollar value equal to or greater than 500 million dollars (base year and options) shall be referred to ASD(NII)/DoD CIO using the procedure in reference (b) and formally reviewed at ASD(NII)/DoD CIO's discretion. ASD(NII)/DoD CIO will notify USD(AT&L) of any proposed acquisition of IT services with a total estimated dollar value equal to or greater than $1 billion (base year(s) and options) per reference (b). CCA compliance shall be confirmed by DON CIO and DoD CIO for acquisition of IT services with a total estimated dollar value equal to and greater $500 million dollars (base year and options).

3. Dollar amounts are in Fiscal Year 2006 constant year dollars.

4. Acquisition of services that are part of a weapon system acquisition program or automated information system (AIS) acquisition program managed per references (b) and (c) shall be reviewed and approved under an acquisition strategy unless the services have been reviewed and approved as part of that program's management process.

5. For acquisition of IT services with a total estimated dollar value below $500 million (base year and options), ASN(RD&A) and DON CIO shall establish procedures that ensure the acquisition strategy and related planning address the relevant aspects of section 11101 et seq. of title 40, U.S.C. (Clinger-Cohen Act (CCA)), such as confirmation of CCA compliance by DON CIO, or designee, before the final solicitation is issued or, for other than full and open competition, before negotiations commence.

6. If a proposed acquisition includes both hardware and services, and the estimated dollar value of the services portion exceeds the values specified in table E7T1, it may be reviewed by the specified decision authority unless the exception under reference (b) applies.

7. Related task orders within an ordering vehicle shall be viewed as one effort for the purpose of determining the appropriate thresholds.

7.6 Review Procedures

An acquisition strategy for service acquisitions meeting the review thresholds in table E7T1 shall be forwarded for review and approval prior to initiating any action to commit the Government to such strategy. Acquisition strategies requiring USD(AT&L) or ASN(RD&A) review and approval shall be submitted via DASN(AP). IT service acquisition strategies for ASD(NII)/DoD CIO or ASN(RD&A) approval will be submitted via DASN(C4I and Space) and DASN(AP).

For acquisition strategies requiring USD(AT&L) or ASD(NII)/DoD CIO review and approval, the review and approval will be completed within 45 calendar days of receipt of the acquisition strategy.

PEOs, DRPMs, and HCAs shall establish review procedures commensurate with the review process above.

7.7 Outcomes

This review process shall ensure, to the extent practicable, that DON acquisition of services:

a. Support and enhance warfighting capabilities;

b. Use a strategic enterprise-wide, life-cycle cost affordable approach;

c. Are based on clear, performance-based requirements and business arrangements that are in the best interest of DoD and DON;

d. Produce outcomes that are identified, measurable, and consistent with customer needs; and

e. Are in compliance with applicable statutes, regulations, policies, and other requirements.

7.8 Metrics

The preferred acquisition approach is performance based. The acquisition strategy should include cost, schedule, and performance metrics that measure service acquisition outcomes against requirements. Decision authorities will approve metrics for service acquisitions as part of their review and approval of the acquisition strategy. If metrics are not submitted with the acquisition strategy, the metrics must be submitted for decision authority approval prior to execution of any business instrument that initiates the acquisition. The timelines for USD(AT&L) or ASD(NII) metric review are identical to those for review of an acquisition strategy.

7.9 Data Collection

Acquisition strategies may be based on obligations and commitments under contracts as well as obligations and commitments made outside of contracts.

The Federal Procurement Data System-Next Generation (FPDS-NG) reports information required by reference (b) for DoD contract actions. The Federal Procurement Data System provides requisite report information for purchases accomplished by non-DoD contracting agencies to satisfy DoD requirements.

Requiring activities shall provide annual reports identifying Government contract actions under each acquisition strategy and addressing the report information required by reference (b) for parts of the acquisition strategy not accomplished through Government contract. Reports shall be submitted in electronic spreadsheet format to DASN(AP) for non-IT services or DASN(C4I and Space) for IT services.

7.10 Execution Reviews

Program progress toward meeting approved metrics shall be continuously monitored within the requiring activity. Program progress reports shall be submitted to the decision authority annually unless the decision authority has identified an

alternate reporting schedule. More frequent progress reports shall be submitted in cases where demonstrated program progress

7.11 Decision Authority Acquisition Management Responsibilities

Use of a contract or task order above the simplified acquisition threshold that is not performance-based, regardless of whether the services are procured through a DON contract or through a contract entered into by an official outside of DON, requires decision authority approval in advance of contract placement per the Navy-Marine Corps Acquisition Regulation Supplement, subpart 5237.1.

Use of contracts or task orders for the acquisition of services to be awarded by a department or agency outside DON requires approval from the decision authority. Decision authorities are responsible for maintaining records of service acquisitions forwarded for procurement outside DON. Such records should include the information required by reference (b) or, at a minimum:

a. The type(s) of services required;

b. Total estimated dollar value;

c. The procuring activity;

d. Type of contract, contract number; and

e. Total contract value.

7.12 Independent Management Reviews (Hereafter Referred to as "Peer Reviews")

Per reference (b), enclosure 9, Director, Defense Procurement and Acquisition Policy (DPAP) will conduct independent pre and post-award peer reviews of all services contracts with an estimated value greater than $1 billion (including options) and services contracts designated as DoD special interest. Per DASN(A&LM) memorandum, Department of the Navy Peer Review Program, of 26 March 2009 with enclosure (1) DON Peer Review Program, DASN(AP) will conduct independent pre and post-award peer reviews of services contracts with an estimated value of $250 million to $1 billion (including options) and those services contracts designated as DON Special Interest. The HCA or senior official in charge of contracting will conduct pre and post-award peer reviews of services contracts with an estimated value of $50 million to $250 million (including options).

Chapter 8
Program Management

References: (a) SECNAVINST 5400.15C
(b) DoD Directive 5000.01 of 12 May 2003
(c) SECNAVINST 5200.35E
(d) SECNAVINST 5710.25B
(e) DoD Instruction 5000.02 of 8 Dec 2008

8.1 Assignment of Program Executive Responsibilities

Program executive officers (PEOs), systems command (SYSCOM) commanders, and direct reporting program managers (DRPMs) are accountable for the specific responsibilities listed in reference (a), including administration of assigned acquisition programs, and reporting directly to the component acquisition executive (CAE) for such programs. PEOs, SYSCOM commanders, DRPMs, and PMs have authority, responsibility, and accountability for life-cycle management of all acquisition programs within their cognizance. PEOs, SYSCOM commanders, and DRPMs shall implement appropriate management controls as required by reference (b), and per reference (c), to ensure the policies contained in this instruction are implemented to the maximum extent practical. SYSCOM commanders shall also provide support, as applicable, to PEOs, DRPMs, and PMs. PEOs, SYSCOM commanders, and DRPMs are authorized to approve charters for assigned PMs. When an official exercises milestone decision authority (MDA) or direction on program matters, the decision or direction shall be documented with a copy forwarded to the Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN(RD&A)), the cognizant PEO, the PM, and the Chief of Naval Operations (CNO) and Commandant of the Marine Corps (CMC). The official shall be held responsible and accountable for the decision or programmatic direction.

8.2 International Cooperative Program Management

International cooperative programs require a legally binding agreement between the respective defense establishments of the United States and foreign governments. These agreements will be developed, negotiated, and staffed by the Office of ASN(RD&A) Deputy Assistant Secretary of the Navy (International Programs) (DASN(IP))/Navy International Programs Office (NIPO) with assistance and participation by cognizant PMs and or PEOs.

Procedures for acquisition-related international agreements are contained in reference (d). PMs should coordinate with DASN(IP)/NIPO for additional information on procedures and requirements.

8.3 Joint Program Management

When Department of the Navy (DON) activities are considering involvement in another Service's program that is past program initiation, but pre-full-rate production decision review (FRP DR), and there has been no formal previous involvement, DON activities shall establish an operating agreement with the lead Service defining participation in the program.

When a DON activity is considering involvement in another Service's program that is past FRP DR, and when there has been no previous formal involvement, the decision to forward funds to the lead Service will be supported by formal decision.

When ASN(RD&A) approves withdrawal from a program, CNO (N8)/CMC (Deputy Commandant, Combat Development and Integration (DC, CD&I)) will prepare the necessary briefing material and correspondence that supports ASN(RD&A)'s withdrawal decision. See reference (e), enclosure 10, paragraph 4, for implementation requirements for all DON acquisition category (ACAT) programs.

8.4 Program Management Agreements

Program management agreements are required for ACAT I and II programs per reference (e), enclosure 10, paragraph 2, and ASN(RD&A) memorandum, Revision to Program Management Agreement (PMA) Policy, of 26 February 2009 which includes the format. ASN(RD&A) as the component acquisition executive (CAE) is authorized per current practice to sign program management agreements for the milestone decision authority (MDA) for ACAT ID and IAM programs. The initial program management agreements shall be approved within 6 months of appointment of a PM and shall be updated and approved annually thereafter.