



Acquisition Directorate

Major Systems Acquisition Manual (MSAM)

"Mission Execution Begins *Here*"

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6. **MAJOR CHANGES.** The purpose of this revision is to revise and align Coast Guard major acquisition policy with DHS acquisition management policy and processes established in References (a) and (b) to continuously improve the policies and procedures applicable to major acquisitions. Included in this revision are the following significant changes:

Introduces new terminology for key U.S. Coast Guard (USCG) acquisition personnel and refines their major roles and responsibilities.

Emphasizes early program planning for affordability and USCG leadership evaluation of program portfolios during early acquisition decision events (ADE-0, ADE-1).

It describes selection of acquisition phase criteria that programs must meet to advance in the acquisition life cycle.

Clarifies the documentation and review of system operational requirements and the process for updating, changing, and approving these requirements.

7. **IMPACT ASSESSMENT.** The manual contains, as before, guidance on planning and delivering acquisition programs and provides explanation of the requirements for Coast Guard and DHS oversight and ADE reviews. This manual is available at the Office of Acquisition Support (CG-924) CGPortal page:
<https://cgportal2.uscg.mil/units/cg9/2/4/AcqSupportCentral/Pages/default.aspx>.
8. **ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS.** Environmental considerations under the National Environmental Policy Act (NEPA) were examined in the development of this manual. This manual includes preparation of acquisition documents that implement, without substantive change, the applicable Commandant Instruction or other Federal agency regulations, procedures, manuals, and other guidance documents. It is categorically excluded from further NEPA analysis and documentation requirements under Categorical Exclusion 33 as published in NEPA Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series). An Environmental Checklist and Categorical Exclusion Determination are not required.
9. **DISTRIBUTION.** No paper distribution will be made of this Manual. An electronic version will be located on the following Commandant (CG-612) web sites. Internet:
<http://www.uscg.mil/directives/>, and CGPortal:
<https://cgportal2.uscg.mil/library/directives/SitePages/Home.aspx>.

NOTE: If paper copies are required please complete Certificate for Need of Printing, DHS Form 500-07, which can be found at http://www.uscg.mil/directives/Printing_Graphics.asp.

10. **RECORDS MANAGEMENT CONSIDERATIONS.** This manual has been thoroughly reviewed during the directives clearance process, and it has been determined there are no further records scheduling requirements, in accordance with Federal Records Act, 44 U.S.C. 3101 et seq., National Archives and Records Administration (NARA) requirements, and Information and Life Cycle Management Manual, COMDTINST M5212.12 (series). This policy does not have any significant or substantial change to existing records management requirements.

11. FORMS/REPORTS. The forms referenced in this manual are available in USCG Electronic Forms on the Standard Workstation or on the Internet: <http://www.uscg.mil/forms/>;
CGPortal at <https://cgportal2.uscg.mil/library/forms/SitePages/Home.aspx>;
Intranet at <http://cgweb.comdt.uscg.mil/CGForms>.

12. REQUEST FOR CHANGES. Requests for exceptions to this manual shall be submitted through the Coast Guard Acquisition Review Board Executive Secretary, Commandant (CG-924). Requests shall contain sufficient detail to clearly explain the basis of the request, policies to be waived, and the recommended alternative action. Waivers of policy will be approved by Commandant (CG-9). This manual is under continual review and will be updated as necessary. Recommendations for improvement or corrections to this manual and/or the MSAM Handbook shall be submitted directly to Commandant (CG-924).

B.D. Baffer /s/
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Assistant Commandant for Acquisition

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CHAPTER 1: INTRODUCTION**A. Manual Organization**

This manual documents the process and identifies the procedures for implementing Reference (a). Major system acquisition procedures are outlined in chapters 1 through 8 of this manual.

Chapter 1: Introduction

This introductory chapter lays out the organization of this manual and provides an overview of the Coast Guard Acquisition Directorate (CG-9). This chapter also spells out the roles and responsibilities of key acquisition personnel and outlines the acquisition workforce training and certification requirements.

Chapter 2: Major Systems Acquisition Management

This chapter discusses the governance process for USCG major systems acquisitions. It describes the Acquisition Life Cycle Framework (ALF), major acquisition decision events (ADEs), major acquisition phases, required acquisition documentation, and lists the major functional activities required during each phase.

Chapter 3: Systems Engineering Life Cycle

This chapter highlights the process and requirements of the Systems Engineering Life Cycle (SELC) framework to efficiently and effectively develop and deliver new capabilities to operational users. The SELC guides the definition, execution, and management of an interdisciplinary set of tasks and formal reviews required to define, plan, design, develop, implement, operate, and dispose of systems.

Chapter 4: Requirements Generation

This chapter addresses the activities that are conducted to assess mission areas and identify mission needs prior to the designation of the program as a Major System Acquisition. It also addresses the requirements definition process conducted once a program has been so designated.

Chapter 5: Program Management Planning

This chapter discusses the documents that are required of major systems acquisitions.

Chapter 6: Capital Investment Planning

This chapter provides an overview of the USCG Planning, Programming, Budgeting, and Execution process (PPBE); the Office of Management and Budget (OMB) Business Case; and the Department of Homeland Security (DHS) investment review process.

Chapter 7: Reports and Reviews

This chapter identifies the reports and reviews that are required as part of the knowledge-based management process to keep senior management aware of program performance.

Chapter 8: Document Review and Approval Process

This chapter details the Coast Guard and DHS review and approval processes for major systems acquisition documents.

NOTE: The MSAM Handbook contains supplemental guidance and templates for MSAM documentation, as well as guidance on delivering briefings for USCG and DHS annual reviews and ADE reviews. The MSAM Handbook is available at the Office of Acquisition Support (CG-924) CGPortal page:

<https://cgportal2.uscg.mil/units/cg9/2/4/AcqSupportCentral/Pages/default.aspx>

B. Coast Guard Acquisition Directorate

Commandant (CG-9) was formed to provide a single point of management and to act as the systems integrator for all USCG major systems acquisitions. Commandant (CG-9) also ensures that the processes and procedures identified in this manual are properly leveraged to obtain capable, supportable, affordable, and sustainable systems. In support of this objective, the Assistant Commandant for Acquisition, also known as the Chief Acquisition Officer (CAO), has defined the Directorate's Vision and Mission as follows:

Vision

The Coast Guard will be a model of acquisition excellence in government.

Mission

Efficiently and effectively deliver the capabilities needed to execute the full range of Coast Guard missions.

1. Major Systems Acquisition Manual Objectives

Major systems acquisitions use a disciplined program management approach and structured methodology derived from the processes and procedures detailed in this Manual and the MSAM Handbook.

This manual defines the policies and procedures for acquisition Program Managers (PMs)¹ and their staffs to plan, coordinate, and execute major systems acquisition programs.

Objectives of the Major Systems Acquisition Manual include, but are not limited to:

- Develop major systems acquisition processes and procedures that are flexible, responsive, and allow PMs to exercise innovation and creativity to deliver

¹ An acquisition Program Manager (PM) is the position of responsibility formerly called "Project Manager" and is aligned with DHS Directive 102-01.

systems, products, and services to our customers within established cost, schedule, and performance parameters;

- Manage major acquisition programs using a systems engineering approach that optimizes total system performance and minimizes total ownership costs;
- Develop cost estimates that document realistic life cycle costs with sufficient accuracy, rigor, and confidence to enhance our credibility with DHS, Congress, and the American taxpayer;
- Look for opportunities to reduce the acquisition cycle time to field useable, affordable, sustainable, and technically mature discrete segments of capability;
- Align Coast Guard major acquisition process with the DHS acquisition management policy established in Reference (a).

2. Acquisition Knowledge

The websites below provide up-to-date acquisition information useful to the acquisition workforce:

- Federal Acquisition Regulations (FAR), specifically including FAR Part 34, Major System Acquisition: <http://www.acquisition.gov/?q=browsefar>;
- Department of Defense (DOD) Acquisition, Technology and Logistics Portal: <https://dap.dau.mil>;
- DHS Connect Program Accountability and Risk Management (PARM): <http://dhsconnect.dhs.gov/org/comp/mgmt/parm/Pages/default.aspx>;
- Office of Acquisition Support (CG-924) Coast Guard Portal site: <https://cgportal2.uscg.mil/units/cg9/2/4/AcqSupportCentral/Pages/default.aspx>.

C. Coast Guard Acquisition Team

The Coast Guard Acquisition Team is composed of program execution officials and program stakeholders, which include sponsors, Technical Authorities (TAs), and support agencies/offices.

Program execution involves acquisition officials in the direct chain of command from the Coast Guard Component Acquisition Executive (CAE) through the PM responsible for executing the program. Program stakeholders include personnel representing the sponsor and user; TAs responsible for implementing and ensuring programs are in compliance with applicable standards, regulations, and processes; and personnel performing program support functions identified below. PMs are accountable to the program execution chain of command as guided by stakeholder equities and technical authorities.

USCG acquisition activities include the conceptualization, initiation, design, development, integration, testing, contracting, production, deployment or fielding, logistics support, modification, disposal of systems and equipment, and services to satisfy approved needs intended for use in support of assigned missions. Members of the Coast Guard Acquisition Team, include, but are not limited to:

- Individuals in an acquisition billet;
- Individuals who are substantially involved in defining, determining, and managing requirements;
- Individuals involved in acquisition planning and strategy;
- Individuals who participate in the process of establishing the business relationship to obtain needed products and services (e.g., contracting process: those involved in the solicitation, evaluation, and award of acquisition contracts);
- Individuals who manage the process after business arrangements have been made to ensure that the Coast Guard's needs are met (e.g., human system integration, testing and evaluating, systems engineering, managing and monitoring manufacturing and production activities, auditing, contract administration, performance management and evaluation, logistics support);
- Individuals who arrange disposal of any residual items after work is complete (e.g., property management/disposal);
- Individuals who support the business and technical processes of the above listed activities (e.g., TA, business/operational authority, program legal counsel or other subject matter experts);
- Individuals who directly manage those involved in any of the above activities.

Key acquisition career fields that are part of the acquisition team include those that are involved in the following functions as they relate to acquisition programs:

- Program management;
- Systems planning, research, development, and engineering;
- Procurement, including contracting;
- Business, cost estimating, and financial management;
- Industrial and contract property management;
- Facilities engineering;
- Life Cycle Logistics/Product Support Management;
- Information technology;
- Production, quality, and manufacturing;
- Testing and evaluation;
- Configuration management.

The Coast Guard Acquisition Team will support the mission needs of the USCG through the direction of PMs/Assistant Program Executive Officers (APEOs) to deliver effective and affordable systems, equipment, and services to USCG users by:

- Engaging the fleet and sponsors in a collaborative discussion of capability gaps and materiel solution options prior to commitment of tax dollars;
- Conducting market research and developing requirements with market and industrial

- base awareness;
- Prioritizing solutions which guarantee interoperability, promote affordability, reduce total ownership costs, and enhance operational effectiveness and efficiency;
 - Clearly defining, in conjunction with the Sponsor (or Sponsor's Representative), the strategy, concepts, capabilities, concept of operations, and requirements;
 - Adhering to the acquisition policies, processes, and procedures published in federal, DHS, and Coast Guard directives;
 - Accurately pricing programs and insisting the program and budget estimates reflect realistic costs, recognizing technical, management, and integration risks;
 - Being accountable and delivering to realistic schedules and approved budgets;
 - Responding appropriately to Sponsor requirements within the boundaries of applicable law, policies, regulations, directives, and procedures;
 - Using disciplined, tailored management practices which appropriately document acquisition requirements, planning, and approvals;
 - Developing and implementing an affordable and effective performance-based product support strategy;
 - Planning for and addressing test and evaluation, logistics, systems engineering, scheduling and other functions commensurate with complexity, assigned program level, and risk;
 - Obtaining and maintaining the appropriate level of training, experience, and acquisition certification.

D. Coast Guard Acquisition Leadership Team

The *Coast Guard Acquisition Leadership Team* consists of the Commandant, the Vice Commandant in the role of CAE, the Deputy Commandant for Mission Support (DCMS), the Deputy Commandant for Operations (DCO), the Assistant Commandants, the Head of Contracting Activity (HCA), and the senior staff of Coast Guard Directorates, assigned field activities and commands. The Coast Guard Force Readiness Command (FORCECOM) and Coast Guard Director of Operational Logistics (DOL) as well as subordinate field and support activities provide invaluable perspectives and feedback on operational performance. These entities contribute to the development of a professional, experienced acquisition workforce through acquisition experience tours of duty for operational personnel.

Major USCG participants and their lines of command and communication within the Coast Guard Acquisition Organization are shown below in **Figure 1 Coast Guard Acquisition Review Organization**.

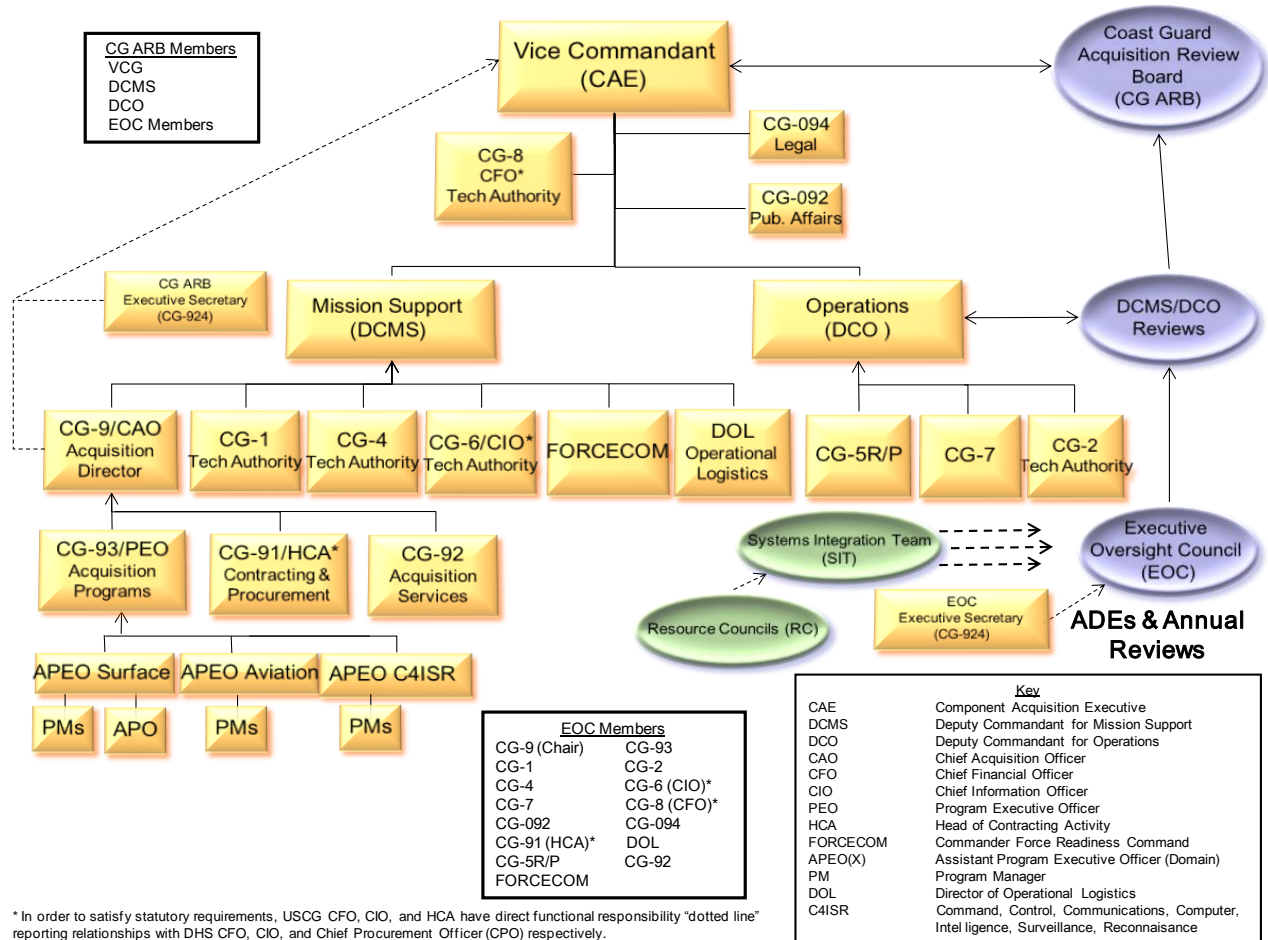


Figure 1 Coast Guard Acquisition Review Organization

ADE briefings are presented to the Coast Guard Acquisition Leadership Team through the Executive Oversight Council (EOC) for review followed by a DCMS/DCO review prior to presentation at the Coast Guard Acquisition Review Board (CG ARB). At a minimum, all programs are reviewed annually by the EOC and CG ARB. All ADE and annual review briefings are scheduled by the EOC and CG ARB Executive Secretary, Commandant (CG-924). Additional discussion about the acquisition review process is found in chapter 7.

E. Acquisition Workforce Training and Certification

PMs assigned to manage any DHS Level 1, 2, or 3 acquisitions (as defined in **Table 1 PM Certification Levels**) shall be certified at a level commensurate with the complexities, scope, and responsibilities of the acquisition being managed.

The Acquisition Directorate’s Standard Operating Procedure (SOP)-9-5 (series), Non-Contracting Acquisition Workforce Certifications, provides specific policies and provides procedures and guidance for obtaining Acquisition Workforce Certifications for non-contracting acquisition functional disciplines.

Table 1 PM Certification Levels

DHS Acquisition Level	Life Cycle Cost ¹	PM Certification Level ²
1	≥ \$1B	III (Senior)
2	< \$1B ≥ \$300M	II (Mid)
3	< \$300M	

¹ Life Cycle Cost (LCC) includes Total Acquisition Cost (TAC) plus operation and maintenance costs in constant year 2009 dollars.

² Minimum recommended certification levels per Federal Acquisition Certification Project and Program Management (FAC-P/PM) policy

An Acquisition Workforce Certification Board (AWCB) has been established to review/endorse or certify individuals who meet the standards (experience, education, and training) established for a career level (I-Entry-Level, II-Mid-Level, or III-Senior-Level) in the non-contracting acquisition functional disciplines listed below.

The Procurement Policy and Systems Division, (CG-9132) provides review and endorsement to DHS on certifications for the following acquisition career fields:

- Contracting Officer's Representative (COR);
- Federal Acquisition Certification in Contracting (FAC-C) Certification.

The Coast Guard AWCB provides review and endorsement to DHS, who is the certifying authority for the following acquisition workforce positions:

- Cost Estimation;
- Life Cycle Logistics;
- Program Financial Management;
- Acquisition Program Manager;
- Systems Engineering;
- Test and Evaluation.

For more information on acquisition certification, see DHS Acquisition Workforce Policy #064-04 (series), or refer to DHS Connect:

<http://dhsconnect.dhs.gov/org/comp/mgmt/cpo/paw/Pages/CertificationPrograms.aspx>.

The Coast Guard AWCB establishes certification standards and acts as certifying authority for the following acquisition functional discipline fields:

- Facilities Engineering;
- Information Technology;
- Production, Quality, and Manufacturing;
- Requirements Management.

Further information on acquisition career fields is available on the Coast Guard Acquisition

Workforce Central Acquisition Workforce Certifications CGPortal page:
<https://cgportal2.uscg.mil/units/cg9/2/1/CG-9AcqCertsHome/default.aspx>.

F. Program Manager (PM) Authority and Responsibility

The PM is the chartered individual who has responsibility and authority to accomplish program objectives for developing, producing, and deploying a new asset with logistics support to meet identified operational requirements. The PM is accountable for meeting cost, schedule, and performance parameters established by the Acquisition Decision Authority (ADA), and works under the guidance and supervision of the Program Executive Officer (PEO) and APEO².

To fulfill this role, the PM is empowered to manage cost, schedule, and performance of the acquisition, and is thereby the program management authority accountable to the acquisition chain of command for meeting overall business and technical goals of their specific acquisition program. The PM is the single point of contact and single point of authority responsible for managing the system through the acquisition process of design, development, production, and deployment.

The PM is the key individual accountable for the successful execution of their acquisition program. The PM's span of control is such that they must be autonomous, trained, resourced, empowered, and accountable to senior management for the effort. This all encompassing level of authority and responsibility is the foundation for the Coast Guard's PM-centric acquisition execution model.

Level 1 and Level 2 acquisition programs are major acquisition programs. In the Coast Guard, individual major acquisition programs are managed by USCG PMs who are chartered by the DCMS.

In the case of interdependent programs (meaning, when one program "provides" or "receives" a system, asset, service, data, or infrastructure to/from another), it is the responsibility of both PMs to participate in all relevant Integrated Product Teams (IPTs) and Program Management Reviews (PMRs) throughout the acquisition life cycle to ensure all integration and interfaces are well understood. Additionally, the PM of the program "receiving" the system, asset, service, or facility shall endorse the requirements, schedule, and other appropriate documentation of the program "providing" the system, asset, service, or facility. Where a specific document does not exist for the schedule or requirement then the endorsement shall be accomplished through a memo to the PEO (with a copy to Commandant (CG-924)). The PM of the program "providing" the system, asset, service or facility shall periodically update the "receiving" program PM of the cost, schedule, and performance of the receiving activity via regular status briefs, Program Management Reviews (PMRs), etc.

The above actions shall occur regardless of the program designation (Major, Non Major) or

² The Assistant PEO for a functional domain (APEO) is the position formerly called "Program Manager" (PgM).

acquisition phase (i.e.; Need, Analyze/Select, Obtain, P/D/S) of each of the interdependent programs.

The PM shall:

- Be accountable and responsible for the planning, organization, execution, and coordination of the acquisition program assigned in accordance with approved charters and applicable acquisition policies and procedures, including those outlined in this manual;
- Be responsible for defining, planning, and executing the acquisition program within the established cost, schedule, and performance constraints;
- Apply acquisition risk management practices in accordance with those outlined in this manual and Project Risk Management and Mishap Risk Management, Commandant (CG-9) SOP-9-7;
- Represent the program throughout the planning, programming, budgeting, and execution process;
- Manage the execution of the program;
- Develop, gain approval for, and maintain acquisition program documents;
- Identify, track, manage, and resolve issues;
- Collect, analyze, and disseminate program information to all stakeholders to include establishing, collecting, and reporting on metrics and information to provide indicators of program progress and health;
- Manage scope to ensure delivery of agreed upon technical, programmatic, and affordability requirements;
- Capture lessons learned throughout the entirety of the program and document them in the Acquisition Lessons Learned Database, found at: <http://hqs-spweb10-001:10113/ALLDB/default.aspx>;
- Coordinate with the responsible Asset Project Office (APO) as appropriate for development and delivery of logistics analysis and products;
- Coordinate with responsible APO to transition assets into a product line;
- Leverage the responsible APO to transition an asset class from acquisition to sustainment;
- Establish Configuration Management (CM) processes in the areas of configuration identification, change management, configuration status accounting, and configuration verification and audit;
- Chair the Configuration Control Board (CCB) for changes allocated to specifications or product baselines;
- Approve authorized engineering change proposals through an established configuration change control process in accordance with Coast Guard Configuration Management, COMDTINST 4130.6 and this manual;

- Organize and lead program matrix teams and IPTs as required;
- Execute the core processes and activities consistent with this manual and the applicable program acquisition phase, with full engagement from Technical Authorities, Sponsors, and in conjunction with other appropriate stakeholders including members of the Acquisition and Support Directorates. These include: Program Management, Systems Engineering, Acquisition Logistics, Test and Evaluation, and Enterprise Architecture activities;
- Manage program resources (funds and personnel) using sound business practices and maintain a program financial plan that ensures a complete audit trail of program funds. Ensure program financial resource management is in compliance with the Financial Resource Management Manual (FRMM), COMDTINST M7100.3 (series), and Obligation Planning Review Process and Timeline, Commandant (CG-9) SOP-9-16;
- Be responsible for reporting program specific information. Develop program reports and briefings, to include: Weekly/Monthly Program Reports, Annual Reviews, ADEs and other decision reviews, updates to DHS Next Generation Periodic Reporting System (nPRS) and Investment Management System (IMS) tools;
- Serve as principal advisor to all formal program-specific source selection activities;
- Participate in negotiations and draft Memoranda of Understanding (MOUs) for Inter-Agency Support Agreements;
- Verify appropriate funding guidance for the use of MOUs and be responsible for MOU administration and execution;
- Serve as the program office lead for Program Resident Offices (PROs) established to deliver the assigned assets;
- Provide appropriate documentation to support valuation and capitalization of acquired assets for Coast Guard Chief Financial Officer (CFO) compliance.

G. Assistant Program Executive Officer (APEO) Authority and Responsibility

The APEO is the individual who has responsibility and authority to determine the strategic vision of a specific domain (Aviation, Surface, or Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR)), and establishes a domain focus across programs. The APEO is accountable to the PEO for establishing program starts and closeouts, and communicating with entities outside Commandant (CG-9). The APEO provides strategic and integrated program management of Aviation, Surface, and C4ISR acquisition domains.

The APEO leverages efficiencies and synergies across the programs as required to provide oversight of domain PMs and to achieve overall cost, schedule, and performance goals of integrated programs. The APEO ensures integration of relevant systems, assets, services, data, and infrastructure among and across domain and program teams by reviewing and endorsing key program documents to include requirements, schedules, and program plans. The APEO and PM shall engage at appropriate cross domain and program IPTs, program

configuration and interface control boards, etc. in order to ensure and provide oversight of integrated system capabilities from early life cycle stages through development and test into production and deployment.

The APEO is responsible for:

- Directing/managing a group of related capability programs within a domain (i.e., Aviation, Surface, C4ISR);
- Applying sound risk-based decision making and domain portfolio analysis practices to balance the many factors that influence domain cost, schedule, and performance in order to support and meet overarching USCG mission goals and objectives;
- Taking advantage of commonality and other synergies across programs within a respective domain, and working with other APEOs to seek efficiencies between domains;
- Providing oversight, direction, guidance, and support to the acquisition PMs within the domain;
- Managing domain staffing resources and ensuring PMs and their teams achieve and maintain appropriate certifications for the duties assigned;
- Developing, coordinating, and representing the program business case and program performance metrics;
- Establishing processes and forums for cross domain and cross program collaboration, resolving issues, and sharing lessons learned;
- Providing input to the Commandant (CG-9) Acquisition Lessons Learned Database system and incorporating best practices into follow-on acquisition programs;
- Reporting progress to Coast Guard executive leadership and facilitating regular and direct access to the PEO for all PMs;
- Coordinating with Commandants (CG-91) and (CG-92) to provide contracting, technical, workforce, governance, and business management support for PMs;
- During the Need and Analyze/Select Phases, and prior to the assignment of a PM, supporting the Sponsor's Representative on requirements development (Preliminary Operational Requirements Document (P-ORD), Concept of Operations (CONOPS), and Operational Requirements Document (ORD)) to ensure acquisition considerations are included;
- Coordinating the Acquisition, Construction & Improvement (AC&I) portion of funding for CONOPS, Capability Development Plan (CDP), P-ORD, and ORD development, including funding for feasibility studies, trade-off analyses, and documentation support;
- Managing a geographically dispersed workforce;
- Supervising direct-report PMs;
- Providing oversight for all domain-related plans and documentation to ensure

- compliance with this manual;
- Liaising with Sponsors, TAs, appropriate APOs, ILS managers and other members of the Acquisition and Support Directorates for their appropriate participation in Program Management, Systems Engineering (including systems integration), Logistics, Test and Evaluation, and Enterprise Architecture activities;
 - For APEO (Surface) only: Through APO Baltimore, ensuring that the Surface PMs are supported in executing all logistics related efforts in accordance with the USCG logistics business model;
 - Providing clear goals and objectives to the PMs, and keeping program team members focused on program vision and goals as they deal with challenges and change;
 - Tracking and ensuring PMs meet Acquisition Program Baseline (APB) cost, schedule, and performance parameters within approved budgets and reporting adverse trends;
 - Monitoring and optimizing the planning, programming, and budgeting efforts for the mission domain;
 - Ensuring the integration and submission of appropriate requests for resources needed to develop, acquire, and support acquisition programs;
 - Coordinating with Commandant (CG-928) throughout the process and providing financial documents to ensure a complete audit trail of domain and program funds;
 - Ensuring the submission of all required financial reports and data to ensure the domain is efficiently and effectively managed and supported;
 - Ensuring the domain is responsive to the requirements that are placed on it by organizations within and outside the Coast Guard;
 - Developing and coordinating external domain responses to inquiries from Congress, DHS, Government Accountability Office (GAO), congressional testimonies, presentations, and data calls. Act as the authoritative and principal source of information for internal and external inquiries and briefings on domain and programmatic issues;
 - Maintaining liaison with DHS, Department of Defense (DOD), and other non-Coast Guard organizations as appropriate;
 - Building relationships with other programs and domains;
 - Exercising control of USCG approval authority of portfolio reporting within the DHS nPRS;
 - Supporting the Sponsor's Representative in developing the initial OMB Business Case for a new start program;
 - Briefing the CAO on a new start program's initial acquisition strategy, prior to ADE-1.

At the discretion of the Component Acquisition Executive, the APEO can be organized to oversee critical cross domain and cross program support functions or services provided by

two different USCG support program offices. These are the Asset Program Office (APO) and the Major Acquisition Systems Infrastructure (MASI) Program Office.

1. Asset Program Offices (APOs)

APOs are established to support PM staff, provide logistics planning and analysis support, assist with the integration of logistics into product development, and facilitate the transition of sustainment responsibility to the appropriate Logistics/Service Center after initial deployment. While the PM is responsible for overall program performance, including logistics related efforts, an APO acts as an extension of the PMs' staff to coordinate and execute these activities in accordance with the USCG logistics business model. An APO is organized to best plan and execute its support mission, and may be organized under an APEO to support a program portfolio such as the Surface program domain, or be tied to directly support a specific program such as a new aviation asset.

The APO:

- Supports PMs and acquisition Integrated Logistics Support (ILS) managers in delivering assets/systems which are sustainable in a manner which meets the Sponsor's operational requirements;
- In concert with ILS managers, develops and implements comprehensive product/logistics support strategies for new acquisitions;
- Supports development of the PM's Integrated Logistics Support Plans (ILSPs) and manages/oversees development of ILS products (e.g., supply support and maintenance development), consistent with Engineering Technical Authority (ETA) policy; (See section 1.O. of this manual, Technical Authority (TA));
- Plans and executes a seamless transition of new acquisition Product/Asset Lines into the appropriate sustainment organization;
- Supports the program PM in the development, establishment, and maintenance of common logistics processes to promote standardized, efficient, and cost effective support across programs;
- Assists the PM in the development of cost requirements of LCCE logistics elements based on common logistics processes;
- Assists in the development of contract data requirements list (CDRL) requirements for program logistics elements;
- Provides subject matter expertise to support logistics test and evaluation, validating any applicable supportability requirements;
- Ensures the safe, timely, and cost effective disposition of decommissioned legacy assets associated with their respective programs.

2. Major Acquisition Systems Infrastructure (MASI)

The MASI program provides resources to address the facilities support needs associated with the acquisition of new or improved assets, such as surface vessels and aircraft. MASI funds facilities construction projects that help prepare field sites to receive, operate, and sustain new assets. MASI is involved early in planning stages of the

program life cycle and the MASI office maintains constant coordination with their “customer” PMs and APEOs to ensure assets are supported with the appropriate facilities and infrastructure when deployed.

H. Program Executive Officer (PEO)

The PEO has overarching responsibility for acquisition program management and execution. This includes the oversight of all USCG major acquisition programs to modernize and recapitalize Aviation, Surface, and C4ISR assets and logistics for the USCG’s multiple maritime missions prior to transition to sustainment. Programs are grouped into three major domains (Aviation, Surface and C4ISR), each led by an APEO who reports directly to the PEO. Within each portfolio, PMs are responsible to the PEO through their respective APEO for the cost, schedule, and performance of their programs and the establishment of a sustained logistics support capability for the asset being acquired. The PEO retains the responsibility to develop, promote, and sustain integration and interoperability efforts across all relevant domains and acquisition programs throughout all phases of the acquisition life cycle.

Under the general direction and supervision of the Assistant Commandant for Acquisition (CG-9) the PEO:

- Oversees acquisition, integration, and delivery of assets and systems. Ensures development, maintenance, and/or compliance with all domain-related plans and existing directives. Maintains complete, up-to-date documentation of actions and decisions;
- Provides direction and guidance for APEOs and PMs to define and best satisfy program cost, schedule, and performance objectives while identifying and managing risk throughout the acquisition life cycle;
- Ensures that APEOs liaise with sponsors, TAs, and support directorates in appropriate MSAM phase activities;
- Consults with the Director of Contracting and Procurement, Commandant (CG-91) in matters relating to acquisition strategy, competition, and contract management;
- Ensures APEOs have full Contracting Officer support to successfully execute acquisition programs;
- Consults with the Director of Acquisition Services, Commandant (CG-92) in matters related to, workforce management, international sales, research, development, testing and evaluation, resource management matters, and acquisition support and governance;
- Ensures APEOs have full access to all required support services to successfully execute their domain including, but not limited to, required funding to execute their domains and programs, contractor support services, cross-domain integration support, information management tools and data, real-time metrics of cost, schedule, and program performance; workforce training and staffing, business management support to oversee cost and schedule, communication product support, administrative support, work spaces and equipment required for duties and workforce professional

- credentialed and certification;
- Reviews and approves financial plans for Commandant (CG-93) programs. Ensures information is provided to Commandant (CG-928), the Sponsor and Support Program Managers (e.g., product line managers, service center asset managers) for development of funding and other resource requests;
- Acts as the principal Coast Guard spokesperson for all acquisition program status and execution related issues;
- Coordinates with sponsors who will continue to serve as spokespersons for current and projected operations and operational requirements;
- Provides effective internal communications to keep personnel properly informed of domain and program developments and issues;
- Serves as one of the principal USCG contacts to senior representatives from industry and government agencies for the conduct of acquisition program management activities;
- Presses acquisition reform and promotes best practices and lessons learned, optimizing matrix team participation and employing integrated product teams;
- Aligns efforts with Commandant (CG-92), Sponsors, and support program directors to address and resolve issues of mutual concern;
- Approves negotiations and MOUs for Inter-Agency Support Agreements related to major system acquisitions;
- Ensures compliance with DHS and Coast Guard policy and SOPs for major acquisition programs.

I. Chief Acquisition Officer (CAO)

The Assistant Commandant for Acquisition, Commandant (CG-9), is chartered by the CAE to be the Coast Guard CAO. The CAO sets the strategic direction for Coast Guard acquisitions and oversees the effective execution of all acquisition related functions.

Specifically, the CAO will:

- Report directly to the CAE on matters pertaining to acquisition roles and responsibilities;
- Serve as the primary representative for the Coast Guard at the DHS CAE Council;
- Develop and approve Coast Guard acquisition policies and processes to ensure effective management and appropriate oversight of Coast Guard acquisitions;
- Use functional experts to promote the use of systems acquisition best practices and to provide/oversee the independent review and assessment of acquisition programs and projects. For more information on these independent reviews, see chapter 5 of this manual;
- Monitor the performance of acquisition programs through the use of cost, schedule, and performance metrics and advise the Commandant, through the chain of

- command, on the appropriate business strategies to best execute Coast Guard acquisition programs;
- Ensure compliance with all applicable acquisition laws and policies including the Coast Guard Authorization Act of 2010;
 - Serve as the ADA for ADE-2 and ADE-3 for non-major, non-IT acquisition programs;
 - Serve as a member of the CG ARB;
 - Serve as the chair of the EOC (with the exception of non-major IT programs for which Commandant (CG-6) is the chair);
 - Design policies and processes to ensure that the best qualified persons are selected for acquisition management positions (e.g., PMs and APEOs);
 - Ensure that Commandant (CG-9) personnel meet the DHS mandatory education, training, and experience standards established for an acquisition career level (Levels I, II, and III) in an acquisition career field.

J. Executive Oversight Council (EOC)

The EOC is a Flag/SES-level forum that monitors major risks, addresses emergent issues, and provides direction to cross-directorate teams as required to support successful planning, preparation, and execution of major acquisition programs. The EOC is chaired by the USCG CAO, Commandant (CG-9) for all major acquisition and non-major non-IT related acquisition reviews. The EOC is chaired by the USCG CIO, Commandant (CG-6) for all non-major IT-related acquisition reviews. The USCG Assistant Commandant for Capability (CG-7) serves as the EOC Chair for the annual ADE-0 review. The chair of the EOC may rotate to the Sponsor or a TA depending on the nature of the given review. The EOC is responsible for integration of USCG systems acquisition across all mission and functional domains.

The EOC includes key stakeholders whose function is to review changes to requirements or resources that have the potential to result in significant performance, cost, and/or schedule changes.

The EOC is responsible for helping major acquisition programs successfully manage to their approved baselines. The EOC will monitor major risks and serve as a focal point to discuss and resolve emergent issues that may hinder the effective management of major acquisitions.

Specifically the EOC will:

- Monitor major risks and approve mitigation plans to balance cost, schedule, and performance tradeoffs;
- Synchronize programs with planning, programming, budgeting, and execution milestones to align them for successful completion of key milestones and ADEs, and provide input to the CG ARB;
- Address and resolve cross-sponsor and cross-enterprise issues;

- Control requirements creep by reviewing proposed changes to operational requirements;
- Review de-scoping of operational requirements or adjustments to technical baselines in response to affordability considerations;
- Provide a forum for the CAO, PEO, and CIO to raise issues, identify programmatic support needs or to propose cost, schedule, and performance tradeoffs;
- Provide a forum for the TAs and Sponsor to raise and discuss issues related to major acquisitions;
- Serve as a review board for proposed acquisition strategies and prioritizing new starts;
- Provide coordinated guidance to staffs;
- When appropriate, make recommendations to the CAE;
- Resolve disputes by consensus. If disputes remain unresolved after 90 days, document the issue providing a detailed description and rationale underlying the decision to the Commandant for reporting to the appropriate congressional committees in accordance with the Coast Guard Authorization Act of 2010, HR 3619 Sec 401(e);
- As part of the annual ADE-0 process, review and assess the collection of current programs plus candidate new start initiatives with the intent of providing a balanced set of affordable acquisition programs that meet mission needs across the collective life cycle.

K. Component Acquisition Executive (CAE)

The CAE is the senior acquisition official within the Coast Guard. The CAE is responsible for implementation, management, and oversight of Coast Guard acquisition processes.

Responsibilities of the CAE include:

- Establishing acquisition processes within the Coast Guard;
- Aligning and managing the Coast Guard acquisition portfolio in compliance with applicable DHS and Coast Guard regulations and policies and consistent with DHS missions and strategic goals;
- Participating in DHS ARBs for Level 1 and 2 acquisitions within the Coast Guard portfolio, or designating an alternate to participate;
- Submitting all Level 1 and 2 acquisitions through the Acquisition Review Process, including Level 1 and 2 joint/consolidated investments for which the Coast Guard is the designated lead;
- Executing ADA responsibilities for Component Level 1 and Level 2 acquisitions when delegated by the DHS Undersecretary for Management (USM), who serves as the DHS CAO;

- Reviewing Operational Test & Evaluation (OT&E) reports presented by the Operational Test Agency (OTA);
- Executing ADA responsibilities for Component Level 3 acquisitions and establishing Component Level 3 acquisition policies and procedures that support the spirit and intent of Reference (a); Assisting the USM and DHS Chief Procurement Officer (CPO) in developing, implementing, and evaluating Acquisition policies, programs, and services by providing resources (e.g., for integrated process teams), input, and advice;
- Advising the USM on the mission, priorities, initiatives, and acquisition program needs of the Component, and immediately notifying the USM and DHS CPO of acquisition management developments that may have a significant impact on DHS or Component acquisition and contracting activities.

L. Systems Integration Team (SIT)

The Systems Integration Team (SIT) is a cross-directorate, cross-enterprise O-6/GS-15 level team whose primary purpose is to support the EOC with the management of issues and provide a forum to discuss and resolve program issues that directly or indirectly impact cross-directorate stakeholders. The SIT provides individual programs and Resource Councils (RCs) the opportunity to elevate cross-programmatic issues and pursue collaborative solutions to achieve mutually beneficial results in a timely manner.

The SIT is chaired by the Deputy Assistant Commandant for Capabilities (CG-7D).

Specifically, the SIT:

- Serves as a forum to discuss and work emergent cross-domain issues;
- Addresses issues tasked by the EOC chair;
- Provides coordinated recommendations to the EOC;
- Coordinates resolution of cross-programmatic issues raised by RCs;
- Meets as needed to address specific issues;
- Meets quarterly to review RC minutes to ensure cross-programmatic issues are appropriately recognized;
- Reports to the EOC on cross-programmatic issues brought forward by the Resource Councils (RCs).

M. Resource Councils (RCs)

Resource Councils (RCs) are cross-directorate O-6/GS-15 level advisory boards who represent several functional areas such as Aviation, Cutters, Boat Forces, C4ISR&IT and Shore Forces. Careful coordination across several directorates is required to ensure USCG assets are properly acquired/modified, maintained, and staffed at field and staff elements. The RCs provide the appropriate oversight to address the concerns of each of the domain functional area stakeholders while meeting the goals and objectives of USCG and DHS

executive leadership.

The RCs will be chaired by the Assistant Commandant for Capabilities, Commandant (CG-7) or a designated representative.

Specifically the RCs will:

- Address domain specific governance issues;
- Recommend domain investment tradeoffs and priorities;
- Advise the SIT and EOC on investment decisions;
- Be potential members of the SIT and may work within that forum to further discuss/resolve cross domain issues;
- Report directly to the EOC for issues within their capability and through the SIT for all cross-programmatic issues.

N. Sponsor and Sponsor's Representative

The Sponsor is the identified organizational element that develops and documents the OMB Business Case, defines and validates functional requirements, and accepts capability needed to support Coast Guard mission or business performance. For enterprise systems (as identified by the USCG Enterprise Architecture), the Sponsor shall be at an organizational element level. For SELC reviews of Coast Guard programs, the Sponsor is also known as the Lead Operational Authority.

The Sponsor has the following responsibilities:

- Working with Commandant (DCO-81) and Commandant (CG-5R/P) in planning and conducting Mission Analysis (MA) and in creating the Mission Analysis Report (MAR);
- Defining, maintaining, evaluating, and articulating organizational and program goals and requirements through development of the Mission Need Statement (MNS), CONOPS, P-ORD and the ORD;
- Acquiring, through planning and programming, the necessary resources to fully implement and support the needed capability, considering total operating costs and the entire life cycle of the system;
- Coordinating, assimilating, and providing end user input to the appropriate stage of the SELC;
- Identifying and facilitating the resolution of issues tied to requirements and needs;
- Defining, tracking, and evaluating performance measures;
- Developing, updating, and establishing program doctrine, policies, and associated concepts of operations, including operational or end user operational training requirements;
- Coordinating with Commandant (CG-6) for identification and designation of an Asset

- Manager for every C4IT program;
- Fulfilling the planning, programming, and budgeting functions of the Sponsor's organization;
 - Developing acceptance criteria (including performance) for capabilities and systems;
 - Conducting annual Operational Analysis (OA) on individual assets in accordance with DHS Operational Analysis Guidance to determine the capability of current assets to meet required performance, supportability and cost goals;
 - Consulting with the PM, TAs and USCG Director of Governmental and Public Affairs, Commandant (CG-092) to ensure Enterprise Architecture artifacts created as part of the proposed acquisition are aligned to the Coast Guard's Enterprise Architecture;
 - Supporting the PM in developing acquisition documents, and providing concurrent clearance inputs to applicable program documents as identified in Figure 18.

The Sponsor's Representative is designated by the Sponsor. The Sponsor's Representative shall collaborate with the PM and SELC technical experts as well as customers, users, and stakeholders to ensure alignment and compliance with this Manual and its SELC policy. The Sponsor's Representative shall be the advocate for delivery of affordable, effective, sustainable and useable systems.

The Sponsor's Representative has the following responsibilities:

- Coordinating concept approval for development of any new or existing system with the Mission Manager³, representatives of the TAs, and the Sponsor;
- Articulating requirements for the Sponsor, users, customers, and stakeholders;
- Assisting in the development and/or validation of business process changes;
- Working with the Asset Manager from Commandant (CG-6) to ensure that any new or existing C4IT system aligns with the Enterprise Architecture;
- Collaborating with the APEO, PM, Asset Manager, users, stakeholders and TA representatives in the development of cost estimates;
- Working with Commandant (CG-1B3), and FORCECOM, Commandant (FC-T) in defining crew performance requirements, and requesting analysis to determine appropriate performance support and training;
- Communicating and resolving issues identified with system development, operation, or support;
- Processing and relaying change requests, input, and feedback from users, customers, and stakeholders;
- Collaborating in the development of a systems engineering lifecycle tailoring plan for

³ Mission Manager is defined in USCG Pub 7-7 as CG-5 representative who provides knowledge of mission analysis details and intent.

each program;

- Supporting development and approval of acquisition documents through the Sponsor.

O. Technical Authorities (TAs)

The Commandant has designated TAs to serve as the Coast Guard's authoritative experts in providing the authority, responsibility, and accountability to establish, monitor, and approve specific enterprise business line responsibility standards, tools, processes, and certify programs in conformance with statute, policy, requirements, architectures, and standards.

Engineering Technical Authority (ETA) is a type of TA designated by DCMS. It is specifically applied to a well-defined systems engineering context. ETA is the delegated authority, responsibility, and accountability to establish or assert engineering technical standards, tools, processes, and best practices; monitor compliance with or use of them; and certify conformance with statute, policy, requirements, architectures, and standards. ETA processes and the associated certifications are an essential aspect of an independent TA, providing objective evidence of effective, efficient, and affordable systems engineering. Deputy Commandant for Mission Support (DCMS) Engineering Technical Authority, COMDT INST 5402.4, addresses the definitions, roles, and responsibilities for the implementation of all ETA in support of acquisition and sustainment programs.

TAs help develop and/or provide concurrent clearance inputs to all applicable program acquisition documents as identified in **Figure 18 Concurrent Clearance Review Matrix**.

The Assistant Commandant for Intelligence (CG-2) is the designated TA for intelligence systems and capabilities, associated Sensitive Compartmented Information networks, communications and spaces. Commandant (CG-2) Memorandum, Decision Memo – Intelligence Support to Acquisitions, SSIC# 3810 dated 28 February 2011 approved by the Vice Commandant on 31 May 2011, applies.

The Assistant Commandant for Resources (CG-8) is the Coast Guard CFO and the designated TA for Financial Management. Chief Financial Officer (CFO) Technical Authority, COMDTINST 5402.3 (series), applies.

The Assistant Commandant for Human Resources (CG-1) is the designated ETA for Human Systems Integration (HSI). HSI addresses the "human" component of the systems engineering process to ensure systems are designed, produced, supported, fielded, and modernized through a complete and careful integration of the human component. This includes human factors engineering (HFE), manpower, personnel, performance support and training, occupational health and system safety, habitability, and personnel survivability design elements to be incorporated into the life cycle development and management of Coast Guard systems. Deputy Commandant for Mission Support (DCMS) Engineering Technical Authority COMDT INST 5402.4 applies.

The Assistant Commandant for Engineering and Logistics (CG-4) is the designated ETA for aeronautical, civil, and naval engineering; energy and environmental management; and logistics for all Coast Guard systems. Additional areas of Commandant (CG-4) technical domain responsibilities are covered in COMDT INST 5402.4 Enclosure 2.

The Assistant Commandant for Command, Control, Communications, Computer, and Information Technology (C4IT) is the designated ETA for all C4IT development, operation, and maintenance in the Coast Guard regardless of system. C4IT systems include any enterprise equipment or interconnected system or subsystem of hardware and software, or any national security system that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data, voice, video, or information. Areas of detailed technical domain responsibilities are covered in COMDT INST 5402.4 Enclosure 2.

P. Head of Contracting Activity (HCA)

The Director of Contracting and Procurement, designated as the Head of Contracting Activity (HCA), is aligned within the Acquisition Directorate (i.e., Commandant (CG-91)) to manage contracting policy for the entire USCG. This executive is responsible for planning, directing, coordinating, and controlling all aspects of procurement policy and operational contracting programs throughout the USCG. The HCA manages all of the Coast Guard's acquisition contracts and other procurements, as well as provides direct contract support for Commandant (CG-93)'s acquisition program managers. The HCA also ensures that the Coast Guard is in compliance with all federal contract law and regulations.

Q. Contracting Officer Authority and Responsibility

The Contracting Officer has a unique role and responsibility in supporting program execution.

In particular, the Contracting Officer:

- Acts as the sole Government authority to enter into, administer, modify, or terminate contracts and make related determinations and findings;
- Ensures performance of all necessary actions for effective contracting, ensures compliance with the terms of the contract, and safeguards the interests of the United States in its contractual relationships;
- Participates and supports program IPTs in the analysis, development, recommendation and selection of contract types;
- Ensures that all requirements of law, executive orders, directives, regulations, and all other applicable procedures, including clearances, approvals, and ethics have been met;
- Ensures that sufficient funds are available for obligation;
- Ensures that contractors receive impartial, fair, and equitable treatment;
- Requests and considers the advice of subject matter experts in audit, law, engineering, information security, transportation, and other fields, as appropriate;
- Ensures that contracts are structured to allow for effective valuation and capitalization of each Coast Guard asset produced under contracts.

The proper exercise of this expertise requires the ability to act independently without improper influence on business decisions. The Contracting Officer's ability to exercise independent business and professional judgment will result in excellent customer service to the PM and facilitate timely and accurate documentation resulting in a successful contract award and ultimately, a successful program. Therefore, Contracting Officers should be identified early in the acquisition process to ensure they are part of the acquisition team from the beginning.

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CHAPTER 2: MAJOR SYSTEMS ACQUISITION MANAGEMENT
A. Major Systems Acquisition Process

The Coast Guard's major systems acquisition process implements the capital asset acquisition policy embodied in the FAR, OMB Circular A-11, and Reference (a).

1. Major Systems Acquisition Management

This chapter discusses the process governing Coast Guard Major Systems Acquisitions. It provides definitions of acquisition categories, acquisition phases, and principal decision milestones.

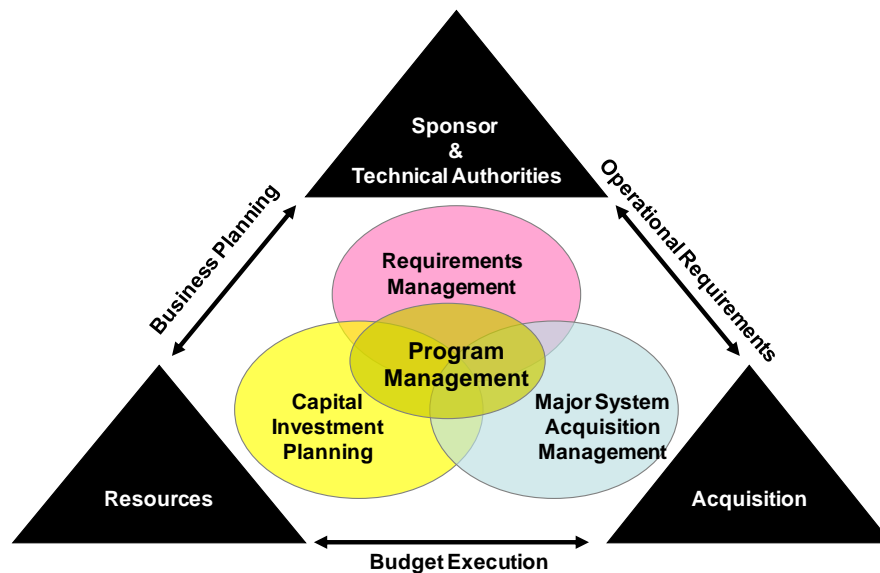


Figure 2 Management Interfaces

PMs are required to integrate the three primary management areas shown in **Figure 2 Management Interfaces** into a coherent strategy to achieve specific cost, schedule, and performance parameters for their assigned programs.

Requirements Management is the Sponsor and Technical Authority managed process with the Sponsor defining mission needs and translating them into Sponsor requirements and the TA ensuring proper Coast Guard technical standards and resources are incorporated. Business planning will identify the deficiencies (gaps) that exist between current Coast Guard functional capabilities and the required capabilities of current or projected missions. The Sponsor is responsible for developing a MNS that describes specific functional capabilities required to accomplish Coast Guard missions that can only be met with new, modified, or additional materiel solutions. The Sponsor is responsible for developing a CONOPS that describes a proposed asset, system, or capability in terms of the user needs it will fulfill, the environment in which it will operate, its relationship to existing assets or systems, and the ways it will be used. The Sponsor identifies and refines specific asset or systems requirements and articulates them in the ORD.

Major Systems Acquisition Management is the PM-owned process of planning program activities and organizing a program staff to achieve cost, schedule, and performance requirements identified in the ORD and funded in the budget.

Capital Investment Planning is the PPBE process that is a calendar-driven fiscal process and owned by the Assistant Commandant for Resources (CG-8). Capital Investment Planning has two interdependent functions - providing program budget planning (for funding and personnel) and supporting the establishment of affordability constraints. Program resource planning and management is coordinated by the PM in collaboration with the Sponsor, TAs, and Commandant (CG-8) staff in conjunction with the Office of Resource Management, Commandant (CG-928).

2. Major Systems Acquisitions

Major Systems Acquisitions include equipment, services, and intellectual property (e.g., software, data) that are acquired by the USCG through purchase, construction, manufacture, lease, or exchange. Depending on the complexity, cost, risk, and value major acquisitions may include: developing new systems; obtaining additional quantities of existing systems/assets or significant changes to existing systems/assets such as capability upgrades, improvements, service life extensions, remanufacturing, restorations, re-activations, major modifications, key subsystem replacements, or major repairs. A complete system includes processes, people, integration, testing, production, logistics, and training as well as the operator, maintainer, supporter, and trainer who are all components of the overall system. Acquisitions are categorized based on Program Life Cycle Cost Estimates (LCCEs) and Total Acquisition Costs (TACs) into acquisition levels requiring differing levels of oversight. DHS Level 1 and 2 programs are labeled Major Systems Acquisitions and Level 3s are called Non-Major Acquisitions.

Reference (a) provides governing guidance and knowledge-based management requirements for oversight of DHS acquisitions. The DHS acquisition levels and ADAs determined by the LCCE of the program (in constant year 2009 dollars) are shown in **Table 2 Acquisition Level Determination** below:

Table 2 Acquisition Level Determination

Level 1¹ (Major)	LCCE: Exceeds or equals \$1B or TAC: Exceeds \$300M ADA: USM
Level 2¹ (Major)	LCCE: Exceeds or equals \$300M, but less than \$1B or TAC: Exceeds \$100M, but less than or equal to \$300M ADA ² : USM or the CAE upon designation by the USM
Level 3 (Non-Major)	LCCE: Less than \$300M ADA: see Table 3

¹ All Acquisition Level 1 and 2 programs require Program LCCE's to be approved by DHS CFO.

² DHS CPO is the designated ADA for Level 2 service acquisitions ADE-2A/B

Initially, an acquisition is assigned a level by the CAE in consultation with the Executive Director PARM based on its estimated total LCCE, but it may be changed to a higher or lower level for one of the following reasons:

- Importance to DHS’ strategic and performance plans disproportionate to its size;
- High executive visibility;
- Impacts more than one DHS Component or has significant program, project, or policy implications;
- Other reasons, as determined by the Deputy Secretary, DHS USM, or ADA.

When acquisition decision authority is delegated to the USCG CAE, ADEs will be brought to the CG ARB and presented to the appropriate ADA as provided in **Table 3 ADE Review Chair (as ADA)**.

Table 3 ADE Review Chair (as ADA)

Major					
ADE	0	1	2A/2B/2C	3	4(CG Only)
Level 1	DCMS	CAE	CAE	CAE	DCMS
Level 2	DCMS	CAE	CAE	CAE	DCMS
Non-Major ^{1,2}					
ADE	1		2	3	
Level 3	DCMS		CAO (CG-9)/CIO (CG-6)	CAO (CG-9)/CIO (CG-6)	

¹ Non-Major Acquisitions are governed by Non-Major Acquisition Process (NMAP) Manual , COMDTINST M5000.11 (series)

² Commandant (CG-9) is the Chair for Non-Major (Non-IT). Commandant (CG-6) is the Chair for Non-Major (IT).

Major Systems Acquisition Process Structure

For the USCG, the major systems acquisition process is based upon the DHS Directive 102-01. As shown in **Figure 3 Major Systems Acquisition Life Cycle Framework**, the overall acquisition life cycle is composed of a pre-acquisition phase (Program Identification) and four distinct acquisition phases: Need, Analyze/Select, Obtain, and Produce/Deploy/Support. The USCG transitions support following Production/Deployment at a USCG unique ADE-4. For this reason, this manual identifies the fourth phase as Produce/Deploy and Support.

The transition from one phase to the next occurs with the decision to approve an ADE as documented in an Acquisition Decision Memorandum (ADM). The appropriate USCG ADA for ADEs is specified in **Table 3 ADE Review Chair (as ADA)**. As indicated by a triangle (▲) in **Figure 3 Major Systems Acquisition Life Cycle Framework**, ADEs are critical knowledge-based decision points throughout the acquisition life cycle process that require assessment of program readiness and risk before formal authorization to proceed to the subsequent phase. Any deviation from this knowledge-based acquisition process must be documented in the Acquisition Strategy approved by the CAE and DHS ADA at

ADE-1.

The major systems acquisition life cycle is intended to be flexible and may be tailored, with the ADA's approval, to meet the specific circumstances of each acquisition program.

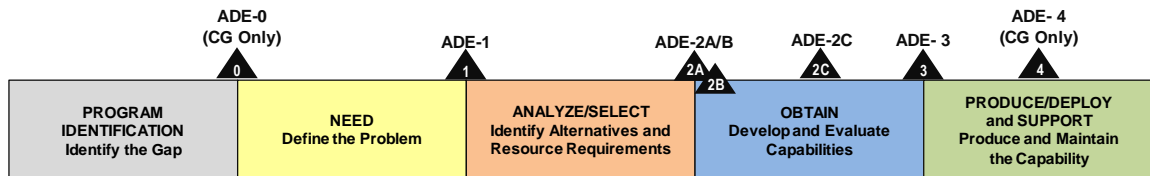


Figure 3 Major Systems Acquisition Life Cycle Framework

3. Major Acquisition Phases

- Program Identification Phase:** Before a major systems acquisition formally begins, a capability gap must be identified. As part of pre-acquisition activities, USCG Mission Analyses (MAs) are performed by Office of Performance Management and Assessment (DCO-81) and Commandant (CG-5R/P) and are used to identify USCG capability gaps. These analyses must include integration with USCG TAs – Commandants (CG-1), (CG-2), (CG-4), (CG-6), and (CG-8), and USCG Force Readiness Command (FORCECOM) – to ensure the inclusion of mission support needs as well as mission capabilities and affordability. The result of this ongoing MA is a Mission Analysis Report (MAR). Potential solutions to the gaps outlined in the DCO-approved MAR(s) are addressed at ADE-0. NOTE: DHS has the specific component (i.e., USCG) act as ADA for ADE-0.
- Need Phase:** During the Need Phase, the DCO approved MAR is used to develop a MNS and CONOPS to describe materiel solution functional capabilities required to address specific capability gaps in USCG mission performance. In addition, initial program management documentation, including the CDP, preliminary acquisition strategy brief, updated rough order of magnitude (ROM) cost estimate and an evaluation of affordability are updated. The Need Phase culminates with the ADE-1 review.
- Analyze/Select Phase:** The Analyze/Select Phase identifies and explores materiel system solution alternatives through an Alternatives Analysis (AA) to fill validated user mission capability gaps identified in the MNS. The CONOPS is used to support the AA. Feasible alternatives are evaluated and system requirements are identified to provide a basis for assessing the relative merits (e.g., advantages and disadvantages, degree of risk, LCC, and detailed cost-benefit) of the alternatives and ultimately determine a preferred solution. An Acquisition Plan (AP) provides the specific details of information contained in the acquisition strategy. A Program Life Cycle Cost Estimate (PLCCE) is developed for the preferred alternative. Product/Logistics support planning (ILSP), test planning (Test and Evaluation Master Plan (TEMP)) and an updated certification of funding are initiated for the preferred alternative. This work culminates into

the initial program cost, schedule, and performance baseline (Acquisition Program Baseline (APB)). Once requirements and associated costs are known, the Analyze/Select Phase concludes with a combined ADE-2A/B review unless a program is managed in discrete segments, in which case, each subsequent discrete segment will go through an individual ADE-2B.

- **Obtain Phase:** The Obtain Phase of the acquisition is focused on demonstrating feasibility of the preferred alternative, refining the solution, and further updating the certification of funding prior to a full-rate production decision. During this phase, essential systems engineering activities are performed, program test plans are implemented, and integrated product/logistics support is accomplished and refined as the program design matures. A Low-Rate Initial Production (LRIP), deployment, and support decision is made at ADE-2C, with overall program approval to proceed into full-rate production, deployment, and support occurring at ADE-3. A full-rate production decision is made through an accumulation of program knowledge using results of analyses, inspection, demonstrations, and testing during development and initial production, culminating in operational test and evaluation (OT&E) using production systems in realistic operating environments.
- **Produce/Deploy and Support Phase:** The objective of the Produce/Deploy and Support Phase is to fully produce/deploy discrete segments of operational capability with established product/logistics support. Steady state support of the delivered capability occurs after the acquisition program has transitioned full support to the sustainment community as approved at ADE-4. During the capability's operational life, the Sponsor(s)/operational program manager continues operational analyses (OAs) to ensure the asset or system is meeting performance, supportability, and cost goals.

NOTE: All participants and stakeholders in the acquisition process should consider and capture lessons learned throughout all phases of a program's lifecycle. This can be accomplished through IPTs or individual methods. All lessons should be entered in the Acquisition Lessons Learned Database on a regular and recurring basis.

4. Acquisition Decision Events

The CG ARB reviews major acquisition programs prior to all DHS ADEs. At each ADE review, the program must demonstrate progress, successful satisfaction of the established exit criteria, affordability, and a readiness to move forward to the next acquisition phase. The DHS and Coast Guard Acquisition Review Processes are explained in chapter 7 in the section on reviews.

Exit Criteria are program specific accomplishments that must be achieved before a program can proceed to the next acquisition phase/ADE. Specific exit criteria are proposed at the closure of the previous phase/ADE and are defined by a thorough review of:

- System capabilities and limitations;
- Technical and programmatic risks;

- Development and operational factors impacting cost, schedule, and performance;
- Knowledge requirements necessary to proceed into the next phase.

Exit criteria for the next phase/ADE are proposed by the PM for ADA approval and documented in the ADM. These exit criteria are separate from, and are not to include, the documentation deliverables required at each ADE.

ADEs generally take place at the end of each phase of the acquisition process and mark the logical completion of the phase and the beginning of the next phase in the acquisition life cycle framework. Approval to enter into the next phase is provided from the ADA in an ADM. The specific ADEs conducted by DHS and the USCG include:

- **ADE- 0 (Program Identification - USCG Only):** A review providing authorization for candidate acquisition program(s) to enter into the Need Phase. It is intended to consider prospective new-starts as a part of the overall investment portfolio. Because of its tie to the programming/budgeting process, it is the only ADE that is intended to be calendar driven instead of event driven, and it reviews the entire portfolio of acquisition programs and prospective new start initiatives from a component mission capability and affordability perspective. It is not intended to focus on a specific individual or new start program. Optimally, ADE-0 should occur in the third quarter of the fiscal year to allow sufficient time for approved new starts to enter the USCG/DHS programming process for the upcoming Resource Allocation Proposal (RAP) activity (covering the 5 year period, beginning 2 fiscal years (FY) out from the current FY). ADE-0 is a Coast Guard specific review and does not proceed further to the DHS ADA. USCG notification to DHS of a potential new acquisition is accomplished with submission of the Preliminary MNS (P-MNS).
- **ADE-1 (Validate the Need):** The purpose of ADE-1 is to ensure alignment of needs to strategic USCG and DHS objectives along with adequate planning and resourcing for future phases. ADE-1 validates the need for a major acquisition program and charters a PM if one has not already been assigned. Exit criteria are proposed to the ADA (and approved in the ADM) to be satisfied at the end of the Analyze/Select Phase.
- **ADE-2A/B (Approve the Major Acquisition Program/Approve the Discrete Segment):** The USCG combines ADE-2A and ADE-2B decision events for the first ADE-2 review. The combined ADE-2A/B approves the acquisition to proceed to the Obtain Phase and authorizes execution of the initial or single segment of capability. This decision includes approval of the APB and execution of the planned program. It is also where the number of LRIP decision events and their quantities are approved. Exit criteria are proposed for approval of ADE-2C LRIP execution or limited production/deployment. In preparation for the ADE-2A/B review, Acquisition managers (APEO, PMs, etc.) with support of Commandant (CG-928), DCO-8, and DCMS-8 will provide current acquisition program documentation to Commandant (CG-8) to support a certification of funding. Commandant (CG-8) will make an assessment of overall affordability given the current acquisition portfolio of programs.
- **ADE-2B (Approve the Discrete Segment):** ADE-2B is usually combined with ADE-2A when the program is managed as a single segment of capability or when the

program's first segment reaches ADE-2A. Subsequent segments will each go through an individual ADE-2B.

- **ADE-2C (Approve LRIP):** Approves execution of LRIP for the quantities previously approved at ADE-2A/B. ADE-2C is used to authorize individual segment LRIP or limited deployments of IT system segments. Prerequisites for ADE-2C approval include: a completed and satisfactory Critical Design Review (CDR), a satisfactory Production Readiness Review (PRR), and demonstration of the exit criteria established by the ADA at ADE-2A/B.
- **ADE-3 (Approve Full-rate Production):** Based upon successful completion of development and operational testing; exit criteria established at ADE-2B; verification of production readiness, logistics readiness, and sufficient production and operational unit resources (staffing, equipment, supplies, and funding); the ADA authorizes the program to enter the Produce/Deploy and Support Phase. In preparation for the ADE-3 review, Acquisition managers (APEO, PMs, etc.) with support of Commandants (CG-928), (DCO-8), and (DCMS-8) will provide updated acquisition program documentation to Commandant (CG-8) for a revised certification of funding. Commandant (CG-8) will reassess affordability prior to proceeding to the next phase based on the current acquisition portfolio of programs.
- **ADE-4 (Program Transition – CG Only):** This Coast Guard specific ADE occurs when system production is approaching completion and the acquisition program is ready to transition the management and sustainment of the delivered asset(s) to the Support Program Manager (e.g., asset manager, product line manager)

CFO Funding Certification: Commandant (CG-8), with support from Commandants (DCMS-8), (DCO-8), (CG-928), the PM and Technical Authorities will formally certify funding for acquisition programs seeking approval decisions for ADE-2 and ADE-3. This certification affirms that the entire program budget resources (prior years, current year and all future years) have been reviewed and validated to ensure they are consistent with the five-year Future Year Homeland Security Program (FYHSP) and all other sources of funding. This certification, along with relevant acquisition documentation, is intended to facilitate discussions regarding program affordability tradeoffs at all program milestone meetings.

Prior to ADE-2 and ADE-3 events, Commandant (CG-8) will provide a preliminary evaluation of affordability at ADE-0, and provide an updated evaluation of affordability at ADE-1. This assessment is intended to focus early USCG discussions on the priority and affordability of the prospective assets/systems and candidate tradeoff opportunities within the context of the overall investment portfolio. Because this will occur before LCCEs for prospective/proposed systems are developed, the assessment will use the rough order of magnitude (ROM) acquisition, operations and support cost estimates available at that time. APEO, Commandants (CG-928), (DCMS-8), (DCO-8), Technical Authorities, Commandant (CG-7) and the Sponsor's Representative (if Commandant CG-7 is not the sponsor) will support the development of this assessment.

B. Program Identification Phase

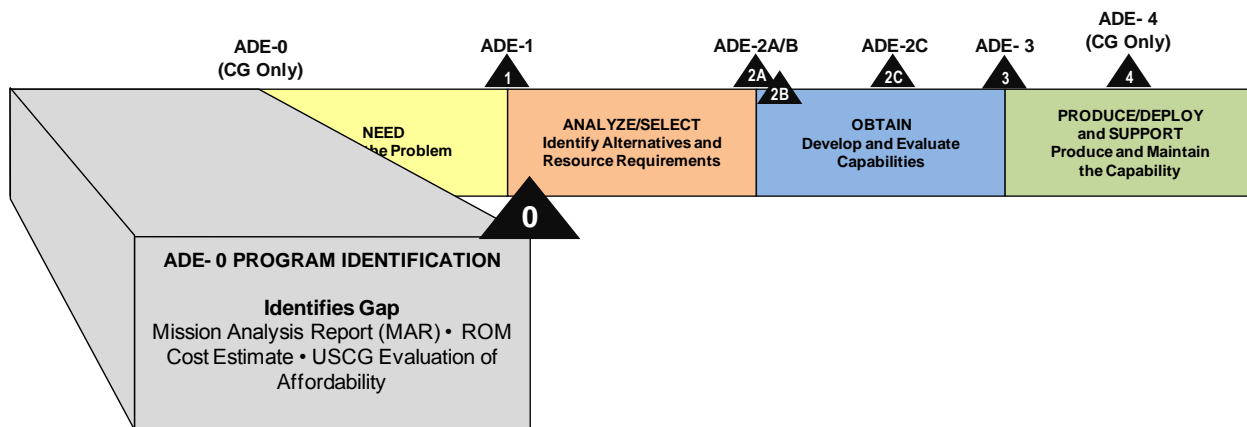


Figure 4 Program Identification Phase

1. Program Identification Phase Overview

The Program Identification Phase, as shown in **Figure 4 Program Identification Phase**, is a pre-acquisition phase conducted by the USCG that provides a foundation for the identification of capability gaps. The Program Identification Phase may also begin as the result of a congressional mandate, need for technology refreshment, or new technology development that provides a new capability or significant improvement in mission performance. During the Program Identification Phase, a MAR is developed by Commandant (DCO-81) with support by Commandant (CG-5R/P), the Sponsor, and FORCECOM to identify capability gaps in Coast Guard mission performance. Evaluation of Doctrine, Organization, Training, Materiel, Leadership, Personnel, and Facilities plus Regulations/Grants/Standards (DOTMLPF+R/G/S) assists in determining whether a materiel solution is needed to resolve the capability gap(s). The MAR is critical to the Sponsor's ability to effectively document and communicate its mission capability gaps in the MNS.

2. Program Identification Phase Objectives

The Sponsor(s) with support from Commandants (DCO-81) and (CG-5R/P), and TAs are responsible for conducting mission analyses on an ongoing basis to identify capability gaps in missions that support National, DHS, and Coast Guard strategic goals and objectives. Commandant (DCO-81) has the lead role in initiating the mission analyses with the support of technical and acquisition authorities, as needed.

The primary objective of the Program Identification Phase is to prioritize and conduct ongoing MA that review or endorse current and emerging missions and associated functional needs. The analyses should be capabilities oriented and should identify new requirements or gaps in USCG capabilities. A secondary objective is to develop a ROM cost estimate and associated timelines as part of an acquisition forecast to allow a discussion of future affordability impacts of including potential materiel solutions in the upcoming Capital Investment Plan (CIP). Materiel solution candidates that do not receive consideration at ADE-0 for inclusion in the CIP may be reconsidered at future

ADEs, assuming the MAR(s) are current and the ROM cost estimates are updated accordingly.

In preparation for the ADE-0 review Acquisition managers (APEO, PMs, etc.) and Technical Authorities, with support of Commandant (CG-928), provide current acquisition program information to Commandant (CG-8), and collaborate with Sponsor representatives to develop ROM acquisition and operations & support cost estimates covering the life cycle for prospective new starts. Commandant (CG-8) uses this information to create and document an evaluation of affordability. This early evaluation, which will be updated for each ADE-0 and in support of individual programs' ADE-1 events, examines overall affordability given the current acquisition portfolio of programs together with the prospective new starts. This evaluation of affordability is also expected to establish the foundation for the USCG CFO Certification of Funds for each program moving to ADEs 2A/B, 2C, and 3.

3. Program Identification Phase Activities

The APEO, PM, and TA activities:

- Support the Sponsor in requirements identification and definition efforts, providing inputs on acquisition considerations;
- Work with Sponsor and Commandant (CG-928) to develop ROM cost estimates;
- Provide data to support Commandant (CG-8) evaluation of affordability.

Commandant (DCO-81) activities:

- Initiate MA and coordinate with Commandant (CG-5R/P), TAs, Sponsor(s), and FORCECOM to identify capability gaps;
- Develop MARs with support from Commandant (CG-5R/P), the Sponsor(s), FORCECOM, TAs, APEO and acquisition support organizations.

Sponsor activities:

- Support Commandant (DCO-81) in the MA to identify capability gaps and in developing the MARs;
- Work with APEO, PM, and Commandant (CG-928) to develop ROM cost estimates for new start initiatives and place in context of acquisition portfolio;
- Work with Commandant (CG-82) to develop a initial evaluation of affordability to inform Commandant (CG-8) certification of funding in later phases;
- Provide information and support (e.g., recommended prioritization of capabilities, evaluation of affordability) (CG-7 ONLY).

Commandant (CG-82) activities:

- Work with Sponsor (and Commandant (CG-7) if they are not the sponsor) to develop the initial evaluation of affordability.

Mission Analysis Report (MAR) activities:

- Define the mission, identify mission objectives, and accompanying functional

requirements;

- For each functional requirement, identify the operational tasks, conditions, and standards needed to achieve the requirement;
- Initiate integration with TAs;
- Review Coast Guard capabilities and associated capacities. Compare existing and programmed capabilities and capacities to mission functional requirements, tasks, conditions, and standards;
- Describe capability gaps, overlaps, or problems identified in mapping capabilities to requirements, in operational terms;
- Describe what additional functional areas may be involved in the problem or solution;
- Review, assess, and prioritize potential impacts on these capability gaps or changes in DOTMLPF+R/G/S;
- Determine if integrated DOTMLPF+R/G/S approaches can fill capability gaps;
- Describe the key attributes of approaches considered to resolve gaps. Ensure purpose, tasks, conditions, and standards are addressed;
- Identify potential solutions to address the needs;
- If the Sponsor determines that the capability gap(s) can be partially or completely addressed by a potential non-materiel solution based on the integrated DOTMLPF+R/G/S approach, the Sponsor will coordinate an appropriate implementation recommendation for the non-materiel solution.

Enterprise Architecture activities:

- Conform to established DHS Enterprise Architecture Board (EAB) strategic planning and IT guidance provided in the DHS EAB Governance Process Guide (series). Refer to DHS's website at: <http://mgmt-ocio-sp.dhs.gov/governance/eab/SitePages/Home.aspx>.

4. Program Identification Phase Significant Accomplishments

Significant accomplishments from the Program Identification Phase include:

- Completion of a MAR;
- Development of a ROM cost estimate.

5. Program Identification Phase Documentation

Documentation required to enter the Need Phase is presented in **Table 4 Program Identification Phase Documentation**.

Table 4 Program Identification Phase Documentation

Document	Preparation	Review	Approval
MAR	DCO-81 or DCO Program/Mission Manager	CG-5P/R	DCO
ROM Cost Estimate	Sponsor's Rep./ APEO/PM/TAs	CG-7/CG-9	N/A
Evaluation of Affordability	CG-8	EOC/DCMS/DCO	N/A

6. ADE-0 Review and Expected Outcomes

In preparation for the ADE-0 review, the Sponsor's Representative prepares a brief of the MA results (including the results of the DOTMLPF+R/G/S analyses). Candidate materiel solutions (with the capability gaps they will close) and their associated ROM cost estimates are prepared for the review. Relevant technology assessments and ongoing Research and Development/Science and Technology initiatives will also be presented. The Sponsor's Representative leads the presentation to the ADE-0 forums with discussion on the viability of programs and new start initiatives.

Commandant (CG-8) will provide the "initial evaluation of affordability" to the Sponsor's Representatives no later than seven days prior to the review for the Sponsor's Representative to integrate into the ADE-0 briefing package. Commandant (CG-8) will address overall affordability of the current acquisition portfolio plus proposed new starts at the appropriate point in the presentation.

If the capability gaps are determined to be of high enough priority to start new materiel solutions in the near term Resource Allocation Process (RAP) process, then upon successful completion of the review, the ADA (DCMS) will authorize further evaluation of these new start initiatives in the Need Phase. ADE-0 Review action items (to be documented in the ADM) will direct development of Resource Proposals (RPs) and select initial pre-acquisition program acquisition documents, and identify areas of further study and potential tradeoffs. Note that the "in preparation for ADE-0" assessment of candidate materiel solutions is not supposed to "recommend a specific solution" but is expected to provide an initial evaluation of the viability ("pros and cons") of solutions across the spectrum of systems acquisitions, (reference chapter 2 Section A.2 Major Systems Acquisitions). The determination of which (if any) particular materiel solution(s) will be pursued occurs during the Need Phase and/or the programming/RAP process.

A DCMS/DCO ADE-0 Review will provide:

- Early review for affordability and identification of resources needed for next phase;
- Direction to prepare one or more of: RP, MNS, CONOPS, CDP, and preliminary acquisition strategy;
- Opportunity to reprioritize and/or reprogram current resources with Sponsor or

PEO approval to conduct Need Phase activities.

A DCMS ADE-0 decision will signify:

- Recommendation to Investment Review Board for selected new start initiatives for upcoming CIP development;
- Identify and reallocate resources through PPBE process;
- Authorization through ADM to proceed into Need Phase to conduct select acquisition activities.

C. Need Phase

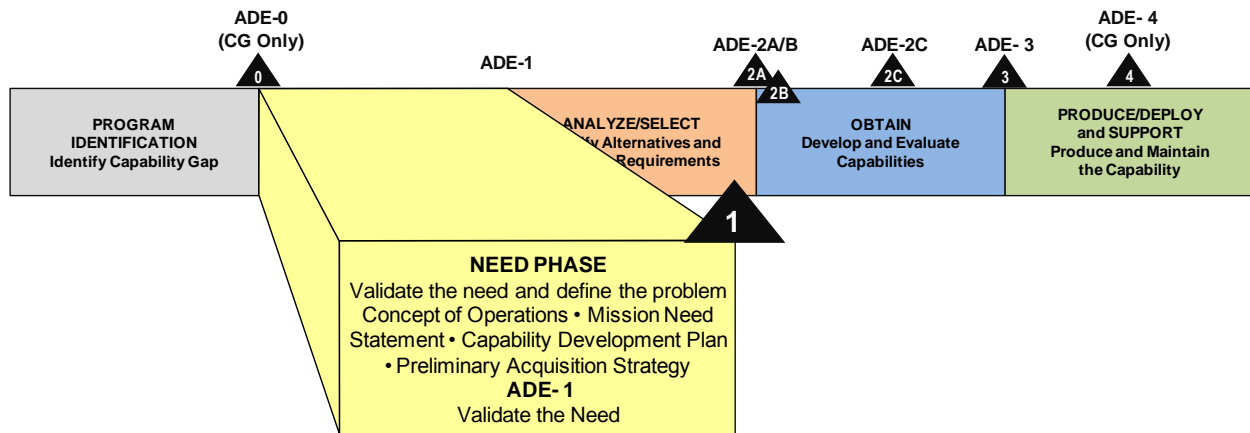


Figure 5 Need Phase

1. Need Phase Overview

The Need Phase, as shown in **Figure 5 Need Phase**, includes activities to describe the specific functional capabilities required to address the capability gap in USCG mission performance and culminates with a MNS, the CONOPS, a preliminary acquisition strategy, an evaluation of affordability, and inclusion in the CIP. In assessing the need, the USCG should consider the Integrated Planning Guidance (IPG) issued by the DHS Assistant Secretary for Policy and how the identified need can be made affordable and align with the DHS Strategic Plan. The MNS and CDP are approved separately by the DHS ADA. The completion of this phase signifies the start of the acquisition activities by entering the Analyze/Select Phase.

2. Need Phase Objectives

The Sponsor is responsible for preparing a MNS, with support from Commandant (CG-5R/P), and appropriate input from FORCECOM and the acquisition community, APEO, TAs and industry representatives (through market research and Requests for Information). The MNS describes the mission(s) and needed capabilities, justifies the program, and sets the program boundaries.

NOTE: Reference (b) calls for development of a P-MNS to support identification of potential multi-Component or multi-Department mission need. A P-MNS is also an element of information considered in DHS Program Resource Board decisions on funding (e.g., to insert a wedge of funding for a new start in the FYHSP). In the USCG, the draft MNS shall – upon signature by the Sponsor – be considered a P-MNS, and submitted to DHS via Commandant (CG-924).

The CONOPS is developed by a multi-functional team, led by the Sponsor under direction of Commandant (DCO). The CONOPS provides an operational mission framework for the program.

The Sponsor is to describe:

- A proposed asset or system in terms of the user needs it will fulfill;
- Its relationship to existing assets, systems, or procedures;
- The ways it will be used for mission execution and accomplishment.

Early user involvement in CONOPS development provides realistic operational background while extensive collaboration is applied to obtain consensus among the mission managers, Sponsor, acquirer, developer, support, technical authorities (TAs), and other user entities within the USCG on the operational concept of a proposed system. The CONOPS is completed in the Need Phase.

NOTE: Commandant (CG-7) has developed a Requirements Generation and Management Process (Pub 7-7) for use in developing the P-MNS, MNS, CONOPS, P-ORD, and ORD requirements documentation for major systems acquisitions; contact Commandant (CG-771) for further information.

The CDP and preliminary acquisition strategy (and if needed an AP for any contract actions necessary to accomplish the specified CDP activities) are prepared in the Need Phase. The CDP identifies the planned Analyze/Select Phase activities as well as defines the necessary resources to perform these activities. The CDP establishes an agreement between the acquisition program and Coast Guard and DHS leadership on the activities, and cost, schedule, and performance boundaries for the Analyze/Select Phase. The CDP will be completed by the acquisition organization prior to ADE-1 or up to 90 days after ADE-1 if a PM is not assigned until ADE-1.

A preliminary acquisition strategy brief is to be presented to the HCA, then to Commandant (CG-9) prior to ADE-1. The intent of this brief is to provide leadership an early assessment of reasonable acquisition approaches so that decisions can be made to align resources to a strategy that offers the best potential value to the Coast Guard. This will also provide an early opportunity to adjust the program's near term budget plan to accommodate the preferred approach. The brief must include a preliminary view of program need, cost, capability, or performance and any known risks. This brief should include options for level of competition and overall contracting strategies. It should also address any resources or acquisitions necessary to accomplish the specified CDP activities during the Analyze/Select Phase. The format of the brief is at the PM's (if assigned) discretion. An approved version of this brief will be presented as the preliminary acquisition strategy at ADE-1.

In preparation for the ADE-1 review, Acquisition managers (APEO, PMs, etc.) and Technical Authorities, with support of Commandant (CG-928), provide current acquisition program information to Commandant (CG-8), and assist Sponsor's Representatives to refine and expand earlier ROM acquisition and operations & support cost estimates and timelines covering the life cycle for new start programs. Commandant (CG-8) uses this information to update its evaluation of affordability for the program. This evaluation will be based on updated program information and the most current annual ADE-0 portfolio review. This evaluation of affordability will be revised to support the upcoming USCG CFO Certification of Funds for each program moving to ADEs-2A/B, 2C, and 3.

3. Need Phase Activities

Sponsor's Representative activities:

- Prepare the MNS, as directed by the Sponsor;
- Prepare the CONOPS document, as directed by the Sponsor;
- Prepare a RP for the initial program funding and staffing, as directed by the Sponsor;
- Support Commandant (CG-8) in assessing affordability of the program and developing the evaluation of affordability;
- Ensure the program is included in the CIP, as directed by the Sponsor.

Program Management activities:

- Support Commandant (CG-8) in development of evaluation of affordability;
- Coordinate with Contracting Officer to develop preliminary acquisition strategy.

Commandant (CG-82) activities:

- Provide evaluation of affordability in preparation of funding certification for ADE-2 and ADE-3 decisions.

Human Systems Integration activities:

- Identify human capabilities/manpower constraints with associated missions;
- Describe the human performance gaps and initiate analysis activities required to support mission needs;
- Identify mission-essential functions associated with mission scenarios;
- Provide inputs to MNS;
- Provide manpower numbers and other inputs into AA requirements;
- Provide inputs to the Capability Development Plan (CDP);
- Provide inputs and support to CONOPS development including scenario development;
- Produce System Safety Management Plan (SSMP).

Enterprise Architecture activities:

- Conform to established DHS EAB strategic planning and IT guidance provided in the DHS EAB Governance Process Guide (series). Refer to DHS's website at: <http://mgmt-ocio-sp.dhs.gov/governance/eab/SitePages/Home.aspx>.

OMB IT Business Case (if applicable/as required) activities:

- For IT programs only, refer to Circular No. A-11 Preparation, Submission, and Execution of the Budget (OMB Circular No. A-11), Part 7. OMB updates this guidance annually. Refer to OMB's website at: http://www.whitehouse.gov/omb/circulars_all_current_year_all_toc/.

RDT&E (if applicable/as needed) activities:

- Provide analytical evaluation, technology demonstration, and Modeling and Simulation (M&S) support for CONOPS development and AAS.

4. Need Phase Significant Accomplishments

Significant accomplishments from the Need Phase include:

- Defined the mission need and CONOPS;
- Developed the CDP and preliminary acquisition strategy;
- Obtained CAE authorization to proceed to DHS ADE-1;
- Obtained ADA approval at ADE-1 to enter the Analyze/Select Phase.

5. Need Phase Documentation

Documentation required for ADE-1 approval is presented in **Table 5 Need Phase Documentation**.

Table 5 Need Phase Documentation

Document	Task	Preparation	Approval
Preliminary Mission Need Statement	Prepare	Sponsor's Rep.	CG-7
Mission Need Statement	Prepare	Sponsor's Rep.	CAE/DHS ADA
Concept of Operations	Prepare	Sponsor's Rep.	Sponsor
Evaluation of Affordability	Prepare	CG-8	CAE (reviews)
Capability Development Plan	Prepare	APEO (PM - if assigned)	CG-9/DHS ADA
Preliminary acquisition strategy brief	Prepare	APEO (PM - if assigned)	CG-9

6. ADE-1 Review and Expected Outcomes

A CG ARB ADE-1 review will provide:

- Direction to assign a PM and core program team, recognizing priority and need for early program management discipline for success;
- CAE authorization to proceed to DHS for ADE-1 approval to enter into the Analyze/Select Phase.

A DHS Acquisition Review Board ADE-1 review will signify:

- ADA approval of ADE-1 for Level 1 and Level 2 acquisitions and authorization of entry into the Analyze/Select Phase;
- ADA approval of MNS (the MNS may be approved prior to ADE-1);
- ADA approval of CDP (at or within 90 days of ADE-1 review);

- ADA approval of proposed Analyze/Select Phase Exit Criteria;
- ADA issuance of an ADM.

D. Analyze/Select Phase

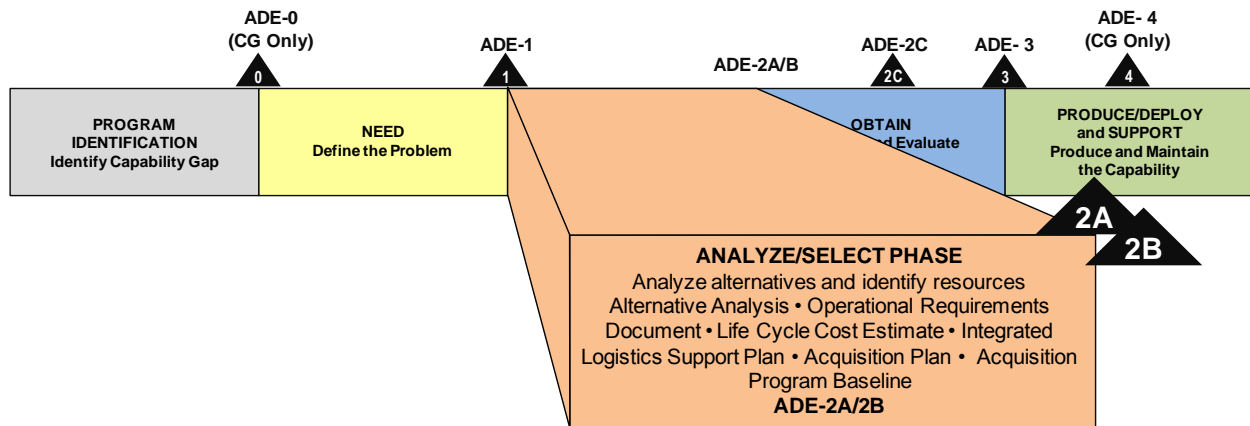


Figure 6 Analyze/Select Phase

1. Analyze/Select Phase Overview

The Analyze/Select Phase, as shown in **Figure 6 Analyze/Select Phase**, explores alternatives to fill validated user mission capability gaps in the MNS with effective, suitable and affordable materiel-based solutions. The CDP provides the overall guidance and schedule for the activities to be conducted during the Analyze/Select Phase.

Alternative solutions are identified through market research and feasibility studies with emphasis placed on innovation and competition. Promising alternatives are evaluated through an AA, and a detailed Cost Estimating Baseline Document (CEBD), then a LCCE/Independent Cost Estimate (ICE)/PLCCE are developed for the preferred solution. Affordability is addressed, opportunities for tradeoffs are explored, the acquisition strategy is refined and initial logistics support and test and evaluation strategies are developed during this phase.

2. Analyze/Select Phase Objectives

The objectives of the Analyze/Select Phase are to establish the requirements, evaluate the feasibility of alternatives that will achieve the requirements, and provide a basis for assessing the relative merits (e.g., advantages and disadvantages, degree of risk, LCC, supportability, and cost-benefit) of the alternatives to determine a preferred solution. During the Analyze/Select Phase, the CEBD, LCCE, and ICE are prepared for the preferred solution, and then reconciled into a final best estimate called the PLCCE.

Requirements Development: During the Analyze/Select Phase, the initial concept provided in the MNS and expressed in the CONOPS is refined through a systematic requirements generation process (defined in chapter 4 of this manual), identifying alternatives, and establishing a technology development strategy (if the preferred solution involves technology that is still under development) to define requirements.

Intelligence Support Planning: PMs shall work with the Sponsor and Commandant

(CG-2) to identify whether the program will have Critical Program Information (CPI), intelligence capabilities, or intelligence requirements. Commandant (CG-2) will advise the PM through written correspondence stating the determination of an Intelligence Support Plan requirement.

Alternatives Analysis: The AA is an independent analysis which identifies and documents the most resource efficient method of satisfying an identified mission capability gap.

Acquisition Strategy and Planning: Per Reference (b), “The Acquisition Plan (AP) is a living document used throughout the acquisition life cycle.” Therefore, the AP is developed during the Analyze/Select Phase to include detailed acquisition planning that supports the preliminary acquisition strategy developed during the Need Phase. Refer to Reference (b) for more information on AP development. The full content of an AP is prescribed by the DHS Acquisition Planning Guide (found in DHS Acquisition Manual (HSAM) Appendix H). Generally, AP submission is governed by the HSAM, which requires that the HCA submit acquisition plans to the CPO for approval not later than 45 days prior to the scheduled Acquisition Review Board. Refer to HSAM Subchapter 3007.103(h) (1) (ii) and (iii) and their respective sub-parts for detailed AP submission timeline requirements. HSAM Subchapter 3007.102(2) states, “No solicitations may be issued, or funds transferred within or outside the Department until an acquisition plan (AP) has been approved.” NOTE: The HSAM may be found in its entirety at: <http://www.dhs.gov/hsam>.

Development of USCG CFO Certification of Funding: In preparation for the upcoming ADE-2A/B review, Acquisition managers (APEO, PMs, etc.) with support of Commandant (CG-928) will provide current acquisition program documentation to Commandant (CG-8) to support a CFO certification of funding. This certification affirms the entire program budget resources (prior years, current year, and all future years) have been reviewed and validated to ensure they are consistent with the five-year Future Year Homeland Security Program (FYHSP) and all other sources of funding. This certification forms the foundation for future certifications at ADE-2C and ADE-3.

Logistics Support Planning: Logistics support concepts, specific product/logistics support requirements (e.g., metrics such as Reliability, Maintainability, Availability), and any product/logistics support constraints that must be satisfied are identified during the Analyze/Select Phase. An Independent Logistics Assessment (ILA) is performed no later than two months prior to ADE-2A/B, in accordance with Coast Guard Independent Logistics Assessment (ILA), COMDTINST 4081.19 (series). In the Analyze/Select Phase, the ILA checks acquisition plans and resource documents to ensure they will provide the required product/logistics support, and assesses policies and processes to ensure they will consistently produce high-quality product support/logistics support plans. The appropriate APO will support the ILSMT or PM ILS manager to provide logistics and analysis support for the development and approval of the initial ILSP.

3. Analyze/Select Phase Activities

The approved CDP developed before ADE-1 serves as the roadmap for the activities to

be performed in the Analyze/Select Phase. The CDP will function as the Program SELC Tailoring Plan (PSTP) until after ADE-2A/B. The program should notify Commandant (CG-93), and DHS PARM (through Commandant (CG-924)), in a timely manner of significant variances in the execution of the planned CDP events and schedule (e.g., delay of greater than 6 months in approval of ORD).

Specific activities and responsibilities during the Analyze/Select Phase are delineated below.

Sponsor's Representative activities:

- With inputs from members of the ORD IPT, prepare P-ORD then ORD;
- Support Commandant (CG-82) in developing Commandant (CG-8) certification of funding.

Program Management activities:

- Establish a program matrix/IPT team;
- Charter IPT;
- Expand details and content of the program's acquisition strategy to develop AP;
- Develop and obtain approval for the Alternatives Analysis Study Plan (AASP);
- Develop Program SELC Tailoring Plan (PSTP);
- Conduct the AA;
- Develop CEBD (foundation for LCCE);
- Develop LCCE;
- Coordinate development of the ICE;
- Adjudicate differences between LCCE & ICE and develop PLCCE (single best estimate) to support APB and RAP/RAD process;
- Initiate OMB Business Case⁴;
- Prepare Program Management Plan (PMP);
- Prepare Risk Management Plan (RMP);
- Prepare the CCB Charter;
- Organize the CCB;
- Support CG-82 in drafting Commandant (CG-8) Certification of Funding;
- Develop APB;
- Identify the LRIP quantity to be approved at ADE-2A/B (if applicable);

⁴ Business Cases are updated and submitted annually after initial submission in accordance with OMB Guidance.

- Work with Commandant (CG-6) to review the preferred solution and formally designate the system as a C4IT or non-IT related system if applicable;
- Develop Obtain Phase Exit Criteria.

SELC activities:

- Conduct the AA Study Plan Review (SPR);
- Assist with finalizing operational requirements;
- Identify major trade-off opportunities for cost, schedule, and performance;
- Conduct market research to identify available alternatives;
- Conduct feasibility studies and/or cost and performance trade-off studies;
- Explore alternatives and assess the major strengths and weaknesses of each;
- Assess the continued availability of materiel and manufacturing sources for each alternative to ensure long term supportability;
- Perform necessary research and testing to address technology maturity and identify integration and interoperability requirements to address and mitigate known risks;
- Conduct Technology Readiness Assessments as part of systems engineering management reviews;
- Refer to CIM 5500.13 for guidance on Information Assurance/Cybersecurity activities. Information Assurance activities include identifying an Authorizing Official, Information Systems Security Officer, and the Security Control Assessor. The C4ITSC Information Assurance Division oversees these activities, among others, that are part of the NIST risk management framework process;
- Initiate the National Environmental Policy Act (NEPA) process;
- Initiate preparation of system specification and Statement of Work (SOW) in coordination with TAs;
- Initiate configuration management planning (Ref: Coast Guard Configuration Management Manual, COMDTINST 4130.6 (Series));
- Prepare Configuration Management Plan (CMP);
- Combine and conduct the Solutions Engineering Review (SER)/Program Planning Review (PPR);
- Develop Program SELC Tailoring Plan (PSTP);
- Identify Human Performance Gaps and Deficiencies;
- Provide inputs to P-MNS, CONOPS.

Logistics Management activities:

- Initiate product/logistics support planning;
- Organize the Integrated Logistics Support Management Team (ILSMT);

- Establish support concept;
- Implement initial support plans;
- Initiate the supportability analysis;
- Establish maintenance concept;
- Prepare the ILSP;
- Conduct the Independent Logistics Assessment (ILA).

Commandant (CG-82) activities:

- Prepare Commandant (CG-8) Certification of Funding.

Human Systems Integration activities:

- Initiate Human Systems Integration (HSI) planning (including Manpower, Personnel, Training, Human Factors Engineering (HFE), System Safety & Occupational Health, Personnel Survivability, and Habitability);
- Provide HSI requirements and standards in support of AA activities;
- Initiate studies and analyses for manpower requirements and constraints to operate, maintain, support, and instruct the system;
- Generate and provide manpower numbers for CEBD and cost documents;
- Initiate studies and analysis for HFE design;
- Develop Human Systems Integration Plan (HSIP) for Commandant (CG-1) approval;
- Prepare Human Factors Engineering Plan (HFEP) for Commandant (CG-1) approval;
- Plan the requirements for the development of contract versions of the HSI and HFE Plans and development of the contractor's System Safety Program Plans;
- Support the Sponsor and PM by identifying HSI requirements and standards for input into P-ORD, ORD and all applicable plans and documents required for ADE-2A/B approval;
- Perform task analyses on legacy assets and platforms;
- Research lessons learned with regard to human performance issues, physiological limitations, and system safety engineering design;
- Coordinate and assist in Performance Support & Training (PS&T) solution development;
- Forecast high dollar/long lead time training aids and associated facility requirements;
- Identify PS&T requirements for inclusion in the ORD.

T&E activities:

- Develop integrated test strategy;
- Identify Operational Test Agency (OTA);
- Initiate Developmental Test and Evaluation (DT&E) and Operational Test and Evaluation (OT&E) planning;
- Establish and charter the Test Management Oversight Team (TMOT);
- Through the TMOT, support the PM in the development of the TEMP in accordance with MSAM Handbook, TEMP section;
- Support analytical evaluation, technology demonstration, and M&S activities, as needed for P-ORD and ORD development.

Enterprise Architecture activities:

- Conform to established DHS Enterprise Architecture Board (EAB) strategic planning and IT guidance provided in the DHS EAB Governance Process Guide (series). Refer to DHS's website at: <http://mgmt-ocio-sp.dhs.gov/governance/eab/SitePages/Home.aspx>.

OMB IT business case activities (if applicable/as required):

- For IT programs only, refer to Circular No. A-11 Preparation, Submission, and Execution of the Budget (OMB Circular No. A-11), Part 7. OMB updates this guidance annually. Refer to OMB's website at: http://www.whitehouse.gov/omb/circulars_all_current_year_all_toc/

4. Analyze/Select Phase Significant Accomplishments

Significant accomplishments from the Analyze/Select Phase include:

- Completed SPR;
- Obtained approval of AASP;
- Completed AA;
- Completed SER/PPR;
- Defined requirements for the asset or system in a P-ORD/ORD;
- Structured program into fully funded discrete segments (if applicable);
- Completed CEBD/LCCE;
- Completed ICE;
- Completed PLCCE;
- Completed ILA (no later than 2 months prior to ADE-2A, in order to meet DHS requirements);
- Completed Manpower Estimate Report (MER) and established Manpower Requirements Document (MRD) (Commandant (CG-1) approval);

- Satisfied Analyze/Select Phase Exit Criteria;
- Obtained CAE authorization to proceed to DHS ADE-2A/B;
- Obtained ADA approval for the LRIP quantity (if applicable);
- Obtained ADA approval of preferred alternative;
- Obtained ADA approval to enter Obtain Phase.

5. Analyze/Select Phase Documentation

MSAM documentation required for ADE-2A/B approval is presented in **Table 6 Analyze/Select Phase Documentation**.

Table 6 Analyze/Select Phase Documentation

Document	Task	Preparation	Approval
Manpower Estimate Report	Prepare	CG-1B3	CG-1
Human Systems Integration Plan	Prepare	CG-1B3/PM	CG-1
Alternatives Analysis Study Plan	Prepare	Study Director	DHS
Alternatives Analysis Report	Prepare	Study Director	CAE
Preliminary-Operational Requirements Document	Prepare	Sponsor's Rep.	CG-9 accepted
Operational Requirements Document	Prepare	Sponsor's Rep.	CAE/DHS ADA
Acquisition Plan	Prepare	PM/Contracting Officer	DHS OCPO \geq \$300M HCA < \$300M
Program Management Plan ¹	Prepare	PM	CG-9
Acquisition Program Baseline	Prepare	PM	CAE/DHS ADA
Integrated Logistics Support Plan	Prepare	PM	DCMS/DHS ADA
Configuration Management Plan	Prepare	PM	CG-93
Risk Management Plan	Prepare	PM	CG-93
Test and Evaluation Master Plan	Prepare	PM	CG-9/DHS DOT&E
CEBD	Prepare	PM	PM ¹
PLCCE	Prepare	PM	CG-9/DHS CFO ²
Program SELC Tailoring Plan	Prepare	PM	CG-93/DHS PARM/CIO
Certification of Funding	Prepare	CG-82/PM	CG-8

¹ Cost Estimate Baseline Document (CEBD) shall be submitted as info to DHS CAD/CFO 45 days prior to the ADE.

² DHS approval required for Level 1 and Level 2 program PLCCEs.

³ PMP includes an updated Integrated Master Schedule (IMS) to be uploaded on DHS program source data systems.

6. ADE-2A/B Reviews and Expected Outcomes

A combined ADE-2A/B will typically be conducted by the USCG at initial entrance to the Obtain Phase. There is only one combined ADE-2A/B for each program while there may be several follow-on ADE-2B events for individual discrete segment approvals. Expected outcomes for ADE-2A/B are presented in **Table 7 ADE-2A/B Reviews and Expected Outcomes**.

Table 7 ADE-2A/B Reviews and Expected Outcomes

CG ARB Review	Milestone	
Approve recommended alternative	ADE-2A/B	
Endorse proposed Obtain Phase Exit Criteria	ADE-2A/B	
Approve LRIP quantities	ADE-2A/B	ADE-2B
Authorize to proceed to DHS ADA	ADE-2A/B	ADE-2B
Approve program discrete segments		ADE-2B
Authorize to proceed to DHS ADA		ADE-2B
DHS Acquisition Review Board Review	Milestone	
ADA approves recommended alternative, endorses affordability, and authorizes entry into Obtain Phase	ADE-2A/B	
ADA approves LRIP quantities, if applicable	ADE-2A/B	ADE-2B
ADA approves proposed Obtain Phase Exit Criteria and APB	ADE-2A/B	
ADA approves program discrete segments and segment exit criteria		ADE-2B
ADA issues ADM	ADE-2A/B	ADE-2B

E. Obtain Phase

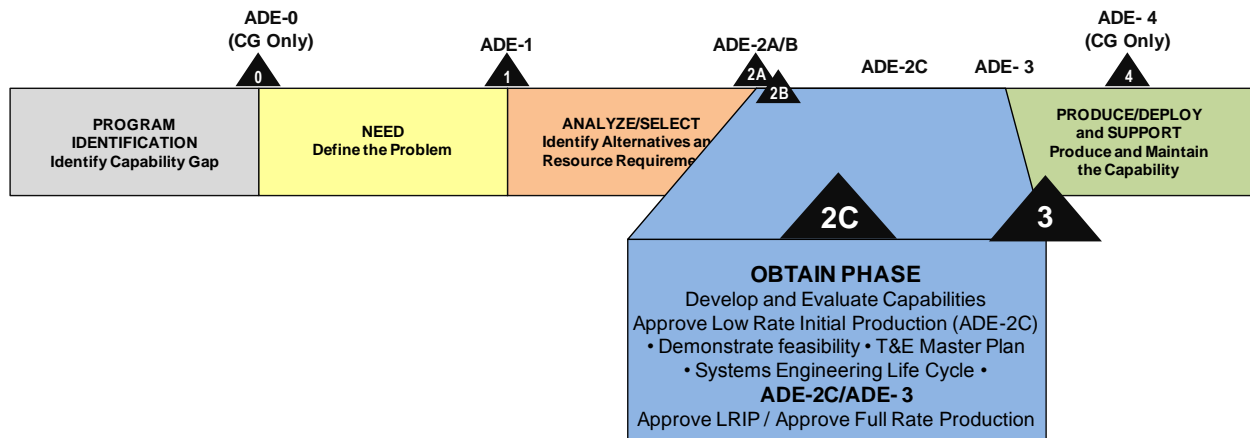


Figure 7 Obtain Phase

1. Obtain Phase Overview

The Obtain Phase, as shown in **Figure 7 Obtain Phase**, is focused on demonstrating feasibility of the preferred alternative and refining the solution (hardware and software) prior to a full production commitment and deployment decision. The high-level requirements of the ORD (derived during the Analyze/Select Phase) are translated into lower level derived requirements to provide a detailed system level specification of the capability. The capability defined by the system level specification is then designed, developed, tested, and produced during this phase. Although much of the area of concern in this phase addresses the equipment that will provide the capability, this phase also puts into place the required infrastructure, logistics support, and refines the CONOPS and other important elements of the overall capability. Technology demonstrators and/or system level test assets are often developed to demonstrate that the design meets the capability specifications and requirements.

Depending upon program objectives, the Obtain Phase is unique in that it may encompass multiple acquisition decision events – ADE-2B (for multiple discrete segment approvals), ADE-2C (for LRIP approval) and ADE-3 (for full-rate production approval). Following ADE-2B approval the program implements the requisite SELC activities, conducts developmental and operational testing, and matures program management documentation to support the ADE-3 decision to proceed into the Produce/Deploy and Support Phase.

2. Obtain Phase Objectives

Obtain Phase activities include the design, fabrication, integration, and test of the first assets to verify compliance with performance requirements. Production and logistics support processes are developed and implemented, low-rate production unit(s) are authorized and built, and operational test and evaluation is conducted to confirm that the production configured system meets all requirements. The program finalizes activities to prepare for full-rate production and deployment of capability.

Multiple objectives must be attained during this phase, including:

- Translating the most promising design approach developed in the Analyze/Select Phase into a stable, producible, supportable, and cost effective system design;
- Evaluating and determining that the detailed product design is at least 75% mature as determined by Technical Authorities prior to CDR;
- Demonstrating the manufacturing or production processes;
- Demonstrating that the product capabilities meet contract specifications, operational requirements, system security requirements, and satisfaction of the mission need;
- Determining whether the product design is mature enough to commit to full-rate production and deployment/fielding;
- Determining whether the integrated logistics support planning and products are sufficient to support the product design.

Obtain Phase Achievements (Exit Criteria): In order for the ADA to approve a full-rate production/full deployment decision at ADE-3, the Obtain Phase needs to satisfy program specific exit criteria defined at ADE-2A/B and ADE-2C and included in the appropriate ADMs. The below list (examples only) addresses typical achievements expected to be accomplished within this phase:

- Updated (or revalidated), documented, and approved operational requirements;
- Demonstrated operational effectiveness and suitability/supportability;
- Full-rate production design meets operational, functional, and other requirements based on acceptable performance throughout development, test and evaluation, and initial production;
- Demonstrated functional and physical interoperability;
- Demonstrated that the system/product design for full-rate production is stable;
- Mature software capability is shown, consistent with the planned software development and implementation schedule;
- No significant manufacturing process (or resource) risks for full-rate production;
- Demonstrated that the initial integrated logistics support products are sufficient to support the design and that there is a properly phased transition from initial/interim logistics support to full support capability;
- Costs are reasonably expected to fall within affordability constraints;
- Certification of funding within the current FYHSP;
- Other criteria as determined through program risk analysis for initiating full-rate production and/or making full deployment decisions.

Programs with Discrete Segments: The ADE-2B decision approves the execution of additional discrete segments of capability laying out the cost, schedule, and performance

parameters defined in the APB for each discrete segment within the program. If applicable, the program's Initial Operational Capability (IOC) and Full Operational Capability (FOC) dates will be established at ADE-2A/B (in the APB schedule). While there will typically be a combined ADE-2A/B decision event, there may be multiple ADE-2B reviews with subsequent ADE-2C and/or ADE-3 reviews for each discrete segment depending on the acquisition strategy and discrete segment structure proposed for the program.

Low-Rate Initial Production (LRIP): LRIP units are required for OT&E and to help validate that the initial production capability is properly engineered during this phase. LRIP is also intended to demonstrate a properly phased ramp-up for full-rate production. The planned quantity of LRIP units⁵ was authorized and approved at ADE-2A/B and approval to commence LRIP production is achieved at ADE-2C. LRIP contract award prior to ADE-2C is not authorized unless a waiver has been granted by the ADA. ADE-2C will be scheduled to occur after completion of the CDR and PRR to ensure adequate system maturity, that production readiness has been achieved, that Obtain Phase exit criteria are satisfied and that all significant risks are identified and addressed. Note that a full-rate production contract award prior to ADE-3 approval is not authorized unless a waiver has been granted by the ADA.

Safety: The Coast Guard Authorization Act (CGAA) of 2010 identified that the issue of safety concerns during DT or OT shall be communicated as soon as practicable (not later than 30 days after test completion) to the PM and CAO. Any safety concerns that are expected to be uncorrected or unmitigated prior to the system low-rate or full-rate production contract award or delivery/task order issue shall be reported by the Commandant to the appropriate congressional committee(s) at least 90 days prior to award of any contract or issuance of a delivery/task order. Reporting to the PM and CAO shall be by the PM's Principal for Safety as designated in accordance with SOP CG-9-7, Enclosure 6 (Project Risk Management and Mishap Risk Management), Paragraph 2. a.

3. Obtain Phase Activities

Sponsor's Representative activities:

- Revalidate the mission need and the operational requirements (provide memo from Commandant (CG-7) to Commandant (CG-9));
- In coordination with FORCECOM and TAs, initiate development of the requirements for sustainment resources, both funding and personnel;
- Develop the sustainment RP (if appropriate);
- Support Commandant (CG-82) in developing Commandant (CG-8) certification of funding;
- Develop Deployment Plan (DP).

⁵ LRIP quantities are authorized in accordance the approved AP and in accordance with DHS Instruction/Guidebook 102-01-001 section VI.G.7 guidance.

Program Management activities:

- Determine full-rate production quantity, develop cost and schedule milestones for useable segments;
- Revalidate the APB to ensure that the mission need remains current, the program performance measures are being met, and the planned Produce/Deploy and Support Phase structure of increments of capability remains affordable within the Coast Guard capital acquisition portfolio;
- Submit system accreditation documentation to the Designated Approving Authority via the System Certifying Authority for Authority to Operate decision (IT only);
- Obtain Frequency Assignments Authorization (IT only)/Frequency Spectrum Authorization (coordination with Commandant (CG-6) required);
- Coordinate with the Sponsor to initiate deployment/fielding planning and assist in the preparation of the DP by the Sponsor;
- Prepare the RP and the necessary budget documentation including updated OMB Business Case to support the program as a line item in Coast Guard budget requests;
- Update the APB with specific cost, schedule and performance objectives for discrete segments (if appropriate);
- Update or revalidate the AP (per HCA requirements);
- Update the PLCCE (for major programmatic or cost changes and/or for preparation of ADE-2C, ADE-3);
- Support Commandant (CG-82) in developing Commandant (CG-8) certification of funding;
- Update or revalidate the TEMP;
- Ensure compliance with all internal Coast Guard IT requirements, in collaboration with Commandant (CG-6);
- Meet Security and Privacy requirements;
- Meet Government Paperwork Elimination Act requirements.

Commandant (CG-82) activities:

- Prepare Commandant (CG-8) Certification of Funding

SELC activities:

- Update the Program SELC Tailoring Plan (as necessary);
- Conduct evaluations, assessments, and analyses of the performance characteristics and recommend solutions to performance problems;
- Finalize planned technology demonstrations or insertions;
- Ensure NEPA analysis is conducted in accordance with National Environmental

Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series);

- Determine the design maturity of the new capability;
- Analyze capability design documentation, user manuals, capability specifications, and other documentation to determine the degree the capability performs its intended purpose;
- Implement program configuration management (CM) through the CCB;
- Review and recommend for approval or disapproval, all configuration changes and proposed alterations that will modify a system's functional characteristics or operational requirements;
- Conduct System Definition Review (SDR);
- Monitor the Configuration Management process by working with the program configuration manager to ensure the system configuration remains in agreement with the approved configuration baseline(s) and documentation;
- Ensure that the Configuration Status Accounting database is current and configuration control is being exercised effectively;
- Monitor the IT system security process by working with the assigned Information System Security Officer to ensure the Information Assurance controls remain enforced as specified in the approved IT system security plan;
- Refine and mature preliminary design and conduct Preliminary Design Review (PDR);
- Refine and mature detailed design and conduct CDR – an accepted Rule of Thumb is that at least 75% of required manufacturing quality drawings, software design specifications, and critical analyses should be completed prior to CDR;
- Evaluate whether the capability is effectively meeting the functional requirements, is operating efficiently, and is effectively managed;
- Complete production design specifications;
- Refine integrated system test plans, conduct Integration Readiness Review (IRR);
- Conduct Functional Configuration Audit (FCA);
- Refine and mature initial production design/capabilities and conduct PRR;
- Assess developmental test results and operational test preparations, then Conduct Operational Test Readiness Review (OTRR);
- Conduct Physical Configuration Audit (PCA);
- Conduct Operational Readiness Review (ORR).

Logistics Management activities:

- Update the ILSP product/logistics support requirements for the selected alternative;

- Design the product/logistics support system;
- Continue the supportability analysis (as needed);
- Determine maintenance levels consistent with maintenance concept through Level of Repair Analysis;
- Finalize provisioning based on supply support requirements;
- Ensure Diminishing Manufacturing Sources and Materiel Shortages (DMSMS) is addressed and perform assessments of subsystems and components to be included to ensure long term supportability/availability of materiel/manufacturing sources;
- Perform fitting out activities;
- Update and finalize supportability requirements;
- Provide product/logistics support for OT&E;
- Identify and establish contractor logistics support required for initial deployment;
- Conduct assessment of initial/subsequent logistics readiness for all logistics elements.

Human Systems Integration activities:

- Revalidate or update the HSI requirements and plans;
- Ensure the requirement for contractor developed plans for human systems integration, human factors engineering and the contractor's System Safety Program Plan are incorporated as required deliverables into the acquisition contract⁶;
- Ensure implementation and execution of the HSIP, HFEP and SSMPs;
- Provide human performance and safety data and analysis for design implications;
- Update studies and analyses for manpower requirements to operate, maintain, support and instruct the system;
- Plan and help execute applicable models, mockups, and related activities to support the accomplishment of human performance goals;
- Monitor, coordinate, and facilitate the development of the Performance Support and Training (PS&T) Strategic Needs Assessment (SNA), including Analysis and Evaluation Plans;
- Determine and evaluate cognitive and physical workload and usability;
- Assess human and system performance;
- Plan and support test and evaluation and Operational Assessment activities for

⁶ Commandant (CG-1B3) is to be contacted for format and content of the HSI, HFE, and System Safety Program Plans that are required deliverables per the contract. Commandant (CG-1B3) is to be a member of the program's Request for Proposals (RFP) development team.

validation and verification of human performance and safety requirements;

- Monitor, coordinate, and facilitate the initial and interim Performance Support and Training (PS&T) solutions;
- Reassess and validate long lead-time, high-dollar training aids and facilities;
- Validate initial and interim training requirements solutions;
- Provide system safety and occupational health inputs to Systems Engineering Technical Reviews.

T&E activities:

- Through the TMOT, support the PM in the development and update of the TEMP in accordance with MSAM Handbook, TEMP section;
- Determine if the capability meets established ORD performance thresholds;
- Develop detailed test plans and procedures;
- Conduct testing on prototype(s), engineering development model(s), first system-level test article, and/or LRIP units;
- Conduct Security T&E, including testing, evaluating, and verifying the IT security controls (IT only);
- Conduct a Risk Assessment to document the threat environment (IT only);
- Conduct a Preliminary Acceptance Trial, First Article Test, or System Level Test, as applicable;
- Complete DT&E and subsequent Report;
- Participate in OTRR to confirm readiness for OT&E;
- Conduct OT&E, including testing, modeling (if appropriate), evaluating, and verifying the support system;
- Provide DT&E and OT&E test results to the CAE and to DHS ARB to support the decision to enter the Produce/Deploy and Support Phase;
- Plan follow-on DT&E and OT&E as indicated;
- Provide analytical support, as needed, for Sponsor and PM's revalidation activities.

Enterprise Architecture activities:

- Conform to established DHS EAB strategic planning and IT guidance provided in the DHS Enterprise Architecture Board (EAB) Governance Process Guide (series). Refer to DHS's website at:
<http://mgmt-ocio-sp.dhs.gov/governance/eab/SitePages/Home.aspx>.

OMB IT business case activities (if applicable/as required):

- For IT programs only, refer to Circular No. A-11 Preparation, Submission, and Execution of the Budget (OMB Circular No. A-11), Part 7. OMB updates this

guidance annually. Refer to OMB's website at:
http://www.whitehouse.gov/omb/circulars_all_current_year_all_toc/.

IT requirements activities (if applicable/as required):

- Meet Security and Privacy requirements;
- Meet Government Paperwork Elimination Act requirements.

4. Obtain Phase Significant Accomplishments

Significant accomplishments from the Obtain Phase include:

- Completed PDR, CDR, IRR, PRR, OTRR and ORR;
- Completed ADE-2C for LRIP;
- Satisfied Obtain Phase Exit Criteria;
- Product/logistics support system design is identified and implemented;
- Completed DHS EAB Review (IT Only);
- Verified the adequacy and readiness of the manufacturing or production processes for low-rate and full-rate production;
- Confirmed the stability, producibility, and supportability of the product design;
- Completed DT&E – verify readiness for IOT&E;
- Completed IOT&E – results acceptable to the Sponsor;
- Established required full-rate production quantity;
- Achieved IOC (if applicable);
- Satisfied asset capitalization requirements for delivered assets.

5. Obtain Phase Documentation

The Obtain Phase is the only acquisition phase associated with two different ADEs. ADE-2C is typically scheduled two thirds into the phase to review results from increased system knowledge and program maturity and to approve entry into low-rate production. ADE-3 requires a more complete knowledge of the system, the resulting record of performance verification, and demonstration of system readiness to proceed into full-rate production, implementation, and deployment. Each of these ADEs requires the PM to review and revalidate or update all plans, reports and analyses based on the current status of the program at that point. The PM should coordinate the document update status and requirements with Commandant (CG-924) in advanced preparation for each of these ADEs. The minimum MSAM documentation required for ADE-2C and ADE-3 approvals are presented in **Table 8 ADE-2C Documentation** and **Table 9 ADE-3 Documentation**.

Table 8 ADE-2C Documentation

Document	Task	Preparation	Approval
Acquisition Plan	Update	PM	DHS OCPO ≥ \$300M HCA < \$300M
Developmental Test Report	Update	PM	APEO
Operational Test Plan	Prepare	OTA	DHS OTE
Certification of Funding	Update	CG-82	CG-8
Integrated Logistics Support Plan	Update	PM	DCMS/DHS ADA
PLCCE	Update	PM	CG-9/DHS CFO
Deployment Plan	Prepare	Sponsor's Rep.	Sponsor

Table 9 ADE-3 Documentation

Document	Task	Preparation	Approval
Acquisition Plan	Update	PM	DHS OCPO ≥ \$300M HCA < \$300M
Developmental Test Report	Update	PM	APEO
Operational Test Plan	Update	OTA	DHS OTE
Operational Test Report	Prepare	OTA	OTA
Test and Evaluation Master Plan	Update (as Req)	PM	DHS OTE
Certification of Funding	Update	CG-82	CG-8
Integrated Logistics Support Plan	Update	PM	DCMS/DHS ADA
PLCCE	Update	PM	CG-9/DHS CFO
Deployment Plan	Update	Sponsor's Rep.	Sponsor

6. ADE-2C Review and Expected Outcomes

A CG ARB ADE-2C review will provide:

- Approval of readiness for ADE-2C review by ADA.

A DHS Acquisition Review Board ADE-2C review will signify:

- ADA authorization of LRIP;
- ADA issuance of ADM.

7. ADE-3 Review and Expected Outcomes

A CG ARB ADE-3 review will provide:

- Approval of readiness for ADE-3 review by ADA.

A DHS Acquisition Review Board ADE-3 review will signify:

- ADA authorization of full-rate production and entry into the Produce/Deploy and

Support Phase, to include full-rate production contract award;

- ADA issuance of ADM.

F. Produce/Deploy and Support Phase

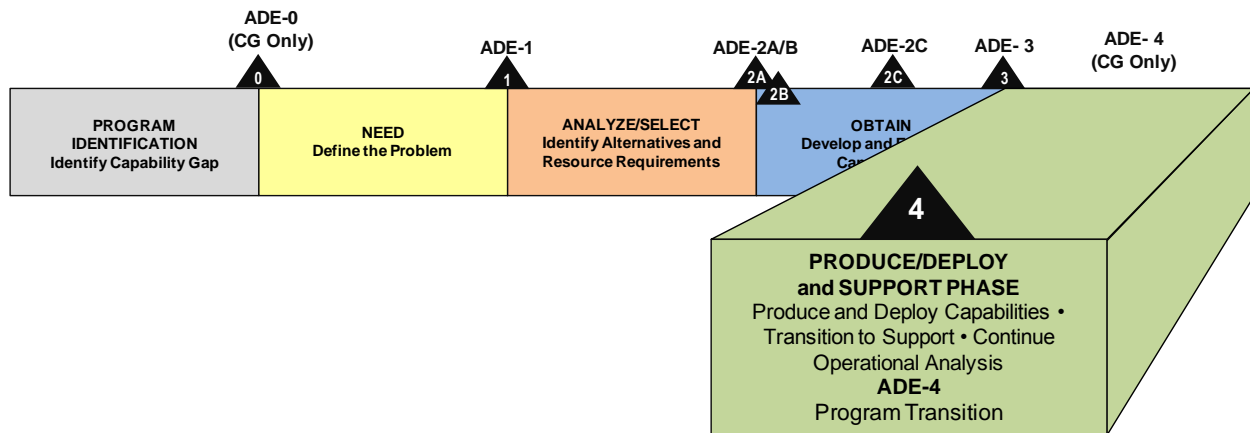


Figure 8 Produce/Deploy and Support Phase

1. Produce/Deploy and Support Phase Overview

The Produce/Deploy (P/D) and Support Phase, as shown in **Figure 8 Produce/Deploy and Support Phase**, follows ADE-3 and encompasses three primary functions: produce, deploy and support the capability (includes disposition of the system/asset). The P/D activities produce assets for deployment into operational use. The asset should achieve operational capability that satisfies mission needs. The initial support capability in terms of materiel, technical data, trained personnel, support equipment, and infrastructure has been delivered and is in place. Replacement and replenishment of this support capability is accomplished, as necessary. Engineering changes to modify or enhance the operational capability or to correct deficiencies of the assets are accomplished when necessary to improve reliability, maintainability, or safety, to adapt to changing mission requirements and to replace equipment items that are approaching obsolescence. P/D activities culminate with the successful achievement of Full Operational Capability (FOC).

During the Produce/Deploy and Support Phase, the ADE-4 Program Transition Review officially completes the acquisition program's production and deployment and marks the formal transition to steady state operations and support. Following ADE-4, the acquisition program is completed and all responsibilities for operations and support are transitioned to the sustainment community. The PM is expected to brief the details of the Program Transition Plan (PTP) and the Program/Support Sponsor briefs the details of the updated ILSP as part of the official transition of program management responsibility to the operating and support communities. The PM is responsible for ensuring the PTP is developed and approved 12 months prior to the ADE-4 Program Transition Review. ADE-4 coincides with the change in leadership of the program matrix/IPT team. It should be noted that typically, responsibility for sustainment processes are transferred to the sustainment community prior to ADE-4 while program management responsibility remains with the PM until ADE-4. The timing and phasing of this transition is dependent on many other factors (e.g., interim contractor support plans, funding, personnel). These

factors should be clearly articulated in the ILSP and PTP.

2. Produce/Deploy Objectives

The primary objective of P/D is to deliver production units authorized at ADE-3. For IT systems, the system itself is a production unit. Software developed in the Obtain Phase as useable segments are prepared for and deployed to an operational environment. Additional objectives of the P/D Phase are to:

- Ensure a stable and cost efficient production and support base;
- Achieve an operational capability or discrete segment of operational capability that satisfies the mission need and meets operational requirements;
- Conduct follow-on testing to confirm and monitor performance and quality and verify correction of deficiencies (as necessary);
- Ensure logistics are in place to support end-items (establish interim support provisions, as necessary);
- Ensure each fielded asset is ready for operations and complete the handoff to the operational community.

A Post Implementation Review (PIR) shall be conducted by the Sponsor, in conjunction with the program office, approximately 12 months after Initial Operational Capability (IOC) to verify that the delivered capability met the program's performance and cost goals. Twelve months is a guideline with the intent that the asset is fielded and that actual performance and cost to operate information is available. The results of the PIR will establish a baseline for performance measurement of each asset for the annual OA.

An LRR should be accomplished no earlier than six months—and no later than one month—prior to deployment of the first full-rate production system in accordance with Coast Guard Logistics Readiness Review (LRR), COMDTINST 4081.3 (series). A complete LRR may be required or an update of status from the assessment of logistics readiness previously accomplished in preparation for ADE-3 may suffice.

3. Produce/Deploy Activities

Program Management activities:

- Execute production contract(s);
- Ensure delivered asset/product meets operational requirements and meets cost and schedule baselines in APB;
- Prepare and gain approval of PTP prior to ADE-4;
- Support development of the sustainment RP;
- Submit system accreditation documentation to the Designated Approving Authority via the System Certifying Authority for Authority to Operate decision (IT only);
- Conduct a NIST SP 800-53 based annual self-assessment of the Information

Security controls in accordance with CIM 5500.13 (IT only);

- Conduct a documented exercise of the system Contingency Plan (IT only);
- Update ILSP (as needed);
- Support PIR.

Sponsor's Representative activities:

- Update requirements for sustainment resources, both funding and personnel;
- Update the sustainment RP;
- Conduct PIR and Operational Analyses (OA) on behalf of Sponsor.

SELC activities:

- Verify and validate production configuration;
- Manage product configuration in accordance with the Product Baseline;
- Conduct/update Physical Configuration Audit (PCA), as needed;
- Revalidate Environmental Impact Assessment and update documentation as necessary;
- Support PIR.

Logistics Management activities:

- Establish interim product/logistics support (if required);
- Evaluate the readiness level for all logistics elements to include support materiel, facilities, personnel, and training facilities;
- Monitor continued availability of materiel and manufacturing sources;
- Package and distribute all technical data to each unit and logistics support organization;
- Prepare for the hand-off of the operational system;
- Complete the LRR.

Human Systems Integration activities:

- Monitor, coordinate, and facilitate the development of the PS&T Plan for design, development and execution of sustainment solutions;
- Validate manpower, PS&T, and habitability requirements meet system needs to operate, maintain, support, and instruct the system;
- Review and recommend engineering changes for HSI issues;
- Perform operational usability assessments and provide results and feedback;
- Complete Manpower Requirements Analysis (MRA).

T&E activities:

- Conduct trials and acceptance tests upon delivery of each asset;
- Conduct Follow-on OT&E (as necessary).

Enterprise Architecture activities:

- Conform to established DHS EAB strategic planning and IT guidance provided in the DHS Enterprise Architecture Board (EAB) Governance Process Guide (series). Refer to DHS's website at:
<http://mgmt-ocio-sp.dhs.gov/governance/eab/SitePages/Home.aspx>.

OMB IT Business Case activities (if applicable/as required):

- For IT programs only, refer to Circular No. A-11 Preparation, Submission, and Execution of the Budget (OMB Circular No. A-11), Part 7. OMB updates this guidance annually. Refer to OMB's website at:
http://www.whitehouse.gov/omb/circulars_all_current_year_all_toc/

4. Produce/Deploy Activity Significant Accomplishments

Significant accomplishments from the Produce/Deploy Phase include:

- Delivered production assets in useful segments of capability;
- Completed LRR, findings out brief, and report;
- Achieved IOC (if not achieved in the Obtain Phase);
- Executed maintenance and support plans;
- Completed PIR;
- Achieved FOC;
- Satisfied asset capitalization requirements for delivered assets;
- Completed PTP;
- Completed MRA;
- Satisfied ADE-4 Program Transition Exit Criteria.

5. Produce/Deploy Activity Documentation

Documentation required to be developed and approved for ADE-4 and updated during this phase are presented in **Table 10 Produce/Deploy Phase Documentation**.

Table 10 Produce/Deploy Phase Documentation

Document	Task	Preparation	Approval
Post Implementation Review	Prepare	Sponsor’s Rep.	Sponsor
Program Transition Plan	Prepare	PM	CG-93
Manpower Requirements Analysis	Prepare	CG-1B3	CG-1
Integrated Logistics Support Plan	Update (as Req)	PM	DCMS

6. ADE-4 Review and Expected Outcomes

The Coast Guard only ADE-4 (Program Transition Review) will be accomplished to coincide with the last annual Coast Guard program review.

A DCMS ADE-4 Program Transition Review will include:

- Approval of the readiness for transition to operations and sustainment system/asset managers;
- ADA (DCMS) approval of the ADE-4 ADM.

7. Support Activity Objectives

The objectives of the Support Phase are the effective and efficient operation and support of the new asset to perform the applicable operational mission(s), over its total life cycle.

The Sponsor will continue to examine asset or system performance against assigned goals within the context of overall Coast Guard capability needs.

Operational Analysis (OA) as defined in OMB’s Capital Programming Guide is a method of examining the ongoing performance of an operating asset investment and measuring that performance against an established set of cost, schedule, and performance goals typically established in the PIR. An OA, by nature, is less structured than performance reporting methods applied to developmental programs and should trigger considerations of how the investment's performance objectives could be better met, how costs could be reduced, and whether the organization should continue performing a particular function.

NOTE: OAs as indicated here are not to be confused with the OT&E Operational Assessment (OA) conducted by an Operational Test Agent prior to ADE-2 or ADE-2C.

The DHS OCIO OMB document repository website where the latest information on OA Guidance is:

<http://dhsconnect.dhs.gov/org/comp/mgmt/cio/ebmo/Documents/Forms/AllItems.aspx>.

Sponsors are required to perform the OA on an annual basis for all Level 1, 2, and 3 IT

acquisitions and Level 1 and 2 non-IT acquisitions. Results of OAs are reported annually to DHS via completion of the OMB Business case (for applicable programs). All OAs (for IT and non-IT programs) should be provided to Commandant (CG-DCO-81) for consideration toward future Mission Analyses.

8. Support Activities

Program Management activities:

- The PTP is executed and management responsibilities are transferred to the applicable Operations and Support systems/asset managers;
- The acquisition program continues to manage the resolution of warranty claims until the end of the warranty period;
- Operating Expense (OE) funding estimate for operations and maintenance is updated;
- Contract closeout is accomplished by the contracting activity.

Sponsor activities:

- Conduct annual OA;
- Maintain EA Artifacts.

Systems Engineering activities:

- The Product Line Manager implements the Configuration Management program for sustainment;
- When the functional baseline is being assessed for changes, Commandant (CG-7) will chair the CCB; otherwise, when the product baseline is being assessed, the Product Line Manager will chair the CCB.

Logistics activities:

- Validate manpower and training requirements meet system needs to operate, maintain, support, and instruct the system;
- The Product Line Manager implements the planned integrated product logistics support strategies and planning;
- The Product Line Manager maintains and improves the processes contained in the ILSP;
- The Product Line Manager implements Diminishing Manufacturing Sources and Materiel Shortages management;
- The Product Line Manager applies and replenishes the ILS resources that have been acquired to support the new system in sustained operation.

Human Systems Integration activities:

- Evaluate PS&T concept effectiveness and efficiency;
- Validate manpower, training, and habitability requirements meet system needs to operate, maintain, support, and instruct the system;

- Review and recommend engineering changes for HSI issues;
- Collect human performance and safety lessons learned;
- Provide usability results and feedback for incorporation in annual OAs and other analysis as applicable.

9. Support Activity Significant Accomplishments

Significant Support activity accomplishments include:

- Provided sustained support of operational system;
- Conducted annual OAs on fielded system.

10. Support Activity Documentation

Documentation required to be developed and updated during this phase are presented in **Table 11 Support Activity Documentation**.

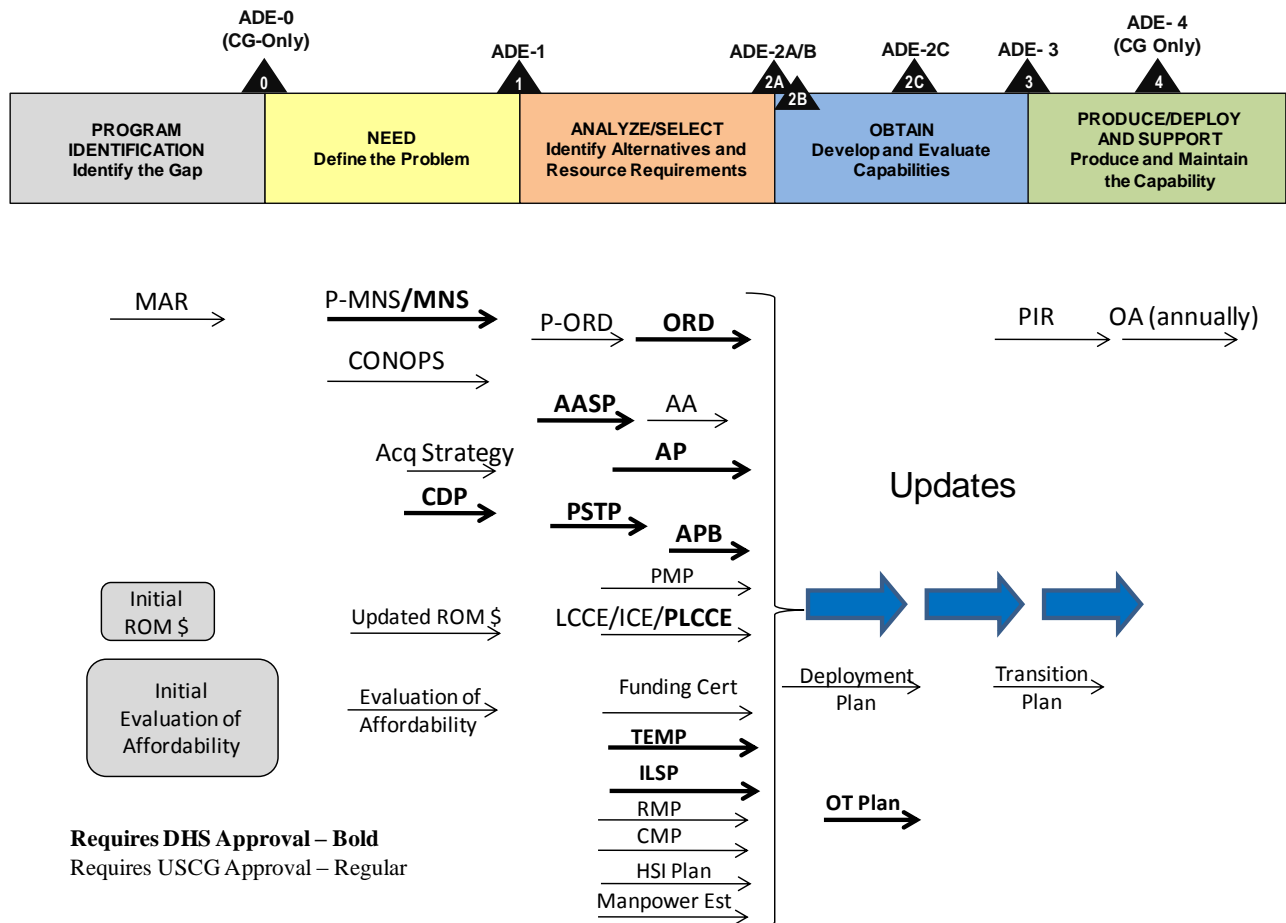
Table 11 Support Activity Documentation

Document	Task	Preparation	Review
Operational Analysis	Conduct annually	Sponsor	Coast Guard

G. Acquisition Life Cycle Planning Summary

Figure 9 Acquisition Life Cycle Planning Summary provides a graphic representation of the major planning and documentation required during the Acquisition Life Cycle. This graphic is not all inclusive – there are many more documents required for Major System Acquisition programs. It is important to call attention to the significant planning and the associated documentation as the primary focus prior to ADE-2A/B. This comprehensive planning is critical to the success of both the government and contractors during execution of the Obtain Phase and the later Produce/Deploy and Support Phase.

Figure 9 Acquisition Life Cycle Planning Summary



CHAPTER 3: SYSTEMS ENGINEERING**A. Introduction**

Systems engineering is an interdisciplinary engineering management process that evolves and verifies an integrated, balanced set of system solutions as part of an asset, system, or capability across an entire life cycle to satisfy Coast Guard needs. It involves systematic problem solving techniques to break down complex systems into manageable elements, find balanced solutions, then integrate and verify those system solutions into a capability. The process and products of systems engineering provide the PM with a solid technical foundation that effectively unifies, integrates, and focuses the efforts of all stakeholders – users, operators, logisticians, developers, acquirers, testers, trainers, and maintainers. It develops a relevant technical knowledge base that is matured, maintained, and transferred in a disciplined manner for the entire life cycle of the deployed capability or system.

B. Systems Engineering Life Cycle (SELC)

The SELC enables efficient and effective delivery of capability to users, and is one of the key processes used for managing Coast Guard acquisition programs and their related programs. The SELC guides the definition, execution, and management of an interdisciplinary set of tasks required to plan, define, design, develop, implement, operate, and dispose of systems.

Knowledge and products from the SELC support the acquisition process and the individual acquisition decision events or milestones.

The use of SELC for Coast Guard programs is mandated by the DHS Directive 102-01 and is applicable to all Capital Assets as well as Enterprise Services programs whose purpose is to deliver a capability. This includes non-IT and IT programs. The process for Enterprise Services is tailored from that required for Capital Assets.

DHS Instruction/Guidebook 102-01-001 Appendix B provides a SELC Guide to standardize the system life cycle process across DHS Components and is designed to ensure that appropriate activities are planned and implemented in each stage of the life cycle to increase the program's success. The stages and associated acquisition phases are shown in **Figure 10 Major System Acquisition Life Cycle with SELC Process**.

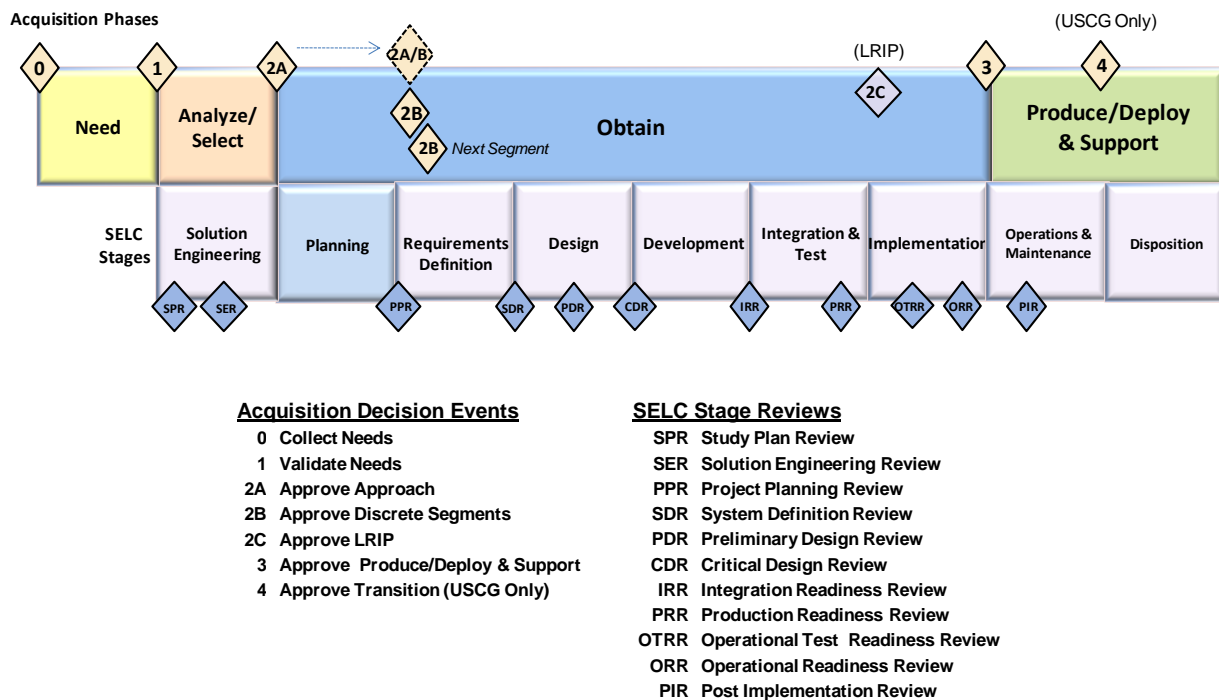


Figure 10 Major System Acquisition Life Cycle with SELC Process

The SELC provides flexibility by supporting tailoring based on the unique characteristics of a program (e.g., size, scope, complexity, and risk) documented in the Program SELC Tailoring Plan (PSTP). PMs are responsible for tailoring the SELC process for the program's specific characteristics as appropriate and submitting this plan for approval at ADE-2A. SELC Stage Reviews (e.g., System Definition Review (SDR), Critical Design Review (CDR)) are used to inform Coast Guard and DHS oversight structure on the progress toward successful capability design, development and production. Each stage has a defined set of activities that represents a logical unit of work. Each stage has associated artifacts to record the results of the activities performed. The USCG implements the SELC as found in the PSTP section of the MSAM Handbook. It aligns closely with D 102-01-001 SELC guidance but is tailored to meet USCG technical requirements.

The SELC represents the systems engineering framework for the acquisition management process. It is important to note that artifacts are simply the final output of a knowledge process, and that evidence of sufficient knowledge is the main focus of oversight rather than format and length of documents. Programs are encouraged to economize SELC documentation to best represent their knowledge gained from their activities. The objective of tailoring is to effectively apply the SELC framework to a specific acquisition program to balance the need for artifacts and reviews with programmatic and technical risks. Tailoring of the SELC framework can take several forms and may include the following:

- Combining SELC stages and/or reviews (e.g., SER and PPR results brief);
- Combining SELC artifacts;
- Scaling the size and content of SELC artifacts;

- Incorporating additional Systems Engineering (SE) processes, activities, exit criteria, and other artifacts not required by the SELC guidance but needed for a specific program/discrete segment/stage or the program's SELC stage or SELC review;
- Including any use of technology demonstrators, with objectives and how they will support the program;
- Substituting products of similar content for SELC artifacts;
- Deleting SELC artifacts.

NOTE: Some artifacts identified in the SELC guidance are required by DHS. Other governing authorities' policies and guidance require certain SELC artifacts that cannot be deleted by the PSTP. Any tailoring of activities and artifacts should be coordinated with USCG leadership and other governing authorities. In order to progress through the SELC, any approved tailoring of SELC stage reviews and program artifacts must still include appropriate substitute reviews, actions or artifacts to demonstrate that the fundamental SELC objectives have been met. This is especially important when this knowledge supports an ADE.

C. **System Engineering Life Cycle Reviews**

SELC reviews are conducted at the end of each stage to ensure all exit criteria for the stage have been satisfactorily addressed. These reviews are an approval process authorizing the program to continue into the next SELC stage as identified in the PSTP. **Figure 11 SELC Stages** provides a brief explanation of each stage. **Figure 12 SELC Review Approval Authorities** identifies the Coast Guard Approval Authority for each SELC review.

NOTE: If combining SELC reviews as part of tailoring, the approval authority will be the most senior entity listed in **Figure 12 SELC Review Approval Authorities**.

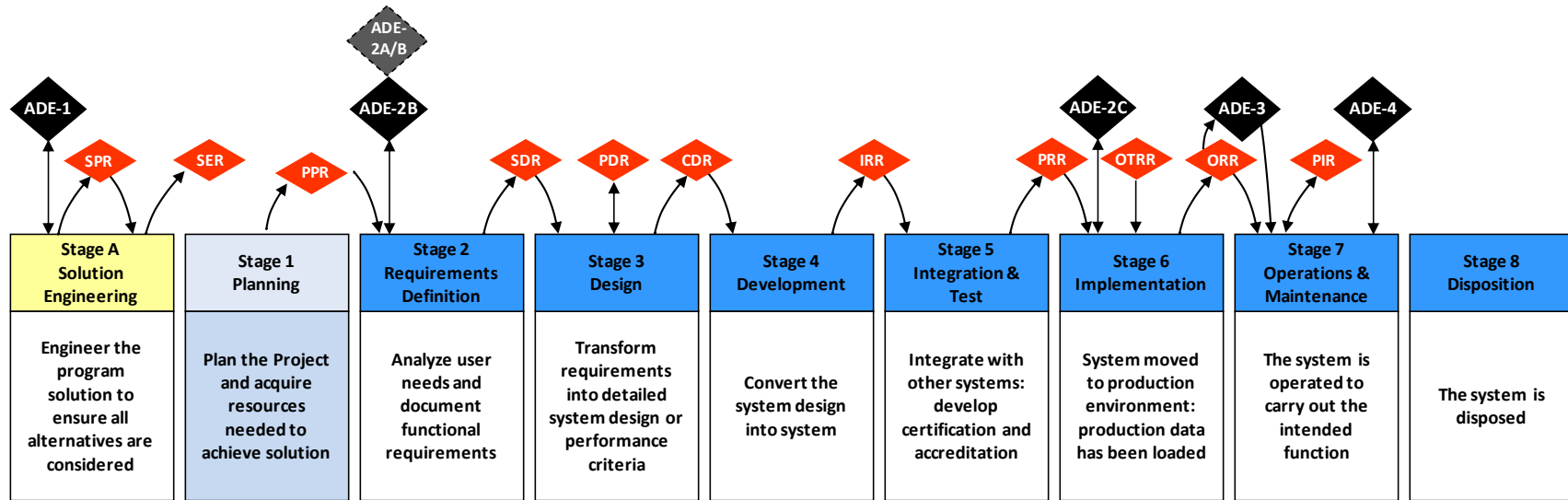








Figure 11 SELC Stages

SELC Review	ADE 1	SPR	SER	PPR	ADE 2A/B	SDR	PDR	CDR	IRR	PRR	ADE 2C	OTRR	ORR	ADE 3	PIR	ADE 4
IT	ADA	CG CIO	CG CIO	CG CIO	ADA	CG CIO	CG CIO	CG CIO	CG CIO	CG CIO	ADA	CG CIO	CG CIO	ADA	CG CIO & Sponsor ¹	ADA
Non-IT	ADA	CG-9	CG-9	CG-93 APEO(X)	ADA	CG-93 APEO(X)	CG-93 APEO(X)	CG-9	CG-93 APEO(X)	CG-9	ADA	CG-926	CG-9	ADA	Sponsor	ADA

¹ Co-Chairs

Figure 12 SELC Review Approval Authorities

Figure 13 SELC Stage Activities summarizes the purpose of each stage review. SELC reviews are led by the acquisition PM/APEO and include the TAs, Sponsor and participation from DHS level organizations (e.g., PARM, CIO, OTE, DHS IT Portfolio Managers). The PM/APEO is responsible for arranging, coordinating and leading the SELC Reviews. Commandant (CG-924) and DHS PARM are to be invited to all SELC reviews; however, attendance by DHS PARM and/or other DHS offices will be as resources and schedules allow. The PM, TAs and Operational Authority (Sponsor) rely on the appropriate experts (e.g., EA, testing, manufacturing, logistics, HSI, security, infrastructure, budget, operators) to evaluate the completion of activities and compliance with exit criteria. Once all exit criteria are satisfactorily met and the program is ready to proceed to the next state, the Approval Authority will endorse an SELC Review Completion Letter signed by the PM signifying satisfactory completion of exit criteria (and/or identification of any exit criteria shortfalls and planned solutions/mitigations), and permission to begin the next SELC stage. The Lead TAs/Sponsors (or their representatives) are required to endorse the SELC stage completion letter. In the specialized case of when a non-IT program is obtaining IT system(s) (e.g., vehicle projects that include communications gear) the TAs must include the Coast Guard CIO in the review process. Within 30 days of completing the SELC Reviews, a scanned electronic copy of the signed SELC Review Completion Letter, along with any updates to the PSTP or PMP, must be posted to nPRS by the program office.

	SELC Review	Stage Activity
	SPR	Reviews the initial AA study plan ground rules, assumptions, scope, evaluation criteria and method of analysis.
	SER/PPR 1	Reviews the results of the AoA/AA and recommended solution(s); evaluates the activities /documents of the Solution Engineering stage, planning and readiness to proceed to the execution stage (ADE-2A/2B). Ensures that the project foundational elements (e.g. WBS, CONOPS), schedules, scope and planning documents are executable.
	SDR	Ensures that the functional and interface requirements are identified, measurable, testable, and traceable to a source.
	PDR	Assesses the system's preliminary design to ensure that the planned technical approach will meet the requirements.
	CDR	Assesses/validates that the system design is complete and accurate in its specification and can produce the results defined in the baseline requirements. Assesses readiness to build system level DT&E assets.
	IRR	Assesses system readiness to begin system level integration and testing based on the results of subsystem or continuous integration tests. Assesses the DT&E infrastructure and planning adequacy.
	PRR	Assesses how well the developed system satisfies the needs. Determines if the design is ready for low rate production, (or incremental delivery); evaluates the readiness of the producers' manufacturing processes. Also assesses readiness of initial logistics system to support low rate production assets upon deployment.
	OTRR	Assesses the project's real world production assets' readiness to enter Operational Test and Evaluation.
	ORR	Assesses whether the system, as implemented or deployed, meets mission need and is ready to be moved into full rate production and users, operators, and maintenance personnel are adequately equipped and trained to operate and support deployed production assets.
	PIR	Evaluates the actual results compared to predictions in terms of cost, schedule, performance and mission outcomes; to determine the causes of major differences between planned and end results; and to help improve future acquisition project management practices.

¹ The SER may be combined with the PPR

Figure 13 SELC Stage Activities

SELC Review Exit Criteria: Each SELC review contains a minimum set of exit criteria that must be satisfied for a program to proceed. Exit criteria are presented in question format and categorized by function (e.g., program management, enterprise architecture) to provide content-centered guidance rather than merely a checklist of documents to be completed. Exit criteria should be tailored for the specific approach and methodology of the program (see tailoring guidance shown in previous section). The CAE, PM, TAs, Operational Authority (Sponsor) may provide additional criteria based on the scope/risk of the program or results

from previous stages. It is critical to understand that the determination of program readiness to proceed is made by satisfactory compliance with the content of the exit criteria, not simply by meeting the entry criteria in terms of documents produced. PMs should review the exit criteria at the start of each SELC stage and plan the stage activities accordingly.

Endorsement of the SELC Review Completion Letter by the applicable approving authority signifies approval. All SELC reviews require a completion letter. For example, although the Preliminary Design Review (PDR) is not a Stage Review nor does it support an ADE, a completion letter is still required to document the completion of the PDR. This letter and enclosures will be routed to the Approval Authority for endorsement.

Lead Technical and Operational Authorities (or their representatives present at the SELC Review) must sign the completion letter to show their endorsement that the program has satisfactorily completed the exit criteria and is ready to move on to the next stage. Ideally, the completion letter should be ready for signature at the end of the SELC review.

D. Documenting Program SELC Tailoring

The Program SELC Tailoring Plan (PSTP) documents the system development approach in terms of the proposed SELC stages, activities, artifacts, and exit criteria. When developing the PSTP, the PM is encouraged to tailor the stages (e.g., combine, delete, add), activities, artifacts, and exit criteria that best fit the program's complexity. The MSAM Handbook provides the template and additional instructions for the PSTP.

The CDP functions as the PSTP in the Analyze/Select Phase until the PSTP is developed and approved. The PSTP's function is to document how the program is tailored with respect to the generic SELC model. The PSTP is reviewed and endorsed by the TAs (typically Commandant (CG-6) for IT, Commandant (CG-4) for non-IT, and Commandant (CG-1)) and Lead Operational Authority. This endorsement represents that the special needs of the USCG have been addressed, and that the overall approach is technically sound and within the abilities of the USCG to execute. This endorsement signifies that internal consensus has been achieved within the Component regarding the process and documents to be developed for each program.

Once cleared by the Technical and Operational Authorities, the PSTP is then signed by Commandant (CG-93) as the USCG approval authority. The PSTP is submitted by the PM (through Commandant (CG-924)) for Department approval by the DHS CIO and DHS PARM prior to ADE-2B.

E. Research, Development, Test and Evaluation Program

The Coast Guard Research, Development, Test and Evaluation (RDT&E) Program as implemented through the Research and Development Center (RDC) is a resource for applying scientific knowledge and capabilities providing innovative and adaptive research, development, testing, evaluation, analysis, and technology solutions for the maritime environment to enhance current and future asset acquisition and mission execution. The RDT&E Program, Commandant (CG-926) can assist PMs and APEOs with evaluating the feasibility and affordability of mission execution solutions and by providing operational and risk-management analysis at all stages of the acquisition process. Some of the primary

functions available from Commandant (CG-926) include:

- Market Research
- Mission and Gap Analysis
- User Wants & Needs Generation
- Requirements and Capability Analysis
- Cost Benefit Analysis (CBA)
- Modeling & Simulation
- Technology Demonstrations
- Field Testing
- Trade-off Studies
- Human Factors Analysis
- Alternatives Analysis
- Technical Readiness Assessment
- Risk Assessment
- LCCE (from early Rough Order Magnitude to Program LCCE)
- Liaison for Operational Test Agent (OTA) designation and coordination

F. Modeling and Simulation (M&S)

A model is a representation of a system, entity, phenomenon, or process that can be used in an experimental environment to gain a better understanding of the system that it is designed to represent. Models can be physical (e.g., scale model aircraft for wind tunnel testing), logical (e.g., process or flow charts) or mathematical (e.g., a mathematical model of a specific system created to conduct computer simulations).

A simulation is an exercise of a model (or experiment on the model) over time. It is used to learn specific characteristics about the system that has been built or being built without having to go through expensive testing on the real system or having to wait for real systems to test. Simulations can also be used with real-world systems to replicate a specific environment of operations. One advantage of simulations over real-life is that simulations can be repeated, consistently, any number of times to provide a set of tests to a model or real world system in order to better inform analysis and decision making and potentially lead to cost reductions.

Coast Guard Modeling and Simulation (M&S) Management, COMDTINST 5200.38 (series), provides vision, policy, procedures, and standards for the administration and management of M&S. Major objectives for the use of models and simulation in acquisition are to reduce time, resources, and risk associated with the entire acquisition process, and to increase the quality, military worth, and supportability of fielded systems. PMs and Sponsors are to identify and fund necessary M&S resources in the early phases of each program to support cost effective analysis of their respective acquisition activities. To help ensure that M&S capability can be more easily accessed and used for acquisitions, Commandant (CG-926) has developed and sustains significant M&S capability consolidated at the M&S Center of Expertise located at the RDC which is available to PMs and Sponsors. M&S capability is uniquely relevant to the maritime operating environment and threats faced by Coast Guard operators. Commandant (CG-926) employs and maintains campaign models, engagement models, and specialty models such as physics-based sensor models – as needed to examine

Coast Guard platforms/systems doing Coast Guard missions. Commandant (CG-926) has the capability and analysts that can develop and implement new M&S tools for planning, acquisition trade studies, and program execution.

Documentation: The role of M&S in the engineering process should be documented in the PSTP. Of particular importance, Verification, Validation and Accreditation (VV&A) must be accomplished to ensure that models and simulations are effectively applied in support of each program. Verification, Validation and Accreditation (VV&A) of Models and Simulations (M&S) COMDTINST 5200.40 (series) mandates that any M&S tool used in supporting the development of major acquisitions must undergo accreditation approval by the appropriate Accreditation Authority prior to its use.

G. Technology Demonstrators

Technology demonstrators can be used throughout the requirements and acquisition life cycles to increase understanding of mission capabilities, limitations, and trade space and to reduce risks. Sponsor Representatives should work with the RDT&E Program, Commandant (CG-926) or other offices as appropriate to plan technology demonstrations to aid in requirements and CONOPS development. The RDT&E Program will assist in analysis of available technology and competitive evaluation of demonstrators.

PMs are encouraged to utilize technology demonstrators as means of reducing development and deployment risk (e.g., for refining requirements or increasing the maturity of technologies) or generating actual data for use in program estimates (e.g., cost estimates); however, special management and governance procedures are required. A technology demonstrator is defined as a working model (physical, electronic, digital, analytical, etc.) or a process-related system that may be used in a laboratory, simulated, testing, controlled operationally relevant environment, or operational environment, depending on the type and purpose for its use. Types of technology demonstrators are as follows:

Type 0 Technology Demonstrators are used as part of developing the MNS to define needs and requirements and assess the feasibility of meeting DHS needs. Typically these are Science and Technology (S&T) or Research and Development (R&D) efforts that can mature into program capabilities.

Type 1 Technology Demonstrators are used as part of a program in support of the Analyze/Select Phase for the purpose of evaluating technology or process maturity, refining requirements (including CONOPS), or producing data in support of alternatives analysis. Type 1 demonstrations are conducted in simulated or controlled operationally relevant environments. The scope of the technology demonstrator must be within the scope of the program's MNS. The scope and plan for Type 1 technology demonstrators is part of the CDP approval at ADE-1.

Type 2 Technology Demonstrators are used as part of a program to refine or verify requirements and/or designs throughout the Obtain Phase. Type 2 demonstrations are typically conducted in simulated or laboratory (non-operational) environments, but may be conducted in controlled operationally relevant environments to obtain operational/user feedback. Type 2 demonstrations may be part of a program's Developmental Test (DT) effort. The scope of a Type 2 demonstrator must be within the scope of the MNS and

performance parameter objectives in the ORD. If part of a DT effort, the Type 2 demonstrator objectives must be documented in the TEMP and DT Plans before evaluation.

Type 3 Technology Demonstrators are conducted to support full-rate production decisions for the P/D/S Phase. Type 3 demonstrators are conducted in the intended operational environment using production-representative articles and the results of testing are often part of Operational Test (OT) Reports. When used as part of operational testing, the objectives and plans for Type 3 demonstrators must be included in the TEMP. Demonstrations conducted outside the purview of formal operational test require objectives and plans to be developed and approved prior to conduct of the evaluation. Type 3 demonstrators require a low-rate/abbreviated production decision (ADE-2C or equivalent) before usage if the demonstrators are to remain in operations past the evaluation period.

Rapid Technology Demonstrator: There may be conditions where emergent threats to National Security or an emergency response necessitate the use of a Rapid Technology Demonstrator in the operational environment. The use of this technique must be approved by the Component acquisition chain of command, be part of an existing program of record, and be approved by the DHS USM before the start of development or procurement. Factors to be considered for the approval of Rapid Technology Demonstrators include safety, relevant test data showing the system performance, and the extent of supportability planning and provisioning for the expected duration of usage. The program office should also include planning to obtain rapid and continuous feedback from operators on system performance to enable quick resolution of problems and achieve the level of performance desired in operational use.

Documentation: The role of technology demonstrations should be documented in the CDP and later in the PSTP. Sponsors, in coordination with the APEO (or PM if assigned), should document plans for the use of Type 0 and Type 1 demonstrators in the CDP. During the Analyze/Select Phase, the PM will then include any Type 0 and Type 1 Technology Demonstrators that will be continued to be used in later phases, as well Type 2 and Type 3 Technology Demonstrators, as applicable, in the PSTP, noting objectives of Technology Demonstrations and how they will support the program. Note that Emergent Technology Demonstrators not previously captured in the CDP or PSTP should be briefed to DHS DOT&E prior to implementation.

CHAPTER 4: REQUIREMENTS GENERATION**A. Overview**

This manual describes top level requirements generation policy. Commandant (CG-7) Publication 7-7, Requirements Generation and Management Process provides supporting detailed information about USCG requirements generation processes (P-MNS, MNS, CONOPS, P-ORD and ORD). Contact Commandant (CG-771) for most current Pub 7-7 information and guidance.

All program management planning documents must be staffed through varying levels of coordination and approval. It is important to plan ahead for informal staffing, coordination and formal concurrent clearance to avoid administrative delays in reviews and decision events. Refer to chapter 8 of this manual for details on the concurrent clearance process and approvals, and the MSAM Handbook for templates outlining formats, content and approvals. The Sponsor needs to engage Commandant (CG-924) and DHS on formal staffing for the MNS and ORD through DHS.

Originators of documents should take special note of the extra coordination and time required to get certain documents through the approval process when DHS is the final approval authority. Keeping this in mind, originators should engage Coast Guard leadership early, and consider including DHS representatives as members of associated IPTs (for MNS, CONOPS and ORDs) when non-USCG or cross-components equities are likely to be addressed. Commandant (CG-924) staff are responsible for assisting the PM and his/her staff in progressing through the requirements generation process and acquisition life cycle.

Originators should also note that, due to the high impact and high visibility of select plans and other documents – among them the MNS and ORD – the appropriate functional requirements experts in Commandant (CG-771) will provide formal independent verification and validation (IV&V) of these documents. These IV&Vs will ensure that the program meets the intent of applicable Coast Guard and/or DHS requirements for that document, before it proceeds for Flag/SES-level signature clearance approval. In the case of an ORD, and any subsequent changes to it, the Sponsor's Representative (and PM if assigned) will present the ORD requirements and trade-off analysis to the EOC prior to Flag/SES-level signature clearance approval.

B. Introduction

The ability for the USCG to continue to effectively execute its missions in the future is dependent upon having and maintaining a healthy requirements life cycle system. **Figure 14 Requirements Life Cycle** is a depiction of the requirements life cycle system as it applies to Major Systems Acquisitions. Each element of the requirements life cycle plays an important role – from identifying mission gaps to developing requirements to fielding new assets or systems to getting feedback on the fielded assets' ability to continue to perform their missions.



Figure 14 Requirements Life Cycle

Mission Analysis (MA) is the periodic assessment of the Coast Guard’s current and future mission operations. It identifies deficiencies, or capability gaps, in the Coast Guard’s ability to execute its missions. For example, the Coast Guard may need to have an 80% success rate in stopping go-fast boats. If the MA shows that our success rate is only 65%, then a capability gap exists. The outcomes of the Sponsor’s annual Operational Analyses, conducted for each major asset, are to be included as supporting information for the MA. See section 4.C below for more detailed information on the MA.

Mission Analysis Report (MAR) documents the results of the MA. It documents potential solutions that can be used to close the mission capability gaps identified in the MA. If the identified mission gap cannot be closed by non-materiel means (e.g., force mix, training, policy) then the MAR will document the need for a materiel solution(s). A materiel solution means that a new, upgraded or additional physical asset (e.g., cutter, aircraft, C4ISR suite) must be added to the Coast Guard’s inventory in order to fill the capability gap. Prospective materiel solutions should be presented as a range of potential solutions, not a single system or asset. See section 4.D below for more detailed information on the MAR.

Mission Need Statement (MNS) is the formal description of the strategic need for an acquisition and is a crucial part of the acquisition process. It is a high level statement of the materiel solution capability required to close the gap. It is one of the earliest documents to formalize the acquisition, and links the gap in mission capability first documented in the

MAR to the particular system acquisition that will fill the gap. An approved MNS is required at ADE-1 and marks the formal transition from the Need Phase.

NOTE: DHS Instruction/Guidebook 102-01-001 calls for development of a Component P-MNS, to support identification of potential multi-Component or multi-Department mission needs. A P-MNS is also an element of information considered in DHS Program Resource Board decisions on funding (e.g., to insert a funding wedge for a new start in the FYHSP). In the Coast Guard, the draft MNS shall, upon signature by the Assistant Commandant for Capabilities (CG-7), (or equivalent if Sponsor is not in Commandant (CG-7)) – be considered a P-MNS, and submitted to DHS via Commandant (CG-924). See section 4.E below for more detailed information on the MNS.

Concept of Operations (CONOPS) describes a proposed asset or system in terms of the user needs it will fulfill, its relationship to existing assets, systems or procedures, and the ways it will be used. The CONOPS is used to obtain consensus on the operational concept of a proposed system among the mission managers, Sponsor, acquirer, developer, support, TAs and other user entities within the Coast Guard. See section 4.F below for more detailed information on the CONOPS.

Preliminary Operational Requirements Document (P-ORD) is the initial statement of operational performance related to requirements and incorporates the vision set out in the CONOPS assigning desired operational performance expectations. The P-ORD is derived from the MNS, CONOPS, and early Sponsor analysis. The P-ORD expresses the requirements statement and priorities needed to guide further analysis for the asset or system that is to be acquired. The P-ORD is a required document for every major systems acquisition unless a waiver is approved by Commandant (CG-771), per Chapter 1, Paragraph A.3 of the Requirements Generation and Management Process (Pub-7-7).

Operational Requirements Document (ORD) is the formal statement, developed by the Sponsor in collaboration with stakeholders, of the operational performance and related operational parameters for the proposed system. It describes an operational system in terms of a range of acceptable and desirable standards of performance. An ORD or requirements IPT should ensure that the ORD identifies the high level operational performance requirements and is not to specify all detailed requirements normally found in performance or system specifications. As the consolidation of these performance measures in one document, as well as requirements for the support and maintenance of the system, the ORD serves as the source document for a host of systems engineering activities, ongoing requirements analysis, and cost estimating to ensure the success of the program. The ORD and changes to the ORD will be briefed to the EOC prior to Flag/SES-level signature clearance for approval of requirements (including the results of cost, schedule, and performance trade-off analysis performed). Once approved, the ORD serves as a “contract” between the Sponsor and the PM. An approved ORD is required at ADE-2A/B and is revalidated or updated for ADE-3 to support the full-rate production and deployment decision by the ADA. Note that ORD requirements are driven primarily by mission needs. However, achieving ORD requirements may require an incremental approach because ORD requirements are established recognizing technology maturity and affordability among the constraints. See section 4.G below for more detailed information on the P-ORD and ORD.

Program-specific system specifications are developed by translating elements of the ORD and other design sources and drivers into functional and select physical requirements. These translated requirements are stated at a level of detail from which industry (contractors) can provide a reasonably priced proposal to develop (as well as produce and deploy) a system design that can be presumed capable of meeting ORD requirements if the specification is fully satisfied. PMs must ensure system specifications and lower level requirements trace back to the ORD, MNS and CONOPS using a requirements traceability matrix (RTM) within an existing requirements management system (e.g., Dynamic Object Oriented Requirements System (DOORS)). The SOW is a description of work tasks and related activities that are to be performed by the contractor in order to design, fabricate, integrate, test, and create/produce a system design that complies with the system specifications. More information on SOW preparation can be found in DOD's Handbook for Preparation of Statement of Work (SOW), MIL-HDBK-245. See section 4.H of this manual below for more detailed information on the Specification and Statement of Work.

Post Implementation Review (PIR) is used to establish a baseline of cost, performance, and operational outcomes for acquisitions that are transitioning to steady state. A PIR is typically conducted by the Sponsor, with assistance from the PM, on deployed programs to evaluate the actual results compared to predictions in terms of cost, schedule, performance, and mission outcomes; to determine the causes of major differences between planned and end results; and to help improve program management practices. See section 5.R of this manual, Post Implementation Review (PIR).

Operational Analysis (OA) is used to assess an asset/system's ability to continue to effectively perform its missions in a cost effective manner. The analysis is required by OMB and DHS and is to be conducted by the Sponsor on an annual basis. The results of the OA provide an input into the MA; OAs (for IT and non-IT programs) should be provided to Commandant (CG-DCO-81) for consideration toward future Mission Analyses. A PIR conducted during the Produce/Deploy and Support Phase provides a baseline for subsequent comparison during follow on OAs. By definition, OA is a method of examining the current performance of a steady-state operation (typically an asset or service in the Support Phase) and measuring that performance against an established set of cost, schedule, and performance parameters. The analysis should demonstrate a thorough examination of the need for the asset or service, the performance being achieved by the asset or service, the advisability of continuing the asset or service, and alternative methods of achieving the same results. See section 5.R. of this manual, Post Implementation Review (PIR) for more information on the OA.

The effectiveness of each element within the requirements life cycle is dependent on its predecessor. A sound and defensible MNS is dependent on the completeness and coherency of the MAR; a well written ORD needs a well thought out and complete CONOPS; the Specifications and SOW are dependent on a clear and well written ORD; and so forth. As requirements become defined in more detail, they need to maintain clear traceability to their predecessor documents.

C. Mission Analysis (MA)

Purpose: MA is a continuous, iterative analysis of assigned mission responsibilities to identify gaps in current and projected USCG mission capabilities. The purpose of MA is to

assess the ability of the USCG to successfully carry out specific missions in the future by analyzing current performance level in contrast to mission goals. Where a gap in capability exists or is projected to exist, a mission analysis should identify additional functional capability or process changes necessary to fill the deficiency. Commandant (CG-DCO-81) is the process owner for conducting MA.

Discussion: DHS and USCG Strategic Goals and USCG Missions are the starting points that are used to establish the USCG sphere of responsibility for which the Coast Guard conducts ongoing mission analyses. DHS annually issues its IPG as part of the Capital Planning and Investment Control (CPIC) process (see chapter 6 of this manual) to provide a focused statement of DHS priorities given the current and projected view of world and national state of affairs. MA should also align with the DHS Strategic Plan.

The Homeland Security Act of 2002, in transferring the Coast Guard to the Department of Homeland Security, listed the following eleven missions: Search and Rescue; Marine Safety; Aids to Navigation; Ice Operations; Marine Environmental Protection; Living Marine Resources; Illegal Drug Interdiction; Undocumented Migrant Interdiction; Other Law Enforcement; Ports, Waterways, and Coastal Security; and Defense Readiness.

The Sponsor organization should develop and track performance metrics for legacy/existing systems through OAs to determine if the system (which includes the operators, the hardware/software, and the operational environment) is able to affordably conduct designated missions to the required levels of system performance. This information will feed the ongoing MA. Included in the Sponsor's assessment will be decisions regarding retirement/disposal of a system or asset.

The Coast Guard uses the framework of its missions and DHS guidance as the standard to which it measures and assesses its capabilities to meet its missions. Concepts and scenarios are applied to give context to missions/tasks. Shortcomings between current capability and desired outcomes are identified as capability gaps (implying that tasks or missions cannot be accomplished with existing resources). A capability-based requirement system is important to meet the needs of the DHS Acquisition Review Process (ARP) in identifying, assessing, and prioritizing USCG/DHS capability needs.

When capability gaps are identified, the mission manager conducts an analysis to determine if gaps can be closed without having to initiate a materiel solution. This non-materiel analysis is an internal review of the USCG's DOTMLPF+R/G/S. If changes can be made within the USCG's current infrastructure to resolve capability gaps, it is the preferred solution. A non-materiel solution is typically faster and less expensive.

Changes related to DOTMLPF+R/G/S may not eliminate all gaps in capabilities. Remaining capability gaps should be prioritized and presented at a USCG Program Identification Review (ADE-0).

The Program Identification Phase is used by the mission manager to perform ongoing MA to identify shortcomings in Coast Guard capabilities as shown in **Figure 15 MA Process**.

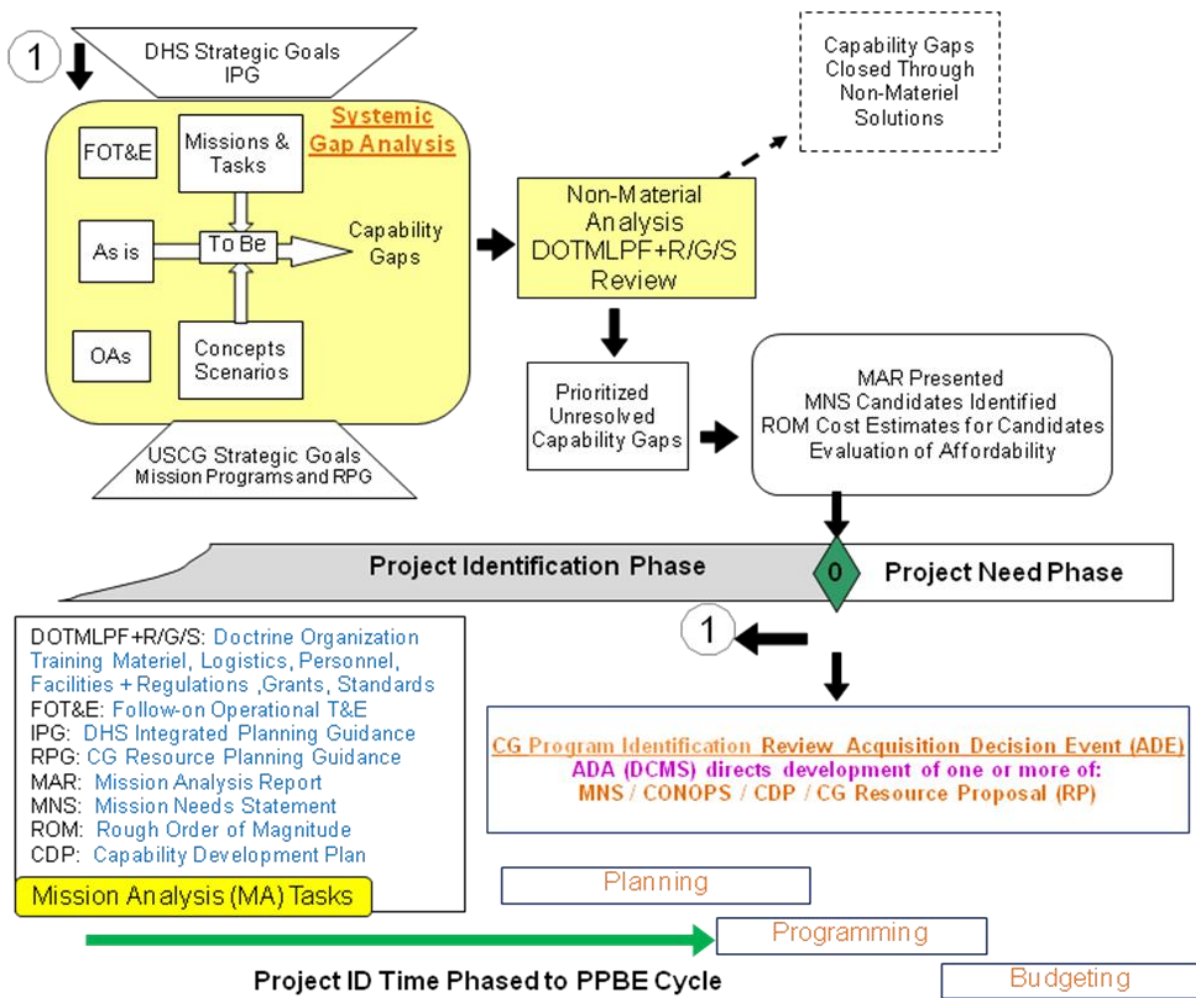


Figure 15 MA Process

Roles and Responsibilities

Commandant (DCO-81) and the Sponsor have the following responsibilities:

- Conduct the MA with support from Sponsors, Commandant (CG-5R/P), Commandant (FORCECOM), Technical Authorities, and Support Organizations;
- Brief DCMS at Program Identification Review (ADE-0).

The Sponsor and Technical Authority have the following responsibilities:

- Support Commandants (DCO-81) and (CG-5R/P) in conducting Mission Analyses;
- Provide early ROM cost and initial assessment for the potential materiel solutions.

Commandant (CG-9) has the following responsibilities:

- Provide support for MAR development and ROM cost estimate development.

Commandant (CG-8) has the following responsibilities:

- Provide initial evaluation of affordability on the potential materiel solutions.

Commandant (DCMS) has the following responsibilities:

- Authorize entry into the Need Phase;
- Direct initiation of Resource Allocation Plan, MNS, CONOPS, CDP.

D. Mission Analysis Report (MAR)

Purpose: The MAR documents the MA results and supports development of conceptual acquisition approaches.

Discussion: The MAR is a collection, cross-analysis, and documentation of numerous feeder studies and analyses that look across a number of different mission areas. The MAR is not intended to be an asset oriented analysis.

Format: The MAR is divided into four sections. Section 1 provides a mission description including a summary of the existing mission, a projection of the future mission and an analysis of mission performance (to include performance measures) and gaps. Section 2 describes the capability gap(s) which will prevent the Coast Guard from adequately conducting mission(s) now or in the future. Section 3 provides a range of alternatives, while Section 4 provides justification and preliminary options for satisfying mission capability gaps. If necessary, the MAR should specifically identify the need for a materiel solution if it is clear that non-materiel solutions cannot sufficiently close the gaps. Specific guidance and a template for development of the MAR are contained in the MSAM Handbook.

MA is the responsibility of Commandant (DCO) operational program managers. The pertinent Commandant (DCO) program manager provides a brief to the Investment Board for initial concept approval and to identify resources (funding and personnel) needed for the analysis. MAR development may, depending on mission complexity, require detailed studies, analysis and extensive commitment of staff resources. The Office of Performance Management and Assessment, Commandant (DCO-81), will coordinate review and submission of the MAR for approval by Commandant (DCO). Commandant (DCMS) will review the MAR as part of the Program Identification Review (ADE-0).

E. Mission Need Statement (MNS)

Purpose: The MNS is a high level synopsis of specific functional capabilities needed to accomplish DHS/USCG missions and objectives. It provides a strategic framework for acquisition planning and Coast Guard capability delivery and is a crucial part of the acquisition process. The MNS formalizes the acquisition, and links the gap in mission capability first documented in the MAR to the particular acquisition of a materiel solution that will fill the gap. If a non-materiel solution closes the capability gap, a MNS and follow-on acquisition program will not be required.

NOTE: DHS Instruction/Guidebook 102-01-001 calls for development of a Component Preliminary MNS (P-MNS), to support identification of potential multi-Component or multi-Department mission need. A P-MNS is also an element of information considered in DHS Program Resource Board decisions on funding (e.g., to insert a funding wedge for a new start in the FYHSP). In the USCG, the draft MNS shall – upon signature by the Assistant

Commandant for Capabilities (CG-7) – be considered a P-MNS, and submitted to DHS via Commandant (CG-924).

NOTE: For C4ISR and IT, the MNS describes specific architecturally-based functional capabilities required to satisfy DHS and USCG Enterprise Architecture (EA) requirements.

Discussion: Based on the capability gap derived from MA, the Sponsor will prepare the MNS and then circulate it for concurrent clearance. The MNS must align with DHS strategic direction and priorities and address several key elements including:

- Required mission in functional terms;
- Threats, threat assessment, and environment (if applicable);
- Description of capabilities required for the mission and gaps in capabilities that drive a need for a materiel solution;
- Consideration of existing or planned systems (internal or external to DHS) that have been considered for use to fill the gap;
- A compelling value proposition for filling the capability gap including impacts of not filling the gaps.

The MNS must be sufficiently detailed to justify an acquisition start. Approval of a MNS provides formal DHS executive level acknowledgment of a justified and supported need to resolve a mission gap with a materiel solution.

Roles and Responsibilities

The Sponsor's Representative has the following responsibilities:

- Draft the MNS.

The Sponsor has the following responsibilities:

- Submit the MNS.

The CAE has the following responsibilities:

- Provide Coast Guard approval for MNS.

The DHS ADA has the following responsibilities:

- Approve the MNS at ADE-1 (or before).

NOTE: Contact Commandant (CG-771) for the most current Pub 7-7 guidance on developing or updating the MNS.

F. Concept of Operations (CONOPS)

Purpose: The CONOPS describes the operational view of the proposed solution(s) from the user's perspective. A CONOPS is used to communicate high-level, conceptual, future business and mission operations to the program sponsors, end-users, planning and design teams, and other stakeholders. Specifically it provides the framework for the development of an operational capability. It permits stakeholders to assess solution alternatives in the context

of “real-world” (scenario-based) operational environments. The CONOPS is both an analysis and a formal document that describes how an asset, system, or capability will be employed and supported. In the Coast Guard, the CONOPS development process serves to generate consensus on the operational and support concept of a proposed system.

Discussion: A well-developed CONOPS provides a useful foundation at the beginning of the program for later development of the asset or system and also serves as a useful reference document throughout the duration of the program. CONOPS development should include careful consideration of a full range of factors that together are required to fulfill the mission including all of the aspects of DOTMLPF+R/G/S. Like the mission scenarios included in the CONOPS, DOTMLPF+R/G/S considerations provide context of how the system will be used and supported. Before commencing work on requirements documents, future work group members should review the CONOPS to ensure they understand the vision of how the asset or system will be employed.

Roles and Responsibilities

The Sponsor’s Representative has the following responsibilities:

- Draft the CONOPS.

The Sponsor has the following responsibilities:

- Approve the CONOPS.

NOTE: Contact Commandant (CG-771) for the most current Pub 7-7 guidance on developing the CONOPS.

G. Operational Requirements Document (ORD)

P-ORD: The P-ORD is the first requirements document that incorporates the vision set out in the CONOPS and assigns desired operational performance expectations.

Purpose: The P-ORD sets the context of the gaps to be addressed to guide the development and evaluation of alternative design concepts. The P-ORD is derived from the MNS, CONOPS, associated cost estimates, early Sponsor analysis (i.e., force structure assessment and C4IT), and the historical baseline. Developed early in the Analyze/Select Phase, the P-ORD describes the missions, operational capabilities, operating environment, and system constraints that competing system concepts must satisfy. The P-ORD expresses the requirements statement before capabilities are removed or lessened due to cost trade-offs, assessment of system component technical maturity and risk, affordability or other factors. The P-ORD serves as the Sponsor’s guidance to the program office specifying the issues to address in the Alternative Analysis (AA). Using the P-ORD, and working closely with the Sponsor’s Representative, the PM conducts feasibility studies and/or trade-off studies in support of the AA. The functional requirements are analyzed, system concepts synthesized, concepts evaluated (in terms of cost, mission, and environmental impacts), and the best system concept(s) selected and described. Once the P-ORD is developed and initially submitted by the Sponsor, the P-ORD is briefed to the EOC highlighting proposed trade space and future affordability. These early studies help refine requirements as the P-ORD ultimately evolves into the ORD.

Requirement priority for trade-off analysis: The P-ORD amplifies and derives requirements from the MNS and early mission and affordability analysis. Building upon operational insights from the CONOPS, the ORD IPT should provide a listing of trade-off priorities in the P-ORD. The purpose of including trade-off priorities in the P-ORD is to document agreement among the Sponsor, PM and TAs for the development of balanced and affordable system concepts. The prioritization of requirements within the trade-off priority list supports feasibility studies, alternatives analysis, mission utility analysis and other studies, and cost estimates that require guidance on the most important system attributes. As part of the trade-off prioritization and analysis process, each attribute is typically assigned values and relative weighting factors to permit a clear delineation of importance within the overall system. The optimum capabilities resulting from the subsequent trade-off analyses that are determined to be affordable are documented in the ORD through the selection of the individual requirements statements and their associated parameters. When the ORD is completed, the trade-off decisions that have been made by the IPT are captured as user needs in unambiguous, affordable and feasible requirements.

ORD: Following completion of the AA, associated studies, analyses, and selection of a preferred alternative, the P-ORD is further refined into the ORD. The ORD is a top-level decision document which constrains the P-ORD to establish the minimum acceptable standards of performance (thresholds) and optimum performance goals (objectives) for the system and, following approval, serves as a “contract” between the Sponsor and the acquirer. This “contract” represents a formal agreement between the PM and the Sponsor where the PM is expected to deliver a capability that will satisfy all requirements in the ORD. Once the ORD is approved, the EOC will be briefed on all changes that impact cost/schedule/performance of the program or enterprise. The PM, as part of the required annual program brief to the EOC, should identify possible de-scoping options to reduce cost and remain affordable.

An approved ORD is required at ADE-2A/B and is to be revalidated for ADE-3 to support the full-rate production and deployment decision by the ADA.

Context: The ORD is an acquisition document. The ORD, along with the CONOPS, are formal documents that provide a bridge between the mission functional requirements spelled out in the MNS and the detailed technical requirements found in the specification or SOW that ultimately governs development of the system to reduce or eliminate a capability gap.

Discussion: The ability of the USCG to acquire major systems that meet operational mission needs within cost and schedule constraints begins with the establishment of operational performance requirements. The accurate definition of requirements by the Sponsor is imperative if the major acquisition is to be completed within cost and schedule constraints and still meet mission performance needs. The Sponsor establishes absolute minimums (thresholds) below which the mission cannot be successfully performed. The Sponsor also sets objectives to define a value beyond the threshold that reflects an operationally meaningful and cost effective increment to an operationally effective system. A key point is to ensure that the ORD conveys the user’s true needs to the acquirer. Information in an ORD varies based on concept/system complexity and the maturity of the program. The ORD contains the best available information to support an ADE-2A/B decision. To place the ORD

in perspective, it must be viewed as a step within the acquisition process rather than as an end in itself. Subsequent revisions to the ORD used in ADE-2C or ADE-3 result from better-refined requirements as the system matures. Revalidation or updates to the ORD are required at ADE-3.

ORD Key Performance Parameters (KPPs): The ORD specifies KPPs which represent those system capabilities or characteristics considered essential for successful mission accomplishment. KPPs should overcome selected capability gaps from the MNS and CONOPS and be linked to the most important missions and organizational goals of the USCG and DHS. KPP designation and performance parameter selection are the responsibility of senior Coast Guard management and are of significant interest to the ADA. KPPs are tracked in the APB. Failure to meet any KPP threshold results in a program “breach” and can be cause for the requirement to be reevaluated, and the system or program to be reassessed. Because KPPs are critical to development, management and evaluation efforts of critical system capabilities, they are to be selected carefully, and specified with operationally realistic values and/or ranges. The ORD should only contain a limited number of KPPs (five or fewer) that capture the minimum number of parameters needed to reach the overall desired mission capabilities.

ORD Objectives: The ORD quantifies objective performance parameters. Each performance parameter in the ORD is stated in terms of a threshold (the minimum value necessary for the asset to be considered acceptable). If warranted, an objective value may also be assigned to a performance parameter. Objective values are a level of performance beyond the threshold that significantly improves mission performance, safety, supportability, or cost. In simple terms, the asset is acceptable at the threshold level but will be much more effective at the objective level. However, caution must be used in selecting objectives. The objective value must be sufficiently supported by analysis and expressed in quantitative terms. The number of objectives in the ORD should be kept to a minimum. The PM, Sponsor, and stakeholders will determine how best to address objectives in the RFP and resulting contract.

NOTE: For planning purposes, the number of objectives in an ORD is to be limited to five unless there is agreement between the Sponsor and Commandant (CG-9) that a higher number is reasonable and is expected to be executable.

ORD Integrated Product Team (IPT): Developing requirements is best accomplished as an integrated, cross-functional endeavor. An ORD IPT will be chartered by the Sponsor to develop the ORD for a major systems acquisition. The Sponsor’s Representative will co-chair the IPT, with Commandant (CG-771) serving as the primary arbiter for the process. The IPT is to include the following Commandant CG-9 team members as participants:

- Commandant (CG-93) PM;
- Commandant (CG-924) Office of Acquisition Support;
- Commandant (CG-926) Office of Research, Development, Test and Evaluation.

The IPT should include a representative from the Operational Test Agency (OTA) or other representative that can discuss OT&E issues and evaluate testability of requirements. See Pub 7-7 for further details on ORD IPT membership.

The ORD IPT needs to consider affordability. To achieve the requirements identified in the ORD, the budget and appropriations need to match the cost of doing the work in developing, delivering, operating and sustaining the capability being provided. It is the PM's responsibility to highlight to senior management, the EOC, and the ADA if there is inconsistency between the PM's cost estimate for achieving the ORD and the Coast Guard's proposed (or approved) budget and/or Congressional appropriations.

The completed ORD will be reviewed and validated by Commandant (CG-771) prior to being submitted for concurrent clearance. The ORD IPT will provide the analyses and documentation supporting the ORD to assist in the Commandant (CG-771) review.

ORD Update Process: As an acquisition document, the ORD may undergo changes after ADE-2A/B due to mission changes, or other factors such as cost, schedule, and performance tradeoffs, technological maturity, funding limitations, ADM memo direction, or other external events. In the case of altered operational requirements or clarifications of such requirements, formal changes to a DHS approved ORD are required. These changes must be processed by the Sponsor's Representative and Commandant (CG-771), then restaffed through the MSAM document clearance process and approved in the same manner as a new ORD.

Roles and Responsibilities

The Sponsor has the following responsibilities:

- Direct the Sponsor's Representative to prepare the P-ORD/ORD;
- Submit a P-ORD via the PM to the Commandant (CG-9) for acceptance;
- Submit an ORD through the clearance processes for CAE approval.

The Sponsor's Representative has the following responsibilities:

- Prepare the P-ORD/ORD;
- Co-Chair the ORD IPT.

Commandant (CG-771) has the following responsibilities:

- Provide requirements generation training to the ORD IPT;
- Provide a Requirements Officer to co-chair the ORD IPT in requirements generation;
- Serve as process gatekeeper for USCG Requirements;
- Review P-ORD/ORD for compliance with requirements generation process.

The PM has the following responsibilities:

- Assist the Sponsor's Representative in defining the operational and support requirements for the system as a member of the ORD IPT;
- If the program has been approved/funded via the appropriations process, provide funding to support the analyses needed for developing the P-ORD and ORD;
- Review and comment on P-ORD/ORD, provide feedback to Commandant (CG-9);

- Highlight to senior management and the ADA any inconsistency between the PM's cost estimate for achieving the ORD and the USCG's proposed (or approved) budget and/or congressional appropriation (budget related affordability issues).

The ORD IPT has the following responsibilities:

- Provide cross-functional knowledge in identifying, assessing, and documenting requirements;
- Include representatives from the TAs to provide input on technical standards and policies that will apply to the ORD;
- Utilize the analytical services of the appropriate APO, the RDT&E program (Commandant (CG-926)) and Service Centers, as appropriate, to refine and verify requirements.

The Director of Acquisition Programs (CG-93) has the following responsibilities:

- Review and comment on P-ORD/ORD.

Commandant (CG-9) has the following responsibilities:

- Accept P-ORD submitted by the Sponsor.

The Vice Commandant (VCG) has the following responsibilities:

- Approve ORD and submits to DHS for approval through Commandant (CG-924).

The DHS ADA has the following responsibilities:

- Approve ORD.

H. Specifications and Statements of Work

Specifications and Statements of Work (SOW): Once a specific need is identified through the ORD, the PM must describe the requirement(s) such that a system design can be created and evaluated to determine if it satisfies the USCG need(s). System specifications are developed by translating ORD requirements and other design drivers into functional and select physical requirements. The SOW is a description of work tasks and related activities that are to be performed by the contractor in order to design, fabricate, integrate, test and create/produce a system design that complies with the system specifications. The SOW is supposed to reference the specification rather than spelling out the system's technical requirements. Together, the SOW and specification detail the Government's requirements. How they are written ultimately impacts the quality of proposals, deliverables and the success of the program. Consider the following points when drafting these contract sections:

1. Requirements

The specification and SOW must be drafted to ensure the Coast Guard and contractor both understand the requirement; therefore,

- Avoid ambiguous specifications. "Ambiguous" means written in such a way that it could reasonably be interpreted in at least two different ways — regardless of whether both are correct;

- Avoid compound requirements. Ensure all requirements are singular in nature;
- Ensure all requirements are clearly traceable to the original requirements or governing documents;
- Do not “borrow” requirements from another specification unless you fully understand the requirement. Too often specifications are drawn from previous or similar programs, and the stated requirements are inappropriate or their meaning unknown;
- Read and become familiar with all reference materials (e.g., publications, standards, specifications) before incorporating them to ensure all requirements in these documents apply. If necessary, incorporate only the applicable portions of referenced material;
- Work task requirements should be specified in the SOW, and all data requirements for delivery, format, and content should be in the Contract Data Requirements List (CDRL) in conjunction with the appropriate Data Item Description (DID) respectively, with none of the requirements restated in other parts of the contract;
- Ensure that the SOW and specification are consistent with each other and all applicable sections of the RFP;
- Strive to make the document readable by all parties. Define terms that have more than one meaning or use. Define acronyms. An index, table of terms, and definition section are often helpful, but try to avoid multiple cross referencing, which breaks up the flow of the text and increases the risk of duplication;
- Use commercial or industry standards instead of Military or Federal standards to the maximum extent possible, except where Military or Federal standards including DHS and Coast Guard standards, are applied to enhance commonality, interoperability or to comply with TA requirements;
- Understand the challenges across the life cycle when requiring or allowing use of commercial software as part of a system acquisition. Restrictions on data rights and proprietary software can cause significant impacts to program cost and management complexity when performing upgrades, changes or long term sustainment activities;
- Ensure all requirements are measurable/testable to enable validation that the capability is delivered as required.

2. Legal Significance

The specification and SOW have legal significance. They tell potential offerors what they must do to fulfill the Government’s requirement, constitute the basis for evaluating offers to determine if they satisfy the Government’s needs, and bind the successful contractor to perform in accordance with the stated requirements. Therefore, when developing these documents, consider how effectively the Government can assess contractor performance when compared to the contract. Clearly defined requirements will enhance the legal enforceability of the SOW.

3. Competition

By law, RFPs must permit full and open competition to the maximum extent practicable and must not be unduly restrictive. To this end, the specification and SOW should only reflect the Government's requirements, and must not be written around a particular company's product or service. As a rule of thumb, the Coast Guard must be able to trace every stated requirement in the specification back to an operational requirement.

CHAPTER 5: PROGRAM MANAGEMENT PLANNING**A. Overview**

The Program Manager's (PM's) primary responsibility in managing a program is to adequately plan for execution of the program, document the plan through a set of acquisition documents, and execute the program's plans within the baseline constraints, resources, guidelines and requirements established for the program. The planning activities and documentation described below provide program information for acquisition decision makers as well as providing an information tool for managers, sponsors, stakeholders, and other acquisition team members to be informed on, and to execute their responsibilities. As an effective management tool, it is the responsibility of PMs (not solely the document originator) to consistently ensure all relevant documents are current and accurately reflect the program situation and status. The currency and validity of program documentation is especially important when approaching an acquisition decision event (ADE), a program or technical review, or other significant program event. The PM's overall attention to currency, accuracy, and integration of all program documentation is also critical to successful external verification and validation actions that may be required for certain individual documents (e.g., APB, PLCCE, ORD).

All program management planning documents must be staffed through varying levels of coordination and approval. It is important to plan ahead for informal staffing, coordination, and formal concurrent and signature clearances to avoid administrative delays in reviews and decision events. Refer to chapter 8 of this manual for details on the concurrent clearance process and the MSAM Handbook for templates outlining formats, content and approvals.

PMs should take special note of the extra coordination and time required to get certain documents through the approval process when DHS is the final approval authority. The Commandant (CG-924) staff members are assigned to specific Coast Guard programs and serve as program liaisons responsible for assisting the PM and his/her staff in progressing through the acquisition life cycle.

PMs should also note that, due to the high impact and high visibility of select plans and other documents – among them the CDP, ILSP, TEMP, PSTP, PLCCE, and APB – the appropriate acquisition functional experts may provide formal independent verification and validation (IV&V) of those documents. These IV&Vs can ensure the programs meet the intent of applicable DHS and/or USCG requirements for that document, before it proceeds for Flag/SES-level signature clearance approval.

B. Program Integration / Integrated Product Teams (IPTs)

Purpose: Program and systems integration is a critical management practice concerned with incorporating components so that they optimally function and interoperate together to perform the overall mission. The PM's responsibility is to maintain management, oversight, planning, and control of these interdependent and interoperating programs and components being acquired to ensure the proper design, test, and operation of the integrated program. Primary means of ensuring this integration is through PM and other program engagement within an IPT. This integration responsibility covers not only internal program components

and providing systems but extends to external systems or interdependent systems, assets, services, data, and infrastructure.

Discussion: An IPT is a chartered planning forum comprised of representatives from various functional disciplines, management, technical experts and program stakeholders (e.g., PMs of interdependent or supporting programs) chaired by the PM of a receiving program to accomplish a specific acquisition task. In order to collaboratively support accomplishment of an integrated program capability, the IPT may be used to generate the plan for a “receiving” program utilizing inputs from program representatives “providing” a system, asset, service, data or infrastructure. The end result should be the PM of the receiving program understanding the dependencies and interfaces between programs, getting endorsement on the program MSAM planning documents (containing cost, schedule and performance information) from provider program PMs, engagement of PMs in their counterpart programs’ IPTs to ensure these factors and interfaces are understood, and the receiving program PM presenting the program as an integrated system when briefing USCG leadership. The typical IPTs involved in this integration process and the acquisition phases of most activity are identified below:

- Operational Requirements IPT (Need and Analyze/Select)
- Systems Engineering/System Performance/System Specification IPT (Analyze/Select, Obtain)
- Program Management Planning IPT (Analyze/Select, Obtain, and P/D/S)
- Test Management Oversight Team (Analyze/Select, Obtain)
- ILS Management Team (Analyze/Select, Obtain, and P/D/S)
- Configuration Control Board (Analyze/Select, Obtain and P/D/S)
- Interface Control IPT (Analyze/Select, Obtain and P/D/S)

Roles and Responsibilities:

The PM has the following responsibilities:

- Charter IPTs, ensure appropriate membership and participation;
- Include integration considerations in program planning/documentation;
- Endorse interfacing programs documentation as appropriate.

C. Interdependent Programs

For programs that are interdependent (meaning a program provides or receives an asset, system, data or facility to or from another program), appropriate IPTs from both programs will include members from the other program. If needed, an interface IPT will be established to ensure all interfaces are known and managed. Both programs’ PMPs will address their working relationship and IPT structure that ensures interdependent elements of the programs are appropriately managed. These actions are to be conducted for all interdependent programs regardless of program level designation (e.g., major, non-major) and phase (e.g., Need, Analyze/Select, Obtain, P/D/S).

The receiving program’s PM will endorse the providing program’s ORD (or equivalent

requirements document), schedule, and any other appropriate plans as a validation that the asset and its timing for receipt meet the receiving program's schedule needs. The receiving program's PM will also include in all ADEs and annual reviews the status of all assets, systems, GFE/GFI, etc. that are a part of his/her program's requirement and schedule needs.

D. Capability Development Plan (CDP)

Purpose: The purpose of the CDP is to serve as the agreement between the PM and the ADA on the activities, cost, schedule, and performance boundaries of the work to be performed in the Analyze/Select (A/S) Phase leading up to ADE-2A/B. The APEO or PM (if assigned) has the responsibility for preparing the CDP in the Need Phase for implementation during the Analyze/Select Phase. The CDP is signed by Commandant (CG-9) and approved by DHS ADA at ADE-1 (or up to 90 days after ADE-1 if no PM had been assigned).

Discussion: The CDP establishes the overall plan and timeline for conducting Analyze/Select Phase activities. The CDP should discuss topics and issues specific to the acquisition that allow the PM to clearly define the "body of work" that must be accomplished during the Analyze/Select Phase. It includes the analysis approach, how users and operators will be included in the Analyze/Select Phase activities, any technical demonstrations planned, coordination with or dependence on other programs or solution, acquisition planning, integrated logistics planning, life cycle cost estimating, and program office resources needed. The CDP shall function as the PSTP for the Solution Engineering Stage until the PSTP is developed prior to ADE-2A/B. As such, it needs to also discuss the Study Plan, SPR and the Solution Engineering Review (SER). It provides the ADA with the assurance that the accumulation of knowledge (based upon sound analytical approaches and techniques) required to make an informed ADE-2A/B acquisition decision will be available.

Roles and Responsibilities

Program Management has the following responsibilities:

- Prepare and submit CDP.

Commandant (CG-9) has the following responsibilities:

- Endorse and approve CDP for Coast Guard.

The DHS ADA has the following responsibilities:

- Approve CDP.

E. Acquisition Strategy / Acquisition Plan (AP)

Purpose: The acquisition strategy and Acquisition Plan (AP) are the means to discuss the acquisition planning process and document the decisions made prior to processing each major contract action. The acquisition strategy and AP serve as mechanisms to review, approve, and document acquisition decisions and create a roadmap for the implementation of acquisition decisions. An acquisition strategy is required for all Major System Acquisitions.

Discussion: The acquisition strategy includes a strategic-level overview of all known planning, technical, business, and management activities for the program (e.g., logistics support, technology development, and test and evaluation strategies). The acquisition

strategy evolves over time and should reflect the current status and desired goals of the program. The acquisition strategy begins as a briefing to the CAO, Commandant (CG-9) prior to ADE-1, then progresses into a formal approval brief to the CAE (VCG) at ADE-1. At a minimum, the brief should include an overview of what is to be acquired, what mission value the acquisition will provide, what options are being considered for level of competition, overall contracting strategies, and an overview of the product support strategy. The acquisition strategy should support successful delivery of a capability at an affordable life cycle price on a realistic schedule. For USCG major acquisitions, the strategic-level acquisition strategy evolves into a detailed program AP document no later than ADE-2A/B. Note that the requirement for a program AP does not supersede DHS/USCG requirements for “stand-alone” types of APs for each USCG purchase (or USCG-funded military interdepartmental purchase request/inter-agency agreement) whose value is greater than the simplified acquisition threshold (currently \$150,000). For further guidance on these latter types of APs, refer to the HSAM.

APs shall be in writing and prepared in accordance with FAR Subpart 7.1, FAR 34.004, DHS Instruction/Guidebook 102-01-001 and HSAM 3007 Appendix H (DHS Acquisition Planning Guide). As noted in HSAM Chapter 7, paragraph 3007.102(b): “No solicitations may be issued, or funds transferred within or outside the Department until an acquisition plan (AP) has been completed and approved.” All Level 1 programs shall submit an initial (or updated as needed) AP to the DHS CPO 45 days prior to ADE-2A/B and ADE-3. Refer to HSAM Subchapter 3007.103(h) (1) (ii) and (iii) and their respective sub-parts for detailed AP submission timeline requirements.

Roles and Responsibilities

The PM has the following responsibilities:

- Prepare and brief the acquisition strategy and AP contents.

The Contracting Officer has the following responsibilities:

- Support PM in formulating and briefing the acquisition strategy and AP.

The Head of Contracting Activity (HCA) has the following responsibilities⁷:

- Review and endorse APs for acquisitions equal to or greater than \$300 million procurement cost;
- Review and approve APs for acquisitions less than \$300 million procurement cost.

The DHS Office of the Chief Procurement Officer (OCPO) has the following responsibilities:

- Approve APs for acquisitions equal to or greater than \$300 million procurement cost.

Competition is an issue that must be addressed at several points in a program or system’s acquisition. Consideration of competition in contracting is required by law (Competition in Contracting Act (CICA) of 1984), and in USCG regulation, and policy. Using other than full and open competition requires obtaining specific exception authority, and in most cases approval in the form of a Justification & Approval (FAR 6.302-1 through 6.302-7) or

⁷ See Chapter 3007 and Appendix H of the HSAM for latest guidance.

Determination and Findings (FAR 1.7). APs also cover choices in contract types and methods, options, special contracting methods, special contract provisions and clauses, potential deviations from the FAR, data rights issues, make or buy decisions, lease or purchase choices, use of support contractors, and organizational conflicts of interest, to name a few of the legal issues that may be addressed in an AP. Given these legal requirements, APs for major systems, as well as amendments to an AP must be reviewed for legal sufficiency by the Office of Procurement Law, Commandant (CG-0949).

F. Human System Integration Planning

Purpose: Total system performance depends on the successful integration of both human and non-human elements. Human System Integration (HSI) is the science that ensures the capabilities and limitations of human users (operators, maintainers, and supporters) are best-matched with the constraints presented by system technology. HSI seeks to identify and remove system elements that: require excessive cognitive, physical, or sensory skills; result in mission-critical errors; require avoidable training costs; or, produce safety or health hazards. Planning for HSI occurs at the onset of the program acquisition process to set human-focused requirements to optimize total system performance and minimize total ownership costs.

Discussion: The Coast Guard identifies seven HSI domains:

1. **Human Factors Engineering (HFE):** Employed during systems engineering over the life of the program to provide for effective human-machine interfaces and to meet HSI requirements.
2. **Personnel:** Define the human performance characteristics of the user population based on the system description and projected characteristics of target occupational specialties. Personnel attributes are design parameters.
3. **Manpower:** The mix of military, civilian, and contract support necessary to operate, maintain, train, and support the system.
4. **Performance Support and Training (PS&T):** Develops options for individual, collective, and joint training for operators, maintainers, and support personnel, consistent with FORCECOM policies and, where appropriate, base training decisions on training effectiveness evaluations. The PM shall address the major elements of training and place special emphasis on options that enhance user capabilities, maintain skill proficiencies, and reduce individual and collective training costs.
5. **System Safety and Occupational Health (SS/OH):** Integrates across disciplines and into systems engineering to determine system design characteristics that can minimize the risks of acute or chronic illness, disability, death, or injury to operators and maintainers; and of equipment damage, failure or loss.
6. **Survivability:** Addresses personnel survivability issues including protection against detection; Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives (CBRNE) effects; the integrity of the crew compartment; and provisions for rapid egress.

7. **Habitability:** Establishes requirements for the physical environment, personnel services (e.g., medical and messing), working and living conditions (e.g., berthing and personal hygiene).

Roles, Responsibilities, Resources: Commandant (CG-1) is the engineering technical authority for HSI across the system's life cycle. Commandant (CG-1B3), the Human Systems Integration Division, is the Commandant (CG-1) engineering technical authority representative. The Sponsor, APEO, PM, other TAs, FORCECOM and program staff shall partner with Commandant (CG-1B3) to plan, resource, coordinate, and execute HSI activities from Program Identification through the Produce/Deploy and Support Phase. Commandant (CG-1B3) activities require Sponsor and PM resourcing in support of each program. Commandant (CG-1B3) staff will guide and advise Sponsors and PMs on HSI activities, standards, and requirements as the engineering technical authority. Commandant (CG-1B3) will coordinate all Commandant (CG-1) organizational oversight and support for systems acquisition programs and related efforts (e.g., assesses compliance with Coast Guard Human Research Protection Program, COMDTINST 6500.1 to ensure T&E participant health, safety and well-being).

Documentation: This manual outlines the required documentation for each phase of an acquisition. This documentation is tailored based upon the current phase of the acquisition. Regardless of the acquisition phase, there are very few acquisition documents that do not impact HSI issues and the end-user/operator of the overall system. Therefore, early engagement with Commandant (CG-1B3) is essential when drafting, reviewing, and gaining Commandant (CG-1) endorsement of acquisition documents. This list is not all inclusive; however, the following are significant HSI-specific documents:

- **Human Systems Integration Plan (HSIP):** The HSIP describes the human systems integration program, identifies the HSI elements, HSI activities, program roles and responsibilities, and how the HSI domain plans will be managed and integrated with other program elements. Commandant (CG-1B3) provides technical guidance and management of HSIP development. The HSIP is prepared during the Analyze/Select Phase.
- **Manpower Estimate Report (MER):** The MER describes all manpower requirements to operate, maintain, and support a system consistent with planned operating and logistics concepts. Manpower offsets are identified if required. The MER provides information for cost estimates. The Sponsor's Representative or PM resources the analysis required for the MER. Commandant (CG-1B3) provides technical guidance and management of MER development. Commandant (CG-1) approves the MER. The MER is prepared during the Analyze/Select Phase.
- **Manpower Requirements Analysis (MRA):** The MER is updated as the fidelity of the acquisition matures and is the basis of the MRA. The MRA must describe all manpower requirements to operate, maintain, train, and support a system consistent with planned operating and logistic concepts. It informs the LCCE. The Sponsor's Representative or PM resources the MRA. Commandant (CG-1B3) oversees and

prepares the MRA, and Commandant (CG-1) approves the MRA. The MRA's required positions are used to align manpower in preparation for IOT&E and ADE-3.

- **System Safety Management Plan (SSMP):** A government management plan that defines system safety program requirements and ensures the implementation and accomplishment of system safety tasks and activities consistent with the overall program requirements. The SSMP is developed during the Analyze/Select Phase. See CG-9 SOP-7 Project Risk Management and Mishap Risk Management for further guidance: <https://cgportal2.uscg.mil/units/cg9/Pages/Standard-Operating-Procedures.aspx>
- **Human Factors Engineering Plan (HFEP):** A government management plan that defines human engineering program requirements and ensures the implementation and accomplishment of human engineering tasks and activities consistent with the overall program requirements. The HFEP is developed during the Analyze/Select Phase.

G. Alternatives Analysis (AA)

Purpose: The purpose of the AA is to conduct a series of independent analyses to identify and document the most resource efficient method of satisfying an identified mission capability gap.

Discussion: In the USCG, the Sponsor conducts and reviews Operational Analysis (OA) of current systems and MA that includes DOTMLPF+R/G/S assessments to determine mission capability gaps. If new missions are identified, a more extensive Analysis of Alternatives may be required. Additionally, the AA may consider alternatives such as:

- Modification of existing DHS or USCG systems;
- Procurement or modification of commercially available products, services, or technologies from domestic or international sources;
- A Joint, DOD, DHS Component, or other Government agency development program;
- A new Coast Guard unique development program.

The AA process requires an analysis of all the alternative ways to satisfy the mission need and operational performance requirements for the new capability.

1. Independent Third Party

The AA shall be conducted by an independent third party such as a federally funded research and development center, a qualified entity of the DOD, or similar independent organization that has appropriate acquisition experience. For the USCG, the AA must be led by an organization independent of Commandant (CG-93) and the Sponsor. Based on this definition, the USCG's RDT&E Program qualifies and may be selected to conduct the analysis. The process is started during Need Phase activities to determine what is needed to satisfy an identified capability gap. Once a determination has been made that a

new materiel solution is needed, focus is narrowed to alternative materiel solutions that can satisfy the mission need. The process evolves on an iterative basis as the specific operational requirements for the new capability are identified, and life cycle costs for each alternative are developed and refined.

2. Ground Rules and Assumptions

The ground rules and assumptions for the AA are defined in the CDP previously prepared in the Need Phase and approved at ADE-1. The AA involves the use of trade studies, identification of a rough order of magnitude (ROM) LCCE for each viable alternative, and a Cost-Benefit Analysis (CBA) for each viable alternative to establish the Return on Investment (ROI) measure. OMB Circular No. A-11 requires a minimum of three viable alternatives to be identified, and the status quo solution.

3. Development

During the Analyze/Select Phase, the AA Study Plan (AASP) is developed in accordance with the ground rules and assumptions contained in the CDP. Review and approval of the AASP will depend on the program's scope, size, criticality, and other key factors. The AASP defines the assumptions, scope/bounds, and constraints and may require certain alternatives to be examined to "open up" the prospective solution trade space. Specific elements of the Study Plan include:

- Study team, director, and overall resources required;
- Participating organizations and their roles and responsibilities;
- Subject matter experts (including representatives from TAs to ensure adequate technical completeness of data and accuracy of rules and assumptions for compliance);
- Study schedule;
- AA team interface planning with concurrent ORD effort;
- The AA review and approval process.

A Study Plan Review (SPR) is held as part of the SELC process to review the initial plans, assumptions, scope, and methods of analysis for the AA study. The SPR is conducted prior to commencing the actual AA. DHS PARM is invited to participate in the SPR. Final approval of the Study Plan is by DHS.

4. Assessment

After Study Plan approval, the AA begins by assessing identified alternatives and analyzing the effectiveness, suitability and lifecycle cost of each within the framework of the CONOPs and MNS. The AA develops Measures of Effectiveness (MOEs) which are further refined via Measures of Performance (MOPs) to provide an evaluation framework for the alternatives. These MOEs and MOPs eventually help form Key Performance Parameters (KPPs) that are incorporated into the ORD. The analysis results compile

effectiveness and suitability measures balanced with cost to provide a preferred solution alternative(s) in the final report. The AA report is created and finalized in the Analyze/Select Phase prior to ADE-2A/B. The results of the AA are also presented as part of the SELC Solution Engineering Review (SER).

Roles and Responsibilities

The PM has the following responsibilities:

- Support AA Study Plan Director in development of the AASP;
- Support the AA as requested for trade studies, LCCEs, and Cost Benefit Analyses;
- Review and endorse the AA Report.

The AA Study Team Director has the following responsibilities:

- Present AASP for approval at AASP Review;
- Lead AA Study Team in AA effort;
- Prepare and submit final report.

The Sponsor has the following responsibilities:

- Participate in the AA process to compare operational requirements to cost estimates and make refinements for affordability, as appropriate.

The Technical Authority has the following responsibilities:

- Participate in the AA process to ensure adequacy, accuracy and completeness of technical assumptions and analysis.

Commandant (CG-9) has the following responsibilities:

- Approve AASP for USCG, forward to DHS for final approval.

The CAE has the following responsibilities:

- Approve Alternative Analysis Report.

H. Life Cycle Cost Estimate (LCCE)

Purpose: The LCCE provides the foundation for the Coast Guard business decisions concerning program affordability at each ADE and can support annual budget requests. An LCCE provides an exhaustive and structured accounting of all resources and associated cost elements required to develop, produce, deploy, sustain, and dispose of a particular asset or capability.

Discussion: Developing a quality LCCE is at the core of the Coast Guard's ability to successfully manage a program within cost and affordability guidelines. The development of major program LCCEs should be led by a cost estimator (Government or contractor) that is either Level 3 certified in Business Cost Estimating by Defense Acquisition Workforce Improvement Act (DAWIA) or DHS, or a certified Cost Estimator/Analyst (CCEA) through the International Cost Estimating and Analysis Association (ICEAA). For most program LCCEs the PM should maximize use of, or require, cost estimators with expertise and experience in estimating costs for the asset class or type of program (e.g., ship (or aviation or

C4ISR) design and production). Estimators also need to show their access to relevant, credible cost estimating data. If development of the LCCE is a contracted service, (e.g., using private sector estimators), the PM should include a requirement for the contractor to develop and deliver an editable electronic cost model to support future updates to the LCCE. For acquisition programs that have not completed an LCCE, or completed an LCCE that was approved but is no longer valid, a DHS recommended draft statement of work for a contracted LCCE that includes detailed information on tasks, deliverables and key personnel as well as evaluation criteria for the PM can be found on the DHS CAD page here: http://coe.dhs.gov/CE_A_COE/SitePages/SME.aspx by following the link for the Technical, Acquisition and Business Support Services (TABSS) Statement of Work template. Any acquisition program that has an approved LCCE/PLCCE should continue using the resources already contracted for.

To improve the fidelity of cost estimates, the PM is required to develop a Cost Estimating Baseline Document (CEBD), which defines the programmatic and technical characteristics for the LCCE (and ICE). The PM should also fund a parallel effort for Commandant (CG-928) to develop an independent cost estimate, the Coast Guard ICE. The PM and Commandant (CG-928) will reconcile differences between the LCCE and the ICE to produce the single best estimate, the Program LCCE (PLCCE). The reconciliation should be agreed to by both the PM and Commandant (CG-928) and documented as an appendix to the PLCCE. Any major differences not reconcilable between the PM and Commandant (CG-928) will be briefed to Commandant (CG-9) for resolution. A PLCCE approved by DHS Cost Analysis Division (CAD) is required to support the ADE-2A/B, ADE-2C and ADE-3 decisions. The PLCCE will be maintained and updated whenever major program changes occur (e.g., schedule changes, substantive changes in requirements that affect affordability, change in program strategy, production quantity changes), to support a revision to the APB, and to support all subsequent ADE decisions. After approval of the PLCCE, the ICE is no longer required to be updated for subsequent planning or decision events unless otherwise directed. The PM approved CEBD is updated at each ADE and should be submitted along with the PLCCE to DHS CAD 45 days prior to the ADE. In the case of an ICE directed by DHS USM and developed by DHS CFO, the CEBD will be approved by Commandant (CG-9) before forwarding to DHS.

Refer to the DHS Cost Estimating Handbook for detailed guidance on DHS specific cost estimating policy and timelines. PMs for Level 1 and Level 2 programs shall also verify the latest guidance with Commandant (CG-928) prior to development of or an update to their PLCCEs. In addition, PMs should consult DHS' cost estimating center of excellence or equivalent group during the development of the final PLCCE to ensure it meets the standards required for DHS approval.

DHS Instruction/Guidebook 102-01-001, Appendix I and other PARM documents are at: <http://dhsconnect.dhs.gov/org/comp/mgmt/parm/Pages/default.aspx>

Part 1A: Developing a LCCE

The PM develops the LCCE based on the preferred solution from the AA. The DHS Cost Estimating Handbook, based on the GAO Cost Estimating and Assessment Guide, March

2009, GAO-09-3SP provides guidance and best practices. This handbook is the standard for cost estimating at DHS. Particular attention should be paid to maintaining current cost estimates and ensuring contractor deliverables (e.g., contractor WBS, Integrated Master Schedule (IMS), and LCCE) are consistent with the intent of the DHS Cost Estimating Handbook. The LCCE steps, described in detail in the DHS Cost Guidebook, are summarized below.

- **Steps 1, 2:** Define purpose and scope. Identifying the LCCE's purpose is the first step of the estimating process. DHS requires a LCCE for Level 1 and 2 programs in support of ADEs 2A/B/C and 3. The LCCE can support the RAP/RAD budgetary process by providing an accounting of all program related costs. Furthermore, management can use the LCCE to help assess the affordability and timing of critical capabilities. A cost estimating plan of attack establishes the cost team, the estimating schedule, and the estimating approach.
- **Step 3:** Obtain CEBD. As previously mentioned, the CEBD is a single, comprehensive document that defines the technical, programmatic, and schedule elements of a system. It provides information on development, testing, procurement, integration, installation and replacement, operations and maintenance, planned upgrades, and disposal. The CEBD describes in detail the complete program from cradle to grave and serves as the basis for all LCCEs (i.e., program and independent cost estimates (ICEs)). The CEBD is required as a supporting document for ADEs 2A/B/C and 3.
- **Step 4:** Implement Work Breakdown Structure (WBS). Organize the LCCE by Work Breakdown Structure (WBS) element. A WBS is the cornerstone of every LCCE because it defines the detailed cost elements and the logical relationship among these elements. It also provides a systematic and standardized way for collecting actual cost data across the program. The WBS should be based on DHS standards (and commodity types) published here: http://coe.dhs.gov/CE_A_COE/SitePages/Tools.aspx or WBSs indicated in MIL-STD-881C as appropriate.
- **Step 5:** Prepare ground rules and assumptions (GR&A). Identify rules and assumptions which communicate the scope, context, and environment of the estimate being developed and define elements that will or will not be included in the estimate. Assumptions represent the cost estimator's judgment about past, present, or future conditions of the program. Assumptions can be derived in lieu of missing data points, limited knowledge of scope, and other relevant data appropriate for establishing a credible estimate.
- **Step 6:** Identify data sources, normalize and analyze. Ensure the LCCE includes and/or references the source data and is constructed in such a manner that it can be replicated and substantiated by an independent third party. Data are the raw materials and foundation for cost estimating. Cost estimates are essentially extrapolations of historical cost data that are modified to reflect the technical and programmatic features of the new program or system. All cost estimates are based to some extent on the actual cost experience of earlier programs or systems. The collection and processing of historical cost data is therefore a key step in developing an estimate.

- **Step 7:** Develop point estimate and cross checks. A point estimate represents the estimated total cost of all elements and all years within the scope of the LCCE. It is structured using a WBS, and is based on ground rules and assumptions and the underlying data. Unlike the results of a risk analysis, which may present cost as a range of values, the point estimate represents a single value, expressed in either base year (BY) or then-year (TY) dollars. Budget exercises and affordability analyses require time phased and sequenced funding (as determined by level of work efforts) for acquisition and fielding. A well constructed point estimate, when combined with a well defined work effort based funding profile, will form the basis of a program budget, support affordability analysis, help establish APB thresholds and goals, support decision making and form the basis for cost performance benchmarks.
 - Develop the estimate to the KPP objective level. In addition, the cost difference between the KPP objective and threshold levels should be documented. Understanding the cost differences between specific levels of performance allows the PM and Sponsor to effectively perform trade-off analyses in developing the operational requirements;
 - In general a point estimate should represent a most likely program cost to support the budget, APB, and affordability analysis initiatives.
 - Ensure all sunk, present, and future costs for every aspect of the program are included regardless of the funding source in order to show the full cost of the asset(s) from initial concept through acquisition, operations, support, and disposal;
 - Ensure technology refreshment costs are considered in the life cycle of the system;
 - Include all personnel costs to operate, maintain, and support the asset in accordance with applicable Commandant (CG-1B3) manpower estimates;
 - Include General Detail Billets in the calculation to develop active duty billet cost estimates, using the Commandant (CG-832) Standard Personnel Cost (SPC) worksheet in accordance with CG-8 memorandum guidance⁸.
 - Ensure all asset-specific building(s) and infrastructure costs are clearly identified so that they can be captured in the Major Acquisition Systems Infrastructure (MASI) funding request;
 - Include all costs associated with operating, sustaining and disposing of the asset(s). Be sure to team with the appropriate USCG organizations (such as Commandant (CG-1B3), Commandants (CG-1), (CG-2), (CG-4), (CG-6), (CG-7), (CG-8), FORCECOM and budget offices of DCMS, DCO etc.). These organizations will assist in developing and refining the LCCE, by

⁸ CG-8 Memorandum “Standard for Accounting for General Detail in Life Cycle Cost Estimates” Dec 24, 2013

providing applicable historical operational and sustainment costs and helping to properly characterize and plan for the types and sequencing of costs associated with the intended asset(s).

- **Step 8:** Conduct sensitivity analysis. In cost estimating, sensitivity analysis is specifically defined as an examination of an isolated effect of changing one input value on the total cost estimate, while all other inputs remain constant. This analysis is typically conducted on inputs whose value(s) are uncertain. The recalculation of the total cost estimate with different input values is then compared to the original estimate in order to identify the most cost sensitive inputs. In reality, many inputs can change simultaneously. In addition to a sensitivity analysis, an uncertainty analysis (see Step 9) should be performed to capture the cumulative effect of additional risks.
- **Step 9:** Perform cost risk and uncertainty analysis. Cost risk and uncertainty analysis is a technique used to quantify the cumulative impact of uncertainty and risk on a cost estimate. It is a critical part of the development of a credible LCCE and accounts for the inherent risks and uncertainties present in all estimates. In addition, cost risk and uncertainty analysis is important because a cost estimate is a projection, and therefore is a certainty that the actual cost will be different from the estimate. It is recommended that a cost risk sensitivity analysis also be performed to determine each input variable's relative contribution to the final estimate's cost risk distribution.
- **Steps 10, 11:** Document the cost estimate with detailed written justification showing how the LCCE was developed. This will aid in updating the LCCE as key assumptions change and more information becomes available. Estimates should be documented to show purpose and scope, program schedule, GR&A, methodologies, data sources, assumptions, and the calculations used to develop the cost estimate. Finally, there should be enough detail so that the documentation serves as an audit trail of backup data, methods, and results, allowing for clear tracking of a program's costs as it moves through the life-cycle phases. It should be complete and well organized so that a cost estimating professional can use the documentation, by itself, to assess and reconstruct the estimate. At the conclusion of the cost estimating process, the cost estimator must communicate the final results (most often in a briefing format) to management. The cost estimate is not considered validated until it has been approved by USCG and DHS authorities.
 - Ensure LCCE is displayed by Fiscal Year, with and without risk, in both BY dollars (using a base year that will remain constant for future LCCE updates), as well as a TY dollars for budgeting purposes;
- **Step 12:** Update the LCCE. Updating refers to the iterative process of revising the LCCE and associated documentation to account for changing technical requirements, revised ground rules and assumptions, availability of actual cost data, or any other change that would result in different LCCE results. The PM should conduct an annual internal review of the LCCE to ensure incorporation of updated cost data and program changes (see Part 2 below).

Part 1B: Independent Life Cycle Cost Estimates

Commandant (CG-9283) will develop independent LCCEs, also called an ICE, for each major acquisition program in preparation for the ADE-2 decision. The term “independent” as it relates to the ICE refers to the preparation of the estimate by an office or entity that is not under the supervision, direction, advocacy, or control of the PEO or Sponsor. The ICE is a LCCE based on the established ground rules and assumptions, WBS, technical specifications and characteristics, production and deployment schedule, logistics plan, and support plan as defined by acquisition program documents, program office staff, and documented in the CEBD. However, the cost estimating methodologies and techniques employed are determined by the independent cost analysts. PMs shall coordinate with Commandant (CG-9283) to support the ICE and are responsible for funding the ICE effort.

Part 2: Program LCCE (PLCCE)

PMs will review the approved PLCCE annually, to determine if funding changes or other actual/likely changes to program cost, schedule, or performance require substantial updates to PLCCE results or methodologies. Several key activities are associated with updating the cost estimate including:

- Documenting all changes that affect the overall program estimate so that differences from past estimates can be tracked;
- Updating the estimate with actual costs as they become available;
- Recording reasons for variances so that the estimate’s accuracy can be tracked;
- Recording pertinent technical information (e.g., source line of code sizing, effort, schedule, risk items) so they are available for the next version of the estimate;
- Obtaining the PM’s feedback, assessing lessons learned, and recording those lessons so they are available for the next version of the estimate.

The results of these activities should be documented in detail. The documented comparison between the current estimate (updated with actual costs) and the old estimate allows the cost estimator to see how well they are estimating and how the program is changing over time.

Documented updates will be required if there are significant program changes (e.g., budget as reflected in enacted appropriations, law, or Sponsor requirements), revision to the APB, and in preparation for ADE-2 through ADE-3. Recommended ways to obtain actual costs and data by WBS are documented in the DHS Cost Estimating Handbook.

Adapted from the GAO 12 step process for achieving a high quality estimate, found in the GAO Cost Estimating and Assessment Guide, the DHS CAD uses a validation scorecard template for specifying a standard set of guidelines and criteria to be used in assessing a PLCCE. The initial PLCCE scorecard and the PM’s adjustments based on the scorecard should be submitted with the PLCCE for approval. For more information about the scorecard template, refer to the DHS CAD website at:

http://coe.dhs.gov/CE_A_COE/SitePages/ReviewCriteria.aspx.

Roles and Responsibilities

The PM has the following responsibilities:

- Develop CEBD (foundation for LCCE);
- Develop LCCE with inputs from FORCECOM, Commandants (CG-1B3), (CG-4), (CG-6), (CG-7);
- Coordinate and reconcile the LCCE with the ICE to create PLCCE;
- Submit PLCCE for approval.

Commandant (CG-928) has the following responsibilities:

- Develop ICE;
- Coordinate and support LCCE/ICE adjudication of differences;
- Conduct an IV&V of the PLCCE prior to signature clearance.

Commandant (CG-82) has the following responsibilities:

- Review and comment on draft PLCCE. Work with Commandant (CG-928) and PM to adjudicate Commandant (CG-82) comments prior to signature clearance;
- Endorse PLCCE.

Commandant (CG-9) has the following responsibilities:

- Final adjudicating authority for LCCE/ICE reconciliation issues;
- Approve PLCCE for the Coast Guard.

The DHS CAD has the following responsibilities:

- Review and recommend PLCCE for CFO approval.

I. Acquisition Program Baseline (APB)

Purpose: The APB formally summarizes the program's critical cost, schedule, and performance parameters, expressed in measurable, quantitative terms that must be met in order to accomplish the program's goals. By tracking and measuring actual program performance against this formal baseline, the PM is alerted to potential problems, such as cost growth, schedule slip, or requirements creep, giving them the ability to take early corrective action.

The APB documents the fundamental agreement on critical program cost, schedule, and performance objectives between the PM, CAE, and the ADA. The scope of the APB encompasses the entire planned execution of the program. Its parameters trace back to the mission gaps expressed in the MNS, requirements established in the ORD, program schedule and the costs in the PLCCE. The APB should be consistent with these documents.

Discussion: The PM is responsible for developing and maintaining the APB and executing the program to achieve this baseline. For major acquisitions programs, APB parameters

(threshold/objective) established for program breach reporting will be proposed by the PM and approved by the ADA. The program APB is formally submitted for approval prior to ADE-2A/B and revised as needed prior to but not later than ADE-3. All revisions to an approved APB are to be done in accordance with the format contained in the MSAM Handbook, APB section. Consideration should be given to documenting accomplishment of APB parameters in the format provided in the MSAM Handbook. ADA approval of the APB establishes the formal program baseline for cost, schedule, and performance. Once approved by the ADA, any change to the APB requires subsequent approval by the ADA.

An APB breach is defined as the inability to meet the threshold value of the specific parameter (see the MSAM Handbook APB Section and Sub-Section on Breaches for more information regarding threshold and objective values). Breaches to the APB can be driven by multiple causes, many of which are fact-of-life changes in requirements, resources, or schedule that are beyond the PM's control. Cost breaches should not be based on the anticipated lack of funding until those amounts are formalized in the President's Budget Request. A performance breach occurs when a program either determines it cannot physically achieve the stated performance parameter or when the Coast Guard (with ADA concurrence) determines the KPP is not affordable and will no longer pursue achieving the performance parameter. KPPs in the APB are normally expected to be demonstrated and met before an ADE-3 full-rate production decision (see page 2-5 for a discussion of the full-rate production decision).

In the event that a KPP is not met during the Obtain Phase activities and initial operational testing, the PM will perform a root cause analysis of its failure to determine the source(s) of performance shortfalls. The PM will present a plan to resolve the shortfall(s) during the ADE-3 brief. The plan, as endorsed by the CG ARB and approved by the ADA in the ADE-3 ADM, will be implemented and the results demonstrated during a follow-on test and evaluation (FOT&E) program or other framework and reported back to the ADA. Failure to demonstrate achievement of the KPP during initial or subsequent FOT&E, or the CG ARB determination that the KPP(s) will not be met due to affordability issues, will become cause for notification of an APB breach.

If a program breaches an approved APB parameter threshold, or the PM determines that the program will so breach in the future, the PM will promptly notify the Program Executive Officer (PEO) and Commandant (CG-924) of the situation. The Commandant (CG-924) Office Chief will review the information to ensure that it meets the breach reporting policy and advise the PM to follow breach notification and reporting procedures in the MSAM Handbook, Section 10.5, APB Breach Reporting Procedures.

PMs will use available and appropriate performance measurement tools throughout the acquisition to anticipate potential problems in meeting the key performance, cost and schedule parameters. Refer to **Table 12 APB Breaches** and **Table 13 Comparison of Breach Reporting conditions**.

Table 12 APB Breaches

Key Parameter	Breach
Cost	Failure to meet the threshold parameter for cost of the overall program or any discrete segment, as defined and structured in the APB
Schedule	Exceeds threshold schedule parameter
Performance	Does not satisfy one or more KPPs

Table 13 Comparison of Breach Reporting Conditions

Key Parameter	USCG/DHS Breach Condition	Congressional Breach Reporting Criteria	
Cost	Exceed Threshold ¹	>15% increase over Threshold	>20% increase over Threshold CCG Certification Required ³
Schedule	Exceed Threshold ²	>180 day delay in delivery beyond Threshold	>365 day delay in delivery schedule Threshold CCG Certification Required ³
Performance	Asset or class of assets doesn't satisfy a KPP		

¹ Cost Threshold: Objective + 15%

² Schedule Threshold: Objective + 180 Days

³ CCG delegated this responsibility to VCG via memorandum 5402 dated 16 February 2012.

Roles and Responsibilities

The PM has the following responsibilities:

- Prepare/update and submit APB.

Commandant (CG-924) has the following responsibilities:

- Conduct an IV&V of the APB.

Commandants (CG-8), (CG-9) have the following responsibilities:

- Endorse APB.

The Component Acquisition Executive (CAE) has the following responsibilities:

- Approve APB for the Coast Guard.

The ADA has the following responsibilities:

- Approve APB.

J. Program Management Plan (PMP)

Purpose: The PMP establishes a management framework for the overall management of the approved acquisition program. It provides the framework to define the activities/tasking, responsibilities, and the sequence of events, and supports implementation of the SELC process.

The PMP provides centralized authority and control over all technical, business, and risk management aspects of the program. It provides IPT members and the matrix support organizations with a clear understanding of what is required of them and when it is required, so they can work together with clarity of purpose.

The PMP addresses the program planning for the acquisition of an individual asset or system. The PMP is initially prepared early in the A/S Phase and is due before ADE-2A/B. The PMP is to be updated (at a minimum the Program Master Schedule and other substantive or major changes as applicable) to support the program's annual review and ADEs.

For programs with interdependency (one program providing an asset/system/data/facility to another program) the receiving program's PMP will address how the interdependency and interfaces will be managed to ensure that which is received fully meets the requirement and schedule of the receiving program. The PMP shall include a discussion on shared IPTs and key program documents (for the providing and receiving programs) that will be reviewed and endorsed. Interdependent programs will be identified in the PMP regardless of program level designation (i.e.; major, non-major) and phase (i.e.; Need, Analyze/Select, Obtain, P/D/S).

Discussion: Program planning is the process of establishing detailed program phase objectives and determining the sequence of development activities needed to attain those objectives. The planning process includes establishing/defining acquisition key events, required accomplishments with success criteria within the acquisition lifecycle framework. The PM should prepare an initial PMP in consultation with all involved operational and support organizations and technical authorities to ensure all appropriate tasks are addressed and assigned to appropriate activities for completion. The PMP additionally documents the detailed work to be accomplished within a 12 to 18 month period. The PMP provides for program activity planning, tracking, accountability, and success to monitor progress towards ADEs.

Roles and Responsibilities

The PM has the following responsibilities:

- Prepare and submit PMP;
- Update PMP annually and for ADEs (validate via cover memo to Commandant (CG-9) with Program Master Schedule update attached).

The APEO has the following responsibilities:

- Review the PMP to ensure the program has adequate resources;
- Ensure annual and pre-ADE schedule validation or update.

Commandant (CG-9) has the following responsibilities:

- Review and approve PMP.

K. Solicitation and Source Selection Planning

Purpose: Solicitations (or Request for Proposals (RFPs)) are the means by which the PM communicates the needs of the Government and seeks proposals from commercial industry. A good, solid solicitation package is the foundation to the success of a program. Source selection planning requires the government to establish and educate the Source Selection team and develop ground rules that will be used for industry proposal review and government source selection.

Discussion: Planning for competition, including developing a solicitation package and Source Selection Plan is complex and difficult but represents some of the most important activities for the PM and Contracting Officer. The Source Selection process is managed by the Head of Contracting Activity (HCA), the process owner for selecting sources of major acquisitions. Prior to release of the RFP, the PM should work with the Contracting Officer and legal counsel to develop the source selection strategy and associated documents (Source Selection Plan, Proposal Evaluation Plan). In addition, all members of the source selection team are required to receive training from the Contracting Officer and legal counsel to ensure understanding of the source selection procedures. This ensures that all team members evaluate the proposals consistently and safeguard sensitive information and materials.

The quality of the solicitation package – its completeness, internal coherency, clarity, and full representation of the approved requirements – is critical for program success. If the solicitation package is incomplete or unclear, the contractor may not properly address all of the approved requirements in a proposal. If not corrected before a contract is awarded, either the end product will not fully meet USCG needs or changes to meet the needs will result in greater cost and/or schedule delays.

Major Acquisition Red Team Review: In an effort to support the development of quality solicitation packages for major (level 1 and level 2) programs, the CAO may determine that an independent review (Red Team) by acquisition subject matter experts of the solicitation package should be accomplished on a selected program two months prior to its RFP release. This review will be coordinated by the PM through Commandant (CG-924), in accordance with Acquisition Directorate Commandant (CG-9) SOP-924-1 For Independent Red Team Review of Request for Proposals: <https://cglink.uscg.mil/6cf28ac5>.

The selected program is expected to fund the Red Team review. This review consists of:

1. A review of the contracting strategy by a senior management team
2. A review of the full solicitation package by an independent team
3. Prior to release of the RFP the Red Team leader will deliver a formal out-brief of the team's findings and recommendations to the PM and Commandant (CG-9).

Major Acquisition RFP Review: An overview of all major program RFPs (excluding support service contracts/solicitations) is to be briefed to Commandant (CG-9) by the PM prior to the final RFP release. The brief will include adjudication of Red Team comments (if a Red team was conducted), verification of the overall soundness of requirements, assessment

of contract(s) affordability, and executability of the acquisition strategy. The CAO approves release of all major program RFPs to industry.

To ensure stable requirements, RFPs are not to be released unless the ORD is approved. A waiver, approved by Commandant (CG-9) with EOC concurrence, is required to release the RFP earlier. If a waiver is approved, an approved ORD is required before a low-rate (or a full-rate) production award may be made.

Refer to the Commandant (CG-9) CGPortal Resources link to, “Acquisition Regulations, Manuals, and Best Practices” for the latest Coast Guard Practice Guide to Contracting: <https://cgportal2.uscg.mil/units/cg9/Pages/AcquisitionRegulation.aspx>.

Additionally, DHS offers a Practical Guide to Source Selection: <http://dhsconnect.dhs.gov/org/comp/mgmt/cpo/paw/Documents/APL/AcquisitionRegulationsandPolicyInfo/APracticalGuidetoSourceSelection/APracticalGuidetoSourceSelection.htm>.

Roles and Responsibilities

The PM has the following responsibilities:

- Develop Contracting Strategy in coordination with the Contracting Officer;
- Support Contracting Officer in development of Solicitation Package;
- Work with Commandant (CG-924) to coordinate Red Team review and fund the effort (if program is selected);
- Review the RFP to ensure that it is complete, clear, and fully represents the need;
- Ensure that all source selection team members receive proper training;
- Provide overview of major program RFPs (excluding support service contracts) to Commandant (CG-9) prior to scheduled release to industry.

The Contracting Officer has the following responsibilities:

- Develop Contracting Strategy in coordination with the PM;
- Prepare the Source Selection Plan (to be submitted for approval by the Source Selection Authority);
- Develop Solicitation Package;
- Provide source selection training to source selection team members;
- Ensure review by legal counsel.

The CAO has the following responsibilities:

- Approve release of all major systems acquisitions RFPs to industry.

L. Risk Management Plan (RMP)

Purpose: To provide guidance for acquisition program risk management plans, processes, tracking and reporting.

Discussion: Risk is the potential for negative variation in the cost, schedule or performance of a program or its products. Risk can be associated with any aspect of a program (e.g., technology maturity, supplier capability, design maturation, performance against plan) and may affect any element of the WBS and any schedule event. Risk addresses the potential variation in the planned approach and its expected outcome.

Risk management is a process by which uncertainties and the consequences associated with these uncertainties can be identified as early as possible and managed accordingly to mitigate cost, schedule, or performance impacts on acquisition programs. Risk management is most effective if it is fully integrated within the program's systems engineering and management processes.

The Risk Management Plan (RMP) identifies the program's approach for identifying, assessing, mitigating, and tracking risks that have an impact on overall program cost, schedule, and/or performance and specifies the organization and upfront activities needed for a successful risk management program. The RMP should describe the program's strategy for accomplishing effective risk management rather than merely defining a general process.

The Commandant (CG-9) SOP #7 Project Risk Management and Mishap Risk Management, (SOP-9-7) provides guidance for Commandant (CG-9) processes for managing risk and for risk tracking and reporting. For further guidance, programs should refer to the Risk Management Guide for DoD Acquisition:

<http://www.acq.osd.mil/se/docs/2006-RM-Guide-4Aug06-final-version.pdf>.

Roles and Responsibilities

The PM has the following responsibilities:

- Develop, implement, and maintain a Risk Management Plan;
- Establish, execute, and fund a risk management process that is integrated with all program management disciplines and ensure that identified risks are considered part of all major programmatic and technical reviews and decisions;
- Designate a program risk manager;
- Integrate a Principal for Safety (PFS) as designated by Commandant (CG-1B3);
- Establish a risk management IPT;
- Provide appropriate risk management training;
- Ensure that program contracting efforts include provisions to support the risk management process as necessary (e.g., as part of the IPT).

The Program Risk Manager has the following responsibilities:

- Be responsible for managing the program risk management process on behalf of the PM;
- Serve as the principal point of contact for risk management within the program.

The Program Risk Management IPTs (RM IPT) have the following responsibilities:

- Be responsible for coordination of the risk management process across the program;
- Serve as the main body for risk identification, analysis, mitigation, and tracking;

- Ensure representation from the TAs to provide risk management technical assistance as well as input on potential risks and mitigation strategies that will apply to the program;
- Report program risks to the risk manager and PM.

Other IPTs have the following responsibilities:

- Assist in the assessment of and mitigation planning for risks;
- Assist the risk owners with the mitigation of risks that affect the IPT's area of responsibility;
- Report the status of program risks to the RM IPT.

M. Test and Evaluation Master Plan (TEMP)

Purpose: The TEMP is the top-level planning document for all T&E related to a particular Major System Acquisition. The TEMP shall set forth an integrated test and evaluation strategy that will verify that the capability-level or asset-level and sub-system-level design and development, including performance and supportability, have been sufficiently proven before the capability, asset, or subsystem of the capability or asset is approved for initial and full production. A fundamental purpose of test and evaluation is to verify attainment of technical performance specifications, operational effectiveness, operational suitability and limitations. The TEMP shall describe the spectrum of developmental and operational T&E activities to be performed, including operational assessments to support a low-rate initial production (ADE-2C) decision, and Initial Operational Test and Evaluation (IOT&E) to support an ADE-3 full-rate production decision.

Discussion: During the early phases of the program, test and evaluation is conducted to demonstrate the feasibility of the conceptual approach, minimize design risk, identify viable design alternatives, analyze tradeoffs, and assess the risks to achievement of planned operational effectiveness and operational suitability. As a system evolves through design, development and integration, the emphasis in testing moves from developmental test and evaluation to operational test and evaluation. Developmental T&E is concerned with verifying contract requirements are met and engineering design goals and required production and manufacturing processes have been achieved. Operational T&E focuses on Critical Operational Issues (COIs) that validate operational effectiveness and operational suitability. COI's are refined by the Test Management Oversight Team (TMOT) and final approval is through the Operational Test Agent (OTA). The TEMP must be approved prior to commencing any test and evaluation activity. Additionally, the lower level Developmental Testing Plan and Operational Testing (OT) Plan require approval prior to commencing DT&E and OT&E respectively. The TEMP and subordinate test plans are to implement integrated testing to the maximum extent feasible.

Integrated T&E activities are developed collaboratively among all T&E stakeholders to collect data in support of their unique T&E needs. Integrated T&E enhances the efficiency and effectiveness of T&E, and results in less duplication during T&E planning and execution. Integrated testing is not "integration" testing, but rather a process in which all

stakeholder T&E objectives are examined during the same test event. Integrated T&E requires collaborative planning and execution to create events to collect data that supports multiple independent evaluator needs. With an integrated T&E approach, confidence is gained by evaluating cumulative test results to demonstrate that capabilities meet operational needs. When developing a TEMP, the PM should consider all test events a shared resource available to all T&E stakeholders, and whenever possible use an integrated T&E approach.

Key components of the TEMP include:

- The KPPs to be resolved through the integrated test and evaluation strategy;
- COIs to assess operational effectiveness, operational suitability and operational resiliency (cybersecurity);
- Test and Evaluation Resource Summary to define needed funding;
- Test and Evaluation Schedule integrated with key program events;
- Program specific operational test entrance criteria that must be satisfied (per DHS 026-06 Test and Evaluation) as applicable.

T&E shall be included in the program WBS and a schedule of T&E events shall be included in the program intermediate-level schedule.

Modeling & Simulation (M&S) can assist the T&E process by assessing the asset or system in scenarios and areas of the mission space or performance envelope where testing cannot be performed, is not cost effective, or additional data are required.

NOTE: Programs using Commercial off the Shelf (COTS) products/services may still need independent OT&E of the solution. Therefore, language to provide assistance, subject matter expertise, or to make an environment available to an OTA or DHS/CG users, must be included in the SOW or service agreement. A system that is an integration of COTS products must be tested in the same manner as a developmental system.

The PM will plan and manage the program's overall T&E effort, in accordance with this manual and DHS Test and Evaluation Directive Number 026-06. The PM performs this task with the assistance of the Sponsor/Sponsor's Representative, Technical Authorities (TAs), program functional support (including T&E, logistics and human systems integration), as well as internal and external testing organizations. The PM is responsible for conducting DT&E. The majority of DT&E is normally conducted by the contractor or the government activity responsible for development and production. Prior to IOT&E, an OTRR is conducted by the PM. Approximately 30 days prior to OTRR the PM will work with Commandant (CG-926), the TAs, the Sponsor's Representative and the OTA through a series of activities to assess readiness for operational testing. These activities are intended to verify that the system design planned for production meets technical and operational performance requirements and the program is prepared to conduct OTRR and proceed to subsequent operational testing (see the MSAM Handbook, Test and Evaluation Master Plan section for more detail).

The PM provides technical and funding support for OT&E. OT&E is managed by the OTA.

For all major systems acquisition programs, a TMOT or Test IPT shall be established to serve as the primary test management planning forum. The TMOT will be chaired by the program T&E Manager, representing the PM. The TMOT/Test IPT should consist of representatives from Commandant (CG-926) and each organization involved (e.g., Technical Authorities, Sponsor, FORCECOM) in the program's overall T&E effort.

The OTA participates in the TMOT to ensure coordination of activities and overall achievement of test objectives. The OTA plans, conducts, and reports independent operational test and evaluation efforts. The OTA may be organic to the Coast Guard or another government agency, but must be independent of the acquirer and the developmental contractor.

The PM, in consultation with the Sponsor and Commandant (CG-926), will nominate an appropriate OTA. Once the OTA nominee is identified, Commandant (CG-926) will submit an OTA approval request to DHS, who appoints the OTA.

After completion of Operational Testing, the OTA will present their findings in the OT&E Report, which is submitted to the PM, Sponsor, CAE, DHS Director, Test & Evaluation and Standards (DTS), DHS Office of Test and Evaluation (OTE) and presented to the ADA. The OTA must be prepared to present and defend those findings to the CAE or the ADA at ADEs or other program reviews. ADAs will ultimately determine the degree to which they accept and factor the evaluator's findings and recommendations into programmatic decisions. However, they must make such determinations in view of the evaluator's objective and unbiased assessment.

NOTE: Systems and products provided by the C4ISR program, as well as systems and products (aviation, boats, etc.) provided to other assets/systems for operational use will be operationally tested with the receiving asset/system. System/asset providers will plan and coordinate program specific testing, combined and interoperability testing with the receiving program PMs and TMOTs for DT&E and OT&E execution and reporting. Planning for operational test is subject to approval by OTAs and DHS authorities. See section 5.C of this manual for further information on Interdependent Programs.

NOTE: In compliance with the Coast Guard Authorization Act of 2010, safety concerns identified during DT or OT shall be communicated as soon as practicable (no later than 30 days after test completion) to the PM and CAO. Any safety concerns that are expected to be uncorrected or unmitigated prior to contract award or delivery/task order issue shall be reported to the appropriate congressional committee(s) by the Commandant at least 90 days prior to award of any contract or issuance of and delivery/task order for low, initial, or full-rate production of the asset or system. Reporting of safety issues to the PM and CAO shall be by the program's Principal for Safety as designated by CG-1B3 in accordance with SOP CG-9-7, Enclosure 6 (Project Risk Management and Mishap Risk Management), Paragraph 2. a. (Reference: MSAM section 5.L, Risk Management Plan (RMP), PM Responsibilities).

Roles and Responsibilities

The PM has the following responsibilities:

- Prepare the TEMP within three months of ORD signature;
- Prepare the DT&E Plan;
- Identify OTA (with Sponsor concurrence and DHS OTE approval);
- Prepare the DT&E Report(s);
- Chair OTRR to determine system readiness prior to entering Initial OT&E;
- Provide resources for all test and evaluation efforts;
- Provide interface between the development contractor and the government testing community.

The Technical Authorities have the following responsibilities:

- Serve as a fully participating member of the TMOT/Test IPT.

The TMOT/Test IPT have the following responsibilities:

- Serve as the primary test management planning forum;
- Assist the PM in preparation of the TEMP;
- Assist the PM in updating the TEMP;
- Assist PM in preparing the DT&E Plan;
- Review and comment on the final DT&E Report;
- Assist the OTA in preparing the EOA Plan (optional), Operational Assessment Plan and the OT&E Plan;
- Assist in the execution of the DT&E Plan and the OT&E Plan;
- Participate in OTRR.

The Sponsor and Sponsor's Representative have the following responsibilities:

- Review and comment on TEMP;
- Review and comment on DT Plans;
- Review and comment on TEMP Updates;
- Participate in OTRR.

The RDT&E Program, Commandant (CG-926) has the following responsibilities:

- Provide test and evaluation oversight;
- Conduct an Independent Verification and Validation of the TEMP;
- Serve as a core member of TMOT;
- Track verification of performance specification requirements;
- Serve as OTRR approval authority (non IT programs).

The USCG CIO (Commandant (CG-6)) has the following responsibilities:

- Serve as OTRR approval authority for major IT programs.

The OTA has the following responsibilities:

- Review Operational Requirements Document (ORD) for testability and provide

- feedback to Sponsor;
- Develop the OT Section and OT portion of Resource Section of the TEMP, and refine the COIs;
- Review and comment on the TEMP and any updates;
- Participate in OTRR;
- Prepare the OT&E Plan(s);
- Conduct/manage OT&E;
- Prepare/submit all OT&E Reports (Early Operational Assessment/Operational Assessments, IOT&E, FOT&E).

The DHS Office of Test and Evaluation has the following responsibilities:

- Review ORD;
- Approve OTA;
- Approve TEMP;
- Participate in TMOT activities;
- Issue Letter of Assessment for Operational Test Reports;
- Participate in OTRR;
- Observe Operational Testing.

N. Integrated Logistics Support Plan (ILSP)

Purpose: The ILSP is the formal acquisition management document that describes the management approach for obtaining a highly supportable capability with an affordable and effective support structure. The primary purpose of the ILSP is to describe the necessary product support activities for each ILSP element, the responsibilities assigned for each element, and the schedule for completing support activities.

Discussion: The ILSP lays out the PM's plan for ensuring the supportability and sustainability of a future capability. Overall logistics support objectives include:

- Identify logistics constraints and define resultant logistics support requirements;
- Identify or define system support requirements during design and development;
- Influence the design to ensure system life cycle support is affordable;
- Design the product support system appropriately for the system(s) being acquired;
- Leverage performance-based logistics planning, development, implementation, and management during development of the product support system;
- Leverage "should-cost" management and analysis approach to identify and implement system and enterprise sustainment cost reduction initiatives;
- Acquire and field the necessary logistics resources in a timely and cost effective manner to achieve system readiness requirements;

- Deploy a fully functioning product support capability for use during the Operations and Support period.

The ILSP includes the approach, schedule, and funding requirements for integrating supportability requirements into the systems engineering process to enable designing the system for support, (e.g., developing/obtaining an integrated systems support package including spares, support equipment, tech manuals) and supporting the design.

The ILSP depends on analyses and planning developed earlier within the acquisition process (i.e., CONOPS, ORD, and AA), and provides inputs to other crucial documents, particularly the APB and PLCCE. The ILSP must be consistent with the information provided in the PMP and AP. Close interrelationships between the ILSP and these other acquisition documents are critical to obtaining thorough and accurate supportability and sustainment planning and execution. The ILSP must also address programming and budgeting for ILS funding; contracting for supportability and sustainment; obsolescence management; environmental, safety and occupational health considerations; automatic identification technology; funding for logistics assessments; deployment and fielding; post-production support; and retirement and disposal.

An Integrated Logistics Support Management Team (ILSMT) will be established during the Analyze/Select Phase. It should consist of members representing various logistics support elements at HQ (e.g., FORCECOM, TAs), the applicable Logistics/Service Centers Program Resident Office (PRO), the Sponsor's Representative, other interested organizations (e.g., representatives of DOL), and contractor representatives, as appropriate for the program. It requires the active participation of functional area representatives across the spectrum of supportability and sustainability elements listed below.

Supportability Elements:

- Maintenance Planning
- Manpower, Personnel
- Training and Training Devices
- Product and Technical Data
- Facilities/Infrastructure
- Obsolescence Management

Sustainability Elements:

- Supply Support
- Support Equipment
- Environment, Safety and Occupational Health
- Packaging, Handling, Storage and Transportation
- Information Technology Resources
- Deployment and Fielding
- Post Production Support

Integrated Logistics Support (ILS) shall be included in the program WBS and a schedule of

ILS events shall be included in the program intermediate level schedule. The ILS schedule is included in the ILSP to show the timing of ILS events in relation to the major programmatic decision events. Formal logistics support and sustainability reviews are specifically included to ensure readiness, in accordance with Coast Guard Independent Logistics Assessment (ILA), COMDTINST 4081.19 (series) and Coast Guard Logistics Readiness Reviews (LRR), COMDTINST 4081.3 (series).

The ILA will be performed to assess the product support management processes needed to achieve required performance objectives outlined in the ORD. In addition to assessing product support planning for sustainment elements, the ILA should also review other program planning documents to ensure that they program effective product support strategies. Product support planning and implementation processes must demonstrate sufficient life cycle management planning to promote effective program management and execution of the activities necessary to acquire and subsequently sustain the program successfully.

The LRR focuses on logistics execution and delivery to examine whether the program integrated product logistics support is effective, that the level of support to be delivered is sufficient and that the appropriate level of support is properly budgeted. The LRR will also evaluate policies and procedures to ensure they provide proper guidance.

The PM must plan, budget and facilitate ILAs and LRRs as part of preparing for milestone decisions (coordinate with Commandant (CG-44) for cost estimate to include in program budget). Commandant (CG-44) is responsible for conducting the ILA/LRR and producing the final report. Commandant (CG-93), the APEO, program, and surface APO should have some level of awareness and engagement with the ILA/LRR team during analysis and report development.

Chapter 2 and the MSAM Handbook provide amplifying information on ILA/LRR timing, responsible parties, and conduct.

Roles and Responsibilities

The PM has the following responsibilities:

- Establish and manage an effective integrated product/logistics support program;
- Coordinate with the ILS Manager for joint budget planning and coordination, and complying with Commandant (CG-4) guidance and policy;
- Relate support to program readiness objectives, system design, acquisition and operating costs, and the acquisition strategy;
- Submit ILSP.

The ILS Manager has the following responsibilities:

- Formulate, coordinate, and implement the integrated product/logistics support program;
- Coordinate with the PM for joint budget planning and coordination, and complying

with Commandants (CG-1), (CG-4), (CG-6), and (CG-8) guidance and policy;

- Prepare the ILSP;
- Manage the collection of data received from analysis completed in accordance with the plan;
- Chair the ILS Management Team (ILSMT);
- Plan, coordinate, and implement transition activities (in coordination with applicable support agents) to ensure a seamless transfer of sustainment practices, processes, and arrangements to the Systems Support Agent.

The ILS Management Team has the following responsibilities:

- Review, develop, coordinate, and integrate product/logistics support plan;
- Review, develop, coordinate, and integrate integrated product/logistics support requirements and resolve problem areas.

Commandants (CG-1), (CG-2), (CG-4), (CG-6), (CG-8), (CG-9) have the following responsibilities:

- Endorse ILSP.

Commandant (DCMS) has the following responsibilities:

- Approve ILSP for Coast Guard.

DHS ADA has the following responsibilities:

- Approve ILSP.

O. Configuration Management Plan (CMP)

Purpose: The purpose of the CMP is to communicate the processes and procedures to be used by the program to implement Configuration Management (CM) policy as promulgated in Coast Guard Configuration Management Manual, COMDTINST M4130.6 (series), applying the tenets and principles of CM for documenting and managing the products, services, assets, activities, facilities, systems, data, and people. The CMP explains the implementation of the CM policy and defines any program-specific differences implemented to satisfy and/or exceed the requirements of the policy.

Discussion: The intent of the program's CMP is to address who, how, when, and where the program-specific efforts will occur and to briefly explain what is done to implement the policy and best practices of CM that are required to deliver assets and capabilities needed to perform Coast Guard missions in a fiscally responsible manner.

CM processes span the entire acquisition life cycle framework and are driven more by program technical and CM events rather than a specific acquisition phase. The CMP demonstrates the understanding of the development of the capability being acquired and establishes the plan to manage the configuration under the program's control and deliver assets with defined capabilities. Configuration changes occur throughout the life of the asset as more knowledge of the asset design, operation, and maintenance concepts is gained, and

as mission, support or technology requirements change. The control of configuration changes allows the program to manage the capability being acquired and plan the development of the system(s) to remain with the PM's area of responsibility.

Change Management: The PMs are not authorized to approve engineering and non-engineering change proposals that increase the contract costs, extend the schedule, or increase total acquisition costs, with the seven exceptions delineated below.

1. Approved Value Engineering Change Proposals that provide a reduction in life cycle cost
2. Safety – e.g., changes required to eliminate hazards to equipment or personnel as officially documented by organizations such as Operational Test and Evaluation Force (OPTEVFOR), or USCG Technical Authorities, Commandants (CG-1), (CG-4), and (CG-6)
3. Technical issues/defects – e.g., correction of defective specifications, defective or unavailable Government Furnished Equipment (GFE), defective or unavailable Government Furnished Information (GFI)
4. Unavailable Contractor Furnished Equipment – e.g., “or equal” form, fit, and function replacement of Government specified contractor furnished equipment or components that are no longer available
5. Testing and trials deficiencies – e.g., necessary component or system modifications derived from developmental or operational testing
6. Statutory and regulatory changes that are not accompanied by funding
7. Delay and disruption due to non-excusable government activities

Change Management Budgeting: PMs are to ensure that budget and spend plans include a change order account and notify Commandant (CG-93) when 75% of the change order budget has been obligated. The PM is to identify and propose offsets to Commandant (CG-93) for unfunded changes (within the seven exceptions) prior to approval. Changes that provide technical enhancements, increase capability, or take advantage of emerging technology shall be managed within the change order budget, and must be approved by Commandant (CG-93) prior to implementation. The CMP should demonstrate understanding of the overall plan to manage the configuration of the assets and their impacts to Total Ownership Cost (TOC).

Each major systems acquisition program shall develop a CMP. The CM planning information shall be tailored, as appropriate, for the specific acquisition. During the Analyze/Select Phase, each major systems acquisition will develop and document the CM Plan that explains how the CM policies are implemented within the program. CM shall be included in the program WBS and a schedule of CM events shall be included in the program schedule. Coast Guard CM Policy requirements and responsibilities are outlined in Coast Guard Configuration Management, COMDTINST 4130.6 (Series) and the National Consensus Standard for Configuration Management, EIA-649. Annex 3 of the Implementation Guide for Configuration Management, GEIA-HB-649 includes a checklist

for CMP development. Additional guidance is available in EIA-649B and the accompanying handbook.

A Configuration Control Board (CCB) will be chartered and used by the PM as the primary working group to manage the product configuration. Commandant (CG-444) will provide training and assistance to establish this board. The CCB shall be chartered as soon as the Functional Baseline for the product is established or approved.

For products in both production and sustainment, changes approved by the product CCB that will impact fielded assets will be referred to the cognizant Coast Guard CCB, in accordance with Coast Guard Configuration Management Policy, COMDTINST 4130.6 (series). Product/support changes approved by the cognizant Coast Guard CCB that will prompt major changes to acquisition, operational or sustainment activities and associated Coast Guard costs will also be reviewed and approved by the PEO [for acquisition impacts] and the Executive Oversight Council (EOC) [for all impacts] prior to implementation. The EOC fulfills the Executive Level CCB responsibilities (for configuration management) as outlined in COMDTINST 4130.6 (Series).

The PM shall have agreements in place with the platform manager for transition of CM authority of delivered assets. During sustainment, when changes to the Functional Baseline are being assessed, the CCB chair will be the Sponsor or Sponsor's Representative; otherwise the CCB chair will be the platform manager. A sample template for a CCB Charter is provided in the MSAM Handbook.

Roles and Responsibilities

The PM has the following responsibilities:

- Establish a program specific CM approach in accordance with COMDTINST 4130.6 (Series);
- Designate a CM Manager responsible for overall conduct of CM and technical data management for the acquisition program, notify Commandant (CG-444) of designated individual;
- Complete/update CMP and submit for approval;
- Ensure the CCB executes its duties per the CMP;
- Draft the CCB Charter not later than ADE-2A/B;
- Convene and chair the acquisition program CCB;
- Evaluate the impact of proposed changes to the Sponsor's functional requirements and provide recommendations based on feasibility, cost, and schedule;
- Approve, disapprove, or refer to a higher authority all proposed changes to an established configuration baseline, as appropriate;
- Receive CCB recommendations, as CCB Chairperson, on the disposition of requested change proposals to allocated and product baseline. Approve/disapprove change

proposals.

The CCB has the following responsibilities:

- Review and recommend approval, disapproval, or referral, as appropriate, on all proposed changes to an established configuration baseline;
- Monitor the CM process by working with the PM and program Configuration Manager to ensure the system configuration remains in agreement with the approved logistics configuration baseline (e.g., the Configuration Data Manager Database-Open Architecture (CDMD-OA)) ensuring currency and configuration control is being exercised effectively;
- Review change proposals and requests for deviations to ensure that they are consistent with the operational and technical requirements and that they are properly analyzed and documented;
- Monitor implementation of approved changes;
- Include representatives from TAs/ETAs to ensure the technical efficacy of proposed changes to an established configuration baseline.

Commandant (CG-93) has the following responsibilities:

- Approve CMP;
- Review and approve or submit major changes (in excess of PM approval authority) to the EOC.

The EOC has the following responsibilities:

- Review and approve major changes (in excess of PM and PEO approval authority) that impacts overall Coast Guard cost and execution.

P. Program SELC Tailoring Plan (PSTP)

Purpose: The PSTP is used to establish the appropriate level of systems engineering for the program or the discrete segment by identifying the SELC stages and products that will be executed during the remainder of the acquisition life cycle.

Discussion: Since no two programs are identical in scope or content, each program systems engineering approach can be tailored for optimum success. The SELC should be applied in a tailored manner appropriate to program size, scope, complexity, risk, and security categorization. Tailoring facilitates flexibility in the design and application of an appropriate development life cycle to fit program characteristics, while ensuring compliance with the requirements of Appendix B of DHS Instruction/Guidebook 102-01-001, *Systems Engineering Life Cycle*. The number of SELC activities and documents required for program development may differ between acquisitions due to each program's unique characteristics. Specific SELC requirements may be waived as part of an approved PSTP. Deviations (the approved alteration of the standard requirements of the SELC) are also part of the tailoring process. A PSTP is required no later than ADE-2B. The CDP will function as the PSTP

until the PSTP is approved; therefore, the activities performed during the Analyze/Select Phase should be covered in the CDP.

Major programs with significant IT content and C4IT programs will follow the overall guidance of the SELC; however, tailoring may require inclusion of C4IT specific guidance under direction of Commandant (CG-6) the Coast Guard CIO.

- **Program Manager:** The PM is responsible for the planning and execution of the program's overall C4IT effort. The PM performs this task with the assistance of the Commandant (CG-6) Asset Manager. The PM is responsible for compliance with the C4IT policy framework, through a tailored SELC process. The PM provides technical and funding support for SELC process activities and is responsible for C4IT-related certifications and testing.
- **Asset Manager:** Commandant (CG-6) (or delegate) will designate in writing an Asset Manager for each major system acquisition program that is a C4IT program or has been determined by Commandant (CG-6) to have a major C4IT element within the program. Designation of an Asset Manager should occur within three months of ADE-1. The Asset Manager serves as front line support and facilitator for SELC process compliance. The Asset Manager will aid the PM in the tailoring, planning, phasing, and coordination of C4IT requirements and associated SELC activities. In more complex relationships, where a system program interfaces with a platform manager and or a C4IT PM, the Asset Manager and PM need to coordinate efforts and work to establish a teaming agreement through an IPT structure or with formal memorandums of agreement. The objective should be a coordinated, mutually beneficial integration of capability.

Roles and Responsibilities

The PM has the following responsibilities:

- Develop PSTP;
- Provide technical and funding support for SELC activities;
- Execute approved PSTP.

The Asset Manager (C4IT only) has the following responsibilities:

- Serve as the Lead Point of Contact for Program to Commandant (CG-6) interface;
- Assist PM in developing the Program SELC Tailoring Plan;
- Shepherd program through Coast Guard EAB;
- Coordinates DHS EAB interface;
- Assist PM in planning and managing C4IT activities.

The Sponsor and Technical Authority have the following responsibilities:

- Support PM in development of PSTP.

The Director of Acquisition Programs (CG-93) has the following responsibilities:

- Approve PSTP for the Coast Guard.

The DHS PARM and CIO have the following responsibilities:

- Approve the PSTP.

Q. Deployment Plan (DP)

Purpose: The DP is the planning document that addresses all areas of asset deployment related to the acquisition. The purpose of the DP is to ensure that all required resources (e.g., personnel, training and facilities) are identified and provided to operate and sustain the new asset or capability when it arrives at the deployed location.

Discussion: As a major systems acquisition program approaches the mid-point of the Obtain Phase, or start of LRIP, planning actions must be completed for deployment of the new assets to the users. An approved DP is to be in place no later than delivery of the first asset. Planning considerations include the timing of deliveries, the order in which new assets or capabilities will be delivered, facilities/infrastructure, homeport or operating site selection and appropriate environmental impact analysis, modification of computerized prototypes to create virtual trainers, and (in many cases) the disposal of old assets as they are replaced by new ones.

The DP should be prepared in consultation with all Operating and Support Program Managers who are likely to participate in deployment efforts, to ensure that all appropriate deployment issues are addressed. Deployment considerations for vessel, aircraft, and electronics systems acquisitions are provided by the technical and organizational specialties represented on the program management matrix/IPT.

Roles and Responsibilities

The Sponsor's Representative has the following responsibilities:

- Prepare the DP to identify how the new assets will be deployed.

The PM has the following responsibilities:

- Provide the schedule for new asset/capability delivery;
- Review and endorse the DP after it is prepared.

The appropriate APO has the following responsibilities:

- Coordinate with the program logistics manager and with the acquisition program office to properly plan and prepare for fielding the capability. Ensure that the operating and support units get the required capability packages.

The Sponsor has the following responsibilities:

- Approve the DP.

R. Post Implementation Review (PIR)

Purpose: The purpose of a PIR is to baseline the cost, performance, and operational outcomes of acquisitions that are transitioning to steady state. The need to effectively

evaluate an asset's ability to meet the Coast Guard's mission needs, both functionally and economically, does not end at deployment/fielding. A PIR is typically conducted by the Sponsor on deployed programs to evaluate the actual results compared to predictions in terms of baseline goals for cost, schedule, performance, and mission outcomes; to determine the causes of major differences between planned and end results; and to help improve program management practices by applying lessons learned.

Discussion: As discussed in Preparation, Submission, and Execution of the Budget (OMB Circular No. A-11), the DHS CPIC Guide, and DHS Instruction/Guidebook 102-01-001, PIR assessments are conducted to determine the degree of program success and to evaluate the impact of the deployment on customers/operators, the mission and program and/or mission capabilities. The PIR also provides a baseline for subsequent comparison during follow-on Operational Analyses. To provide an accurate baseline, the PIR evaluates a fielded asset in its fully implemented operational environment; meaning, the support system for the asset must be in place long enough to provide statistically meaningful information. The PIR should be completed during the Produce/Deploy and Support Phase approximately 12 months after IOC and prior to ADE-4. Lessons learned during the review process should be applied to improve continuing support functions and documented in the Commandant (CG-9) Lessons Learned Database to improve overall acquisition program management. Once the PIR is completed and a baseline assessment is established, the Sponsor will be required to conduct an OA on an annual basis (consult the DHS Operational Analysis Guidance for format of an OA). The OA is used as the performance measuring process to measure the performance and cost against the established baseline. It permits identification of improvements needed or in some cases, identification of a need to acquire a new solution or asset.

Roles and Responsibilities

The Sponsor's Representative has the following responsibilities:

- Prepare the PIR with support from the PM.

The PM has the following responsibilities:

- Provide input regarding cost, schedule and performance;
- Review and endorse the PIR after it is prepared.

Commandants (CG-9), (CG-93), (CG-93X) and the Support Program Manager have the following responsibilities:

- Endorse the PIR subsequent to the PM's endorsement.

The Sponsor has the following responsibilities:

- Approve the PIR.

S. Program Transition Plan (PTP)

Purpose: The PTP sets the requirements and establishes procedures for transition of the acquired capability to the sustainment community for operations and support.

Discussion: The PM and the operational and support organizations work together to identify remaining tasks to accomplish successful acquisition program closure. On the transition date (typically ADE-4); the operational and support organizations will assume responsibility for the delivered products/capabilities throughout the remainder of the life cycle.

The PTP shall identify the operational and support organizations that will assume management responsibility for controlling and maintaining the configuration of the products/capabilities. An approved PTP is to be in place 12 months prior to either the delivery of the final unit of the program's production or the planned acquisition project's closeout date, whichever comes first.

Roles and Responsibilities

The PM has the following responsibilities:

- Identify and coordinate all the program's transition tasks;
- Prepare and submit the PTP.

The Program Sponsor and Supporting Organization have the following responsibilities:

- Review and endorse the PTP.

The Director of Acquisition Programs (CG-93) has the following responsibilities:

- Approve the PTP.

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CHAPTER 6: CAPITAL INVESTMENT PLANNING**A. Introduction**

The Coast Guard must manage its portfolio of capital assets to ensure that public resources are wisely invested. Capital programming is an integrated process for planning, budgeting, acquisition, and management of a component's portfolio of capital assets to achieve strategic goals and objectives with the lowest LCC and least risk. The Capital Programming Guide (series) Supplement to OMB Circular A-11: Planning, Budgeting, and Acquisition of Capital Assets provides guidance on the principles and techniques for effective capital programming. The contents and references in this chapter are provided to highlight the relationship between capital programming and major systems acquisition processes. In the context of major systems acquisitions, capital investment programming has two interdependent functions: to provide capital asset acquisition resources (funding and personnel), and to establish affordability constraints. Capital programming integrates the planning, budgeting, acquisition, and management of capital assets into the budget decision-making process as described in the DHS Capital Planning Guide and the Capital Programming Guide, supplement to OMB circular A-11. The major challenge for PMs is to integrate acquisition processes (event based) with budget processes (calendar based).

OMB's latest version of the Capital Programming Guide may be found at:

http://www.whitehouse.gov/omb/circulars_all_current_year_all_toc.

B. Planning, Programming, Budgeting, and Execution (PPBE)

PPBE is the primary resource management system for DHS and is described in detail in DHS Management Directive (MD) # 1330, Planning, Programming, Budgeting and Execution which may be found at:

http://dhsconnect.dhs.gov/org/comp/mgmt/cpo/oss/Documents/Homepage/OSS_Frequently_Accessed_Links/Acquisition_Management_Directives/4680001.pdf.

Implementation of the PPBE is summarized in the USCG PPBE Process Maps published on 31 March 2014. Contact Commandant (CG-82) for further information.

C. OMB Business Case

OMB Circular No. A-11 Preparation, Submission, and Execution of the Budget and DHS provide policy guidance annually. DHS/OMB Major IT Business Case Handbook (June 2014 v 9.0) provides the most recent tailoring of OMB requirements to link with the DHS Investment Management System (IMS) which includes reporting forms for both IT and non-IT programs. DHS uses the IMS to capture information required by OMB and various subject matter and decision-making groups within DHS. Since OMB Circular No. A-11 changes every year, the USCG point of contact for the annual requirement is Commandant (CG-822). Commandant (CG-924) in concert with Commandant (CG-822) will ensure

PM/APEO have the latest guidance for the most current OMB, DHS, and Coast Guard formats and information requirements for specific Business Case portfolio forms.

Business Cases are reviewed and scored to ensure that spending on acquisitions directly supports DHS strategic goals and the President’s Management Agenda. New programs must be justified based on their ability to contribute to DHS strategic goals with the least life cycle costs of all possible solutions and minimal risk to the Government. PMs need to provide risk-adjusted cost and schedule goals with measurable performance benefits identified. Programs that are in planning (Pre-Acquisition) or full acquisition (Acquisition) must demonstrate satisfactory progress towards achieving baseline cost, schedule, and performance goals. Assets that are in the Produce/Deploy and Support Phase must document how close actual annual operating and maintenance costs are to the original LCCs. Documentation starts with the PIR and continues with annual OAs.

In general, Business Case forms provide information to help describe and justify the investment, and to help in the management of the execution of those investments through the acquisition program life cycle. The program’s Business Case and APB should align and be consistent.

The Business Case is designed to (1) coordinate OMB’s collection of component information for its reports to Congress required by the Federal Acquisition Streamlining Act of 1994 (FASA) and the Clinger-Cohen Act of 1996 (CCA); and (2) to ensure that the business case for the acquisition of capital investments are made and tied to mission statements, long-term goals and objectives, and annual performance plans that are developed pursuant to the Government Performance and Results Act of 1993 (GPRA).

Figure 16 Capital Acquisition Planning shows the link between the ARP and the USCG PPBE process.

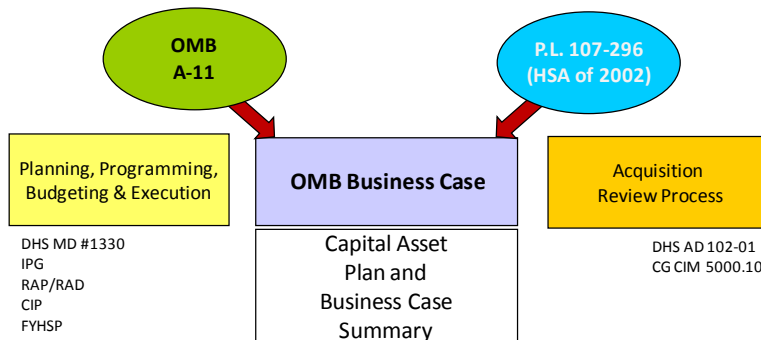


Figure 16 Capital Acquisition Planning

D. DHS Acquisition Review Process (ARP)

DHS Directive 102-01 establishes an ARP and Acquisition Review Board (ARB) to:

- Integrate capital planning and acquisition control, resource allocation, budgeting, acquisition, and management of acquisitions;

- Ensure that spending on acquisitions directly supports and furthers DHS' mission and provides optimal benefits and capabilities to stakeholders and customers;
- Identify poorly performing acquisitions that are behind schedule, over budget, or lacking capability so corrective actions can be taken;
- Identify duplicative efforts for consolidation and mission alignment when it makes good sense or when economies of scale can be achieved;
- Improve acquisition management in support of the President's Management Agenda.

The ARP is the support process followed to prepare for an ARB and to ensure appropriate implementation of the decisions made at the ARB. At the outset of the acquisition lifecycle, PARM works with DHS stakeholders, the PM for the acquisition, and the Component organization responsible for oversight of the acquisition to identify the key acquisition decisions to be made and the key preliminary issues to be resolved.

- Prior to the ARB, PARM coordinates a review of the acquisition by the Acquisition Review Team (ART), comprised of the action officers for the ARB members. This review consists of: reviewing program documentation and pre-briefing the ART (draft ARB ADE brief) by the PM. Following this review, PARM prepares an issue paper for the ARB. Following an ARB meeting, PARM shall prepare an ADM as the official record of the ADE, to be signed by the ADA. The ADM shall describe the approval or other decisions made at the ARB and any action items to be satisfied as conditions of the decision.
- Following the approval of the ADM, PARM and Commandant (CG-924) track the action items contained in the ADM and reports to the ADA on any failure to satisfy required actions. Completion of action items is a prerequisite for advancement to the next phase of the Acquisition Life Cycle.

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CHAPTER 7: REPORTS AND REVIEWS

A. Introduction

This section addresses the knowledge-based administrative processes that the PM uses to keep senior management within the USCG, DHS, OMB, and Congress informed of the progress being made on major systems acquisition programs. Effective acquisition management requires efficient and timely dissemination of information to all levels of the organization to improve communications, highlight potential problems that may require management attention, and to identify current performance.

B. Reports

One of the responsibilities of the PM is to provide various reports to senior management in the Coast Guard and DHS. The following information describes the required reports that the PM will use to carry out his/her administrative duties contained in the PM Charter.

Comprehensive Acquisition Status Report (CASR): The CASR is an annual DHS report to Congress submitted with the President's Budget in February each year as required by the Consolidated Appropriations Act, 2012. DHS is also required to submit quarterly updates on any major acquisition for which there has been a new APB, an ADM, or where there has been significant deviation from the prior report with respect to acquisition cost, quantity, or schedule (a significant change is considered any deviation in cost or quantity that exceeds 15 percent, or a change in schedule that exceeds six months. The CASR includes programs identified for major acquisition oversight as defined in the DHS Master Acquisition Oversight List (MAOL). DHS generates the CASR from nPRS, the Investment Management System (IMS), the Quarterly Program Accountability Reports (QPAR), and acquisition program governance records. In accordance with annual USM guidance on the MAOL, PMs are expected to update and maintain the information in IMS and nPRS for their programs.

Next Generation Periodic Reporting System (nPRS): The DHS Office of the Chief Information Officer (OCIO) in conjunction with the Office of Program Accountability and Risk Management (PARM) within the Office of the Undersecretary of Management (USM) conducts a periodic reporting process to ensure that various DHS programs satisfy compliance-related mandates and improve investment management and reporting. The PM shall submit appropriate reports for the program on a monthly basis, as required by the MAOL, DHS and USCG directives.

C. Reviews

A knowledge-based acquisition management approach requires information at critical junctures throughout the acquisition process to help make informed decisions. Sufficient knowledge and demonstrated progress has to be presented to governance officials to obtain approval to continue to the next stage of development or the next phase of the acquisition. Major program events that require a formal review include 1) a requirement for the PM to

brief Commandant (CG-9) prior to an RFP release as stated in chapter 5, and 2) a requirement for the Sponsor to brief the EOC on the draft P-ORD, ORD, and ORD changes as indicated in chapter 4.

Coast Guard Reviews

Executive Oversight Council (EOC): The Coast Guard EOC is a Flag/SES-level forum that monitors major risks, addresses emergent issues, reviews ADE exit criteria, and provides direction to cross-directorate teams as required to support successful execution of major acquisition programs.

The EOC is chaired by the Coast Guard Chief Acquisition Officer; Assistant Commandant for Acquisitions (CG-9) for all major acquisition and non-major non-IT related acquisition reviews. The EOC is chaired by the Coast Guard Chief Information Officer, Commandant (CG-6) for all non-major IT related acquisition reviews. Membership is shown in **Table 14 EOC Membership**.

Table 14 EOC Membership

CG-9 (Chair)			
CG-7 (Chair for ADE-0 review)			
CG-6 (Chair for non-major IT programs)			
CG-1	CG-2	CG-4	CG-5R/P
CG-8	CG-91	CG-92	CG-93
CG-092	CG-094	DOL	FORCECOM

The EOC includes key stakeholders in the acquisition process. Primary responsibilities of the EOC can be found in chapter 1 of this manual.

Coast Guard Acquisition Review Board (CG ARB): The CG ARB conducts ADE reviews of major systems acquisition programs prior to their review by DHS. The MSAM Handbook provides recommended format and content guidance for CG ARB presentations.

Annual reviews allow for review of major systems acquisition programs and facilitate the flow of information across directorates and senior management. The PM presents annual review briefings for CG ARB members and invited DHS personnel that provide the status of the program. Guidance on preparation for annual review briefings can be found in the MSAM Handbook.

The CG ARB:

- Analyzes program cost, schedule, technical progress, accomplishments, and future plans to determine if the program is prepared to go forward for ADA approval;
- Reviews program decision documents and select planning documentation prior to submission to the CAE;
- Makes a recommendation to the CAE on program preparation to move to the next acquisition phase.

The CG ARB consists of three primary members shown in **Table 15 CG ARB Core Membership**. The CG ARB will include members of the EOC and may be augmented by Subject Matter Experts (SMEs) from major acquisition functional areas.

Table 15 CG ARB Core Membership

CG ARB Core Members		
VCG (CAE)	DCMS	DCO
EOC		

EOC/CG ARB Executive Secretary: Chief Acquisition Support Office, Commandant (CG-924), is the EOC and CG ARB Executive Secretary.

The Executive Secretary:

- Coordinates Coast Guard EOC and ARB meetings and provides administrative support for effective meeting facilitation;
- Monitors program progress;
- Ensures program compliance with approved policy, process and guidance;
- Distributes documents to EOC and CG ARB members for review;
- Serves as the central point of contact for all issues and documentation submitted to the CAO and CAE;
- Prepares Acquisition Decision Memoranda (ADMs) for decision authority signature;
- Copies senior level decision authorities on all ADMs where decision authority has been delegated.

Coast Guard Information Technology Acquisition Review (ITAR) process: ITAR is a review and approval process that is required prior to the award of any Information Technology (IT) procurement. The Coast Guard CIO (Commandant (CG-6)) must review and approve all IT procurements \$100K and above (inclusive of options); IT procurements equal to or greater that \$2.5M must be further approved by the DHS CIO. See Coast Guard and Department of Homeland Security Chief Information Officer (CIO) Review and

Approval of Command, Control, Communications, Computers, and Information Technology (C4&IT) Acquisitions, COMDTINST 5230.77 (series). For more information: <http://cgea.uscg.mil> (accessible on the Coast Guard intranet).

Coast Guard Enterprise Architecture Board (EAB) Reviews: The Coast Guard EAB supports the DHS EAB by conducting enterprise architecture reviews of all C4IT program decision requests prior to their review by DHS. Coast Guard EAB findings and recommendations are provided to the DHS EAB for decision. For more information: <http://cgea.uscg.mil> (accessible on the Coast Guard intranet).

DHS Reviews

DHS EAB: The DHS EAB conducts reviews and provides recommendations to the DHS ARB pertaining to the acquisition's alignment to the Homeland Security (HLS) EA and its architecture. A Coast Guard EAB Review must be completed prior to any DHS EAB Review. It reviews all IT programs prior to DHS ARB review. Level 1 and 2 programs are required to complete the EAB before the ARB. The DHS EAB reviews select non-IT program elements prior to DHS ARB review based on ADA direction. The ADA in consultation with the OCPO and OCIO decides on review necessity for non-IT program elements. For more information: <http://cgea.uscg.mil> (accessible on the Coast Guard intranet).

DHS ARP and ARB: The DHS ARP is the formal means for Level 1 and 2 programs (unless delegated to the Coast Guard) to receive authorization to proceed from phase to phase through the acquisition life cycle. The process allows PMs to summarize progress relative to the criteria of the acquisition life cycle and provides ARBs a forum to assess progress and bring essential issues to the ADA. PMs will ensure DHS source systems (nPRS and IMS) are updated to support briefing packages. The ARB provides recommendations to the ADA, along with those of the PM, regarding decisions and courses of action. **Figure 17 DHS ARP** represents the end-to-end acquisition review process. The notional timeline for the end-to-end ARP is expected to be 60 days, from the time the first entrance conference is held to the point at which the draft ADM is submitted to DHS Executive Correspondence Tracking (ECT) for ADA approval. Note that this timeline will vary with the size, complexity, and readiness of programs.

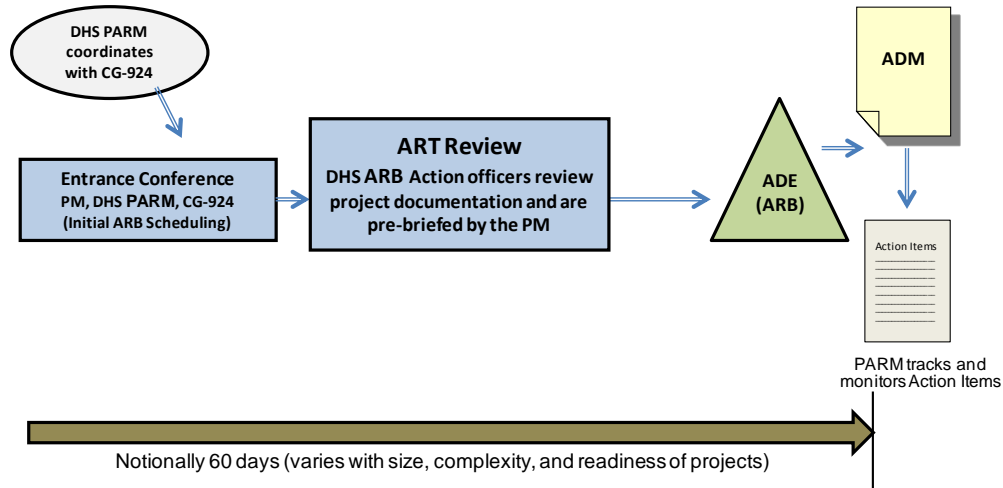


Figure 17 DHS Acquisition Review Process

1. DHS PARM Coordinates with Commandant (CG-924)

The ARP is initiated by a request for an ARB. The request may be initiated by either DHS PARM or by Commandant (CG-924) by providing PARM the Monthly Program Review Schedule that lists planned ARBs.

2. Entrance Conference

An ARB entrance conference is held to define the ARB schedule, agenda, decisions, and issues. PARM will work with the department stakeholders, Commandant (CG-924), the PM, and component oversight to identify the essential acquisition decisions as well as the key preliminary issues to assist the acquisition review team with their analysis.

3. Conduct Acquisition Review Team (ART) Review

In preparation for the ARB, the ART (comprised of the action officers for the ARB members) reviews program documentation and is pre-briefed (draft ADE ARB brief) by the PM. The ART review may be conducted by holding a separate in-brief and out-brief, or combined. Following the ART review, PARM makes final preparations for the ARB.

4. Conduct Acquisition Decision Event (ADE) ARB Meeting

The primary focus of the ADE ARB will be on the issues identified in the ART review. The objective of the ARB is to provide the ADA with a balanced and objective basis for decision. Coast Guard representation at the ARB should include the CAO, Sponsor, and CFO.

5. Develop ADM

ARB results, including the decisions and associated actions or conditions, are documented in an ADM. The ADM is the official ADE record. All acquisition

decisions will be documented in ADMs. Commandant (CG-924) and the PM will normally have an opportunity to review the draft ADM and provide input to PARM.

6. Track ADM Action Items

The ADM actions and conditions are tracked by PARM. It is the responsibility of the PM/APEO or other assigned point of contact to complete assigned actions and to provide deliverables to Commandant (CG-924), who track completion and forward them to DHS PARM for closeout confirmation. Review of program action items status is part of the ARB process.

DHS Executive Steering Committee (ESC): The DHS ADA or a delegated official (for a Level 1, 2 or 3 program) has authority under D 102-01 to designate a program committee and its members as a chartered ESC in order to support ADA functions for that program during an acquisition phase. Program reviews by the ESC are scheduled by the DHS ESC staff. The ADA still retains oversight and decision authority for the acquisition program which cannot be delegated to an ESC.

D. Records Management and Documentation

Program offices typically generate large amounts of documentation over the life cycle of the program. It is important that program offices follow administrative and regulatory requirements to correctly create and manage documents and records. Guidance can be found in the following:

1. Information and Life Cycle Management Manual, COMDTINST M5212.12 (series)

The manual prescribes policies and procedures for administering the Coast Guard Records Program as it relates to the life cycle management of both paper and electronic documents/data. Effective controls over the life cycle of records maximizes the effective use of space and equipment, and provides management with more easily identifiable and retrievable records with which to conduct Coast Guard business. Effective Records Management controls assure the quality, authenticity, utility, and access to essential data/information. The following link provides more information on records management:

<http://www.archives.gov/records-mgmt/publications/disposition-of-federal-records/chapter-1.html>.

2. The Privacy Act of 1974

When the design, development, or operation of a system of records on individuals is required to accomplish an agency function, the contracting officer shall insert clause 52.224-1, Privacy Act Notification and clause 52.224-2, Privacy Act in solicitations and contracts. Additionally, contractual documentation shall contain language stipulating identification/safeguarding of Personally Identifiable Information (PII) and Sensitive PII such that privacy incidents are prevented through the system's life cycle, including final disposal.

3. Section 508 Compliance

Section 508 was originally added to the Rehabilitation Act in 1986, establishing non-binding guidelines for technology accessibility. In 1998, Section 508 was amended to require that Electronic and Information Technology (EIT) developed, procured, maintained, or used by Federal agencies be accessible to people with disabilities. Federal agencies must now use these standards in all their EIT acquisitions. Section 508 Program Management Office & Electronic and Information Technology Accessibility, DHS Management Directive MD Number 4010.2 (series) and Coast Guard Implementation of the Rehabilitation Act, Section 508, COMDTINST 5230.60 (series), have been promulgated to establish policies and procedures for implementing Section 508 of the Rehabilitation Act.

Section 508 Program Management Office & Electronic and Information Technology Accessibility, DHS Management Directive MD 4010.2 (series), states in Section VI A, paragraph 2, “When developing or maintaining EIT, DHS Components shall ensure that functional requirements are identified, applicable functional performance criteria and technical standards of Section 508 are selected, and appropriate documentation is produced.” Section 508 Program Management Office & Electronic and Information Technology Accessibility, DHS Management Directive, MD 4010.2 (series), Section VI B addresses procedures that must be followed.

DHS developed a tool to assist users in including the correct Section 508 requirements verbiage. DHS Accessibility Requirements Tool (DART) is a worksheet that allows users to select the appropriate boxes and the results provide the appropriate words, based on the type of EIT that can be cut and pasted into the SOW and/or Task Order. DART can be found using the following link:

http://dhsconnect.dhs.gov/org/comp/mgmt/cio/oast/Documents/DART1_5_2_strict.html.

CHAPTER 8: DOCUMENT REVIEW AND APPROVAL PROCESS
A. Review and Approval Levels

For systems acquisition documents that require USCG and/or DHS review/approval, the document originator is expected to use their working/higher level IPTs (and other relevant teams or groups) to involve key stakeholders during the document drafting, development, review, and approval efforts. Many stakeholders possess the requisite corporate knowledge to properly prepare these documents. This support will also help ensure all stakeholders' requirements are addressed. During the concurrent clearance process, the staff of active stakeholders is expected to ensure their leaders are fully informed of all relevant issues, aware of the pending review, adjudication, and endorsement process to facilitate a timely and efficient signature clearance of the document.

Prior to signature clearance, most draft acquisition documents or plans must undergo a Matrix-level concurrent clearance review. It is not necessary that reports, reviews, or assessments go through concurrent clearance. Any questions or concerns should be resolved with assistance from Commandant (CG-924). Alternatively, when a stakeholder non-concurs on a document, the originator should promptly notify Commandant (CG-924) of this status. The following three tables (**Table 16 Acquisition Documents Requiring DHS Approval**, **Table 17 Acquisition Documents Requiring Senior Coast Guard Approval** and **Table 18 Acquisition Documents Not Requiring Senior Coast Guard Approval**) provide the program documentation approval authorities.

Table 16 Acquisition Documents Requiring DHS Approval

Document	Drafted by	CG Approval Authority	DHS Approval Authority
Mission Need Statement	Sponsor's Rep.	CAE	ADA
Capability Development Plan	CG-93 APEO/PM (if assigned)	CAE	ADA
Operational Requirements Document	Sponsor's Rep.	CAE	ADA
Program Life Cycle Cost Estimate	PM	CG-9	CFO
Program SELC Tailoring Plan	PM	CG-93	CIO and PARM
Acquisition Plan ¹	PM	HCA	CPO

Integrated Logistics Support Plan	PM	DCMS	ADA
Test and Evaluation Master Plan	PM	CG-9	DOT&E
Acquisition Program Baseline	PM	CAE	ADA
Operational Test Plan/OT Report	OTA	Sponsor	DOT&E

¹ The HCA is approval authority for APs < \$300M procurement cost. DHS CPO approves APs ≥ \$300M procurement cost.

Table 17 Acquisition Documents Requiring Senior Coast Guard Approval

Document	Prepared by	DHS Review Required?	CG Approval Authority
Mission Analysis Report	DCO-81	No	DCO
Preliminary Operational Requirements Document ¹	Sponsor's Rep.	No	CG-9 (accepts)
Alternatives Analysis Study Plan	Study Director	Yes ²	CG-9
Alternative Analysis Report	PM/Study Director	No	CAE
Concept of Operations	Sponsor's Rep.	Yes ³	Sponsor
Program Management Plan	PM	No	CG-9
CFO Funding Certification Memo	CG-8	Yes	CG-8
Configuration Management Plan	PM	No	CG-93
Independent Logistics Assessment	CG-441	No	CG-4
Logistics Readiness Report	CG-441	N/A	CG-4
Risk Management Plan	PM	N/A	CG-93
Deployment Plan	Sponsor's Rep.	N/A	Sponsor
Program Transition Plan	PM	N/A	CG-93

Document	Prepared by	DHS Review Required?	CG Approval Authority
Post Implementation Review	Sponsor's Rep.	N/A	Sponsor

¹ P-ORDs are accepted, not approved, by Commandant (CG-9).

² Commandant (CG-924) will provide a read-ahead copy of the Study Plan and an invitation to attend DHS PARM 15 days prior to the SPR.

³ This document is submitted for information to DHS prior to the ADE.

Table 18 Acquisition Documents Not Requiring Senior Coast Guard Approval

Document	Prepared by
Business Case (initial)	Sponsor's Rep.
Business Case (post-ADE-1)	PM

B. Concurrent Clearance

Purpose: The purpose of a concurrent clearance review is to communicate important program information to key stakeholders in order to solicit their comments and ultimately, their concurrence prior to submitting the document for approval. The document originator should use their relevant IPTs, working groups and other forums to involve key stakeholders during the initial development and drafting of documents. This support will help ensure stakeholder and cross-stakeholder requirements are properly captured and addressed before the formal concurrent clearance process. Note that effective use of IPTs and Matrix teams can ease the concurrent clearance review process, but cannot supplant formal concurrent clearance.

As noted in earlier sections of this manual, a key PM responsibility is to ensure integration between his/her “receiving” program and all “providing” programs. PMs and appropriate APEO shall ensure they have all appropriate stakeholder PMs and managers included in the concurrent clearance for all relevant program documentation to include requirements, schedule, costs, and funding, as well as appropriate program planning documents.

Concurrent clearance review takes place in two parts: at the Matrix-level and subsequently at the EOC-level. A Matrix-level review is conducted across the matrix of applicable stakeholders. This review provides the reviewing stakeholder staff with the opportunity to ensure their program responsibilities are addressed and their leadership is informed. This clearance process is also intended to ensure that all of their leadership’s critical or substantial issues are identified and addressed at the earliest opportunity prior to signature clearance.

An EOC-level review is required for any document or plan in which there is a critical or substantive comment that cannot be adjudicated successfully between the originating office and the commenting office during the Matrix-level concurrent clearance review. If Matrix-level concurrent clearance review comments have been properly adjudicated, then an EOC-level concurrent clearance review may be waived by Commandant (CG-924), the EOC Executive Secretary. The document originator can request a waiver of the EOC concurrent clearance review process with a memo requesting the waiver in the document package. If the Matrix-level (O-6/GS-15) review results in a non-concur, or a critical change to the document, Commandant (CG-924) will be notified immediately to help resolve the issue. Commandant (CG-924) then takes action to facilitate further adjudication and if needed place the issue on the EOC review calendar.

NOTE: Successful adjudication is accomplished when the originating office and the commenting office are in agreement for the disposition of the critical and substantive comments that were provided on the document. Adjudication should be documented

through email.

ORDs require an EOC brief prior to signature routing. This will function to validate all requirements and demonstrate that proper trade-offs have been conducted for cost, schedule and performance.

Matrix-level Concurrent Clearance Review

For the Matrix-level concurrent clearance review process, **Figure 18 Concurrent Clearance Review Matrix** lists the documents that are required to go through a concurrent clearance review and the offices to which prepared documents are distributed for review and comment, including DHS. Where multiple offices within a Directorate are listed, the program should include each office having direct involvement in the program and each office that establishes policy concerning the prepared document. Example: an ILSP should go to the engineering office(s) supporting the program and the logistics policy office, Commandant (CG-44).

	MSAM Document ⁵	Sponsor/Representative	CG-1B3 ⁴	CG-2/EA ^{1,3}	CG-4EA ¹	CG-5P/R EA ¹	CG-6EA ¹	CG-7EA ¹	CG-771	CG-8EA ¹	CG-0949	CG-924	CG-926	CG-928	PEO	PM / APEO (X)	FORCECOM EA ¹	Operational Test Agent	DHS ²
MNS	O	C	C	C	C	C	C	C	C	I	C	C		C	C	C			C
CONOPS	O	C	C	C	C	C	C	C	C	I	C	C		C	C	C	C		C
CDP	C	C		C		C	C	C		I	C	C	C	C	C	O			C
ORD	O	C	C	C	C	C	C	C	C	I	C	C		C	C	C	C		C
PMP		C		C		C	C		C	I	C	C	C	C	O				
RMP		C		C		C	C		C		C			I	O				
TEMP	C	C	C	C		C	C	C	C	I	C	C		C	O	C	C		C
ILSP	C	C	C	C		C	C	C	C	I	C			C	O	C			C
CMP		C		C		C	C			C				C	O				
PSTP		C		C		C	C	C			C	C		C	O				C
DT Plan	C	C	C	C		C	C	C			C	C		I	O	C	C		
DP	O	C		C		C	C	C	C		C			C	C	C			
PTP	C	C		C		C	C		C	I	C			C	O	C			

Concurrent Clearance Matrix

O - document originator C - comments on document I - provide document for information

Notes:

1. Executive Assistant (EA) distributes and coordinates responses from the appropriate offices.
2. Send to PARM@hq.dhs.gov. DHS comments will be returned directly to the originator.
3. Review needed if program involves intelligence community.
4. CG-1B3 will coordinate responses for all CG-1 offices.
5. PMs should ensure interdependent program PMs are included on concurrent clearance for applicable program documents.

Figure 18 Concurrent Clearance Review Matrix

A completed final draft document is distributed for Matrix-level concurrent clearance review along with Concurrent Clearance, Form CG-4590 that provides instructions and a deadline date for return to the originator.

Figure 19 Concurrent Clearance Review Process is a flow diagram of the concurrent

clearance review process. The following is a step by step explanation of the process:

- **Step 1:** Draft the document. The document originator (identified in **Table 16 Acquisition Documents Requiring DHS Approval** and **Table 17 Acquisition Documents Requiring Senior Coast Guard Approval**) drafts the document.
- **Step 2:** Submit the document for Matrix-level concurrent clearance review. Submit concurrently to all appropriate offices by email. Allow three calendar weeks for commenting offices to review and provide comments. The following actions apply:
 - Fill out the Concurrent Clearance, Form CG-4590 (see **Figure 20 Concurrent Clearance, Form CG-4590**) in accordance with instructions in **Table 19 Matrix-Level Concurrent Clearance, Form CG-4590, Instructions**.
 - Ensure the offices listed in **Figure 18 Concurrent Clearance Matrix** for the prepared document are listed in the form.

NOTE: DHS is included in the concurrent clearance review process for all documents DHS approves. The PM should receive, adjudicate and send back all DHS comments through Commandant (CG-924).
 - Include the standard comment matrix documenting comments provided by respondents at this link <https://cglink.uscg.mil/5b8d78b5> (Commandant (CG-9) Comment Matrix).
 - Once completed, provide the prepared document, the signed Concurrent Clearance, Form CG-4590 (scanned for inclusion in the email), and the Comment Matrix document to each office listed in the form to include Commandant (CG-924). Submit to Commandant (CG-924) directly, not thru Commandant (CG-92).
- **Step 3:** Originator receives and adjudicates comments and revises the document. Comments are to be adjudicated with the offices submitting them. Adjudication means that the Clearing Officer/Office and the document originator understand what changes the originator has/will make in response to the comments, and should reflect consensus on those changes from both parties. The Clearing Officer/Office is to provide the originator's office a statement to include in the concurrent clearance package that all of their critical and substantive comments have been appropriately adjudicated. Use the standard Commandant (CG-9) Comment Matrix (found at: <https://cglink.uscg.mil/5b8d78b5>) to consolidate and document the comments and disposition.

If a commenting office non-concurs, notify Commandant (CG-924) upon receipt of the non-concurrence. If that office and the originator cannot come to an agreement (with Commandant (CG-924) facilitation), the originator will work with Commandant (CG-924) to schedule the EOC-level Concurrent Clearance review.
- **Step 4:** Submit the document package to Commandant (CG-924). Build a Concurrent Clearance package per **Table 20 Concurrent Clearance Review**

Package Contents and Figure 22 EOC Concurrent Clearance Package. If there are no outstanding critical or substantive disagreements remaining for the comments that were submitted, then include in the concurrent clearance review package a request for a waiver from EOC Concurrent Clearance process. The waiver request should be submitted to Commandant (CG-924), EOC Executive Secretary.

- **Steps 5-6:** Commandant (CG-924) reviews the package for proper adjudication within one calendar week. If comments are properly adjudicated proceed to Step 8.

NOTE: Commandant (CG-926) (TEMP), and Commandant (CG-771) (MNS/CONOPS/P-ORD/ORD) are responsible for verifying proper Concurrent Clearance comment adjudication in their functional areas.

- **Step 7:** If comments have not been properly adjudicated, return to Step 3.
- **Step 8:** Commandant (CG-924) approves EOC-level Concurrent Clearance Waiver.
- **Step 9:** Commandant (CG-924) returns package to the document's originating office with approved waiver request, and informs EOC Chair/EOC of adjudication.
- **Step 10:** Document originator routes the document for signature approval or endorsement.

NOTE: When the document requires CG ARB level endorsements and/or approval (DCO, DCMS, VCG), those should be obtained within three calendar weeks.

- **Step 11:** Document is approved within the Coast Guard. For documents that require DHS approval, return the Coast Guard approved document to Commandant (CG-924) for routing to DHS.

EOC-level Concurrent Clearance Review

- **Steps 6-7:** If there are irresolvable critical or significant comment(s) on the document, then the document must go through an EOC-level Concurrent Clearance Review.
 - **Steps A and B:** Commandant (CG-924) will initiate the EOC-level Concurrent Clearance Review process by distributing the concurrent clearance review package to the EOC members. Comments from the EOC-level Concurrent Clearance Review are provided to the document originator. The document originator is responsible for tracking the status of the package and receipt of comments
 - **Step C:** The document originator receives and adjudicates comments.
 - **Step D and E:** Submit concurrent clearance review package (**Figure 22 EOC Concurrent Clearance Package**) to Commandant (CG-924) for validation that proper adjudication of the comments has occurred
 - If properly adjudicated, proceed to Step 9
 - If not properly adjudicated, return to Step C

The EOC Executive Secretary (CG-924) will establish the EOC-level concurrent clearance review due date based on the document's time sensitivity and other documents out for EOC-level concurrent clearance.

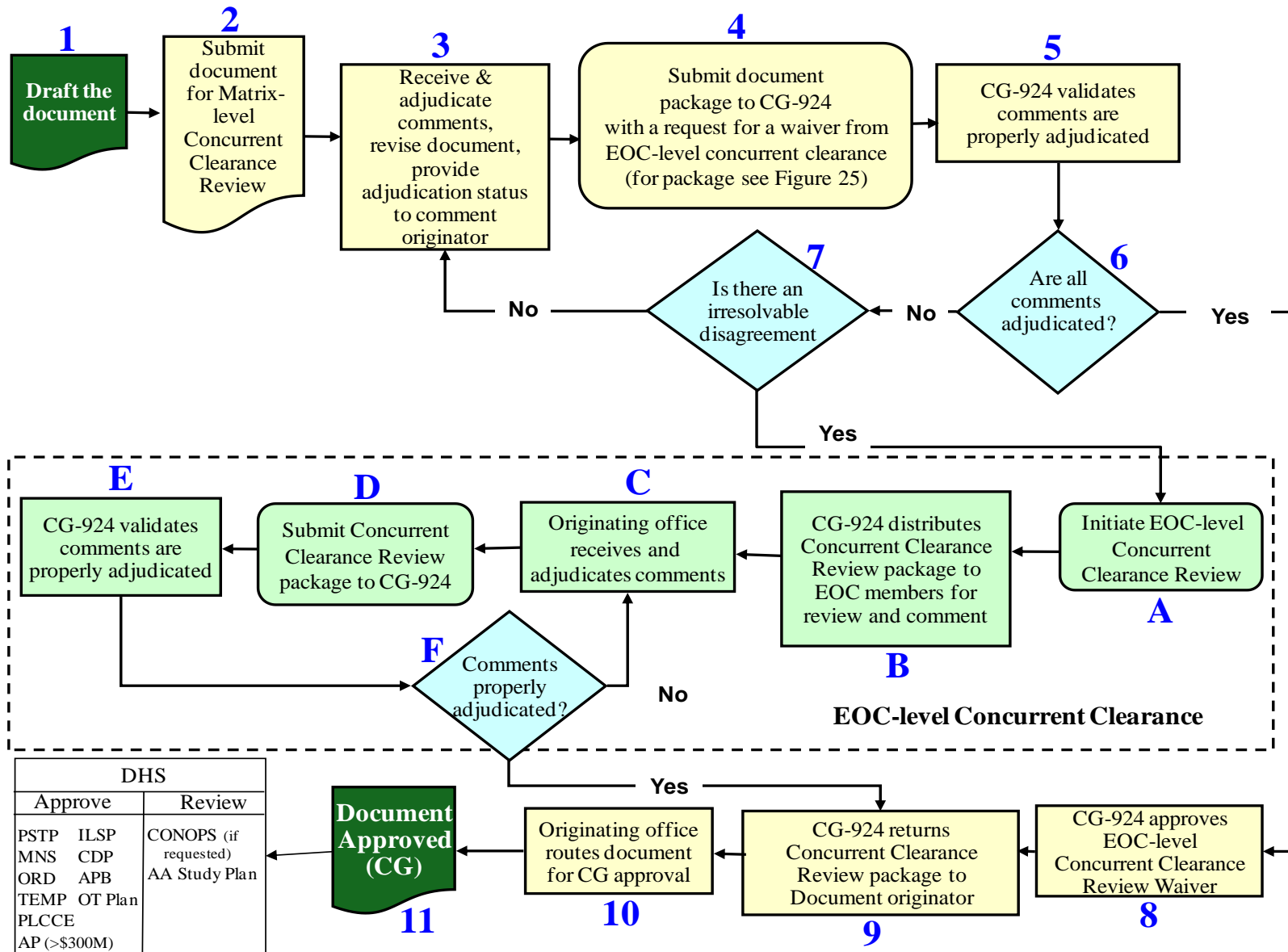


Figure 19 Concurrent Clearance Review Process

U.S. DEPARTMENT OF HOMELAND SECURITY U.S. COAST GUARD CG-4590 (Rev 06-04)		CONCURRENT CLEARANCE		TO (Symbol and Station)	
IDENTITY OF MATERIAL				RETURN TO (Symbol and Station)	
EXPLANATION/REMARKS/DIGEST					
CLEARANCE COPIES ROUTED TO				DEADLINE DATE FOR RETURN TO ORIGINATOR	
ORIGINATING OFFICE/DIVISION CLEARANCE (Name, Signature)			DATE		
CLEARING OFFICER(S) TITLE, ACTION AND COMMENTS, IF ANY (May be continued on another sheet)				NON CON- CUR	MEMO ATTACHED
				CON- CUR	
RETURN TO ORIGINATOR'S CONTACT	NAME	ROOM	PHONE		
				Reset	

Figure 20 Concurrent Clearance, Form CG-4590

Instructions for filling out the Concurrent Clearance, Form CG-4590, are provided in **Table 19 Matrix-Level Concurrent Clearance, Form CG-4590, Instructions**.

Table 19 Matrix-Level Concurrent Clearance, Form CG-4590, Instructions

Concurrent Clearance. Form CG-4590 Item	Information Required
TO	“DISTRIBUTION”
IDENTITY OF MATERIAL	Name of document being cleared
RETURN TO	Routing symbol of APEO, or Sponsor as appropriate
EXPLANATION/REMARKS/ DIGEST	Purpose of concurrent clearance
CLEARANCE COPIES ROUTED TO	Matrix-level team members plus routing symbols identified in Figure 22. Note: If too long for space use “CLEARING OFFICER(S)...” block and state “See Distribution List below” and put “DISTRIBUTION:” at top of list in that block
ORIGINATING OFFICE/DIVISION CLEARANCE	APEO or Sponsor typed name, and signature
DATE	Date signed
DEADLINE DATE FOR RETURN TO ORIGINATOR	Date for comments to be returned to originator’s contact, usually three weeks
CLEARING OFFICER(S) TITLE, ACTION AND COMMENTS, IF ANY	Leave blank unless used for Distribution List.
RETURN TO ORIGINATOR’S CONTACT – NAME	Name and routing symbol of person to return comments to (e.g., PMO contact person or Sponsor’s Rep)
ROOM	Room number of Originator’s Contact
PHONE	Phone number of Originator’s Contact

EOC-Level Concurrent Clearance Review

The requirement for all documents to go through the EOC-level concurrent clearance review is the same, except if the Matrix-level review resolves all critical and substantive comments, the PM or document originator is expected to request a waiver from the EOC-level concurrent clearance review from the EOC Executive Secretary, Commandant (CG-924). The PM (or Sponsor’s Representative as appropriate) will provide an adjudicated

document package in a blue-pocketed file folder (see **Table 20 Concurrent Clearance Review Package Contents** and **Figure 22 EOC Concurrent Clearance Package**) to the EOC Executive Secretary to initiate a EOC-level concurrent clearance review (or waiver request).

If all of the critical and substantive comments are adjudicated resulting in no outstanding issues, then the PM will include a memo in the document package requesting a waiver of the EOC-level concurrent clearance review requirement. Commandant (CG-924) will validate that all comments have been appropriately adjudicated. Commandant (CG-924) will normally process the waiver request within one calendar week.

Table 20 Concurrent Clearance Review Package Contents

Left Side of Folder (Back to Front)	Right Side of Folder (Back to Front)
Copy of draft document circulated for Matrix level concurrent clearance review	Revised draft document
Copy of each response received from reviewing activities	Memo from APEO, or Sponsor to EOC Executive Secretary, Commandant (CG-924) requesting and justifying waiver of EOC-level concurrent clearance requirements
Synopsis of all comments received and the adjudicated response to each	Copy of each statement by reviewing activities that all their critical comments have been appropriately adjudicated (does not need to be formal memo)
Original Concurrent Clearance, Form CG-4590 sent to the matrix with bottom portion filled out to show which activities did and did not respond, which activities provided comments, and which activity's concur or non-concur with the document	

Figure 21 EOC Concurrent Clearance Package provides a pictorial of the contents of the Concurrent Clearance Review Package.

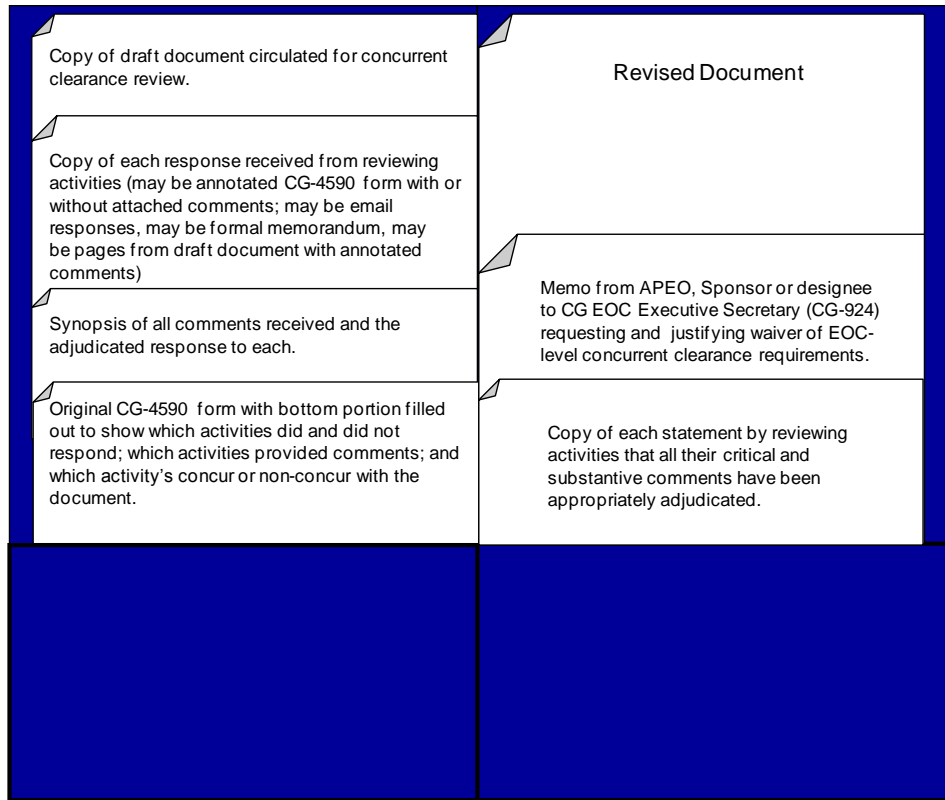


Figure 21 EOC Concurrent Clearance Package

C. Routing Documents for Signature

For documents that require approval/signature, the contents of the package to be routed for signature is the same as shown in **Table 20 Concurrent Clearance Review Package Contents**, and **Figure 22 EOC Concurrent Clearance Package** with the request for waiver of an EOC-level concurrent clearance review in the right side of the folder on top of the draft document. The package will be reviewed by Commandant (CG-924); if EOC-level concurrent clearance review is waived, the package is returned to the originator for routing to obtain any/all endorsements and approval signatures. The originating office will retain copies of the Concurrent Clearance package with all adjudicative comments on file for future reference.

For those documents not reviewed through a formal concurrent clearance, (AASP, AP, PLCCE, APB), the originator is expected to ensure that signatory offices endorsing the document are provided opportunity to review and provide feedback prior to routing for final signature clearance. This clearance process is intended to ensure that endorsing office leadership's critical or substantial issues are identified and addressed at the earliest opportunity prior to signature clearance.

Concurrent and Signature Endorsement and/or Approval

The originator of each document is responsible for routing and tracking of the document as it is routed for signature approval or endorsement. Where appropriate, the document can be routed concurrently (simultaneously) to several offices to streamline the approval process. In the templates shown in the MSAM Handbook, those directorates/offices that are recommended for concurrent document approval routing are highlighted in light grey on the title/signature pages. Those not highlighted should be routed in sequence for signature. Remove highlighting prior to routing final copy for signature. For documents that require DHS approval, return the Coast Guard approved document to Commandant (CG-924) for routing to DHS (include a summary of adjudicated DHS comments from the concurrent clearance review).

NOTE: If the sequential clearance endorsement and/or approval process has not cleared the Assistant Commandant level within four calendar weeks, Commandant (CG-924) shall schedule a status brief to the EOC. When the document requires CG ARB level endorsements and/or approval (DCO, DCMS, VCG), those should be obtained within 3 calendar weeks.

Streamlining (Best Practice)

The following provides the originator with an example of how a document can be routed for both sequential and concurrent “shotgun” signature:

1. The originator prepares the routing package for sequential signature as described above.
2. The originator will brief the EOC that the document will be routed for EOC concurrent signature and will provide updated status two weeks later or during the next EOC brief.
3. When the originator has received the copy with the first set of sequential signatures (those signatures in sequential order up to the next set of signatures being concurrent authorities) the originator shall e-mail all concurrent signature authorities as highlighted in grey on the associated template for that document’s signature page. The routing package is the same as 1 above, except sent electronically (include the title/signature page showing signatures to this point). The e-mail shall include the text, “If this document is signed, request a scanned copy be returned to the originator.”
4. The originator will collect the concurrent signatures and make a notation “ENDORSEMENT ATTACHED” and add the date signed on the original title/signature page that displays the prior sequential signatures.
5. Once all of the sequential and concurrent signatures have been received, the originator forwards the acquisition document package to the final set of authorities for sequential signatures. The package is the same as per 1 above. However, the only difference is the originator should place the title/signature pages (containing the concurrent signatures) behind the original title/signature page.

Documents that require DHS approval are to be submitted to DHS for approval (through Commandant (CG-924)) no later than 45 days⁹ prior to the DHS ADE/ARB. For documents that require DHS approval, e-mail the Commandant (CG-924) Program Liaison the Adobe Portable Document Format (PDF) file of the document (Microsoft Word file converted to PDF), with scanned in signature page(s) attached. Commandant (CG-924) will prepare a transmittal memo and send/track the document for DHS approval. Upon receipt of approved documents, the originator (or Commandant (CG-924)) shall upload a copy of the final signed document into the Document Management System (DMS) and provide an e-copy to Commandant (CG-924).

D. Documentation Updates and Revisions

As the program progresses through the various acquisition phases, program management documents may require revisions to update the management strategy and acquisition planning for the remaining phases. At a minimum, they shall be reviewed and updated if required for each subsequent DHS ADE. This assessment, review, and update of documents are especially critical in preparation for an ADE-2C (LRIP) review as this typically occurs in the middle of executing the Obtain Phase. For documents that require revalidation, the PM or Sponsor's Representative, as appropriate, should document the revalidation in a memorandum through Commandant (CG-924) to file 45 days prior to the ADE, and show the revalidation in the ADE brief. In addition, each document shall be updated if significant changes in program execution plans, schedule, performance, scope, funding or resource requirements occur. The approval process for major updates shall be the same as the original document review and approval process. For minor updates of documents, the PM provides a memorandum through Commandant (CG-924) to the APEO describing the scope of the update along with replacing the title page with the new version number but not including the signature page of the previous version.

Version Control: Documents are to comply with the following version control:

- If the document has not yet been approved, it should use a numbering scheme beginning with “zero”, such as Version 0.1;
- Version numbers for documents submitted for approval will start with a whole number, such as Version 1.0;
- Minor updates (e.g., wording changes, updates to reference versions, administrative changes, hyperlink updates) should increment in tenths, as in Version 1.1;
- Major changes in direction or composition should increment in whole numbers higher than the previous approved and published version, as in Version 2.0;
- For document versions that contain cumulative changes, or questions on major and minor changes, contact Commandant (CG-924) for further guidance;

⁹ Original PLCCE for ADE-2 is required 90 days prior to ADE.

- The document's version number should be placed in the lower left-hand side and the date should be placed in the lower right-hand side of the document footer;
- A Version Summary (with Table of Changes) will be included following the document's Executive Summary. The Table of Changes should reflect the version number and date discussed and should be as shown in **Table 21 Version Formats** below.

Table 21 Version Formats

Version	Change	Effective Date
Version 1.0	Initial Version	15 Oct 09

Schedule Date Format within Documents and Plans: When referencing schedules in any of these documents, the date formats in **Table 22 Date Formats** should be used.

Table 22 Date Formats

Key Event To Occur:	Date Format Convention:
Past History (Actual Date)	Use Month and Year, e.g., 10/09
Future Date	Use Quarter and Fiscal Year, e.g., 1QFY11

REFERENCES

- (a) Department of Homeland Security Acquisition Management Directive DHS 102-01
- (b) Department of Homeland Security Acquisition Management Instruction/Guidebook DHS 102-01-001
- (c) Non-Contracting Acquisition Workforce Certifications, Commandant (CG-9) Standard Operating Procedure (SOP)-9-5 (series)
- (d) DHS Acquisition Workforce Policy, Department of Homeland Security Acquisition Management Directive MD #064-04 (series)
- (e) Project Risk Management and Mishap Risk Management, Commandant (CG-9) Standard Operating Procedure (SOP)-9-7
- (f) Financial Resource Management Manual (FRMM), COMDTINST 4130.6, Coast Guard Configuration Management(g) COMDTINST M7100.3 (series),
- (g) Obligation Planning Review Process and Timeline, Commandant (CG-9) SOP-9-16,
- (h) Coast Guard Authorization Act of 2010
- (i) Intelligence Support to Acquisitions, Commandant (CG-2) Memorandum, Decision Memo –SSIC# 3810 dated 28 February 2011
- (j) Chief Financial Officer (CFO) Technical Authority, COMDTINST 5402.3 (series),
- (k) Deputy Commandant for Mission Support (DCMS) Engineering Technical Authority COMDT INST 5402.4
- (m) Preparation, Submission, and Execution of the Budget, Office of Management and Budget Circular A-11
- (n) Department of Homeland Security Enterprise Architecture Board Governance Process Guide (series)
- (o) Requirements Generation and Management Process, Commandant (CG-7) Publication 7-7
- (p) DHS Homeland Security Acquisition Manual (HSAM)
- (q) Coast Guard Independent Logistics Assessment (ILA), COMDTINST 4081.19 (series)
- (r) National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series)
- (s) Coast Guard Logistics Readiness Review (LRR), COMDTINST 4081.3 (series)
- (t) Capital Programming Guide, Office of Management and Budget
- (u) Systems Engineering Life Cycle, Department of Homeland Security Acquisition Management Instruction/Guidebook DHS 102-01-001 Appendix B
- (v) Major Systems Acquisition Manual (MSAM) Handbook
- (w) Coast Guard Modeling and Simulation (M&S) Management, COMDTINST 5200.38 (series)
- (x) Verification, Validation and Accreditation (VV&A) of Models and Simulations (M&S), COMDTINST 5200.40 (series)

- (y) DOD's Handbook for Preparation of Statement of Work (SOW), MIL-HDBK-245
- (z) Federal Acquisition Regulation (FAR), (multiple parts)
- (aa) Competition in Contracting Act (CICA) of 1984
- (bb) Coast Guard Human Research Protection Program, COMDTINST 6500.1
- (cc) Department of Homeland Security Cost Estimating Handbook
- (dd) General Accountability Office GAO Cost Estimating and Assessment Guide, March 2009, GAO-09-3SP
- (ee) For Independent Red Team Review of Request for Proposals, Commandant (CG-9) SOP-924-1
- (ff) Risk Management Guide for DoD Acquisition
- (gg) Test and Evaluation, Department of Homeland Security Management Directive 026-06
- (hh) National Consensus Standard for Configuration Management, EIA-649
- (ii) Implementation Guide for Configuration Management, GEIA-HB-649, Annex 3
- (jj) Planning, Programming, Budgeting and Execution, Department of Homeland Security Management Directive (MD) # 1330
- (kk) DHS/OMB Major IT Business Case Handbook, June 2014 v 9.0
- (mm) Federal Acquisition Streamlining Act of 1994 (FASA)
- (oo) Clinger-Cohen Act of 1996 (CCA)
- (pp) Government Performance and Results Act of 1993 (GPRA)
- (qq) Consolidated Appropriations Act, 2012
- (rr) Coast Guard and Department of Homeland Security Chief Information Officer (CIO) Review and Approval of Command, Control, Communications, Computers, and Information Technology (C4&IT) Acquisitions, COMDTINST 5230.77 (series)
- (ss) Information and Life Cycle Management Manual, COMDTINST M5212.12 (series)
- (tt) Section 508 Program Management Office & Electronic and Information Technology Accessibility, DHS Management Directive MD Number 4010.2 (series)
- (uu) Coast Guard Implementation of the Rehabilitation Act, Section 508, COMDTINST 5230.60 (series)

ACRONYMS

AA	Alternatives Analysis
AC&I	Acquisition Construction and Improvement
ADA	Acquisition Decision Authority
ADE	Acquisition Decision Event
ADE-0	Acquisition Decision Event 0: Program Identification
ADE-1	Acquisition Decision Event 1: Validation of Need
ADE-2A	Acquisition Decision Event 2A: Approve the Acquisition
ADE-2B	Acquisition Decision Event 2B: Approve Acquisition Type
ADE-2C	Acquisition Decision Event 2C: Approve Low-rate Initial Production
ADE-3	Acquisition Decision Event 3: Approve Production & Deployment
ADE-4	Acquisition Decision Event 4 (USCG Only): Approve Transition to Support
ADM	Acquisition Decision Memorandum
ALC	Aviation Logistics Center
AP	Acquisition Plan
APB	Acquisition Program Baseline
APEO	Assistant Program Executive Officer
APO	Asset Project Office
ARB	Acquisition Review Board
ARP	Acquisition Review Process
ART	Acquisition Review Team
A/S	Analyze Select
AT&L	Acquisition Technology and Logistics
AWCB	Acquisition Workforce Certification Board
C4IT	Command, Control, Communications, Computers and Information Technology
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
CAE	Component Acquisition Executive
CAO	Chief Acquisition Officer
CASR	Comprehensive Acquisition Status Report

CBA	Cost-Benefit Analysis
CBRNE	Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives
CCA	Clinger Cohen Act
CCB	Configuration Control Board
CDR	Critical Design Review
CEBD	Cost Estimating Baseline Document
CDP	Capability Development Plan
CFO	Chief Financial Officer
CG ARB	Coast Guard Acquisition Review Board
CICA	Competition in Contracting Act
CIM	Commandant Instruction Manual
CIO	Chief Information Officer
CIP	Capital Investment Plan
CM	Configuration Management
CMP	Configuration Management Plan
COI	Critical Operational Issue
CONOPS	Concept of Operations
CPIC	Capital Planning & Investment Control
CPO	Chief Procurement Officer
DART	DHS Accessibility Requirements Tool
DAU	Defense Acquisition University
DCMS	Deputy Commandant for Mission Support
DCO	Deputy Commandant for Operations
DHS	Department of Homeland Security
DMSMS	Diminishing Manufacturing Sources and Materiel Shortages
DOD (AT&L)	Department of Defense, Acquisition, Technology and Logistics
DOD	Department of Defense
DOORS	Dynamic Object Oriented Requirements System
DOT&E	Director Operational Test and Evaluation

DOTMLPF+R/G/S	Doctrine, Organization, Training, Materiel, Leadership, Personnel, and Facilities plus Regulations/Grants/Standards
DP	Deployment Plan
DT	Developmental Test
DTP	Developmental Test Plan
DT&E	Developmental Test and Evaluation
DUSM	Deputy Undersecretary for Management (DHS)
EA	Enterprise Architecture
EAB	Enterprise Architecture Board
ECP	Engineering Change Proposal
EIT	Electronic and Information Technology
EOA	Early Operational Assessment
EOC	Executive Oversight Council
FAR	Federal Acquisition Regulations
FASA	Federal Acquisition Streamlining Act
FCA	Functional Configuration Audit
FOC	Full Operational Capability
FOT&E	Follow-On Test and Evaluation
FRMM	Financial Resource Management Manual
FY	Fiscal Year
FYHSP	Future Years Homeland Security Program
GAO	Government Accountability Office
GFE	Government Furnished Equipment
GFI	Government Furnished Information
HCA	Head of Contracting Activity
HFE	Human Factors Engineering
HFEP	Human Factors Engineering Plan
HSAM	Homeland Security Acquisition Manual
HSI	Human Systems Integration
HSIP	Human Systems Integration Plan

ICE	Independent Cost Estimate
ILA	Independent Logistics Assessment
ILS	Integrated Logistics Support
ILSMT	Integrated Logistics Support Management Team
ILSP	Integrated Logistics Support Plan
IMS	Integrated Master Schedule
IMS	Investment Management System (a DHS tool)
IOC	Initial Operational Capability
IOT&E	Initial Operational Test and Evaluation
IPG	Integrated Planning Guidance
IPT	Integrated Product/Program Team
IRR	Integration Readiness Review
IT	Information Technology
ITAR	Information Technology Acquisition Review
IV&V	Independent Verification and Validation
KPP	Key Performance Parameter
LCC	Life Cycle Cost
LCCE	Life Cycle Cost Estimate
LRIP	Low-rate Initial Production
LRR	Logistics Readiness Review
M&S	Modeling and Simulation
MA	Mission Analysis
MAR	Mission Analysis Report
MASI	Major Acquisition Systems Infrastructure
MD	Management Directive (DHS)
MER	Manpower Estimate Report
MNS	Mission Need Statement
MOE	Measures of Effectiveness
MOP	Measures of Performance

MOU	Memorandum of Understanding
MRA	Manpower Requirements Analysis
MSAM	Major Systems Acquisition Manual
NARA	National Archives and Records Administration
NEPA	National Environmental Policy Act
nPRS	Next Generation Periodic Reporting System
O&S	Operations and Support
OA	Operational Analysis
OCIO	Office of the Chief Information Officer
OCPO	Office of the Chief Procurement Officer
OE	Operating Expense
OMB	Office of Management and Budget
ORD	Operational Requirements Document
ORR	Operational Readiness Review
OT	Operational Test
OTA	Operational Test Agency/Agent
OT&E	Operational Test and Evaluation
OTRR	Operational Test Readiness Review
PARM	Program Accountability and Risk Management (DHS Office)
P/D	Produce/Deploy
PBG	Program Budget Guidance
PCA	Physical Configuration Audit
PDR	Preliminary Design Review
PEO	Program Executive Officer
PHS&T	Packaging, Handling, Storage, and Transportation
PII	Personally Identifiable Information
PIR	Post Implementation Reviews
PLCCE	Program Life Cycle Cost Estimate
PM	Program Manager

PMDS	Program Management Data Sheet
PMO	Program Management Office
PMP	Program Management Plan
P-MNS	Preliminary Mission Needs Statement
P-ORD	Preliminary Operational Requirements Document
PPBE	Planning, Programming, Budgeting and Execution
PPR	Program Planning Review
PRO	Project Resident Office
PRR	Production Readiness Review
PS&T	Performance Support and Training
PSTP	Program SELC Tailoring Plan
PTP	Program Transition Plan
QPAR	Quarterly Program Accountability Report
R&D	Research and Development
RAD	Resource Allocation Decision
RAP	Resource Allocation Plan
RC	Resource Council
RDT&E	Research, Development, Test & Evaluation
RFP	Request For Proposal
RMP	Risk Management Plan
ROI	Return on Investment
ROM	Rough Order of Magnitude
RP	Resource Proposal
RTM	Requirements Traceability Matrix
SDLC	System Development Life Cycle
SDR	System Definition Review
SE	Systems Engineering
SELC	Systems Engineering Life Cycle
SER	Solutions Engineering Review

SFLC	Surface Forces Logistics Center
SIT	Systems Integration Team
SME	Subject Matter Expert
SNA	Strategic Needs Assessment
SOP	Standard Operating Procedure
SOW	Statement of Work
SOW/PS	Statement of Work/Performance Specification
SPR	Study Plan Review
SRR	System Requirements Review
SSMP	System Safety Management Plan
SS/OH	System Safety & Occupational Health
TA	Technical Authority
TAC	Total Acquisition Cost
T&E	Test and Evaluation
TEMP	Test and Evaluation Master Plan
TMOT	Test Management Oversight Team
USCG	United States Coast Guard
USM	Under Secretary for Management (DHS)
VCG	Vice Commandant
VV&A	Verification, Validation and Accreditation
WBS	Work Breakdown Structure

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LIST OF CHANGES

Change #	MSAM (pg #)	Para/Section #	Section Name	MSAM Change	Reason for Change
Chapter 1					
1	Multiple (first 1-1)	Multiple	Multiple (first Manual Org)	Changed all references of "project" to "program"	CG acquisition personnel name change to align with DHS terminology
2	1-1 (3rd para)	A	Manual Organization	Added sentence onto chapter 1 summary description to identify changes in terms for acquisition positions. Added sentence onto chapter 2 summary description to identify changes to program affordability issue and emphasis on performance criteria.	Clarity - introduction of chapters/major changes
3	1-1 (7th para)	A	Manual Organization	Changed "OMB Exhibit 300" to "OMB Business Case" in accordance with OMB FY 16 guidance	DHS/OMB FY 16 Guidance
4	1-2 (1st para)	A	Manual Organization	Paragraph on document review approval process reworded for clarity	Clarity and emphasis on document review policy and practices
5	1-2 (3rd para)	B	Coast Guard Acquisition Directorate	Mission and Vision flipped around to correctly follow CG-9 strategic plan outline. "Project managers" changed to "Program managers" Footnote added to explain terminology change.	Relevancy to current policy, alignment with CG-9 Strategic Plan
6	1-3 (bullets)	B.1	Major Systems Acquisition Manual Objectives	Rearranged Objectives in order of importance. Deleted objective to "Reestablish CG Technical; Authority to serve as system integrator..."	Clarity and priority of current goals and objectives

7	1-3 (1st and 2nd paras)	C	Coast Guard Acquisition Team	Para added to emphasize program execution and program stakeholders/support aspects of CG acquisition team (e.g. TA, sponsor etc.).	Clarity of acquisition organization relationships. Added and introduced "Product Support" to "Life Cycle Logistics."
8	1-4 (bullets)	C	Coast Guard Acquisition Team	Reworded bullets to emphasize, expand and/or clarify acquisition team roles. Re-ordered some bullets for priority and emphasis.	Clarity and priority of responsibilities
9	1-6 (figure 1)	D	Coast Guard Acquisition Leadership Team	Org chart changes to reflect new command arrangements and terminology (PM, APEO). Revised EOC membership.	CG organization new terminology to align with DHS. EOC Charter signed 12DEC14.
10	1-6 (1st para)	D	Coast Guard Acquisition Leadership Team	Added emphasis statement on EOC and CG ARB annual review reqmt for programs	Clarity and priority of EOC and ARB responsibilities
11	1-6 (2nd para)	E	Acquisition Workforce Training and Certification	Minor rewording to emphasize/clarify acquisition workforce certification "commensurate with the complexities, scope and responsibilities of the acquisition being managed."	Clarify current AWF certification policy
12	1-7 (table 1)	E	Acquisition Workforce Training and Certification	DHS Level 2 and 3 programs have requirement for Level II Mid level PM certification	Clarify current AWF certification policy IAW FAC-P/PM policy.
13	1-7 (1st para)	E	Acquisition Workforce Training and Certification	Changed career level names (Level 1 from basic to entry-level, Level 2 from intermediate to mid-level, Level III from advanced to senior-level)	Alignment with DHS AW terminology. Clarity.

14	1-7 (3rd para)	E	Acquisition Workforce Training and Certification	Added text to description of Coast Guard AWCB to include that it "acts as certifying authority".	Improved explanation of CG AWCB.
15	1-8 (2nd para)	F	PM Authority and Responsibility	Removed reference of Commandant (CG-9) Policy Statement #1 when discussing PM roles and responsibilities	Key aspects of PS#1 are incorporated in Config Mgmt Plan section (Ch 5)
16	1-8 (6th para)	F	PM Authority and Responsibility	Added para to define and identify Interdependant programs and PMs integration responsibilities. Inserted footnote on APEO. Changed "Program Manager" to "Assistant PEO (APEO)".	Emphasizes PM responsibility for interoperability and integration with other Interdependant programs. Defines new acquisition position term (APEO).
17	1-9 thru 1-10	F	PM Authority and Responsibility	Reworded and reordered bullets to clarify and expand roles and responsibilities of PMs	Clarity and priority of PM responsibilities
18	1-8 thru 1-22	F - G	Multiple (1st PM Authority and Responsibility)	Changed order of stakholder roles and responsibilities for clarity. Added descripton of the HCA.	More complete, easier to follow explanations of R&Rs.
19	1-10 (1st para)	G	APEO Authority and Responsibility	Changed name from PgM to APEO. Changed "program" to "domain". Added paragraph on APEO's oversight responsibility for system and program integration	CG organization name changes support alignment with DHS PM terminology.
20	1-11 thru 1-12	G	APEO Authority and Responsibility	Reworded and reordered bullets to clarify and expand roles and responsibilities of APEOs.	Clarity and priority of APEO responsibilities.
21	1-12 (last para)	G	Asset Project Office	Added descriptive paragraph and bullets on major functions of APO office	New description of CG acquisition organization
22	1-13 (2nd para)	G	Major Acquisition Systems Infrastructure (MASI)	Added descriptive paragraph on major functions of MASI office	New description of CG acquisition organization
23	1-14 (1st para)	H	Program Executive Officer	Added sentence onto first para on PEO program integration oversight responsibilities.	Emphasizes PEO oversight responsibility for interoperability and integration on associated programs

24	1-14 (bullets)	H	Program Executive Officer	Minor rewording to bullet statements to change "Project" to "Program" and "PgM" to "APEO".	CG organization new terminology, supports alignment with DHS PM terminology
25	1-14	H	Program Executive Officer	Moved discussion of APOs to APEO Section	Reflects current oversight roles.
26	1-15 thru 1-16 (bullets)	I	Chief Acquisition Officer (CAO)	Made minor changes to bullet descriptions	Restatement and clarification of CAO responsibilities
27	1-16 (1st para)	J	Executive Oversight Council (EOC)	Reworded EOC role to "support successful planning, preparation, and execution of major acquisition programs. " Deleted "annual portfolio review" and replaced with "ADE-0 review". Deleted statement on "CG initiative on assuming system integrator role". Reworded 4th, 5th, 10th and 12th bullets to clarify responsibilities of EOC.	Clarification of EOC role. Addresses change in ADE conduct to more clearly state that ADE-0 is a portfolio review"
28	1-18	M	Resource Councils (RCs)	Added descriptive paragraph and bullets on major functions of Resource Councils (RCs).	Description of CG organization roles and responsibilities IAW updated RC charters.
29	1-19 thru 1-20 (bullets)	N	Sponsor and Sponsor's Representative	Reworded and reordered bullets to clarify and expand roles and responsibilities of Sponsors	Accuracy and clarity
30	1-20 (1st bullet under Sponsor's Rep)	N	Sponsor and Sponsor's Representative	Defined "Mission Manager". Added footnote to help define this role. Added last bullet describing Sponsor Reps role in acquisition document approval process.	Updated description of CG organization roles and responsibilities IAW CG Pub 7-7 definitions.
31	1-20 thru 1-21	O	Technical Authorities	Modified to clarify TA descriptive details for CG-4. Added role of CIO for CG-6, corrected CG-6 TA COMDT INST. Added role of CFO to CG-8	Accuracy and completeness. Updated TA responsibilities IAW their TA COMDT INSTs.

32	1-22 (bullets)	Q	Contracting Officer Authority and Responsibility	Added responsibility of participating in and supporting program IPTs.	IPT practice
Chapter 2					
33	2-1 (4th para)	A.1	Major Systems Acquisition Management	Deleted ".....derived from business planning activities...."	Accuracy of requirements management (MNS) description
34	2-2 (2nd para)	A.1	Major Systems Acquisition Management	Added "in conjunction with the Office of Resource Management, Commandant (CG-928) to the end of the paragraph discussing resource planning.	
35	2-2 (3rd para)	A.2	Major Systems Acquisition	Added reference to Total Acquisition Cost (TAC)	Public Law requirements. Aligns with Title 14 (CGAA 2010) which includes TAC in defining Level 1 and Level 2 Programs. (PL 111-281, §581 SUBCHAPTER III)
36	2-2 (3rd para)	A.2	Major Systems Acquisition	Removed some of the description of LCC	
37	2-2 (table 2)	A.2	Major Systems Acquisition	Added TAC values. Changed Level 1 to "exceed \$1B". Changed Level 2 "up to \$1B". Changed level 3 from "CAE" approval to "see Table 2"	Public Law requirements. Aligns with Title 14 (CGAA) which includes TAC in defining Level 1 and Level 2 Programs.
38	2-2	A.2	Major Systems Acquisition	Added additional guidance on criteria for designation as major program acquisitions including "complexity, cost, risk, and value major acquisitions may include: developing new systems; obtaining additional quantities of existing systems/assets or significant changes to existing systems/assets, such as capability upgrades, improvements, service life extensions, remanufacturing, restorations, re-activations, major modifications, key subsystem replacements, or major repairs. "	Further clarity on decision processes when classifying "non typical" acquisition programs
39	2-2 (table 2)	A.2	Major Systems Acquisition	Changed footnote to indicate Level 1 and 2 PLCCEs are to be approved by DHS CFO	DHS USM policy memo Authority to approve LCCEs, 9 June 2014

40	2-3 (2nd para)	A.2	Major Systems Acquisition	Added "..., ADEs will be brought to the CG ARB and presented to the appropriate ADA..."	Clarified ADA delegation as indicated in Table 2
41	2-3 (table 3)	A.2	Major Systems Acquisition	Table title changed from "CG ARB Chair" to "ADE Review Chair (as ADA)". Additionally old footnote # 1 is deleted	Table 2 modified to reflect current practices
42	2-3 (table 3)	A.2	Major Systems Acquisition	For Level 2 programs at ADEs 2 and 3 ADA is CAE vice DCMS.	Table 2 modified to reflect current practices
43	2-3 (3rd para)	A.3	Major Systems Acquisition Process Structure	Inserted reference to ADM in second para.	Clarified ADE decision documentation.
44	2-4 (1st para)	A.4	Program Identification Phase	Added words "are used" to indicate that MA is an input and not the only driver to identify capability gaps. Reworded 2nd to last sentence to indicate potential solutions addressed at ADE-0.	Accuracy of Program ID phase (MA) role and description
45	2-4 (2nd para)	A.4	Need Phase	Added "material solution" as a qualifier to functional capabilities	Accuracy and clarity
46	2-4 (2nd para)	A.4	Need Phase	Deleted reference to Exhibit 300 and added requirements for a ROM and funding availability certification memorandum	Updated Need phase documentation reqmts to address program affordability. Deleted OMB business case in this phase.
47	2-4 (3rd para)	A.4	Analyze/Select Phase	Added "material system solution alternatives" to first sentence	Accuracy and clarity
48	2-4 (3rd para)	A.4	Analyze/Select Phase	Added "product" to "/logistics support planning"	Updated Product support terminology
49	2-4 (3rd para)	A.4	Analyze/Select Phase	Added "updated certification of funding"	Updated A/S phase documentation reqmts.
50	2-4 (3rd para)	A.4	Analyze/Select Phase	clarifying verbiage to indicate that ADE-2A/B reviews are not conducted until requirements and associated costs are known.	Updated A/S phase and ADE-2A/B documentation reqmts.
51	2-5 (1st para)	A.4	Obtain Phase	Added "...and further updating the certification of funding....."	Updated Obtain phase documentation reqmts.
52	2-5 (1st para)	A.4	Obtain Phase	Deleted reference to "...Project Management Data Sheet..." and updated "...product/logistics support"	Updated reporting systems, logistics and product support terminology

53	2-5 (1st para)	A.4	Obtain Phase	Deleted "If appropriate a LRIP decision". Added statements to address resolution of issues from GAO 14-450 recommendations on APB performance shortfalls discovered in OT&E.	Clarified requirement for ADE-2C. D 102-01 policy re-emphasis on proposing and assessing exit criteria to address program maturity and readiness to move to next phase. Addresses recommendations of GAO 14-450 report
54	2-5 (2nd para)	A.4	Produce/Deploy and Support Phase	Changed operating program to "Sponsor(s)/operational program manager"	Updated terminology for sponsor PMs
55	2-5 (4th para)	A.5	Acquisition Decision Events	Second sentence - Added ".....,affordability,...."	Emphasizes program affordability as a major factor in ADE decisions.
56	2-5 (5th and 6th paras)	A.5	Acquisition Decision Events	Added two new paragraphs to address phase Exit Criteria.	Alignment with DHS 102-01-001.
57	2-6 (1st para)	A.5	Acquisition Decision Events – ADE-0	Changes and clarification/requirements/references added to ADE-0: "An annual review"; "consider prospective new-starts within the context of the overall investment portfolio...not intended to focus on a specific individual or new start program."; "third quarter of FY"; "...notification to DHS of a potential new acquisition is accomplished with submission of the P-MNS."	Changes to ADE-0 to address assessment of new starts from a portfolio capability and affordability perspective. Reemphasis of timing requirement to align with programming cycle.

58	2-6 (2 nd para)	A.5	Acquisition Decision Events – ADE-1	Additional clarification/requirements/references added: “and charters a PM if one has not already been assigned. Exit criteria are proposed to the ADA (and approved in the ADM) to be satisfied at the end of the Analyze/Select Phase.”	Addresses exit criteria to be proposed and approved by ADA at ADE-1. D 102-01 policy
59	2-6 (3 rd para)	A.5	Acquisition Decision Events – ADE-2A/B	Entire paragraph revised to incorporate the approval of the initial or a single segment capability.	Aligns with CG practice of conducting combined ADE 2A and -2B events, and separate 2B events if applicable
60	2-6 (5 th para)	A.5	Acquisition Decision Events – ADE-2C	Additional clarification/requirements/references added to incorporate new changes at ADE-2A/B and “demonstration of the exit criteria established by the ADA at ADE-2A/B.”	DHS and CG practice of conducting ADE 2C LRIP. Discussion of exit criteria assessment.
61	2-7 (1 st para)	A.5	Acquisition Decision Events – ADE-3, ADE-4	Additional clarification/requirements/references added to complete developmental and operation testing and ADE-2C exit criteria. Added reference to support program managers in sustainment phase.	D 102-01 policy re-emphasis on assessing exit criteria to address program maturity, acquisition discipline, and readiness to move to P/D/S phase.
62	2-7 (3 rd and 4 th paras)	A.5	CFO Funding Certification Memorandum	Two new <input type="checkbox"/> esponsibi added to incorporate requirement and timing of the CFO Funding Certification for CG only in ADE-0 and ADE-1 and for submittal to DHS at ADE-2A/B/C and ADE-3.	Addresses requirement to utilize current CFO certification memo to <input type="checkbox"/> esponsibi internal discussion on affordability and formal submittal at ADE-2 and beyond. DHS CFO memo, 13 June 2014.
63	2-8 (3 rd para)	B.2.	Program Identification Phase Objectives	Added text to clarify that Mas can be ongoing. Also added text discussing relationship between CIP, MAR, ROM and ADE-0.	Expansion of D 102-01 policy on mission analysis and program identification processes and explanation of “evaluation of affordability”

					replacing the AAS.
64	2-9 (bullets)	B.3	Program Identification Phase Activities	Added activities for new role of APEO/PM	APEO, PM, TA roles in developing ROM cost estimates and generation of evaluation of affordability.
65	2-9 (bullets)	B.3	Program Identification Phase Activities	Added activities for Sponsor involvement with CG-82 to develop evaluation of affordability, CG-7's role in recommending priorities of capabilities.	Better definition of R&R to develop evaluation of affordability in lieu of legacy AAS.
66	2-9 (bullets)	B.3	Program Identification Phase Activities	Added activities for Commandant CG-82	Expansion of current role in generating funding memo in support of CG ADE-0, ADE-1
67	2-9 thru 2-10 (bullets)	B.3	Program Identification Phase Activities	Deleted table heading "SELC Activities" (MSAM version C) changed to "Mission Analysis Report (MAR) Activities." Also added reference to "non-materiel solutions"	Reflects activity during this phase.
68	2-11 (table 4)	B.5	Program Identification Phase Documentation Table	Deleted reference to "Prelim Affordability Assessment" and added "ROM Cost Estimate" and "Evaluation of Affordability" (Inclusive of organizational responsibilities)	Addresses change in requirements for assessing program affordability
69	2-11	B.6	ADE-0 Review and Expected Outcomes	Significant rewriting to expanded section 6 providing description of the requirements and responsibilities for preparing and conducting the ADE-0 Review.	Aligns CG ADE-0 practices with DHS D 102-01 policies
70	2-11	B.6	ADE-0 Review and Expected Outcomes	Revisions to the roles of DCMS/DCO ADE-0 Review and DCMS ADE-0 Decision	Reflects modified responsibilities to address ADE-0 review requirements

71	2-13 (1 st para)	C.1	Need Phase	Removed reference to Exhibit 300 and added evaluation of affordability as a requirement	Expansion of current role in generating funding memo in support of CG ADE-0, ADE-1
72	2-13 (3 rd para)	C.2	Need Phase Objectives	Changed reference of CG-7 to “Sponsor”	Clarity of requirements organization/positions
73	2-14 (1 st para)	C.2	Need Phase Objectives	Clarification that The CONOPS is completed in the Need Phase, ‘by a multi-functional team’ and led by Sponsor.	Clarity of requirements management practice.
74	2-14 (2 nd para)	C.2	Need Phase Objectives	Moved/Added NOTE on requirements generation manual Pub 7-7 and contact info for CG-7 for further requirements guidance.	
75	2-14 (3 rd and 4 th paras)	C.2	Need Phase Objectives	Changed Astr to “acquisition strategy”	Emphasizes □esponsibil strategy to be documented in an AP. Deletes requirement of □esponsibil strategy (Astr) as a stand alone document.
76	2-14 (5 th para) (last para)	C.2	Need Phase Objectives	Deleted reference to Exhibit 300. Added requirement for CFO Funding Certification Memorandum. Addresses development of evaluation of affordability for ADE-1.	Updates Need phase documentation reqmts to address program affordability. Deleted OMB business case in this phase. Incorporates affordability discussion at CG acquisition leadership level.
77	2-15 (1 st set of bullets)	C.3	Need Phase Activities	Deleted references to Exhibit 300 and added requirements for CFO Funding Certification Memorandum	Updates Need phase documentation reqmts to address program affordability. Deleted OMB business case in this phase.
78	2-15 (3 rd set of bullets)	C.3	Need Phase Activities	Added activities for CG-82	
79	2-15 (4 th set of bullets)	C.3	Need Phase Activities	Human System Integration Activities – Changed “Identify manpower □esponsibil of the system” to “Estimate manpower of the potential system”; Also clarifies that manpower RP needs are provided to the Sponsor. Add requirement	Clarifies HIS requirements

				for HIS to provide inputs to MNS and CDP	
80	2-17 (table 5)	C.5	Need Phase Documentation	Changed “Affordability Assessment” to “evaluation of affordability” (Includes organizational roles and approval).	Updates Need phase documentation reqmts to address program affordability.
81	2-18 (2 nd para)	D.1	Analyze/Select Phase Overview	Added requirement to address affordability in the A/S Phase	Emphasis on affordability.
82	2-19 (5 th para)	D.2	Analyze/Select Phase Objectives	Updated terminology for “product/logistics support”. Clarification that the preliminary acquisition strategy is developed in the Need Phase.	Updated product logistics support terminology, D 102-01 documentation timing requirement
83	2-19 (5 th para)	D.2	Analyze/Select Phase Objectives (Logistics Support Planning)	Minor word changes – Clarification that APO supports ILSMT, and PM ILS manager.	Updated CG organizational reference
84	2-18 thru 2-19 (4 th para)	D.2	Analyze/Select Phase Objectives	Reordered and made minor word changes. Added development of USCG CFO certification of funding.	
85	2-20	D.3	Analyze/Select Phase Activities	Sponsor’s Representative Activities – added requirement to “support CG-82 in developing Commandant (CG-8) certification of funding	Replaces affordability assessment.
86	2-20	D.3	Analyze/Select Phase Activities	Program Mgmt Activities – Added requirements to: obtain approval for AASP; Initiate OMB Business Case, deleted Ex300; changes “Update AAS” to “Support CG-8 in drafting Certification of Acquisition Funding Memo; Footnote updated regarding OMB Business Case	Updates Analyze/Select phase documentation reqmts to address program affordability.
87	2-21	D.3	Analyze/Select Phase Activities	SELC Activities – Added activity for Information Assurance/Cybersecurity.	New cybersecurity requirements of CIM 5500.13

88	2-21	D.3	Analyze/Select Phase Activities	SELN Activities – Defined NEPA	Clarification of acronym
89	2-22	D.3	Analyze/Select Phase Activities	Commandant CG-82 – Added role regarding Funding Certification.	Expansion of current role in generating funding certification.
90	2-22	D.3	Analyze/Select Phase Activities	HIS Activities – Various Changes to conform with new CG-1 requirements and terminology (such as the HSIP and HFEP). Footnote is also updated	Updates CG-1B3 HIS requirements and documentation
91	2-23	D.4	Analyze/Select Phase Significant Accomplishments	Added “Completed Manpower Estimate Report (MER) and established Manpower Requirements Document (MRD) (CG-1 Approval)”	Updates CG-1B3 HIS requirements and documentation
92	2-25	D.5	Analyze/Select Phase Documentation	Added requirement for P-ORD, CEED and “Certification of Funding”. Updated approvals for HIS Plan, ILSP, and PLCCE. Added footnote for CEED submittal	Updates Analyze/Select phase documentation reqmts to address program costs, affordability, requirements. Aligns with DHS CEED submittal guidance.
93	2-26	D.6	ADE-2A and ADE-2B Reviews and Expected Outcomes	Changed “ADE-2A” to “ADE-2A/B” throughout table.	Reflects current CG practice of conducting combined ADE-2A/B
94	2-26	D.5	ADE-2A and ADE-2B Reviews and Expected Outcomes	Added “...and segment exit criteria” to ADA approval for program with Discrete Segments	Aligns and re-emphasizes D 102-01 guidance
95	2-27 (1 st para)	E.1	Obtain Phase Overview	2 nd and 3 rd sentence has been revised to provide additional descriptions	Clarification of Obtain phase purpose and objectives (D 102-01)
96	2-27 (3 rd para)	E.2	Obtain Phase Objectives	Additional text to provide additional context to the phase objectives	Clarification of Obtain phase purpose and objectives (D 102-01)

97	2-28	E.2	Obtain Phase Objectives	2 nd bullet – changed “75-90%” to “at least 75% mature”	Emphasizes engineering “rule of thumb” minimum requirement
98	2-28	E.2	Obtain Phase Objectives	Added a bullet: “determining whether the integrated logistics support planning and products are sufficient to support the product design.”	Emphasizes need for logistics considerations for design.
99	2-28 (2 nd para)	E.2	Obtain Phase Achievements	Added new lead in para and 12 bullets to describe examples of Obtain Phase achievements. (Exit Criteria)	Provides examples of potential exit criteria for the Obtain phase. Response to GAO 14-450 report recommendations
100	2-28 thru 2-29	E.2	Programs with Discrete Segments	Added clarifying text to describe the approval of discrete segments	Aligns and re-emphasizes D 102-01 guidance for discrete segments
101	2-29 (2 nd para)	E.2	Low Rate Initial Production	Added clarifying text to describe the LRIP units	Aligns and re-emphasizes D 102-01 guidance for discrete segments
102	2-29 (3 rd para)	E.2	Safety	Added clarifying text to describe the issue of notification of safety concerns	Clarification of reporting statutory requirement (CGAA (2010))
103	2-29	E.3	Obtain Phase Activities	Added a responsibility for the Sponsor’s Representative to “support CG-82 in developing (CG-8) certification of funding.”	Replaces support for superceded affordability assessment (AAS)
104	2-30	E.3	Obtain Phase Activities	Program Mgmt Activities – Updates to reference OMB Business Case and CG-8 Cert Memo	Updates Obtain phase documentation reqmts to address program affordability.
105	2-30	E.3	Obtain Phase Activities	Commandant CG-82 – Added role regarding certification of funding.	Updates Obtain phase documentation reqmts to address program affordability.
106	2-30 thru 2-32	E.3	Obtain Phase Activities	SELC, Logistics Mgmt Activities – Incorporated terminology changes. Added responsibilities to conduct FCA and PCA, moved requirement to conduct PPR to Analyze/Select Phase.	Logistics/product support terminology
107	2-31 thru 2-32	E.3	Obtain Phase Activities	Removed responsibilities to conduct FCA and PCA from Logistics Management activities	SELC responsibility

108	2-32	E.3	Obtain Phase Activities	HIS Activities – Changes to clarify CG-1 requirements and terminology	Clarity of HIS requirements
109	2-33	E.3	Obtain Phase Activities	Added OMB IT Business Case Activities and IT Activities. Both are if applicable/as required.	Broke out separate and distinct EA activities.
110	2-34	E.4	Obtain Phase Significant Accomplishments	SER moved to Analyze/Select Phase. Added text regarding supportability to Obtain Phase significant accomplishments.	Clarification of Obtain phase exit criteria
111	2-34 (table 8)	E.5	Obtain Phase Documentation	Deleted Aas and added “CG-8 Certification of Funding”. Added PS&T Strategic Needs Assessment (Inclusive of organizational approvals)	Updates Obtain phase documentation reqmts to address program affordability, HIS requirements.
112	2-34 (table 8)	E.5	Obtain Phase Documentation	New section to address ADE-2C Documentation Review. Includes two tables to indicate approval requirements for ADE-2C and ADE-3.	Re-emphasizes ADE-2C criteria and clarifies requirements for updated documents during ADEs (D102-01)
113	2-37 (1 st para)	F.1	Produce, Deploy and Support Phase Overview	Text revised to indicate primary functions P/D/S (including disposition). Includes other clarifying text revisions.	Clarification of P/D/S phase.
114	2-37 (2 nd para)	F.1	Produce, Deploy and Support Phase Overview	Removed sentence about a program’s last annual review being used for the ADE-4 project transition review.	Clarity
115	2-37 (2 nd para)	F.1	Produce, Deploy and Support Phase	Added text about timing and responsibility of ADE-4 transition to sustainment	Explains transition timing and responsibilities.
116	2-39	F.3	Produce/Deploy Activities	Sponsor Rep Activities – Added Operational Analyses	Aligns with OMB and D 102-01 guidance on Oas
117	2-39	F.3	Produce/Deploy Activities	Logistics Mgmt Activities – changed “logistics” to “product/logistics”	Updated product/logistics support terminology
118	2-39	F.3	Produce/Deploy Activities	HIS – Added activity to “Perform operational usability assessments and provide results and feedback”	Updated CG-1B3 HIS requirements
119	2-40	F.3	Produce/Deploy PM Activities	Added requirement for the IT programs to conduct a NIST SP 800-53 based annual self-assessment of information security controls.	Statement in accordance with CIM 5500.13.

120	2-41	F.6	ADE-4 Review and Expected Outcomes	Table title changed from “CG ARB.....” to “DCMS.....”. Table contents changed to reflect DCMS responsibilities for ADE-4.	Aligns with CG ARP practices
121	2-41	F.6	ADE-4 Review and Expected Outcomes	Added expected outcome of DCMS approval of ADE-4 ADM and reworded other expectations	Clarity
122	2-41	F.7	Support Activity Objectives	Updated OA description and guidance	Aligns with OMB and D 102-01 guidance on Oas
123	2-42 thru 2-43	F.7	Support Activity Objectives	Minor revisions to text in tables updated to reflect OE “estimates” and Logistics terminology changes	Correctness and clarity
124	2-43	F.9	Support Activity Significant Accomplishments	Removed accomplishment: “conducted periodic review to validate manpower and training requirements meet system needs to operate, maintain, support, and instruct the system.”	Updated HIS requirement
125	2-43	F.11	Asset or System Removal from Service and Disposal	Removed paragraph about asset or system removal from service and disposal	Not within MSAM acquisition framework
126	2-44	G Fig 9.	Acquisition Life Cycle Planning Summary	Reworded to emphasize that planning and documentation are the “major” efforts and graphic is not all inclusive of all documents. Fig 9 changed to delete AAS, and add evaluation of affordability and funding certification.	Clarification of figure. DHS CFO requirement for ARBs.
127	2-44	G	Acquisition Life Cycle Planning Summary	Removed “PMs are encouraged to use assigned staff, IPTs, and acquisition support organizations to the maximum extent to integrate these multiple, parallel planning efforts into a cohesive and well organized project.”	Clarity
Chapter 3					
128	3-2 (1 st para)	B	SELG (5 th para)	Text revised to direct readers to MSAM Handbook vice a web link	Admin clarification
129	3-3 (1 st)	B	SELG (4 th)	Added “exit criteria”	Emphasizes guidance on SELG

	bullet)		bullet)		review exit criteria
130	3-3 (note para)	B	SELN (NOTE)	Added guidance regarding substitute review requirements and expectations	Re-emphasizes program knowledge and fundamental objectives which must be met, regardless of tailoring measures.
131	3-5 (1 st para)	C	SELN Reviews	Added invitation requirement for SELN reviews for CG-924 and DHS PARM.	Aligns with SELN Review invitation practices
132	3-5 (1 st para)	C	SELN Reviews	Removed: "The review can start after all the entry criteria are met per the project's SELN Tailoring Plan (PSTP)."	Clarity: DHS emphasis on review exit criteria.
133	3-6 (figure 13)	Figure 13 SELN Stage Activities	SELN Reviews	Combined SER and PPR and provided clarification. Provided additional clarification to PRR	Clarity: SELN tailoring practice for early reviews to support combined ADE-2A/B.
134	3-7 (4 th para)	D	Program SELN Tailoring Plan (SELN)	Removed reference to DHS Instruction/Guidebook 102 01 001 Appendix B	Appendix B is being superceded.
135	3-7 (5 th para)	D	Program SELN Tailoring Plan (SELN)	Removed: "it is not the equivalent of a project focused systems engineering plan." When discussing the function of the PSTP	Avoids confusion with DoD's SEP
136	3-7 (6 th para)	D	Program SELN Tailoring Plan (SELN)	Removed: "This signature represents that the Component supports the acquisition and SELN tailoring, and is able to defend the tailoring justification in terms of overall program/project risk." When discussing CG-93 signature of the PSTP	Avoids CG TA confusion with endorsement and approval description.
137	3-8 (last bullet)	E	RDT&E Program	Added "• Liaison for Operational Test Agent (OTA) designation and coordination"	Accuracy: Function of CG-926

Chapter 4

138	4-1 (1st para)	A	Overview	Substantial content added to Section 4.A. Overview regarding IV&V, staffing responsibilities, reviews, approvals, and authorities on requirements documents. Rewording of paragraphs to address identification of ORD tradeoffs, briefing requirements for ORD and requirement changes.	Identifies requirements management guidance in MSAM update and in CG Pub 7-7; Re-emphasizes staffing and verification requirements for MNS, CONOPs, ORD. Identifies new requirement to brief ORD and changes to EOC.
139	4-1 (3rd and 4th paras)	A	Overview	Substantial content added to discuss the ORD review and approval process and the time required to complete such activities.	Clarity for ORD IPT members. Identifies requirement.
140	4-2 (1st para)	B	Mission Analysis	New text to update and provide more definition	Clarity
141	4-2 (2nd para)	B	Mission Analysis Report	New text to update and provide more definition	Clarity
142	4-2 thru 4-3	B	Mission Needs Statement	New text to update and provide more definition	Clarity
143	4-3 (5th para)	B	ORD	New text to update and provide more definition. Added statement "An ORD or requirements IPT should ensure that the ORD identifies the high level operational performance requirements and is not to specify all detailed requirements normally found in performance or system specifications."	Re-emphasis and clarification on appropriate level of detail in requirements for ORD and for specifications.
144	4-4 (1st para)	B	Program-specific system specifications	New text to update and provide more definition. Also provides guidance for requirements traceability utilizing requirement management tool (i.e. DOORS or equivalent).	States requirement for requirements traceability and tools to achieve traceability.

145	4-4 (3rd para)	B	Operational Analysis	New text to emphasize applicability to IT and Non-IT programs	Aligns with latest OMB A-11 guidance
146	4-5 (7th and 8th paras)	B	Mission Analysis	Text deleted. Will be incorporated in MSAM Handbook	ADE-0 guidance moved to chapter 2.
147	4-5 (7th para)	B	Mission Analysis	ADE-0 paragraph reworded to incorporate ROM cost estimates, and consideration of new starts for program initiation by DCMS	Clarified requirements for ADE-0.
148	4-6 (figure 15)	B	Mission Analysis	Identified and clarified Mission Analysis tasks	Clarify MA tasks in figure
149	4-6 (bullets)	B	Roles and Responsibilities	Added CG-9 Roles	Aligns with CG-9 support for enabling evaluation of affordability during early program stages.
150	4-8	D	Mission Analysis Report Purpose	changed "...initial...." to "...development of conceptual acquisition approaches."	Clarity of MAR and MA results
151	4-8 (3rd para)	D	MAR Format	Added "if it is clear that non materiel solutions cannot sufficiently close the gaps" to sentence discussing the need for the MAR to identify the need for a materiel solution.	Emphasizes CG and DHS priorities preferring non-materiel solutions first.
152	4-8 (4th para)	D	MAR Format	Removed "and authorize entry into the Need Phase" when discussing the outcomes of ADE-0.	Entry into the Need Phase is not an assured outcome for all initiatives.
153	4-10 (1st para)	F	CONOPS Discussion	Removed significant text	Reduce duplication of guidance and info in Pub 7-7
154	4-10 (3rd para)	G	P-ORD Purpose	Added requirement for EOC review of P-ORD	New EOC briefing requirement
155	4-10	G	P-ORD Purpose	Removed disucssion of initial KPPs and COIs	Reduce duplication of guidance and info in Pub 7-7
156	4-11 (2nd para)	G	ORD	Added requirement for EOC briefing and review of ORD changes that impact cost/schedule/performance. Also linked approved ORD to ADE 2A/2B	New EOC briefing requirement
157	4-11 (5th and 6th paras)	G	ORD Context and Discussion	Removed significant text	Reduce duplication of guidance and info in Pub 7-7

158	4-12	G	ORD KPPs	Reworded section to clarify selection of and recommended number of KPPs.	D 102-01, Pub 7-7 guidance on KPPs
159	4-12 (2nd para)	G	ORD Objectives	Removed significant text	Reduce duplication of guidance and info in Pub 7-7
160	4-13 (3rd para)	G	ORD Update Process	New statement to clarify update procedures for ORD changes. Emphasizes restaffing ORD when changes are required to be incorporated.	DHS ORD change in direction
161	4-13 (bullets)	G	ORD Roles and Responsibilities	PM - requirement for PM to inform leadership of impacts of ORD changes to cost estimates - inform program and budget decisions	PM Reporting requirement to CG leadership
162	4-13 thru 4-14 (bullets)	G	ORD Roles and Responsibilities	Rewritten section on ORD IPT membership to identify acquisition participants and reference CG Pub 7-7 for further guidance and recommendations on membership	ORD charter, Pub 7-7 guidance
163	4-14 (bullets)	G	ORD Roles and Responsibilities	New text to emphasize APO and CG-926 responsibilities within ORD IPT	ORD IPT practices
164	4-14	H	Specifications and SOW	Revised text to clarify intent of SOW	Clarity of requirements heirarchy from ORD to SOW/Specification.
165	4-14 (2nd and 3rd bullets)	H.1	Requirements	Added requirements 2 & 3 (avoid compound requirements and ensure traceability of requirements)	Best Practices in developing specification requirements
166	4-15 (6th bullet)	H.1	Requirements	Added text to discuss DID/CDRLs	Clarity of requirements, contract requirement practices
167	4-15 (7th bullet)	H.1	Requirements	New text to emphasize consistency between SOW and specifications within the RFP	Clarity of requirements, contract requirement practices
168	4-15 (10th and 11th bullets)	H.1	Requirements	Added requirements 10 & 11 (understand challenges of using commercial software and ensure all requirements are measurable/testable)	Emphasizes awareness of a major area fo concern in past and current acquisitions
169	4-15 (1st para)	H.2	Legal Significance	Additional text to discuss significance of SOW and Specification from a legal standpoint	Clarity of requirements, contract requirement practices
170	4-15 (2nd para)	H.3	Competition	Changed "...specification,," to ",,RFP..." Minor word changes to clarify requirements for contracts	Clarity of requirements, contract requirement practices

Chapter 5

171	5-1 (1st para)	A	Overview	Added 1st paragraph at Chapter 5 introduction to summarize and emphasize program managers responsibility to ensure currency and validity of program documentation on a continual basis with special emphasis on keeping documents updated prior to ADEs and IV&V efforts for certain documents. Third paragraph shortened to indicate greater PM responsibility and accountability for quality of documents. Minimum formal IV&V effort to be retained for APB, PLCCE, ORD.	Emphasizes and important PM responsibility - document update, currency and staffing
172	5-1 thru 5-2	B	Program Integration/Integrated Product Teams	Added section on program integration and IPTs. Describes PM responsibilities for establishing and engaging in appropriate IPTs and achieving goals of integrated program planning using the IPT forum.	Emphasizes key PM responsibility for interoperability and integration with other Interdependent programs (DHS SELC).
173	5-2 (4th para)	C	Interdependent Programs	New paragraph addressing interdependent or providing and receiving programs. Outlines activities and responsibilities for establishing and engaging in appropriate IPTs and concurrent clearance of cross program documentation including requirements, schedule and other planning.	Emphasizes key PM responsibility for interoperability and integration with other Interdependent programs (DHS SELC).
174	5-3 (5th para)	E	Acquisition Strategy / Acquisition Plan (AP)	Changes made to describe acquisition strategy as a concept brief and not a formal deliverable. Deletes "AStr" designation. Deletes statement on having a "summary level schedule in support of the AP".	Emphasizes acquisition strategy to be documented in an AP. Deletes requirement of acquisition strategy (AStr) as a stand alone artifact.
175	5-4 (1st para)	E	Acquisition Strategy / Acquisition Plan (AP)	Inserted new statement "The acquisition strategy should support successful delivery of a capability at an affordable life cycle price on a realistic schedule" to inject affordability issue into the acquisition strategy.	HSAM acquisition strategy requirement

176	5-4 (bullets)	E	AP Roles and Responsibilities	Changed "Astr" to "acquisition strategy"	Emphasizes acquisition strategy to be briefed and documented in an AP. Deletes requirement of acquisition strategy (AStr) as a stand alone deliverable.
177	5-4 (4th para)	E	AP Roles and Responsibilities	Deleted general subjective statements on advantages of competition.	Relevancy to policy implementation
178	5-5 (1st para)	E	AP Roles and Responsibilities	Added a list of topics covered in APs. Further clarification of legal sufficiency review requirements by CG-0949.	Reflects current legal review practices (CG-0949)
179	5-5 (2nd para)	F	Human System Integration Planning	Lead in paragraph rewritten to modify description of Human Systems Integration performed by CG-1B3	Addresses new CG-1B3 HSI requirements
180	5-6 (2nd para)	F	HSI Roles, Responsibilities, Resources	Changed "Human Systems Integration for Acquisition Division" to "Human Systems Integration Division"	New CG-1B3 terminology
181	5-6 (2nd para)	F	HSI Roles, Responsibilities, Resources	Paragraph reworded to emphasize changes in acquisition organizations/positions and CG-1B3 activities. Deleted details on HSI taskings and resourcing for CG-1B3 activities. Inserted statement on CG-1B3 coordination authority "on all Commandant (CG-1) organizational oversight and support "	Addresses new HSI requirements
182	5-6 (3rd para)	F	HSI Documentation	Minor rewording to clarify HSI documentation development guidelines during acquisition phases.	Addresses new HSI requirements
183	5-6 (6th para)	F	Manpower Requirements Analysis (MRA)	Modified paragraph to provide further description of MRA and relationship to Manpower Estimate Report (MER).	Addresses new HSI requirements
184	5-7 (2nd para)	F	System Safety Management Plan (SSMP)	Added reference to CG-9 SOP-7 for further guidance on risk management	Clarification of guidance for risk and system safety management
185	5-7 (4th para)	G	AA Purpose	Removed comparison between CG AA and DHS Analysis of Alternatives	Avoid confusion on DHS use of AoA vs CG AA.

186	5-7 (5th para)	G	AA Discussion	Removed: "Since the DOTMLPF + R/G/S is already completed, the Coast Guard usually moves directly to a focused AA, especially where no change in mission has been identified."	Further clarification on use of CG AA.
187	5-7 (3rd para)	G.3	AA Development	Removed requirement for AASP development ot begin shortly after ADE-1 and be completed within 30 days or less.	Correct alignment with CDP development and approval requirements
188	5-9 (1st para)	G.4	AA Assessment	Inserted statement, "The results of the AA are also presented as part of the SELC Solution Engineering Review (SER)."	SELC practice
189	5-9 (last para)	H	LCCE Purpose	Added "and can support annual budget requests". Further identifies role of Life Cycle Cost Estimate (LCCE).	Clarity
190	5-10 (1st para)	H	LCCE Discussion	Paragraph significantly rewritten to identify certification requirements and qualifications of cost estimators, and references to contract requirements for LCCE services and appropriate cost models.	Clarification of DHS CAD LCCE requirements
191	5-10 (2nd para)	H	Discussion	Paragraph significantly rewritten to identify requirements for the PM and CG-928 to reconcile the independent cost estimate (ICE) and the Life cycle cost estimate (LCCE) for establishment of the Program LCCE (PLCCE). Identifies requirements for ADEs including DHS CFO approval. Further emphasis on maintaining and update PLCCE and further definition of causes of program PLCCE changes.	DHS CFO approval policy for LCCE. Further clarification of CG policy for ICE, LCCE reconciliation

192	5-10 (3rd para)	H	Discussion	Added paragraph to reference to new DHS Cost estimating Handbook and Cost estimating center of excellence. Further explanation to obtain latest LCCE guidance via CG-928.	Clarity, LCCE policy direction (DHS Cost Estimating Handbook replaces DHS Instruction Guidebook 102-01-001 Appendix I)
193	5-11 (1st para)	H	Part IA: Developing a LCCE	Added reference to new DHS Cost Estimating Handbook and explained its procedural steps based on GAO Cost Estimating and Assessment Guide. Explained need for consistency between LCCE, WBS, IMS as described in guidance.	Clarity, LCCE policy direction (DHS CAD), re-emphasizes consistency of data across program documents
194	5-12	H	Part IA: Developing a LCCE Step 7	Added explanation on use of point estimates and time phased funding profiles as LCCEs for purposes of program budgeting, affordability analysis, establishment of APB thresholds, cost performance and decision support.	Captures best practices for LCCE development and use
195	5-11 thru 5-14	H	Part IA: Developing a LCCE	Bulleted paragraphs rewritten to provide LCCE procedural steps within outline format of DHS Cost Estimating Handbook	Clarity, LCCE policy direction (DHS Cost Estimating Handbook replaces DHS Instruction Guidebook 102-01-001 Appendix I)
196	5-14 (bullets and 4th para)	H	Part 2: Program LCCE (PLCCE)	Identifies procedural activities to occur when updating PLCCEs. Provides further explanation of change documentation requirements and circumstances for required updates	Clarity of DHS PLCCE policy and internal CG policy for PLCCE updates
197	5-15 (bullets)	H	LCCE Roles and Responsibilities	CG-9 role clarified to be final adjudicating authority for PLCCE and ICE reconciliation.	Clarification of current CG-9 PLCCE policy
198	5-15 (bullets)	H	LCCE Roles and Responsibilities	DHS CFO role added for PLCCE approval	DHS USM policy memo Authority to approve LCCEs, 9 June 2014

199	5-15 (3rd para)	I	APB Purpose	Added "program schedule" to traced parameters in the APB	Clarity DHS/CG APB policy
200	5-16 (2nd para)	I	APB Discussion	Added updated guidance for APB to be completed using MSAM Handbook	More detail as provided in MSAM Handbook
201	5-16 (3rd para)	I	APB Discussion	Reduces detailed guidance and procedures for breach notifications. Directs to follow guidance in MSAM Handbook instead.	More detail as provided in MSAM Handbook
202	5-16 (4th and 5th paras)	I	APB Discussion	Added 2 paras to explain procedures for identification and determination of a performance breach for a KPP, and PM requirements for development of a plan of recommendations to ADA on corrective actions during program follow on testing	Responds to and aligns with GAO 14-450 report recommendations
203	5-17 (table 12)	I	APB Discussion	Clarified performance breach requirements	Clarity and correctness
204	5-18 (3rd and 4th paras)	J	PMP Purpose	Stated requirement to update PMP (identifying at minimum an update to program master schedule) for annual reviews and ADEs. Removed discussion of requirements if a system of systems or family of systems is being followed and added requirement to address interdependant programs and associated IPT relationships in the PMP.	Clarity. DHS/CG PMP requirement. Documentation of interoperability and integration requirements
205	5-18 (bullets)	J	PMP Roles and Responsibilities	Added PM responsibility for PMP updates	Stated PMP update procedure
206	5-19 (2nd para)	K	Solicitation and Source Selection Discussion	Reworded para to concentrate on PM's responsibilities with contracting officer during major solicitation actions.	Clarity of solicitation procedures
207	5-19 (2nd para)	K	Solicitation and Source Selection Discussion	Clarified and reworded para to identify PM and contracting officer responsibilities for designation of Red Team review for a major program solicitation. Also added para for Commandant CG-9 review of all major program RFPs prior to release to industry.	SOP 924-1 Red Team procedures. Added CAO RFP review/approval requirement. Best practice derived from DoDI 5000.02.

208	5-19 thru 5-20	K	Solicitation and Source Selection Red Team Review	Minor rewording and reorganization to Red Team review guidance. Added requirement for Red Team leader to deliver formal out-brief to PM and CG-9 prior to RFP release	SOP 924-1 Red Team procedures.
209	5-20 (bullets)	K	Solicitation and Source Selection Roles and Responsibilities	Added PM responsibility for coordination of Red team review. Added contracting officer responsibilities to provide source selection training to source selection team members and to ensure review by legal counsel. Added CAO responsibility to approve release of all major systems acquisitions RFPs to industry	SOP 924-1 Red Team procedures.
210	5-21 (3rd, 4th, and 5th paras)	L	RMP Discussion	Added wording to explain contents of RMP as program specific risk strategy vs restating general risk management policy	CG-9 SOP 9-7 Risk management policy
211	5-21 thru 5-22 (bullets)	L	RMP Roles and Responsibilities	Reworded and reordered responsibilities to emphasize integration of risk management processes in all other program activities. Emphasizes implementation of risk program vs specific risk management procedures.	CG-9 SOP 9-7 Risk management policy
212	5-22 (3rd para)	M	TEMP Purpose	Added requirement for TEMP to outline integrated test strategy. Emphasis added to OT&E in support of ADE-3 in addition to ADE-2C T&E activities.	DHS (DOT&E) guidance and DHS 026-06 T&E guidance
213	5-23 (bullets)	M	TEMP Discussion	Added new components of the TEMP: T&E schedule integrated and in support of key program events, program specific operational test entrance criteria that must be satisfied	DHS (DOT&E) guidance, D102-01-001 Appendix L (TEMP), DHS 026-06 T&E guidance
214	5-23 (4th para)	M	TEMP Discussion	Added guidance about activities in preparation for conducting OTRR	Emphasizes cross-CG evaluation of readiness for IOT&E
215	5-23 NOTE	M	TEMP Discussion	Added guidance on operational testing of commercial off the shelf products.	Emphasizes DHS 102-01-001 Appendix L guidance on OT&E requirements for COTS systems

216	5-24 (2nd para)	M	TEMP Discussion	Added "NOTE: Systems and products provided by the C4ISR program to other assets/systems for operational use will be operationally tested with the receiving asset/system...."	CG T&E and SELC policy on interoperability and interdependent programs. Responds to recommendations from GAO 14-450 report
217	5-24 (3rd para)	M	TEMP Discussion	Added responsibility for program's Principal for Safety to report safety issues to PM and CAO.	CG 9-7 policy to align with provisions of 2010 CGAA
218	5-24 thru 5-25 (bullets)	M	Roles and Responsibilities	Added responsibilities: 1) TMOT/Test IPT to participate in OTRR, 2) CIO to serve as OTRR approval authority for major IT programs	Reflects current DHS DOT&E guidance, CG-926 practices
219	5-26 (5th and 6th bullets)	N	ILS Discussion	Added bullets on performance-based logistics planning and development of the product support system, and "Should-cost" initiatives to manage enterprise sustainment costs.	Captures best practices of product support strategy
220	5-27 (4th para)	N	ILS Roles and Responsibilities	Adjusted ILSMT member description, added DOL, FORCECOM and TAs as typical members. Added bulleted section to clarify HQs director representative's responsibility to endorse ILSP	Updated product/logistics support practices and terminology
221	5-29 thru 5-32	O	Configuration Management Plan (CMP)	Significant CMP section rewrite to incorporate provisions of new CM policy in COMDT INST M4130.6. Emphasizes CM plan content as program specific implementation. Integrates and incorporates key contents of Commandant CG-9 Policy statement #1.	Implements COMDT INST M 4130.6, Configuration Management and CG-9 Policy statement #1, Program and Project Cost Management
222	5-31 (bullets)	O	CM Roles and Responsibilities (PM)	Minor rewording to clarify PM and CCB responsibilities within the CM process.	Implements COMDT INST M 4130.6, Configuration Management and CG-9 Policy statement #1, Program and Project Cost Management
223	5-31 (bullets)	O	CM Roles and Responsibilities (CCB)	Added logistics configuration baseline "(e.g., the Configuration Data Manager Database-Open Architecture (CDMD-OA))"	Implements COMDT INST M 4130.6, Configuration Management
224	5-32 (4th para)	P	PSTP Discussion	Removed requirement for non-major C4IT projects to comply with SDLC processes	Policy issue independent of MSAM processes
225	5-33 (bullets)	P	PSTP Roles and	Added requirement for Sponsor and Technical Authority to support PM in the development of	Reflects current practice

			Responsibilities	PSTP	
226	5-33 (last para)	Q	DP Discussion	Changed statement to read "..approved DP is to be in place no later than delivery of the first asset."	Clarifies CG requirement and timeframe for DP
Chapter 6					
226	6-1 (2nd para)	B	Planning, Programming, Budgeting, and Execution	Significantly reduced description of PPBE process and removed figure illustrating PPBE process. Reference and link added for DHS MD 1330 PPBE. References made to CG-8 PPBE process maps, and CG-8 contact information.	Significant ongoing changes to PPBE per discussion with CG-82
227					
228	6-1 (last para)	C	OMB Business Case	Added reference to DHS/OMB Major IT Business Case Handbook (June 2014 v 9.0) which provides tailored OMB requirements for reporting in DHS IMS. Changed "Exhibit 300" to "OMB Business Case"	Accuracy and currency of reference guidance
229	6-2 (figure 17)	C	OMB Business Case	Moved figure up to accompany paragraphs on Business cases.	Relevant position of figure
230	6-2 (bullet)	D	DHS Acquisition Review Process (ARP)	First major bullet procedure on ARB reviews reworded to address changed CG and DHS review requirements and procedures.	Change in DHS ARB review procedures
Chapter 7					
231	7-1 (2nd para)	B	Reports	Removed guidance to look at Assistant Commandant for Acquisition SOP 9-8 for guidance on project performance reporting.	SOP 9-8 practices under review
232	7-1 (3rd para)	B	Comprehensive Acquisition Status Report	Added statement "In accordance with annual USM guidance on the MAOL, PMs are expected to update and maintain the information in IMS and nPRS for their programs."	DHS Program documentation and information currency requirement
233	7-1 (3rd para)	B	Comprehensive Acquisition Status Report	Removed statement that after reports are generated by DHS, the CAE has 10 days to review the reports and provide comments to revise DHS-provided info	Change in review requirement

234	7-1 (4th para)	B	Next Generation Reporting System	Removed QPAR paragraph and replaced it with a description of nPRS	Change in DHS reporting system requirements
235	7-2 (1st para)	C	Reviews	Added statement, "Major program events that require a formal review include 1) a requirement for the PM to brief CG-9 prior to an RFP release as stated in chapter 5, and 2) a requirement for the sponsor to brief the EOC on the draft P-ORD, ORD, and ORD changes as indicated in chapter 4."	Restating and summarizing early CG leadership briefing/review points to provide increased program progress visibility. DoD 5000.02 best practices
236	7-2 (table 14)	C	Executive Oversight Council (EOC)	Changed EOC membership to add CG-5R/P and DOL, removed DCO-D and CG-095	Updated EOC charter signed 12DEC14
237	7-2 (4th para)	C	Executive Oversight Council (EOC)	Removed description of primary responsibilities of the EOC and instead referenced guidance in chapter 1 of the MSAM	Reduced MSAM redundant information.
238	7-3 (table 12)	C	Coast Guard Acquisition Review Board (CG ARB)	Deleted note on Table 11 on ADA delegation from S2 to CG CAE and DCMS.	Represents actual practice
239	7-4 (1st para)	C	Coast Guard TechState Reviews	Removed paragraph about TechStat reviews	Change in requirements for these reviews
240	7-4 (2nd para)	C	DHS EAB	Added statement "Level 1 and 2 programs are required to complete the EAB before the ARB."	CG ARB procedure
241	7-4 (2nd para)	C	DHS TechState Reviews	Removed paragraph about TechStat reviews	Change in requirements for these reviews
242	7-4 (3rd para)	C	DHS ARP and ARB	First 4 steps of DHS ARP planning process, substantially reworded and reorganized to update to current ARB preparation procedures.	Revised DHS ARB preparation procedure
243	7-4 (figure 17)	C	Figure 17 Acquisition Review Process	Figure modified to show simplified ART review process, deletes DHS PARM issue paper.	Revised DHS ARB preparation procedure
244	7-5 (1st para)	C	DHS PARM Coordinates with Commandant	Added requirement for CG-924 to provide DHS PARM with a monthly program review schedule that lists planned ARBs	DHS PARM practice

			(CG-924)		
245	7-5 (2nd para)	C	Entrance Conference	Revised guidance for ARB entrance conference to "define ARB schedule, agenda decisions, and issues."	Clarity
246	7-5 (3rd para)	C	Conduct ART Review	Revised guidance for conducting ART review	Change in DHS ART procedure
247	7-5 (4th para)	C	Conduct ARB Review	Added guidance that "Coast Guard representation at the ARB should include the CAO, Sponsor, and CFO."	Reflects current practices and DHS direction
248	7-5 (6th para)	C	Track ADM Action Items	Removed requirement for DHS Annual Portfolio Review	Change in DHS review requirements
249	7-5 (6th para)	C	Track ADM Action Items	Added description and responsibilities of DHS ESC	DHS adoption of ESCs for high interest efforts
Chapter 8					
250	8-1 (1st para)	A	Review and Approval Levels	Reworded to emphasize staffing requirements for stakeholders and responsibility to properly staff and identify critical issues to leadership during clearance process. Added statement "...when a stakeholder non-concurs on a document, the originator should promptly notify Commandant (CG-924) of this status."	Re-emphasis of required staffing practices and timely resolution of concerns
251	8-1 (2nd para)	A	Review and Approval Levels	Requirement added to notify CG-924 when a stakeholder non-concurs with a document during concurrent clearance	Re-emphasis of required staffing practices and timely resolution of concerns
252	8-1 thru 8-2 (table 16)	A	Table 16: Acquisition Documents Requiring DHS Approval	Revised table of Acquisition Documents Requiring DHS Approval. CDP changed from CG-9 to CAE. PLCCE approval changed from PARM to CFO. PSTP approval changed to "CIO and PARM".	Correctness
253	8-3 (table 17)	A	Table 17: Acquisition Documents Requiring Senior Coast Guard	Revised table of Acquisition Documents Requiring Senior Coast Guard Approval. Affordability Assessment changed to Certification of Funding Memo, which is drafted and approved for CG by CG-8.	DHS USM policy June 2014

			Approval		
254	8-3 (table 18)	A	Table 18: Acquisition Documents Not Requiring Senior Coast Guard Approval	Changed "Exhibit 300" to "Business Case". Deleted "Operational Test Report"	OMB and DHS reporting guidance
255	8-4 (2nd para)	B	Concurrent Clearance	Paragraph added to emphasize PM responsibility to ensure integration between interdependent programs.	PM interoperability responsibility
256	8-4	8.B. Concurrent Clearance	8. Document Review and Approval Process	Added text to clarify that concurrent clearance process is intended to ensure that directorates leaderships' critical or substantial issues are identified and addressed ASAP	Clarifies and emphasizes core intent of concurrent clearance process
257	8-4 (4th para)	B	Concurrent Clearance	Added statement, "If the Matrix-level (O-6/GS-15) review results in a non-concur, or a critical change to the document, Commandant (CG-924) will be notified immediately to help resolve the issue. Commandant CG-924 then takes action to facilitate further adjudication and if needed place the issue on the EOC review calendar."	Clarify staffing procedures, promote timely and balanced resolution of concerns prior to invoking EOC review
258	8-4 (5th para)	B	Concurrent Clearance	Added statement to NOTE: "Adjudication should be documented through email."	Clarify staffing procedures
259	8-4 (6th para)	B	Concurrent Clearance	Added requirement that ORDs require an EOC brief prior to signature routing. "This will function to validate all requirements and demonstrate that proper trade-offs have been conducted for cost, schedule, and performance."	Emphasizes EOC role in requirements review and affordability discussion

260	8-5 (figure 18)	B	Figure 18 Concurrent Clearance Review Matrix	Changes made to Figure 18. Adjusted clearance authorities for CG-1B3, CG-8. Separated out PEO as review authority. Added note and column label on potential documents required to be cleared through interdependant program PMs.	Updated to reflect current staffing practices for MSAM documentation
261	8-6 (step 2 bullets)	B	Concurrent Clearance Review Process (Step 2)	Clarified that concurrent clearance documents and completed Form CG-4590s must be submitted directly to CG-924 not thru CG-92. Added statement on receiving and processing DHS comments thru CG-924.	CG-924 reviews packages for adjudication and EOC CC waiver requests and is primary DHS liaison
262	8-6 (step 3, 2nd para)	B	Concurrent Clearance Review Process (Step 3)	Reworded NOTE under Step 3 to add statement "If a commenting office non-concurs, notify Commandant (CG-924) upon receipt of the non-concurrence."	Reduce CC timelines, changes timelines for CG-924 notification of a non-concurrence to "upon receipt", facilitates more timely resolution of non-concurs.
263	8-6 (steps 5-6)	B	Concurrent Clearance Review Process (Steps 5-6)	Changed wording for documents for more accurate description of verification of adjudicated comments.	Reflects current IV&V procedures of MSAM documents adjudication
264	8-7 (step 10)	B	Concurrent Clearance Review Process (Step 10)	Moved note about scheduling a status brief to the EOC if sequential clearance endorsement has not cleared the Assistant Commandant level within four weeks to the Signature Endorsement section (pg 8-15)	Correct staffing information
265	8-10 (table 19)	B	Table 19 Matrix-Level Concurrent Clearance, Form CG-4590 Instructions	New position terms inserted "APEO" for "PM"; Originator Contact block: added "(PMO contact person or Sponsor)"	Updated staffing info with CG organization position responsibilities for clearance
266	8-11(table 20)	B	Table 20 Concurrent Clearance Review Package Contents	Corrected missing contents descriptions	Correct staffing information

267	8-11 (figure 22)	B	Figure 22 EOC Concurrent Clearance Package	Corrected content descriptions to align with Table 17.	CG MSAM staffing requirement and best practice
268	8-12 (2nd para)	C	Routing Documents for Signature	Added text about requirements for documents not reviewed through formal concurrent clearance.	Clarity and completeness
269	8-13 (4th para)	C	Streamlining (Best Practice)	Changed 1st statement in para to: Documents that require DHS approval "are to be" submitted to DHS for approval no later than 45 days* prior to the DHS ADE/ARB.	DHS Staffing requirement
270	8-13 (4th para)	C	Streamlining (Best Practice)	Removed requirement to include a summary of adjudicated DHS comments from the concurrent clearance review when sending document to CG-924	Correct staffing information. DHS is aware of adjudication during clearance/approval process
271	8-13 (5th para)	D	Documentation Updates and Revisions	Added additional guidance on the update of documents	Clarity and completeness
272	8-14 (5th bullet)	D	Version Control	Inserted requirement to contact CG-924 for document versions that contain cumulative changes	Ensures major changes don't occur through accumulation of minor changes