



Acquisition Directorate

Major Systems Acquisition Manual (MSAM)

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COMDTINST M5000.10B

NOV 1 2010

COMMANDANT INSTRUCTION MANUAL 5000.10B

Subj: MAJOR SYSTEMS ACQUISITION MANUAL

Ref: (a) Department of Homeland Security Directive 102-01
(b) Department of Homeland Security Instruction/Guidebook 102-01-001

1. PURPOSE. To establish policy, procedures and provide guidance for the implementation of the Department of Homeland Security Acquisition Management and Review Process detailed in reference (a).
2. ACTION. All Coast Guard unit commanders, commanding officers, officer-in-charge, deputy/assistant commandants, and chiefs of headquarters staff elements shall comply with the provisions of this Manual. Internet release is authorized.
3. DIRECTIVES AFFECTED. The Major Systems Acquisition Manual, COMDTINST M5000.10A, Versions 2.0 and 2.1 are cancelled.
4. COAST GUARD MAJOR SYSTEMS ACQUISITION MANAGEMENT. This Major Systems Acquisition Manual (MSAM) defines the policy and process for major systems acquisition projects. Detailed procedures are provided for applying a uniform and disciplined approach to acquisition planning and project management from mission analysis and requirements generation through design, development, production, and deployment. The purpose of this revision is to align Coast Guard major acquisition policy with DHS acquisition management policy and processes established in references (a) and (b), and to continuously improve the policies and procedures applicable to major acquisitions.

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5. 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 National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series). An Environmental Checklist and Categorical Exclusion Determination are not required.
6. IMPLEMENTATION. Individual major acquisition projects should implement policy changes introduced in this Manual prior to their next formal Acquisition Decision Event, but not later than six months from the date of this Manual. Documents already in concurrent clearance review may continue without implementation of policy changes unless they are needed for compliance with reference (a) or as required by law.
7. WAIVERS. 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).
8. RESPONSIBILITY. This Manual is under continual review and will be updated as necessary. Recommendations for improvement or corrections shall be submitted directly to Commandant (CG-924).
9. 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://cgportal.uscg.mil/delivery/Satellite/uscg/References>; and Intranet at <http://cgweb.comdt.uscg.mil/CGForms>.

R. J. Rábago /s/
Assistant Commandant for Acquisition

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Chapter 1: Introduction

1. **MANUAL ORGANIZATION**

This Manual documents the process and identifies the procedures for implementing Department of Homeland Security (DHS) Acquisition Review Process, Directive 102-01. Major System Acquisition procedures are outlined in Chapters 1 through 7, and Appendix A of this Manual.

Chapter 1: Introduction

This chapter includes the vision and mission of the Coast Guard Acquisition Directorate (CG-9), plus Project Manager (PM) and acquisition workforce training and certification requirements, and the organization of this Manual. It provides definitions of acquisition categories, acquisition phases, and principal decision milestones. It includes the roles and responsibilities of the key members of the acquisition management process.

Chapter 2: Major Systems Acquisition Management

This chapter discusses the process governing Coast Guard major systems acquisitions.

Chapter 3: Systems Engineering Life Cycle

This chapter highlights 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 required to plan, define, design develop, implement, operate and dispose of systems.

Chapter 4: Requirements Generation

This chapter emphasizes the activities that are conducted to assess mission areas and identify mission needs prior to the designation of the project as a major system acquisition. It also addresses the requirements definition process conducted once a project has been so designated.

Chapter 5: Project Management Planning

This chapter discusses the documents that are needed as a part of the Major Systems Acquisition management process.

Chapter 6: Capital Investment Planning

This chapter provides an overview of the Coast Guard Planning, Programming, Budgeting, and Execution process (PPBE); the Office of Management and Budget (OMB) Exhibit 300; and an overview of the Department of Homeland Security (DHS) Acquisition Review Process.

Chapter 7: Reports and Reviews

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

Appendix A: Major Systems Acquisition Management (MSAM) Handbook

Appendix A provides additional guidance and templates for developing acquisition plans/documents and providing required project reviews and briefings. It is composed of three parts. Part 1 provides acquisition project documentation review and approval process; Part 2 covers acquisition document content and includes templates; and Part 3 provides guidance for briefings.

2. COAST GUARD ACQUISITION DIRECTORATE

The Coast Guard Acquisition Directorate (CG-9) was established in July 2007. It is a merger of the Coast Guard Acquisition Directorate (G-A) and the Coast Guard Deepwater Directorate (G-D). Commandant (CG-9) was formed to provide a single point of management for all Coast Guard major system acquisitions and to leverage the processes identified in this Manual to obtain capable, supportable, affordable, and sustainable systems, products, and services. In support of this objective, the Assistant Commandant for Acquisition has defined the Directorate's Mission and Vision as follows:

Mission

Acquire and deliver more capable, interoperable assets and systems, and high quality, timely services that support Coast Guard forces in executing missions effectively and efficiently.

Vision

The Coast Guard Acquisition Directorate empowers a professional and credentialed workforce motivated by leadership, integrity and teamwork to deliver the assets and systems that increase readiness, enhance mission performance and create a safer working environment.

a. Major Systems Acquisition Manual Objectives

Major acquisition assets and systems are acquired using a disciplined project management approach and structured methodology using the processes and procedures detailed in this Major Systems Acquisition Manual (MSAM) and attached MSAM Handbook.

This Manual defines the policies and procedures for Project Managers (PMs) and their staff's to help plan, coordinate, and execute major systems acquisition projects.

Objectives

Reduce acquisition cycle time to field useable, affordable, sustainable, and technically mature discrete segments of capability

Objectives
Manage major acquisition projects 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 the Department of Homeland Security (DHS), Congress and with the American taxpayer
Reestablish Coast Guard authority and practice to serve as system integrator for all acquisition projects
Develop major systems acquisition processes and procedures that are flexible, responsive, and allow PMs to exercise innovation and creativity to deliver systems, products, and services to our customers in a timely manner
Align Coast Guard major acquisition process with the DHS acquisition management policy established in DHS Directive 102-01.

b. 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/far/>
- Department of Defense (DoD) Acquisition, Technology and Logistics (AT&L) Portal <https://dap.dau.mil>

3. COAST GUARD ACQUISITION TEAM

Coast Guard Acquisition includes the conceptualization, initiation, design, development, integration, test, contracting, production, deployment or fielding, logistics support, modification and disposal of systems, 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, managing and monitoring the manufacturing and production activities, auditing, contract administration, performance management and evaluation, logistics support, etc.),

- Individuals who arrange disposal of any residual items after work is complete, (e.g., property management/disposal),
- Individuals who support the business processes of the above listed activities (e.g., technical authority, operational authority, project legal counsel or other subject matter experts), and
- Individuals who directly manage those involved in any of the above activities.

Key billets that are part of the acquisition team include those that are involved in the following functions as they relate to acquisition projects:

- program and project 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
- information technology
- production, quality and manufacturing
- quality control and assurance
- testing and evaluation
- configuration management

The *Coast Guard Acquisition Team* will support the mission needs of the Coast Guard through the direction of program and project managers to deliver effective and affordable systems, equipment, and services to our users by:

- Engaging the fleet and sponsors in a collaborative discussion of requirements (capability, cost and schedule) for all options before spending tax dollars;
- Clearly defining, in conjunction with the sponsor (or sponsor's representative), the strategy, concepts, capabilities, concept of operations, and requirements;
- Understanding the users' operational concepts;
- Adhering to the acquisition policies, processes and procedures published by the Coast Guard and DHS;
- Prioritizing solutions which guarantee interoperability, reduced total ownership costs, and enhanced operational efficiency;
- Accurately pricing projects and insisting the project and budget reflect realistic costs, recognizing technical and integration risks;
- Being accountable and delivering to realistic schedules and approved budgets;

- Responding appropriately to sponsor requirements within the boundaries of applicable law, regulations, policies, directives, and procedures;
- Using disciplined, tailored management practices which appropriately document acquisition requirements and approvals;
- Planning for and addressing test and evaluation, logistics, systems engineering, and other competencies commensurate with complexity, dollar value and risk; and
- Obtaining the appropriate level of training, experience and acquisition certification.

4. COAST GUARD ACQUISITION LEADERSHIP TEAM

The *Coast Guard Acquisition Leadership Team* consists of the Commandant, the Component Acquisition Executive (CAE), the Chief of Staff (CG-01) in the role of Mission Support, the Deputy Commandant for Operations (DCO), the Assistant Commandants, senior staff of Coast Guard Directorates, and assigned field activities and commands. Commanders and senior staffs of the Coast Guard Operations Command and the Coast Guard Force Readiness Command, as well as subordinate field and support activities, provide invaluable input via operational requirements and feedback on operational performance, and contribute to the development of a professional, experienced acquisition workforce via acquisition experience tours of duty for operational personnel.

Acquisition Decision Events (ADE) and Annual Review Briefings are presented to the Executive Oversight Council (EOC) for review followed by a Commandant (CG-01)/DCO review prior to presentation at the Coast Guard Acquisition Review Board (CG ARB). Annual Reviews may move from EOC directly to a combined VCG/CG-01/DCO CG ARB forum if there are no unresolved issues. This relationship is shown in **Figure 1 Coast Guard Acquisition Review Organization**.

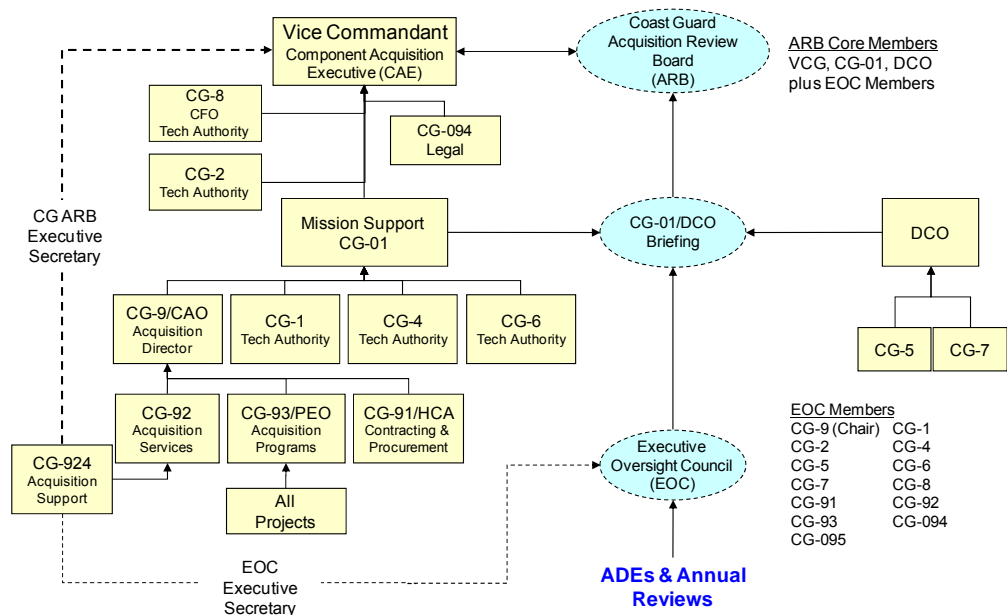


Figure 1 Coast Guard Acquisition Review Organization

5. ACQUISITION WORKFORCE TRAINING AND CERTIFICATION

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

The Acquisition Directorate’s Standard Operating Procedure (SOP) #5, *Acquisition Workforce Certification*, provides the process, procedures, and requirements for professional certification.

Table 1 Project Manager Certification Levels

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

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

An Acquisition Workforce Certification Board (AWCB) has been established to act as the certifying authority for individuals who meet the standards (experience, education, and training) established for a career level (I, II, or III) in one of the acquisition career fields listed below:

1. Business, Cost Estimating and Financial Management
2. Facilities Engineer
3. Life Cycle Logistics
4. Information Technology

5. Production, Quality and Manufacturing
6. Systems Planning, Research, Development and Engineering (SPRDE)
 - SPRDE (Systems Engineering)
 - SPRDE (Science and Technology)
 - SPRDE (Program Systems Engineer)

DHS is the certifying authority for both Program/Project Managers, and Test and Evaluation (T&E). The AWCB provides review and endorsement to DHS on certification for the Program Manager, and Test and Evaluation acquisition career field. (See DHS Acquisition Workforce Policy #064-04-series for further details.)

Go to DHS Connect for more information on acquisition certification:

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

6. PROJECT MANAGER AUTHORITY AND RESPONSIBILITY

The Project Manager (PM) is the chartered individual who has responsibility and authority to accomplish project objectives for developing, producing, and deploying a new asset with logistics support to meet identified operational requirements. The PM is accountable for meeting established 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).

Project Manager Roles and Responsibilities
Cost
Schedule
Performance
Acquisition planning, pre-award and execution
Asset valuation and capitalization

To fulfill this role, the PM is empowered to manage cost, schedule, and performance of the acquisition (within the bounds established by Commandant (CG-9) Policy Statement #1, *Program and Project Cost Management*) 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 project. The PM is the single point of contact and single point of authority responsible for managing the asset through the acquisition process of design, development, production, and deployment.

The Project Manager is the key individual for acquisition program execution. Project Managers are accountable for the successful execution of their projects. Project Managers' 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 Project Manager-centric acquisition execution model.

Level 1 and Level 2 acquisition projects are considered major acquisition projects. In the Coast Guard, individual major acquisition projects are managed by Coast Guard Project Managers chartered by the Chief of Staff.

The Project Manager shall:

- Develop Project acquisition documents.
- Be accountable and responsible for the planning, organization, execution, and coordination of the acquisition Project 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 Project within the established cost, schedule, and performance constraints.
- Apply risk management practices in accordance with those outlined in this Manual and Commandant (CG-9) Standard Operating Procedure (SOP) #7.
- Serve as the Project advocate throughout the planning, programming and budgeting process.
- Manage and control the execution of the Project.
- Identify, track, manage, and resolve issues.
- Disseminate Project information to all stakeholders. Collect and report on metrics to give a sense of Project progress.
- Manage scope to ensure delivery of agreed upon requirements.
- Capture lessons learned.
- Coordinate with Asset Project Office (APO) for development and delivery of logistics analysis and products.
- Coordinate with APO to transition assets into a product line.
- Leverage the APO to transition an asset class from acquisition to sustainment.
- Chair the Configuration Control Board (CCB) for changes to allocated specifications or product baseline.
- Organize and lead Project matrix teams and Integrated Product Teams (IPTs) as required.
- Execute the core processes and activities as consistent with this Manual and Project phase, with participation from appropriate stakeholders, including Sponsors, Technical Authorities, other members of the Acquisition Directorate, and Support Directorates. These include: Project Management, Systems Engineering, Acquisition Logistics, Test and Evaluation, and Enterprise Architecture activities.
- Manage project resources (funds and personnel) using sound business practices and maintain a project financial plan that ensures a complete audit trail of project funds. Ensure project financial resource management is in compliance with the

Financial Resource Management Manual (FRMM), COMDTINST M7100.3 (series) and Commandant (CG-9) SOP #16 for Obligation Planning Review Process and Timeline.

- Act as the focal point for reporting Project specific information. Develop Project reports and briefings, to include: Weekly/Monthly/Quarterly Project Reports, Annual Reviews, Decision Milestone Reviews and Information Briefs.
- Serve as principal advisor to all formal Project-specific Source Selection activities.
- Participate in negotiations and draft Memorandums 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 Project Office lead for Project Resident Offices (PROs) established to deliver the assigned assets.
- Provide appropriate documentation to support valuation and capitalization of acquired assets for Chief Financial Officer (CFO) compliance.

7. CONTRACTING OFFICER AUTHORITY AND RESPONSIBILITY

The Contracting Officer has a unique role and responsibility in supporting project execution. In particular, the Contracting Officer:

- Acts as the sole Government authority to enter into, administer, 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 interest of the United States in its contractual relationships.
- Ensures that all requirements of law, executive orders, directives, regulations, and all other applicable procedures, including clearances and 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 properly to allow for effective valuation and capitalization of each USCG asset produced under contracts.

The proper exercise of this expertise requires the ability to act independently without improper influence on business decisions. The functional independence of the Contracting Officer is important to the success of any project. The Contracting Officer's ability to exercise independent business and professional judgment will result in excellent customer service to the Project Manager 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.

8. PROGRAM MANAGER AUTHORITY AND RESPONSIBILITY

The Program Manager (PgM) is the individual who has responsibility and authority to determine the strategic vision of a specific portfolio. The PgM is responsible for establishing a portfolio focus across projects within the portfolio. The PgM is accountable for establishing starts and closeouts, and communication with entities outside Commandant (CG-9); and reports directly to the PEO.

Program Manager Roles and Responsibilities
Strategic vision for the assigned portfolio
Focus on efficiency across projects
Focus on standardization and business processes across projects
Arrange for resources
Facilitate new starts and closeouts
External communications with technical authority and sponsor for items that have a program-wide impact

The Coast Guard Acquisition Directorate (CG-9) assigns Program Managers to provide integrated program management of surface, aviation, and Command, Control, Communications, Computers and Information Technology (C4IT) major acquisition (Level 1 and 2 acquisitions) portfolios. Program Managers are responsible for:

- Directing/managing a group or portfolio of related capability Projects (i.e., Surface, Air, C4IT).
- Applying sound risk-based decision making and portfolio analysis practices to balance the many factors that influence Program cost, schedule, and performance in order to support and meet overarching Coast Guard mission goals and objectives.
- Taking advantage of commonality and other synergies across projects within a respective portfolio, and working with other Program Managers to seek efficiencies between portfolios.
- Providing input to the Commandant (CG-9) lessons learned system and incorporate best practices into follow-on acquisition projects.
- Developing, coordinating and representing the Program business case and Program performance metrics.
- Establishing a forum for cross-Project collaboration, issue resolution, and sharing of lessons learned; maintaining a lessons learned file.
- Providing oversight, direction, guidance, and support to the acquisition Project Managers within the Program.

- Facilitating regular and direct access to the Program Executive Office (PEO) for all Project Managers.
- Managing Program workforce resources.
- Coordinating with Commandant (CG-91) and Commandant (CG-92) to provide contracting, technical, workforce, and business management support for Project Managers.
- Supporting Sponsor's Representative on requirements development (Preliminary Operational Requirements Document (PORD), Operational Requirements Document (ORD)) and Concept of Operations (CONOPS) development to ensure that acquisition considerations are included prior to the assignment of a Project Manager.
- Coordinating funding for PORD, ORD and CONOPS development, including funding for feasibility studies, trade-off analyses and documentation support.
- Ensuring Project Managers and their teams acquire or hold appropriate certifications for the duties assigned.
- Managing a geographically dispersed workforce.
- Supervising direct-report Program and Project leads.
- Providing oversight for all Program related plans and documentation to ensure compliance with this Manual.
- Liaison with Sponsors, Technical Authorities (TAs), other members of the Acquisition Directorate, and Support Directorates for their appropriate participation in Project Management, Systems Engineering (including systems integration), Logistics, Test and Evaluation, and Enterprise Architecture activities.
- Developing Program vision and direction and establishing a communication plan to communicate a clear and compelling vision for the Program,
- Providing clear goals and objectives to the Project Managers, and keeping Program and Project team members focused on Program vision and goals as they deal with challenges and change.
- Tracking and ensuring Project Managers meet Acquisition Program Baseline parameters within approved budgets and cost, schedule and performance parameters; report adverse trends.
- Monitoring the planning, programming, and budgeting efforts for the Program.
- Ensuring the submission of appropriate requests for resources needed to develop, acquire, and support acquisition Projects.
- Coordinating with Commandant (CG-928) throughout the process and providing financial documents to ensure a complete audit trail of Program funds.
- Ensuring the submission of all required financial reports and data to ensure the Program is efficiently and effectively managed and supported.

- Ensuring the Program is responsive to the requirements that are placed on it by organizations within and outside the Coast Guard.
- Acting as the authoritative and principal source of information for internal and external inquiries and briefings on programmatic issues.
- Reporting progress to Coast Guard executive leadership.
- Developing and coordinating external Program responses to inquiries from Congress, DHS, GAO, congressional testimonies, presentations, data calls, etc.
- Maintaining liaison with DHS, DOD and other non-Coast Guard organizations as appropriate.
- Building relationships with other Programs.

9. PROGRAM EXECUTIVE OFFICER, DIRECTOR OF ACQUISITION PROGRAMS

The Program Executive Officer (PEO) has overarching responsibility for acquisition project management and execution. This includes the oversight of all Coast Guard major acquisition projects to modernize, recapitalize and sustain Surface, Air, C4ISR assets and Logistics for the Coast Guard's multiple maritime missions. Projects are grouped into three major portfolios (Air, Surface and C4ISR), each led by a Program Manager who reports directly to the Deputy PEO and PEO. Within each portfolio, Project Managers are responsible to the PEO through their respective Program Managers for the cost, schedule and performance of their projects and the establishment of a sustained logistics support capability for the asset being acquired.

An Asset Project Office (APO) has been established under the Acquisition Directorate to provide logistics planning and analysis support to each project, assist with the integration of logistics into product development and the transitioning of assets into a product line.

Under the general direction and supervision of the Assistant Commandant for Acquisition, the Director of Acquisition Programs/Program Executive Officer (PEO):

- Oversees acquisition, integration and delivery of assets and systems. Ensures development, maintenance, and/or compliance with all program-related plans and existing directives. Maintains complete, up-to-date documentation of actions and decisions.
- Provides direction and guidance for Acquisition Program and Project Managers to define and best satisfy program cost, schedule, and performance objectives while identifying and managing risk throughout the acquisition life cycle.
- Through the APO, ensures that the PM is supported in establishing complete product lines for each project.
- Ensures that Program Managers liaise with Sponsors, Technical Authorities and Support Directorates in appropriate Major Systems Acquisition Manual (MSAM) phase activities.

- Consults with the Director of Contracting and Procurement (CG-91) in matters relating to acquisition strategy, competition, and contract management. Ensure Acquisition Program Managers have full Contracting Officer support to successfully execute acquisition programs.
- Consults with the Director of Acquisition Services (CG-92) in matters related to workforce management; international sales; research, development, testing and evaluation; and all resource management matters. Ensures Acquisition Program Managers have full access to all required support services to successfully execute acquisition programs including, but not limited to: required funding to execute their 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 credentialing 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 Directors 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 the spokesperson for current and projected operations and operational requirements. Provides effective internal communications to keep personnel properly informed of program developments and issues.
- Serves as one of the principal Coast Guard contacts for senior representatives from industry and government agencies for the conduct of Acquisition Project 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 Departmental and Coast Guard policy and standard operating procedures for major acquisition projects.

10. SPONSOR AND SPONSOR'S REPRESENTATIVE

The Sponsor is the identified organizational element that develops and documents the 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 C4IT Enterprise Architecture), the Sponsor shall be at an organizational element level. The Sponsor shall collaborate with the Director of

Acquisition Programs and the Technical Authorities to ensure alignment and compliance with this Manual and SELC policies and practices. The Sponsor has the following responsibilities:

- Defining, maintaining, evaluating, and articulating organizational and program goals and requirements through development of the Mission Need Statement (MNS), Concept of Operations (CONOPS), Preliminary Operational Requirements Document (PORD) and the Operational Requirements Document (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 phase 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 system;
- Fulfilling the planning, programming, and budgeting functions of the Sponsor's organization;
- Developing acceptance criteria (including performance) for capabilities and systems;
- Ensures that Operational Test and Evaluation (OT&E) is conducted to verify that operational requirements have been met; and
- Conducts annual Operational Analysis (OA) on individual assets in accordance with DHS Operational Analysis Guidance to determine the ability of current assets to meet required performance, supportability and cost goals.

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 SELC policy and practice to deliver successful, supportable, and easy-to-use systems. Responsibilities include:

- Coordinating concept approval for development of any new or existing system with the Mission Program Manager, technical representatives of the Technical Authorities and the Sponsor;
- Articulating requirements for the Sponsor, users, customers, and stakeholders;
- Assisting in the development of, and/or validation of business process changes;
- Working with the Asset Manager from Commandant (CG-6) to ensure that any new or existing system aligns with the Enterprise Architecture;
- Developing cost estimates in collaboration with the PgM, PM, Asset Manager, users, stakeholders and technical authority representatives;

- 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 tailoring plan for each project.

11. TECHNICAL AUTHORITIES

The Commandant has designated Technical Authorities (TAs) to serve as the Coast Guard's authoritative experts in providing the authority, responsibility, and accountability to establish, monitor, and approve technical standards, tools, and processes, and certify projects in conformance with statute, policy, requirements, architectures, and standards.

Commandant (CG-1) is designated as the Technical Authority for the human component of the system design process and ensures systems are designed, produced, supported, fielded, and modernized through a complete and careful integration of the human component, including manpower, personnel, training, system safety and occupational health, human factors engineering, habitability, and personnel survivability. CG-1 Technical Authority, COMDTINST 4700.5 (series) applies.

Commandant (CG-2) is designated as the Technical Authority for intelligence systems and capabilities, associated SCI networks, communications and spaces. COMDTINST 3880.1 (draft) applies.

Commandant (CG-4) is designated as the Technical Authority for the design, construction, maintenance, logistics support, and configuration management of Coast Guard systems and assets, excluding Coast Guard Command, Control, Communications, Computers, and Information Technology (C4IT) Systems. CG-4 Technical Authority, COMDTINST 4700.4 (series) applies.

Commandant (CG-6) is designated as the Technical Authority for the design, development, deployment, security, protection, and maintenance of all Coast Guard C4IT systems and assets. Command, Control, Communications, Computers and Information Technology, (C4IT) Systems Development Life Cycle (SDLC), COMDTINST 5230.66 (series) applies.

Commandant (CG-8) is designated as the Technical Authority for Financial Management. Chief Financial Officer Technical Authority, COMDTINST 5402.3 (series) applies.

Technical Authority processes and the associated certifications are an essential aspect of an independent technical authority, providing objective evidence of effective, efficient, and affordable systems engineering.

12. EXECUTIVE OVERSIGHT COUNCIL

The Executive Oversight Council (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 execution of major acquisition projects. The EOC is responsible for integration of Coast Guard systems acquisition across all mission and functional domains. The EOC Coast Guard-wide integration function embodies the Coast Guard initiative to assume the integrator role.

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 projects 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 projects with planning, programming, budgeting and execution milestones to align them for successful completion of key milestones and Acquisition Decision Events, and provide input to the Coast Guard Acquisition Review Board.
- Address and resolve cross-sponsor and cross-enterprise issues.
- Control requirements creep by reviewing proposed changes to requirements and technical configuration that could increase cost and schedule.
- Provide a forum for the Chief Acquisition Officer (CAO) and Program Executive Officer (PEO) to raise issues; identify programmatic support needs; or, to propose cost, schedule, and performance tradeoffs.
- Provide a forum for the Technical Authorities and Sponsor to raise and discuss issues related to major acquisitions.
- Review de-scoping of requirements or adjustments to technical baselines in response to funding constraints.
- Serve as a review board for proposed acquisition strategies and prioritizing new starts.
- Provide coordinated guidance to staffs.

13. COMPONENT ACQUISITION EXECUTIVE

The Vice Commandant, by position, is designated by the Department of Homeland Security as the USCG Component Acquisition Executive (CAE) per DHS USM memorandum of 10 August 2009.

Responsibilities of the CAE include:

- Management and oversight of all Coast Guard Acquisition functions, and ensuring coordination of them with the contracting processes managed by the Head of Contracting Activity.
- Establishing acquisition processes within the Coast Guard and tracking the extent to which the requisite resources and support are provided to the acquisition Program/Project Managers to ensure successful and effective acquisitions.
- 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 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 Acquisition Decision Authority responsibilities for Component Level 1 and Level 2 acquisitions when delegated by the CAQO.
- Reviewing Operational Test & Evaluation (OT&E) reports presented by Operational Test Authorities (OTAs).
- Executing ADA responsibilities for Component Level 3 acquisitions and establishing Component Level 3 acquisition policies and procedures that support the spirit and intent of DHS Directive 102-01.
- Designing policies and processes to ensure that the best qualified persons are selected for Acquisition Management positions (e.g., acquisition project and program managers).
- Ensuring that Acquisition personnel, other than Contracting personnel, but including program managers, 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.
- Assisting the DHS 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 DHS CPO on the mission, priorities, initiatives, and acquisition program needs of the Component, and immediately notifying the DHS CPO of acquisition management developments that may have a significant impact on DHS or Component Acquisition and Contracting activities.

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Chapter 2: Major Systems Acquisition Management

1. MAJOR SYSTEMS ACQUISITION PROCESS

The Coast Guard's major systems acquisition process implements the capital asset acquisition policy embodied in the Federal Acquisition Regulations (FAR), Office of Management and Budget (OMB) Circular A-11, and the DHS Directive 102-01.

a. 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.

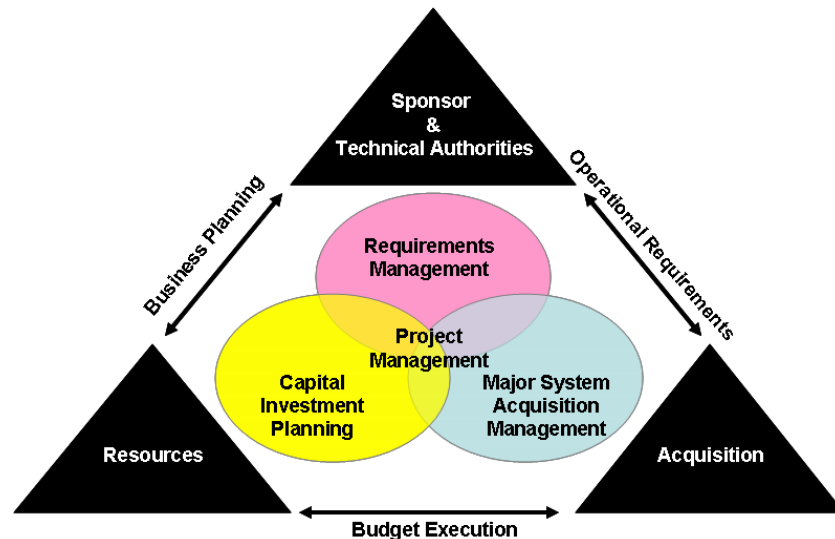


Figure 2 Management Interfaces

Project Managers (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 projects.

Requirements Management is the “Sponsor and Technical Authority managed” process with the Sponsor defining mission needs and translating them into sponsor requirements and the Technical Authority 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 Mission Need Statement (MNS), derived from business planning activities that describes specific functional capabilities required to accomplish Coast Guard missions that can only be met with materiel solutions. The sponsor is responsible for developing a Concept of

Operations (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 Operational Requirements Document (ORD).

Major System Acquisition Management is the “Project Manager-owned” process of planning project activities and organizing a project staff to achieve cost, schedule, and performance requirements identified in the ORD and funded in the budget.

Capital Investment Planning is the planning, programming, budgeting, and execution process that is a calendar-driven budgetary process and owned by the Assistant Commandant for Resources (CG-8). Capital investment planning has two interdependent functions - providing project budget planning (for funding and personnel) and establishing affordability constraints. Project resource planning and management is coordinated by the PM in collaboration with the Sponsor, Technical Authorities and the Commandant (CG-8) staff.

b. Major System Acquisitions

Major system acquisitions include equipment, services, and intellectual property (e.g., software, data, etc.) that are acquired by the Coast Guard through purchase, construction, manufacture, lease, or exchange and may also include improvements, modifications, replacements, or major repairs. A complete system includes processes and people; integration, testing, logistics, and training as well as the human operator, maintainer, supporter and trainer who are all components of the overall system.

DHS Directive 102-01, Acquisition Management, provides governing guidance and knowledge-based management requirements for oversight of DHS acquisitions. Based on Life Cycle Cost Estimates (LCCEs), acquisitions are categorized into Acquisition Levels with differing levels of oversight. The LCCE includes all costs associated with the acquisition of the overall system over its life from project initiation to asset or system disposal. DHS Levels 1 and 2 are Major System Acquisitions and Level 3 are Non-Major Acquisitions. The DHS acquisition levels determined by the life cycle cost of the projects (in constant year 2009 dollars) are as follows:

Level 1 (Major)	Life Cycle Cost: At or above \$1 billion ADA: Deputy Secretary (S2), or the Chief Acquisition Officer (CAQO) upon designation by the Deputy Secretary, or the Under Secretary for Management (USM) upon designation by the CAQO
Level 2 (Major)	Life Cycle Cost: \$300 million or more, but less than \$1 billion ADA: Chief Acquisition Officer, or one of the following officials as designated by the CAQO, Under Secretary for Management or the Component Acquisition Executive
Level 3 (Non-Major)	Life Cycle Cost: Less than \$300 million ADA: Component Acquisition Executive

Initially, an acquisition is assigned a level based on its estimated total life cycle cost, but it may be changed to a higher or lower level for one of the following reasons:

- Importance to DHS's 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 Chief Acquisition Officer (CAO), or Acquisition Decision Authority (ADA).

Where acquisition decision authority is delegated to the Component Acquisition Executive (CAE), the Coast Guard Acquisition Decision Authority (ADA) is defined as the chair of the CG ARB as provided in **Table 2 CG Acquisition Review Board Chair**.

Table 2 CG Acquisition Review Board Chair

Major					
ADE	0	1	2A/2B/2C	3	4(CG Only)
Level 1	CAE	CAE	CAE ¹	CAE ¹	CG-01
Level 2	CAE	CAE	CG-01	CG-01	CG-01
Non-Major²					
ADE	1		2	3	
Level 3	CG-01		CAO (CG-9)	CAO (CG-9)	

Notes: ¹ CAE will chair CG ARB whenever DHS ADA is S2, but may delegate to CG-01 for Level 1 ADE-2A/2B/2C and ADE-3.

² Non-Major Acquisitions are governed by COMDTINST 5000.11 (series) Non-Major Acquisition Process.

All decisions are documented in an Acquisition Decision Memo (ADM) with copies to senior level decision authorities where decision authority has been delegated.

c. **Major Systems Acquisition Process Structure**

The major systems acquisition process, for the Coast Guard, is based upon the DHS Directive 102-01. As shown in **Figure 3 Major Systems Acquisition Life Cycle Framework**, the overall acquisition lifecycle is composed of a pre-acquisition phase (Project Identification) and four distinct acquisition phases: Need; Analyze/Select; Obtain; and Produce/Deploy/Support. The Coast Guard transitions support following Production/Deployment at ADE-4. For this reason, this document will identify the fourth phase as Produce/Deploy and Support.

The transition from one phase to the next occurs with approval of an Acquisition Decision Event (ADE). The appropriate Coast Guard Acquisition Decision Authority (ADA) for ADEs is specified in Table 2. Indicated by the triangle (▲) in Figure 3, ADEs

are critical knowledge points throughout the acquisition life cycle process that require assessment of project readiness and risk before formal authorization to proceed to the subsequent phase.

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 project.

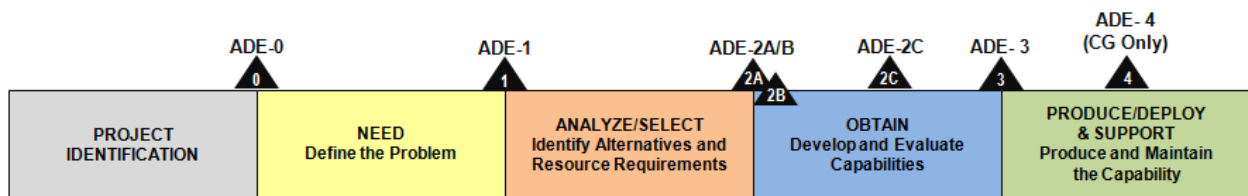


Figure 3 Major Systems Acquisition Life Cycle Framework

Major Acquisition Phases

1. **Project Identification Phase:** Before a major systems acquisition formally begins, a capability gap must be identified. As part of pre-acquisition activities, Coast Guard Mission Analyses and Operational Analyses are performed by Assistant Commandant for Policy and Plans (CG-5) and the operating program Sponsor to identify Coast Guard capability gaps. These analyses must include integration with Coast Guard Technical Authorities (CG-1, CG-2, CG-4, CG-6 and CG-8) to ensure the inclusion of mission support needs as well as mission capabilities and affordability. The result of this ongoing mission analysis is a Mission Analysis Report (MAR). The MAR is endorsed at ADE-0 with direction to proceed with the development of a Mission Need Statement (MNS) and a Concept of Operations (CONOPS).
2. **Need Phase:** During the Need Phase, the completed and endorsed MAR is used to develop a MNS and CONOPS that describe specific functional capabilities required to address specific capability gaps in Coast Guard mission performance. In addition, initial project management documentation, including the Capability Development Plan (CDP), initial Acquisition Strategy (AStr), and an initial Exhibit 300 business case are developed. The Need Phase culminates with the ADE-1 review.
3. **Analyze/Select Phase:** The Analyze/Select Phase identifies and explores 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 (ORD) to jointly provide a basis for assessing the relative merits (e.g., advantages and disadvantages, degree of risk, life cycle cost, 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 AStr. A Project Life Cycle Cost Estimate (PLCCE) is developed for the selected alternative. Logistics support planning (Integrated Logistics Support Plan (ILSP)) and test planning (Test and Evaluation Master Plan (TEMP)) are performed for the preferred solution culminating in the initial definition of the project's performance, schedule, cost baseline (Acquisition Program Baseline (APB)) and test planning. Typically the Analyze/Select Phase concludes with a combined ADE-2A/ADE-2B review, unless a

- project is managed in discrete segments, in which case, each subsequent discrete segment will go through an individual ADE-2B.
4. **Obtain Phase:** The Obtain Phase of the acquisition is focused on demonstrating feasibility of the preferred alternative and refining the solution prior to a full production commitment. During this phase, project test plans are implemented, essential systems engineering activities are performed, and integrated logistics support is accomplished and refined as the project design evolves. The Obtain Phase also includes preparation of the Project Management Data Sheet (PMDS) for submission to Commandant (CG-8) describing the project funding, types of assets, asset delivery schedule, acceptance criteria and valuation criteria. If appropriate, a Low Rate Initial Production (LRIP) decision is made at ADE-2C, with overall project approval to proceed into production, deployment and support occurring at ADE-3.
 5. **Produce/Deploy and Support Phase:** The objective of this phase is to produce/deploy discrete segments of operational capability with established logistics support. Steady state support of the delivered capability occurs after the acquisition project has transitioned full support to the sustainment community at ADE-4. During the capability's operational life, the operating program continues operational analyses to ensure the asset or system is meeting performance, supportability, and cost goals.

Acquisition Decision Events

The Coast Guard Acquisition Review Board (CG ARB) reviews major acquisition projects prior to all DHS Acquisition Decision Events (ADE). At each ADE review, the project must demonstrate progress, successful satisfaction of the established Exit Criteria, and a readiness to move forward to the next acquisition phase. The DHS and Coast Guard Acquisition Review Processes are explained in Chapter 7, Section 3 of this Manual.

Acquisition Decision Events come 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 development cycle. The decision authority for each ADE is specified in Table 2. Approval to enter into the next phase is provided from the Acquisition Decision Authority in an Acquisition Decision Memorandum (ADM). The specific Acquisition Decision Events used by DHS and the Coast Guard include:

1. **ADE- 0 (Project Identification):** Provides authorization for a prospective project to enter into the Need Phase. It is intended to support a budgetary decision to provide funding for a new-start project. Because of its tie to the budget process, it is the only ADE that is calendar driven instead of event driven. ADE-0 should include all Coast Guard new start projects and is not normally intended to be an isolated review for an individual project.
2. **ADE-1 (Validate the Need):** The purpose of ADE-1 is to ensure alignment of needs to strategic Coast Guard and DHS direction along with adequate planning and resourcing for upcoming phases. ADE-1 validates the need for a major acquisition project and initiates the Analyze/Select Phase.
3. **ADE-2A (Approve the Major Acquisition Project):** Approves the acquisition to proceed to the Obtain phase. This decision includes approval of the materiel elements of the alternative to be pursued and the initial Acquisition Program Baseline

(APB) for the project. It is also where the Low Rate Initial Production (LRIP) quantity is approved if LRIP is planned by the project.

4. **ADE-2B (Approve the Discrete Segment):** ADE-2B is combined with ADE-2A when the project is managed as a single segment of capability or when the project's first segment reaches ADE-2A. Subsequent segments will each go through an individual ADE-2B.
5. **ADE-2C (Approve Low Rate Initial Production):** Approves execution of LRIP for the quantities previously approved at ADE-2A. Approval for LRIP means that the PM is authorized to commit to contract for production for a limited number of items. Prerequisites for LRIP approval include: a completed and satisfactory Critical Design Review (CDR); a satisfactory Production Readiness Review (PRR) and an approved AP prior to solicitation, order or contract. In accordance with Homeland Security Acquisition Manual (HSAM) Chapter 7, paragraph 3007.102; "No synopsis for a solicitation may be released, solicitations issued, or funds transferred within or outside the Department until an AP has been completed and approved." The quantity ordered or contracted for, of any type, cannot exceed the amount approved for LRIP at ADE-2A/2B without a specific waiver submitted through the Component Acquisition Executive (CAE) and approved by the ADA prior to order or contract action.
6. **ADE-3 (Approve Production):** Based upon successful testing and positive test reports, production readiness, logistics readiness, and verification of sufficient production and operational resources (staffing and funding) the ADA authorizes the project to enter the Produce/Deploy and Support Phase.
7. **ADE-4 (Project Transition):** This ADE occurs when the acquisition project is ready to disestablish and transition the management of the delivered asset(s) to the Support Program Manager. This is a Coast Guard unique milestone.

2. PROJECT IDENTIFICATION PHASE

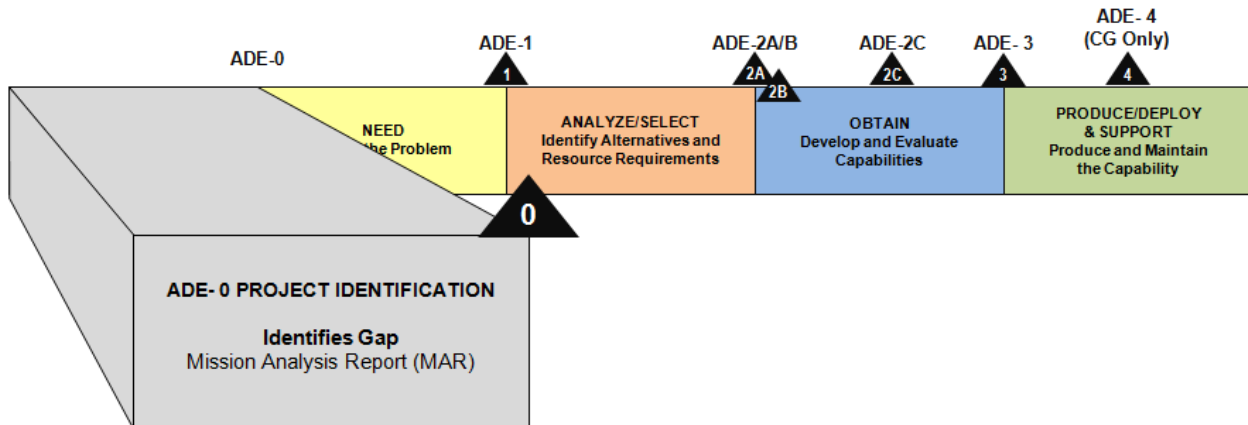


Figure 4 Project Identification Phase

The Project Identification Phase, as shown in **Figure 4 Project Identification Phase**, is a pre-acquisition phase conducted by the Coast Guard that provides a foundation for the identification of capability gaps. The Project 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 Project Identification Phase, a Mission Analysis Report (MAR) is developed by Commandant (CG-5) with support by the Sponsor 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. The CONOPS and a MNS developed during the Need Phase refines the definition of the mission capability needed to close the capability gap that was identified in the MAR.

a. Project Identification Phase Objectives

Commandant (CG-5) and the Sponsor(s) 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 (CG-5) has the lead role in implementing the mission analyses with the support of technical and acquisition authorities, as needed.

The primary objective of the Project Identification Phase is to prioritize ongoing mission analyses that review or endorse emerging needs. The analyses should be capabilities oriented and should identify new requirements or gaps in Coast Guard capabilities. A secondary objective is to develop rough-order-of-magnitude (ROM) cost estimates as part of an acquisition forecast to allow a preliminary affordability determination prior to inclusion in the Capital Investment Plan (CIP).

b. Project Identification Phase Activities

Commandant (CG-5) Project Management Activities
Initiate mission analysis and coordinate with the Sponsor(s) to identify capability gaps
Develop Mission Analysis Report(s) with support from the Sponsor(s), Technical Authorities, and Acquisition Support Organizations
Sponsor's Project Management Activities
Support Commandant (CG-5) in the mission analyses to identify capability gaps and in developing the Mission Analysis Report(s)
Submit Mission Analysis Report(s)
Work with Commandant (CG-82) on a budget/program review to develop a preliminary affordability assessment
Systems Engineering Life Cycle Activities
Perform mission analysis
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 Technical Authorities
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 of changes in Doctrine, Organization, Training, Materiel, Leadership, Personnel, and Facilities plus Regulations/Grants/Standards (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 solution based on the integrated DOTMLPF+R/G/S approach, the sponsor will coordinate an appropriate implementation recommendation
Enterprise Architecture Activities (if applicable)
Conform to established DHS EAB strategic planning and IT guidance provided in EAB Governance Process Guide (Version 8), July 1, 2009.

c. Project Identification Phase Significant Accomplishments

Accomplishments
Completed Mission Analysis Report
Development of a ROM cost estimate and early affordability assessment

d. Project Identification Phase Documentation

Documentation required to enter the Need Phase is presented in **Table 3 Project Identification Phase Documentation**.

Table 3 Project Identification Phase Documentation

Document	Preparation	Review	Approval
Mission Analysis Report (MAR)	DCO-81 or Program/Mission Manager	CG-5/ Sponsor	DCO
Preliminary Affordability Assessment	Sponsor's Rep	CG-821	CG-82

e. ADE-0 Review and Expected Outcomes

CG ARB ADE-0 Review
Early review for affordability and identification of resources needed for next phase
Direction to prepare a Resource Proposal (RP), initial Exhibit 300, and the Mission Need Statement
Provides the opportunity for the acquisition Program Manager to arrange resources with PEO approval

CAE ADE-0 Decision
Confirmation of necessary resources through budget decision
Authorization to proceed into Need Phase

3. NEED PHASE

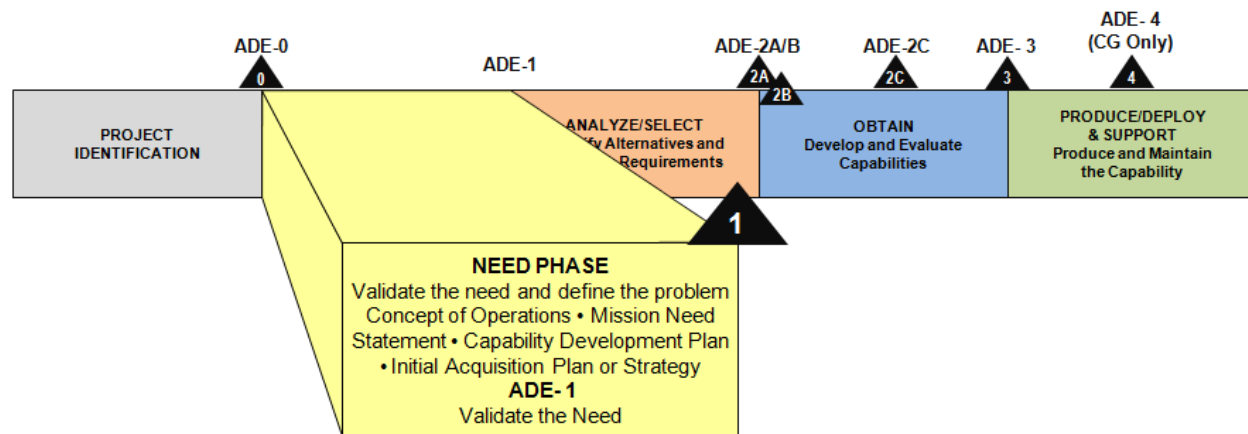


Figure 5 Need Phase

The Need Phase, as shown in **Figure 5 Need Phase**, includes activities to describe the specific fundamental capabilities required to address the capability gap in Coast Guard mission performance and culminates with a MNS, the CONOPS, an initial Exhibit 300, and inclusion in the CIP. In assessing the need, the Coast Guard should consider the Integrated Planning Guidance (Quadrennial Homeland Security Review (QHSR)) issued by the DHS Assistant Secretary for Policy and how the identified need aligns with the DHS Strategic Plan. The MNS and CDP are approved separately by the DHS ADA. The initial Acquisition Strategy (AStr) evolves into the Acquisition Plan (AP), which is approved by DHS OCPO for contracts \geq \$300 million procurement cost and by the HCA for contracts $<$ \$300 million procurement cost. The completion of this phase signifies the start of the acquisition activities by entering the Analyze/Select Phase.

a. Need Phase Objectives

The Sponsor is responsible for preparing a MNS, with support from Commandant (CG-5), and appropriate input from the acquisition community, technical authorities and industry representatives (through market research and Requests for Information (RFI)). The MNS describes the mission(s) and capabilities, justifies the project and sets the project boundaries. In addition, the Sponsor will develop the initial Exhibit 300, documenting the business case for the acquisition, and defining proposed cost, schedule, and performance goals.

In order to provide an operational mission framework for the project, a CONOPS is developed by a multi-functional team to describe 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. 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, and other user entities within the Coast Guard on the operational concept of a proposed system.

The CDP and initial AStr/AP are prepared in the Need Phase and implemented in the

Analyze/Select 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 project and Coast Guard and DHS leadership on the activities, and cost, schedule, and performance boundaries for the Analyze/Select Phase. The initial AP encompasses any acquisitions necessary to accomplish the specified CDP activities. 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.

The Exhibit 300 business case will be drafted and submitted during the Need Phase. The Sponsor's Representative in coordination with the PgM (PM - if assigned) will complete the initial Exhibit 300. Project identification as Information Technology (IT) or non-IT will be included in the Exhibit 300 and/or Exhibit 53 in accordance with the Capital Planning and Investment Control (CPIC) Guide Version 6.0.

A Preliminary AStr planning brief is to be presented 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 project's near term budget plan to accommodate the preferred approach. The brief must include a preliminary view of project 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 PgM's (PM - if assigned) discretion. An approved version of this brief will be presented as the Preliminary AStr at ADE-1.

b. Need Phase Activities

Sponsor Representative Activities	
Prepare the Mission Need Statement	
Prepare the Concept of Operations document	
Prepare initial Exhibit 300	
Prepare a Resource Proposal for the initial project funding and staffing	
Prepare an Affordability Assessment	
Ensure the project is included in the Capital Investment Plan	
Program/Project Management Activities	
Prepare the Capability Development Plan	
Prepare the initial Acquisition Strategy (High-level statement of Need, Cost, Capability or Performance, and Risk). Provide Acquisition Strategy Brief	
Perform a Privacy Threshold Analysis (PTA)*	
*Perform a Privacy Threshold Analysis (IT Only - see Electronic Manual, COMDTINST M10550.25 series and DHS Directive 102-01-001 Appendix B for more information)	
Human Systems Integration Activities	
Identify manpower constraints of the system	

Human Systems Integration Activities
Describe the human performance gaps
Define human performance initiatives
Identify manpower resource proposal needs
Collaboratively participate in the development of the CONOPS
Include Performance Support & Training scenarios in CONOPS

Enterprise Architecture Activities (if applicable)
Complete Part II (IT projects) of the Exhibit 300 in addition to the Non-IT sections
Conform to established DHS EAB strategic planning and IT guidance provided in EAB Governance Process Guide (Version 8), July 1, 2009.

RDT&E Activities (if applicable/as needed)
Provide analytical evaluation, technology demonstration, and Modeling and Simulation (M&S) support for CONOPS development and Affordability Assessment.

c. Need Phase Significant Accomplishments

Accomplishments
Defined the mission need
Defined the concept of operations
Developed Exhibit 300 to justify entry into the budget
Developed the Capability Development Plan ¹ and initial Acquisition Strategy
Obtained CAE authorization to proceed to DHS ADE-1 to obtain ADA authorization to enter the Analyze/Select Phase
Obtained ADA approval at ADE-1 to enter the Analyze/Select Phase

¹The Capability Development Plan will be completed by the Acquisition Organization. DHS Directive 102-01-001 allows up to 90 days to complete CDP after ADE-1

d. Need Phase Documentation

Documentation required for DHS ADE-1 approval is presented in **Table 4 Need Phase Documentation**.

Table 4 Need Phase Documentation

Document	Task	Preparation	Approval
Mission Need Statement	Prepare	Sponsor's Rep	CAE/DHS ADA
Concept of Operations Document	Prepare	Sponsor's Rep	Sponsor
Affordability Assessment	Prepare	Sponsor's Rep	CG-82
Capability Development Plan	Prepare	Program Manager (PM - if assigned)	CG-9/DHS ADA

e. ADE-1 Reviews and Expected Outcomes

CG ARB ADE-1 Review
Direction to assign a Project Manager and core project team, recognizing priority and need for early project management discipline for success
CAE authorize project to proceed to DHS for ADE-1 approval to enter into the Analyze/Select Phase
Approve the MNS and forward to DHS for final approval

DHS ARB ADE-1 Review
ADA approve ADE-1 for Level 1 and Level 2 acquisitions and authorize entry into the Analyze/Select Phase
ADA approve Mission Need Statement
ADA approve Capability Development Plan (at or within 90 days of ADE-1 Review)
ADA approve proposed Analyze/Select Phase Exit Criteria
ADA issues an Acquisition Decision Memorandum

4. ANALYZE/SELECT PHASE

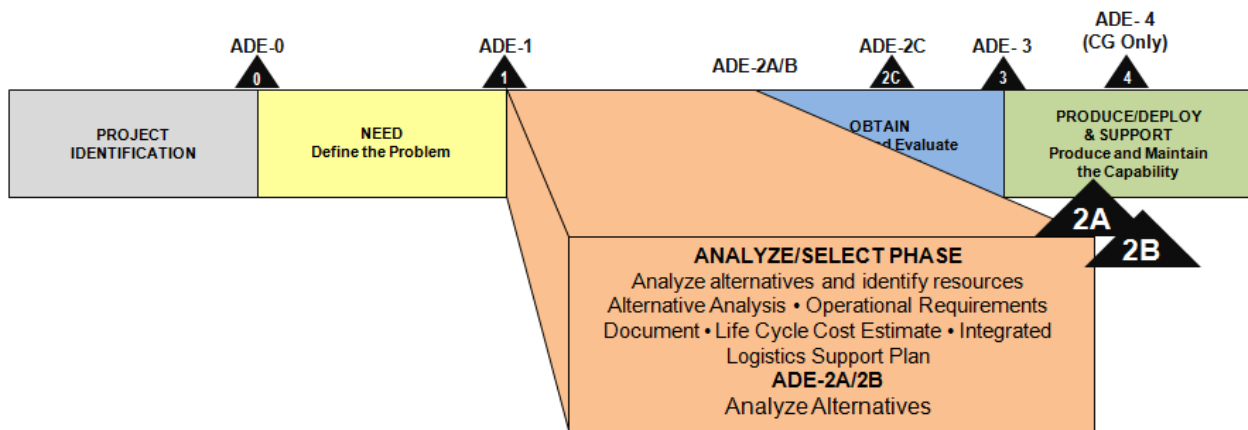


Figure 6 Analyze/Select Phase

The Analyze/Select Phase, as shown in **Figure 6 Analyze/Select Phase**, explores alternatives to fill validated user mission capability gaps in the Mission Need Statement with effective, suitable and affordable solutions. The CDP provides the overall guide 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 Alternatives Analysis (AA) and a detailed PLCCE is developed for the preferred solution. Opportunities for tradeoffs are explored, the acquisition strategy is refined and an initial logistics and test and evaluation strategy are developed during this phase.

a. 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, life cycle cost, supportability, and cost-benefit) of the alternatives to determine a preferred solution. To ensure the objectives are met, an Independent Logistics Assessment (ILA) is performed at least four months prior to ADE-2. The ILA process further checks acquisition plans and resource documents to ensure they will provide the required logistics support, assesses policies and processes to ensure they will consistently produce high-quality logistics plans, and initiates corrective action to address deficiencies in acquisition logistics.

Acquisition Strategy: The Acquisition Strategy is evolved into the Acquisition Plan during the Analyze/Select Phase to include detailed acquisition planning and the full content prescribed by HSAM, Appendix H. No synopsis for a solicitation may be released, solicitations issued, or funds transferred within or outside the Department until an AP has been completed and approved (HSAM Chapter 7, paragraph 3007.102). See Appendix A of this Manual for further information.

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), identifying alternatives, and developing a technology development strategy (if the preferred solution involves technology that is still under development) to define requirements.

Alternatives Analysis: The AA is an independent analysis or series of independent analyses which identify and document the most resource efficient method of satisfying an identified mission capability gap.

Logistics Support Planning: Logistics support concepts, specific logistics support requirements (i.e., metrics such as Reliability, Maintainability, Availability), and any logistics support constraints that must be satisfied are identified during the Analyze/Select Phase. Analysis support will be provided by the Acquisition Project Office (APO). The initial ILSP must be developed and approved.

Note: Along with the ADE-2A and ADE-2B pre-brief to the EOC, the project may want to present the results of the Solutions Engineering Review (SER) to minimize the number of briefings to EOC. The SER Completion Letter (Ch 3) may be signed at the above pre-brief to the EOC. For combined ADE-2A/2B, the project will need to also complete Planning Stage activities and the associated Project Planning Review (PPR). In this case the project may present results of the SER and PPR to the EOC in the ADE-2A/2B pre-brief.

b. Analyze/Select Phase Activities

The approved CDP serves as the “roadmap” for the activities to be performed in the Analyze/Select Phase. The CDP will function as the Project SELC Tailoring Plan (PSTP) until after ADE-2A/2B when the PSTP is developed. The project should notify Commandant (CG-93) and DHS APMD in a timely fashion of significant variances in the execution of the planned CDP events and schedule.

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

Sponsor Representative Activities
Prepare Preliminary Operational Requirements Document and Operational Requirements Document
Project Management Activities
Establish a project matrix/IPT team
Charter IPT
Expand details and content of the Project’s Acquisition Strategy to develop Acquisition Plan
Develop the Alternatives Analysis Study Plan
Develop SELC Tailoring Plan
Conduct the Alternatives Analysis
Develop Life Cycle Cost Estimate (LCCE)

Project Management Activities
Coordinate development of the Independent Cost Estimate (ICE)
Adjudicate differences between LCCE & ICE and develop PLCCE (single best estimate) to support APB and RAP/RAD process
Update Exhibit 300 ¹
Prepare Project Management Plan
Prepare Risk Management Plan
Develop Human Systems Integration Plan
Prepare the Configuration Control Board Charter
Organize the Configuration Control Board
Update Affordability Assessment
Develop Acquisition Program Baseline
Identify the Low Rate Initial Production (LRIP) quantity to be approved at ADE-2A/2B
Work with Commandant (GC-6) to review the preferred solution and formally designate the system as a C4IT or C4IT related system if applicable.
Develop Obtain Phase Exit Criteria

¹ Exhibit 300s are submitted annually in September and then rolled out to the Federal IT Dashboard in February.

Systems Engineering Life Cycle 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 material 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
Initiate the National Environmental Policy Act process
Initiate preparation of system specification and Statement of Work (SOW) in coordination with Technical Authorities
Initiate configuration management planning
Prepare Configuration Management Plan
Conduct the Solutions Engineering Review (SER)

Logistics Management Activities
Initiate logistics support planning
Organize the Integrated Logistics Support Management Team
Establish support concept

Logistics Management Activities
Implement initial support plans
Initiate the supportability analysis
Establish maintenance concept
Prepare the Integrated Logistics Support Plan
Conduct the Independent Logistics Assessment (ILA)

Human Systems Integration Activities
Initiate Human Systems Integration (HSI) planning (including Manpower, Personnel, Training, Human Factors Engineering (HFE), System Safety, Personnel Survivability, and Habitability)
Initiate studies and analyses for manpower requirements to operate, maintain, support, and instruct the system
Initiate studies and analysis for HFE design
Plan for the development of HSI, HFE and System Safety Program Plans by the contractor*
Identify HSI requirements and standards for input into requirements development, including PORD and ORD
Perform task analyses on legacy assets and platforms
Research lessons learned with regard to human performance issues and physiological limitations
Document preliminary approach to Performance Support & Training solution development
Forecast high dollar/long lead time training aid and facility requirements
Identify performance Support & Training requirements for inclusion in the ORD

*Commandant (CG-1B3) is to be contacted for format and content of the HSI, HFE, and System Safety Program Plans that need to be included in the contract. PMs are to coordinate with Commandant (CG-1B3) for a cost estimate to manage the development and implementation of the plans.

T&E Activities
Develop test strategy
Identify Operational Test Agent (OTA)
Initiate Developmental Test and Evaluation and Operational Test and Evaluation planning
Establish and charter the Test Management Oversight Team
Prepare the Test and Evaluation Master Plan
Support analytical evaluation, technology demonstration, and M&S activities, as needed for PORD and ORD development

Enterprise Architecture Activities
Conform to established DHS EAB strategic planning and IT guidance provided in EAB Governance Process Guide (Version 8), July 1, 2009.

c. Analyze/Select Phase Significant Accomplishments

Accomplishments
Completed Study Plan Review (SPR)
Obtained approval of AA Study Plan
Completed the Alternatives Analysis
Completed Solutions Engineering Review (SER)
Defined the requirements for the asset or system
Structured the project in fully funded discrete segments (if applicable)
Completed the Life Cycle Cost Estimate
Completed the Independent Cost Estimate
Completed PLCCE
Completed Independent Logistics Assessment (no later than 4 weeks prior to ADE-2A)
Satisfied Analyze/Select Phase Exit Criteria
Obtained CAE authorization to proceed to DHS ADE-2A/2B
Obtained ADA approval for the LRIP quantity (if applicable)
Obtained ADA approval of preferred alternative
Obtained ADA approval to enter Obtain Phase

d. Analyze/Select Phase Documentation

Documentation required for DHS ADE-2A/2B approval is presented in **Table 5 Analyze/Select Phase Documentation**.

Table 5 Analyze/Select Phase Documentation

Document	Task	Preparation	Approval
Manpower Estimate Report	Prepare	CG-1B3	CG-1
Human Systems Integration Plan	Prepare	PM/CG-1B3	CG-9
Alternatives Analysis Study Plan	Prepare	Study Director	CAO
Alternatives Analysis Report	Prepare	Study Director	CAE
Operational Requirements Document	Prepare	Sponsor's Rep	CAE/DHS ADA
Acquisition Plan	Prepare	PM/Contracting Officer	DHS OCPO ≥ \$300M HCA <\$300M
Project Management Plan	Prepare	PM	CG-9
Acquisition Program Baseline	Prepare	PM	CAE/DHS ADA
Integrated Logistics Support Plan	Prepare	PM	CG-01/DHS ADA
Configuration Management Plan	Prepare	PM	CG-93
Risk Management Plan	Prepare	PM	CG-93
Test and Evaluation Master Plan	Prepare	PM	CG-93/ DHS DOT&E

Document	Task	Preparation	Approval
Project Life Cycle Cost Estimate	Prepare	PM	CG-9
Project SELC Tailoring Plan	Prepare	PM	CG-93/DHS ADA
Affordability Assessment	Update	PM	CG-82

e. ADE-2A & ADE-2B Reviews and Expected Outcomes

Although shown in separate decision event listings below, a combined ADE-2A/2B will typically be conducted by the Coast Guard at initial entrance to the Obtain Phase. There is only one combined ADE-2A/2B for each project while there may be several follow-on ADE-2B events for individual discrete segment approvals.

CG ARB Review	Milestone	
CAE approve recommended alternative	ADE-2A	
Endorse proposed Obtain Phase Exit Criteria	ADE-2A	
CAE approve LRIP quantities	ADE-2A	
Authorize to proceed to DHS ADA	ADE-2A	
CAE approve project Discrete Segments		ADE-2B
Authorize to proceed to DHS ADA		ADE-2B

DHS ARB Review	Milestone	
ADA approve recommended alternative and authorize entry into Obtain Phase	ADE-2A	
ADA approve Low Rate Initial Production quantities, if applicable	ADE-2A	
ADA approve proposed Obtain Phase Exit Criteria and Acquisition Program Baseline	ADE-2A	
ADA approve project Discrete Segments		ADE-2B
ADA issues Acquisition Decision Memorandum	ADE-2A	ADE-2B

5. OBTAIN PHASE

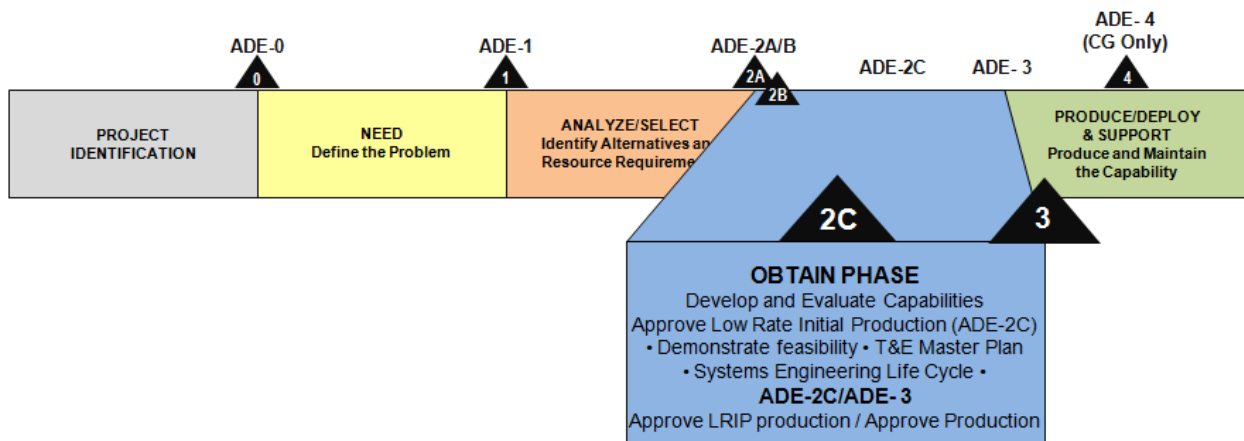


Figure 7 Obtain Phase

The Obtain Phase, as shown in **Figure 7 Obtain Phase**, is focused on demonstrating feasibility of the preferred alternative and refining the solution prior to a full production (hardware) commitment or deployment (software) decision. The purpose of the Obtain Phase is to expand the high-level requirements of the Analyze/Select Phase into specific detailed requirements producing a complete detailed specification of the capability. All requirements defined in the ORD must be satisfied by this specification. Finally, the initial capability or first article is 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 any required infrastructure, logistics support, and refines the concept of operations and other important elements of the overall capability. A technology demonstrator, when needed, may be developed to test that the design meets the capability specifications and requirements.

Depending upon project 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 production approval). Following ADE-2B approval the project implements the requisite SELC activities, conducts developmental and operational testing, and matures project management documentation to support the ADE-3 decision to proceed into the Produce/Deploy and Support Phase.

a. Obtain Phase Objectives

Obtain activities include developing the first article for the completion of Developmental Test and Evaluation (DT&E). OT&E is conducted on production representative unit(s) to confirm that the system meets requirements as described in the MNS and the ORD. An independent Logistics Readiness Review (LRR) is conducted to ensure all aspects of logistics support are in place or are planned to be in place and funded, and a satisfactory initial sustained logistics support capability will be fielded. The LRR is to be accomplished six months prior to delivery of the first LRIP system (if applicable) and developed or updated six months prior to ADE-3.

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, and cost effective product design
- Demonstrating the manufacturing or production process
- Demonstrating that the product capabilities meet contract specifications, minimum acceptable operational performance requirements, system security requirements, and satisfy the mission need
- Determining whether the product design is mature enough to commit to full production and deployment/fielding

Projects with Discrete Segments: As described in the Analyze/Select Phase, the ADE-2B decision approves the expansion of the APB to include additional segments of capability laying out the cost, schedule and performance parameters for each discrete segment within the project. If applicable, the project's Initial Operational Capability (IOC) and Final Operational Capability (FOC) dates will be established at ADE-2A (in the APB schedule). While there will typically be one ADE-2A review for each project as part of a combined ADE-2A/2B decision event, there may be multiple ADE-2B segment reviews with subsequent ADE-2C and/or ADE-3 reviews for each segment depending on the discrete segment structure proposed for the project.

Low Rate Initial Production (LRIP): LRIP units required for OT&E and to maintain a minimum production capability are engineered and produced during this phase. As described in the Analyze/Select Phase, the quantity of LRIP units is approved at ADE-2A/2B 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 CG CAO. ADE-2C will be scheduled to coincide with completion of the CDR and PRR to ensure adequate system maturity and production readiness has been achieved and all significant risks are identified and adjudicated. Along with the ADE-2C pre-brief to the EOC, the project may want to present the results of the CDR/PRR and an updated AP to minimize the number of briefs to the EOC. At this time, the CDR/PRR Completion Letters will be signed at the EOC-level. The approved quantity for LRIP may not be exceeded unless authorized by the ADA.

The Obtain Phase also includes preparation of the Project Management Data Sheet (PMDS) for submission to CG-8 describing the project funding, types of assets, asset delivery schedule, acceptance criteria and valuation criteria. Guidance on the PMDS is located in the Financial Resources Management Manual COMDTINST M7100.3 (series). The PMDS form is available at FINCEN Resources for Construction In Progress/PMDS Forms: <http://intranet/cap1/>. Questions on PMDS procedures can be sent via e-mail to: HQS-PF-CIP-Projects@uscg.mil

Coast Guard Authorization Act (FY11): Safety concerns identified during DT or OT shall be communicated as soon as practicable (NLT 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) 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.

b. Obtain Phase Activities

Sponsor Representative Activities
Revalidate the mission need and the operational requirements
Initiate development of the requirements for sustainment resources, both funding and personnel
Develop the sustainment Resource Proposal, if appropriate
Develop Deployment Plan
Project Management Activities
Determine production quantity or develop cost and schedule milestones for useable segments
Revalidate the APB, and update Affordability Assessment to ensure that the mission need remains current, the project 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)
Coordinate with the Sponsor to initiate deployment/fielding planning and assist in the preparation of the Deployment Plan by the Sponsor
Prepare the Resource Proposal and the necessary budget documentation including updated Exhibit 300 to support the project 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 Acquisition Strategy/Acquisition Plan
Update the PLCCE
Update the TEMP
Ensure compliance with all internal CG IT requirements, in collaboration with Commandant (CG-6)
Meet Security and Privacy requirements
Meet Government Paperwork Elimination Act requirements
Systems Engineering Life Cycle Activities
Implement the Project SELC Tailoring Plan
Conduct evaluations, assessments, and analyses of the performance characteristics and recommend solutions to performance problems
Finalize planned technology insertions
Ensure NEPA analysis is conducted in accordance with National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1D
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

Systems Engineering Life Cycle Activities
Implement project configuration management program through the Configuration Control Board
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 Project Planning Review (PPR)
Conduct System Definition Review (SDR)
Monitor the Configuration Management process by working with the project 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)
Conduct Critical Design Review (CDR)
Evaluate whether the capability is effectively meeting the functional requirements, is operating efficiently, and is effectively managed
Complete production design specifications
Conduct Integration Readiness Review (IRR)
Conduct Production Readiness Review (PRR)
Conduct Operational Readiness Review (ORR)
Logistics Management Activities
Update the logistics support requirements in the ILSP for the selected alternative
Design the logistics support system
Continue the supportability analysis (as needed)
Determine maintenance levels consistent with maintenance concept through Level of Repair Analysis (LORA)
Conduct Functional Configuration Audit
Finalize supply support requirements (provisioning)
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 and availability of materials and manufacturing sources
Perform fitting out activities
Update and finalize supportability requirements
Provide logistics support for Operational Test & Evaluation
Conduct Physical Configuration Audit (PCA)
Identify contractor logistics support required for initial deployment
Conduct Logistics Readiness Review (LRR)
Human Systems Integration Activities
Revalidate the HSI requirements and plans

Human Systems Integration Activities
Ensure the requirement for the HSI, HFE and System Safety Program Plans are incorporated in the contract*
Ensure implementation and execution of the HSI, HFE and System Safety Program Plans
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
Perform simulation and prototyping
Develop Performance Support & Training Strategic Needs Assessment (SNA), including Analysis and Evaluation Plans
Determine and evaluate cognitive and physical workload
Assess human and system performance
Support test and evaluation for validation and verification of human performance and safety requirements
Develop and execute initial and interim performance support and training solutions
Procure long lead-time, high-dollar training aids and facilities
Validate initial and interim training requirements solutions

*Commandant (CG-1B3) is to be contacted for format and content of the HSI, HFE, and System Safety Program Plans that need to be included in the contract. Commandant (CG-1B3) is to be a member of the project's RFP development team.

T&E Activities
Determine if the capability meets established ORD performance thresholds
Develop detailed test plans and procedures
Deliver engineering development model(s), prototype(s), first article and/or LRIP units for testing
Conduct Security Test & Evaluation, 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 (AT) or First Article Test, if applicable
Complete Developmental Test & Evaluation and subsequent Report
Conduct Operational Test Readiness Review (OTRR) to confirm readiness for OT&E
Conduct Operational Test & Evaluation, including testing, modeling (if appropriate), evaluating, and verifying the support system.
Provide Developmental Test & Evaluation and Operational Test & Evaluation 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 (if applicable)
Ensure compliance with all internal CG IT requirements, in collaboration with Commandant (CG-6)
Meet Security and Privacy requirements
Meet Government Paperwork Elimination Act requirements

Enterprise Architecture (if applicable)
Conform with established DHS EAB strategic planning and IT guidance*
Conform with established DHS EAB strategic planning and IT guidance

*EAB Governance Process Guide (Version 8), July 1, 2009

c. Obtain Phase Significant Accomplishments

Accomplishments
PPR, PDR, CDR, IRR, PRR, OTRR and ORR completed
Completed ADE-2C for LRIP (if needed)
Satisfied Obtain Phase Exit Criteria
Completed Logistics Readiness Review
Logistics system design is identified
Completed DHS EAB Review (IT Only)
Verified the adequacy of the manufacturing or production process
Confirmed the stability and producibility of the product
Completed DT&E – verify readiness for IOT&E
Completed IOT&E – results acceptable to the Sponsor
Established required production quantity
Achieved Initial Operational Capability (if applicable)
Satisfied asset capitalization requirements for delivered assets

d. Obtain Phase Documentation

Documentation required for DHS ADE-3 approval is presented in **Table 6 Obtain Phase Documentation**.

Table 6 Obtain Phase Documentation

Document	Task	Preparation	Approval
Developmental Test Plan	Prepare	PM	PgM
Developmental Test Report	Prepare	PM	PgM
Operational Test Plan	Prepare	OTA	DOT&E
Operational Test Report	Prepare	OTA	OTA
Affordability Assessment	Update	PM	CG-82
Integrated Logistics Support Plan	Update (As Req)	PM	CG-01/DHS ADA
Project Life Cycle Cost Estimate	Update (As Req)	PM	CG-9
Deployment Plan	Prepare	Sponsor's Rep	Sponsor

e. ADE-2C Reviews and Expected Outcomes

CG ARB ADE-2C Review
CAE endorses the revalidated/updated APB (if needed)
Approves readiness for ADE-2C reviews by ADA

DHS ARB ADE-2C Review

ADA authorizes Low Rate Initial Production

ADA issues Acquisition Decision Memorandum

f. ADE-3 Reviews and Expected Outcomes

CG ARB ADE-3 Review

Approves readiness for ADE-3 reviews by ADA

DHS ARB ADE-3 Review

ADA authorizes entry into the Produce/Deploy and Support Phase

ADA issues Acquisition Decision Memorandum

6. PRODUCE/DEPLOY AND SUPPORT PHASES

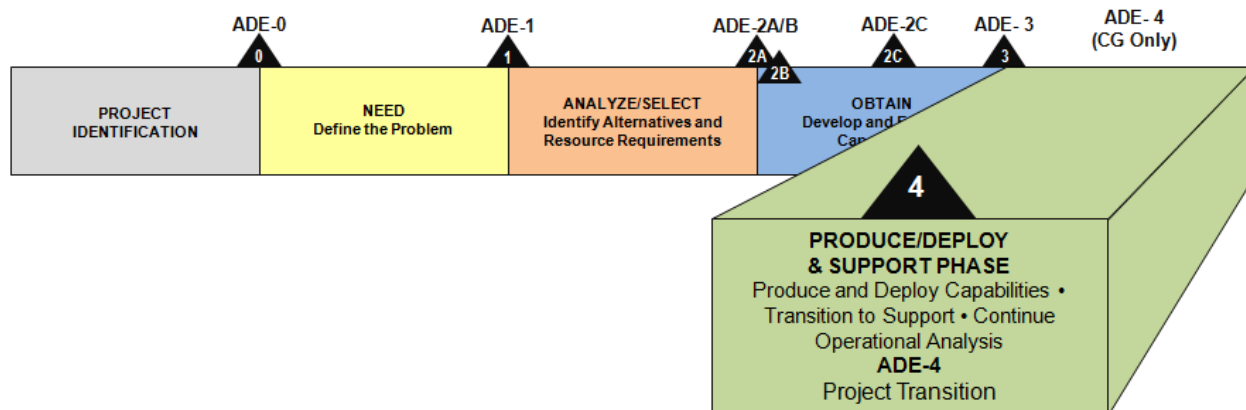


Figure 8 Produce/Deploy and Support Phase

The Produce/Deploy and Support Phase, as shown in **Figure 8 Produce/Deploy and Support Phase**, follows project approval at ADE-3 and encompasses two primary functions – Produce/Deploy (P/D) and Support. 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 materials, 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 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 FOC.

During the Produce/Deploy and Support Phase, the Coast Guard unique ADE-4 Project Transition Review formally completes the acquisition program's production and deployment and marks the formal transition to steady state operations and support. Following ADE-4, the acquisition project is completed and all responsibilities for operations and support are transitioned to the sustainment community. All active major acquisition projects brief the CG ARB on project performance, annually. The last annual CG ARB Review will be used for the ADE-4 Project Transition Review. The PM is expected to brief the details of the Project Transition Plan (PTP) and the Program/Support sponsor briefs the details of the updated ILSP as part of the official transition of project management responsibility to the operating and support Programs. The PM is responsible for ensuring the PTP is developed and approved prior to the ADE-4 Project Transition Review. Commandant (CG-924) is responsible for the drafting of the Project Responsibilities Transfer Letter (PRTL) for the ADE-4 event. The template for the PRTL is in the handbook section of this manual under section 22.4. ADE-4 coincides with the change in leadership of the project matrix/IPT team.

a. Produce/Deploy Phase Objectives

The primary objective of P/D is to deliver production units. Full-production contract and award prior to ADE-3 is not authorized unless a waiver unless a waiver has been granted by the CAO. 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:

- Design and technology mature enough for full production
- Establish 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 unrestricted operations and complete the hand-off to the operational commander

A Post Implementation Review (PIR) shall be conducted approximately 12 months after IOC to verify that the delivered capability met the project'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 on each asset for all future operational analyses.

An independent LRR will be accomplished six months prior to deployment of the first full rate production system. A complete LRR may be required or an update of status from the LRR previously accomplished prior to ADE-3 may suffice.

b. Produce/Deploy Phase Activities

Project Management Activities
Execute the production contract(s)
Ensure the delivered product meets operational requirements and meets cost and schedule baselines in Acquisition Program Baseline
Prepare the Project Transition Plan for ADE-4
Assist and support the development of the sustainment Resource Proposal (RP)
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)
Conduct an annual self assessment of the Information Security controls in accordance with NIST 800-53 (IT only)
Conduct a documented exercise of the system Contingency Plan (IT only)
Sponsors Representative's Activities

Sponsors Representative's Activities
Develop the requirements for sustainment resources, both money and personnel
Develop the sustainment Resource Proposal
Conduct Post Implementation Review
Systems Engineering Life Cycle Activities
Verify and validate production configuration
Manage product configuration in accordance with the Product Baseline
Conduct Physical Configuration Audit
Revalidate Environmental Impact Assessment and update documentation as necessary
Logistics Management Activities
Establish interim logistics support, if required
Evaluate the readiness level for all logistic 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 logistic support organization
Prepare for the hand-off of the operational system
Complete LRR
Human Systems Integration Activities
Develop Performance Support & Training Plan for design, development and execution of sustainment solutions
Validate manpower, performance support and training, and habitability requirements meet system needs to operate, maintain, support and instruct the system
Review and recommend engineering changes for HSI issues
Provide usability results and feedback
T&E Activities
Conduct acceptance tests and trials upon delivery of each asset
Conduct Follow-on OT&E, as necessary
Enterprise Architecture Activities (if applicable)
Complete Part II (IT projects) of the Exhibit 300 in addition to the Non-IT sections
Conform with established DHS EAB strategic planning and IT guidance provided in EAB Governance Process Guide (Version 8), July 1,2009,

c. Produce/Deploy Phase Significant Accomplishments

Significant Accomplishments
ADE-4 Project Transition Exit Criteria Satisfied
Delivered production assets in useful segments of capability
Conducted Logistics Readiness Review (if required)
Achieved Initial Operational Capability (if not achieved in the Obtain Phase)
Executed maintenance and support plans
Post Implementation Review completed

Significant Accomplishments
Achieved Full Operational Capability
Satisfied asset capitalization requirements for delivered assets

d. Produce/Deploy Phase Documentation

Documentation required to be developed and updated during this phase are presented in **Table 7 Produce/Deploy Phase Documentation**.

Table 7 Produce/Deploy Phase Documentation

Document	Task	Preparation	Approval
Post Implementation Review	Prepare	Sponsor's Rep	Sponsor
Project Transition Plan	Prepare	PM	CG-93
Manpower Requirements Analysis (MRA)	Prepare	CG-1B3	CG-1
Integrated Logistics Support Plan	Update (As Req)	PM	CG-01

e. ADE-4 Review and Expected Outcomes

The Coast Guard unique ADE-4 (Project Transition Review) will be accomplished to coincide with the last annual Coast Guard project review.

CG ARB ADE-4 Project Transition Review
Project Manager and Support Program Manager brief the Project Transition Plan and Integrated Logistics Support Plan

f. Support Phase 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. OAs will be conducted annually to determine the asset/system mission effectiveness, the optimal level of support, or end of useful life, if the asset is no longer needed. When the asset is no longer needed by the operating program, it is removed from the operational inventory and disposed of in accordance with applicable guidance.

Operational Analysis (as described and required in the DHS Operational Analysis Guidance Manual) is the assessment tool that will be used to measure the performance and cost of assets or systems against an established baseline. An operational analysis should demonstrate a thorough examination of the need for the asset or system, the performance being achieved by the asset or system, the advisability of continuing the asset or system, and alternative methods of achieving the same asset or system results. As such, OA may indicate that a current asset is not meeting the intended needs of the Coast Guard and therefore needs to be redesigned, modified, or replaced.

Sponsors are required to perform the annual OA on each major acquisition. OA results

for major IT programs (Level 1 and Level 2) are to be reported in the Exhibit 300 and will be reviewed by DHS. All OAs will be provided to CG-DCO-81.

g. Support Phase Activities

Project Management Activities
The Project Transition Plan is executed and management responsibilities are transferred to the applicable Operations and Support Program Managers
The acquisition project continues to manage the resolution of warranty claims until the end of the warranty period
Operating Expense (OE) funding for operations and maintenance is updated
Contract closeout is accomplished by the contracting activity
Sponsor Activities
Conduct annual Operational Analysis (OA)
Systems Engineering Activities
The Platform/Facility Manager implements the Configuration Management program for sustainment
When the functional baseline is being assessed for changes, the CCB chair will be CG-7; otherwise, when the product baseline is being assessed, the CCB chair will be the Platform Product Line Manager
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 Logistics Support (ILS) strategies and planning, maintains and improves the processes contained in the ILSP, implements Diminishing Manufacturing Sources and Materiel Shortages management, and applies and replenishes the ILS resources that have been acquired to support the new system in sustained operation
Human Systems Integration Activities
Evaluate performance support and training 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
Provide usability results and feedback
Collect human performance and safety lessons learned

h. Support Phase Significant Accomplishments

Significant Accomplishments
Provided sustained support of operational system
Conducted periodic review to validate manpower and training requirements meet system needs to operate, maintain, support, and instruct the system
Conducted Post Implementation Review
Conducted Project Transition Review (ADE-4)

Significant Accomplishments
Conducted annual Operational Analyses on fielded system

i. Support Phase Documentation

Documentation required to be developed and updated during this phase are presented in **Table 8 Support Phase Documentation**.

Table 8 Support Phase Documentation

Document	Task	Preparation	Review
Operational Analysis	Annual	Sponsor	DHS/CG

j. Asset or System Removal from Service and Disposal

After transition, the Sponsor will assess utility and serviceability as part of the annual OA process. Based on the results of the OA or based upon a previously approved retirement schedule, assets or systems will be declared at end of useful service life and removed from service. General disposal instructions are provided in the Coast Guard Property Management Manual, COMDTINST 4500.5 series. Special disposal requirements must be followed in the case of environmental hazards, small arms and weapons, or export restricted and sensitive security assets including cryptographic equipment.

7. 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 projects; however, it is important to call attention to planning and the associated documentation as the primary focus before ADE-2A/2B. PMs are encouraged to use assigned staff, Integrated Product Teams and Acquisition Support organizations to the maximum extent to integrate these multiple, parallel planning efforts into a cohesive and well organized project. This comprehensive planning is a foundation for success for both the government and contractors during execution of the Obtain Phase and later Produce/Deploy & Support Phase.

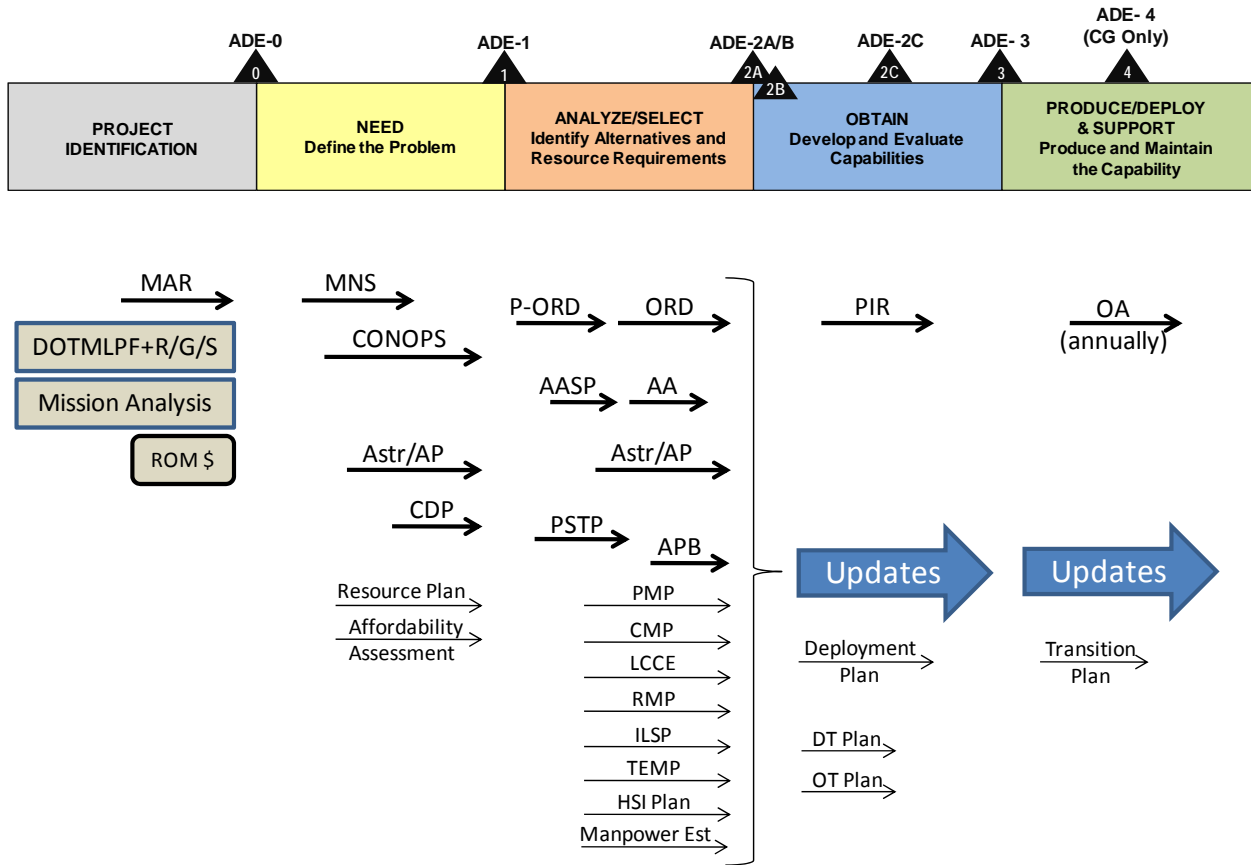


Figure 9 Acquisition Life Cycle Planning Summary

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Chapter 3: Systems Engineering Life Cycle

1. 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 provides the project manager 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.

2. SYSTEMS ENGINEERING LIFE CYCLE FRAMEWORK

The Systems Engineering Life Cycle (SELC) is a systems engineering framework for enabling 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 projects. 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 projects is mandated by the Department of Homeland Security, DHS Directive 102-01 and is applicable to all Capital Assets as well as Enterprise Services projects whose purpose is to deliver a capability. This includes Non-IT and IT projects. The process for Enterprise Services is tailored and much abbreviated from that required for Capital Assets.

DHS Instruction/Handbook, 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 project's success. The stages and associated acquisition phases are shown in **Figure 10 Major System Acquisition Life Cycle with SELC Process**.

Figure 11 Systems Engineering Life Cycle Stages provides a brief explanation of each stage.

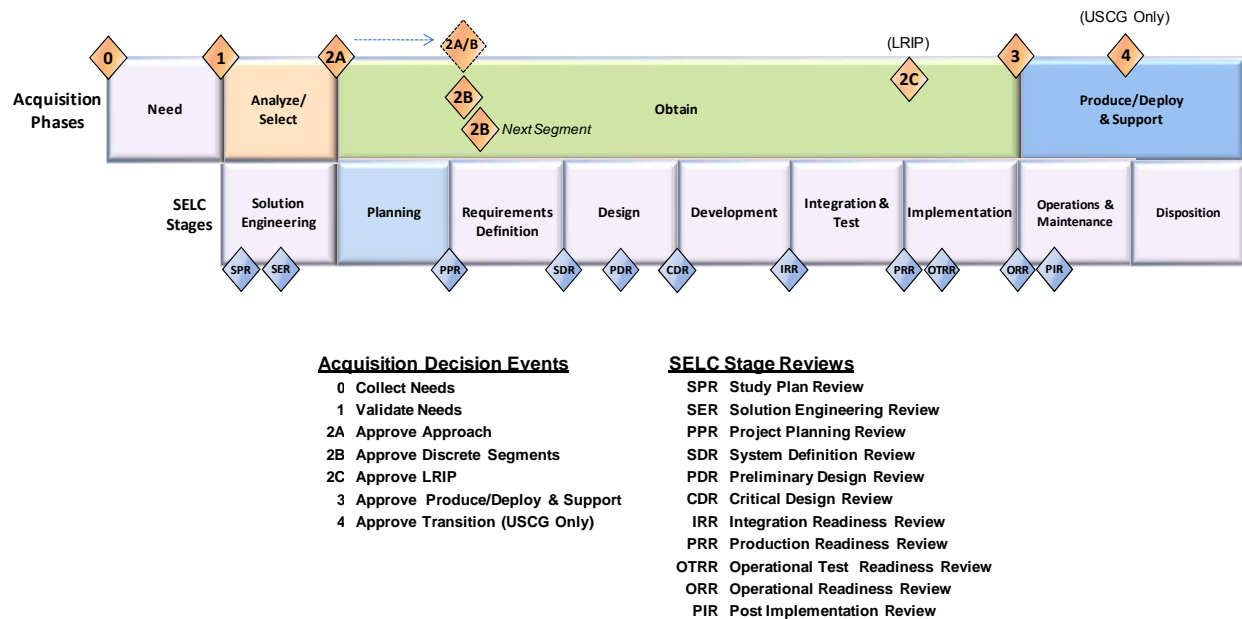


Figure 10 Major System Acquisition Life Cycle with SELC Process

The SELC provides flexibility by supporting tailoring based on the unique characteristics of a project (e.g., size, scope, complexity, and risk) documented in the Project's SELC Tailoring Plan (PSTP). Project Managers are responsible for tailoring the SELC process for the project'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), etc.) are used to inform Coast Guard and Department 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 latest SELC document templates can be obtained on the DHS Online at:

<http://dhsconnect.dhs.gov/org/comp/mgmt/cio/ebmo/Pages/SELC.aspx>.

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 more the focus of oversight than format and length of documents. Projects are encouraged to economize documentation to best represent their knowledge gained from their processes. The objective of tailoring is to effectively apply the SELC framework to a specific acquisition project that balances 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:

- a. Combining SELC stages and/or reviews (i.e., SER and PPR results brief combined with ADE-2A/2B EOC pre-brief);
- b. Combining SELC artifacts, stages, reviews;
- c. Scaling the size and content of SELC artifacts;
- d. Incorporating additional Systems Engineering (SE) processes, activities and other artifacts not required by the SELC guidance but needed for a specific project/discrete segment/stage;

- e. Including any use of technology demonstrators, with objectives and how they will support the project;
- f. Substituting products of similar content for SELC artifacts; and
- g. Deleting SELC artifacts.

Note: Some artifacts identified in the SELC guidance are required by DHS policy, guidance, or other governing authorities and may not be deleted in the PSTP. Any tailoring of activities and artifacts should be coordinated with the governing authorities and points of contact.

3. 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 project to continue into the next SELC stage as identified in the PSTP.

Figure 12 SELC Stage Approval Authorities identifies the Coast Guard Approval Authority for each SELC Stage.

Figure 13 SELC Stage Activities summarizes the actions required for each stage review. SELC reviews are led by the acquisition program/project managers and include the Technical Authorities, sponsor and participation from DHS level organizations (e.g., APMD, CIO-EBMO, Test and Evaluation, DHS IT Portfolio Managers). The Program/Project Manager is responsible for arranging, coordinating, leading the SELC Reviews. The PM, Technical Authorities and Operational Authority (Sponsor) will rely on the appropriate experts (e.g., EA, testing, security, infrastructure, budget, operators) to evaluate the completion of activities and compliance with exit criteria. Once all exit criteria have been satisfactorily met and the project is ready to proceed to the next state, the Approval Authority will sign a SELC Review Completion Letter signifying completion of exit criteria and permission to begin the next SELC stage. In the specialized case of non-IT projects obtaining IT systems (e.g., vehicle projects that include communications gear) the Technical Authorities must include the Chief Information Officer (CIO) in the review process. Within 30 days of completing the SELC Reviews, a scanned electronic copy of the signed SELC Review Completion Letter must be provided to DHS Acquisition Program Management Division (APMD) using the Periodic.Reporting@dhs.gov mailbox.

SELC Review Exit Criteria: Each SELC review contains a minimal set of exit criteria that must be satisfied for a project to proceed. Exit criteria are presented in question format and categorized by domain (e.g., project management, enterprise architecture, etc.) 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 project (see tailoring guidance shown in previous section). The Component Acquisition Executive (CAE), PM, Technical Authorities, Operational Authority may provide additional criteria based on the scope/risk of the project or results from previous stages. It is critical to understand that the determination of project readiness to proceed is made by satisfactory compliance with the *content of the exit criteria*, *NOT simply by the evidence of documents produced*. Project Managers should review the exit criteria at the start of each SELC stage and plan the stage activities accordingly.

SELC Stage Approval Process: The results of the System Engineering Review (SER), Production Readiness Review (PRR), and Operational Readiness Review (ORR) SELC Stage review may be presented to the EOC at the same time as the CG ARB pre-brief for an ADE event since they coincide. Endorsement of the SELC Review Completion Letter by the Approving Authority signifies approval. Copies of the SELC Review Completion Letter and attachments are to be provided to Commandant (CG-924) for further distribution to DHS APMD as noted above. All SELC reviews require a completion letter. For example, although the Preliminary Design Review (PDR) does not require a Stage Review, a completion letter is required to document the completion of the PDR. This letter and enclosures will be routed to the Approval Authority for endorsement.

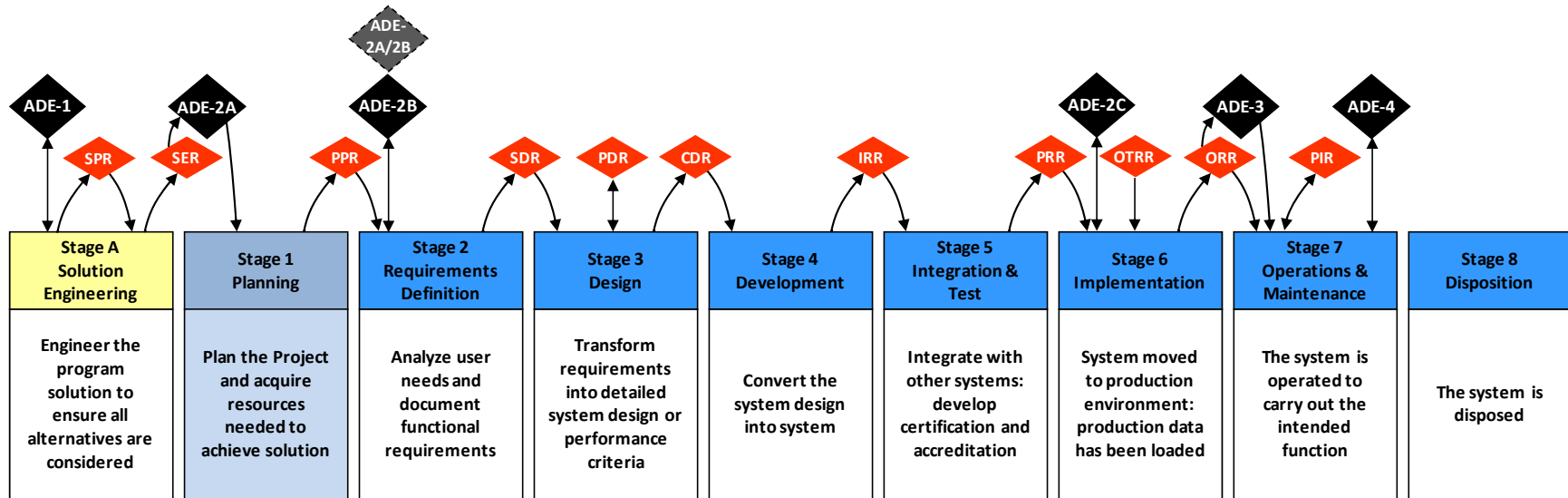


Figure 11 Systems Engineering Life Cycle Stages

Stage Review		SPR	SER		PPR	ADE 2A/2B	SDR	PDR	CDR	IRR	PRR		OTRR	ORR		PIR	
Capital Investment IT	ADA	CG CIO	CG CIO	ADA	CG CIO	ADA	CG CIO	CG CIO	CG CIO	CG CIO	CG CIO	ADA	CG CIO	CG CIO	ADA	CG CIO & Sponsor ¹	ADA
Capital Investment Non-IT ¹	ADE 1	APMD or DHS CIO	CG-9 ²	ADE 2A	CG-93 ²	ADE 2B	CG-93Y ²	CG-93Y ²	CG-9 ²	CG-926 ²	CG-93 ²	ADE 2C	CG-926 ²	CG-926 ²	ADE 3	Sponsor ²	ADE 4

1. Co-Chair with Sponsor
 2. Review and recommendation provided to decision authority by appropriate Systems Engineering / Technical Review Team
 3. Enterprise Service Stage Review Process

Figure 12 SELC Stage Approval Authorities

SELC Review		Stage Activity
ADE 1	SPR	Review the initial study plan assumptions and the scope and method of analysis.
ADE 2A	SER	Review the results of the AoA/AA and recommended solution(s); evaluate the activities /documents of the Solution Engineering stage.
ADE 2A/2B	PPR	Ensures that the project, resources, activities, schedules and tools are allocated and baselined.
ADE 2B	SDR	Ensures that the functional and interface requirements are identified, measurable, testable, and traceable to a source.
	PDR	Assesses the system's conceptual design to ensure that the planned technical approach will meet the requirements.
	CDR	Assesses/validates that the design is complete and accurate in it's specification and can produce the results defined in the baseline requirements.
	IRR	Assesses system readiness to begin system level integration and testing based on the results of subsystem or continuous integration tests. Assess the test infrastructure and planning adequacy.
ADE 2C	PRR	Assesses how well the system developed satisfies the needs. Determines if the design is ready for production, the readiness of the producer manufacturing processes and that the production capability forms a satisfactory basis for proceeding into production.
	OTRR	Assesses the project's readiness to enter Operational Test and Evaluation.
ADE 3	ORR	Assesses whether the system, as implemented, meets mission need and is ready to be moved into production and users, operators, and maintenance personnel have been adequately trained.
ADE 4	PIR	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 future acquisition project management practices.

Figure 13 SELC Stage Activities

4. PROJECT SELC TAILORING PLAN

The Project 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, etc.), activities, artifacts, and entrance/exit criteria that best fit the project's complexity. Appendix A of this Manual provides the template and additional instructions for the PSTP.

Note: The CDP will function as the PSTP in the Analyze/Select Phase until the PSTP is developed.

The Project SELC Tailoring Plan is reviewed and endorsed by the Technical Authority (TA) (typically the CIO for IT, and Commandant (CG-4) for Non IT) and sponsor. This endorsement represents that the special needs of the Component have been addressed, and that the overall approach is technically sound and within the abilities of the Component to execute. This endorsement signifies that internal consensus has been achieved within the component regarding the process and documents to be developed for each project.

Once cleared by the Technical Authority, the Project SELC Tailoring Plan is then signed by Commandant (CG-93) as approval authority. This signature represents that the Component supports the acquisition and SELC tailoring, and is able to defend the tailoring justifications in terms of overall program/project risk. The PSTP is normally submitted by the PM (through Commandant (CG-924)) for Department approval through the DHS APMD and the DHS CIO prior to ADE-2A.

5. RESEARCH, DEVELOPMENT, TEST AND EVALUATION PROGRAM

The Coast Guard Research, Development, Test and Evaluation (RDT&E) Program 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 (CG-926) can assist Project Managers and Program Managers 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
- Business Case Development
- User Wants & Needs Generation
- Requirements Validation
- Cost Analysis
- Modeling & Simulation
- Technology Demonstrations

- Field Testing
- Trade-off Studies
- Human Factors Analysis
- Alternatives Analysis
- Technical Readiness Assessment
- Risk Assessment

6. MODELING AND SIMULATION

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 (process or flow charts) or mathematical (e.g., a mathematical model of a specific system created to conduct computer simulations).

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 identical tests to a model or real world system.

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. Project Managers and Sponsors are to identify and fund necessary M&S resources in the early phases of each project 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 that is available to Project Managers and Sponsors. The RDT&E program maintains several organic campaign models, mission/engagement models, cost models, and specialty models and has the capability to develop and implement new M&S tools for planning and project execution. The RDT&E M&S work is credible and appropriate through ongoing Verification, Validation, and Accreditation (VV&A) procedures.

Documentation: The role of M&S in the engineering process should be documented in the PSTP. Of particular importance, VV&A must be accomplished to ensure that models and simulations are effectively applied in support of each project. 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.

7. 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 (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.

Project Managers 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 project 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 either 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 Research and Development (R&D) efforts that can mature into project capabilities.

Type 1 Technology Demonstrators are used as part of a project 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 project's Mission Need Statement. 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 project 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 project'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 as part of a project to support production/deployment decisions for the Produce/Deploy and Support phase. Type 3 demonstrators are conducted in the intended operational environment using production-representative articles and the results of testing may inform Operational Test (OT) Reports. Type 3 Demonstrations are typically conducted after OT or may be part of operational testing on an exception basis. 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 may be used outside of operational testing to gain knowledge for the project necessary to support a production/deployment. Type 3 Demonstrators require an abbreviated production decision 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 or S2 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 project 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 Capability Development Plan and later in the PSTP. Sponsors, in coordination with the PgM (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 project.

Chapter 4: Requirements Generation

Note: All project 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 Appendix A of this Manual for details on the concurrent clearance process and Part 2 for templates outlining formats, content and approvals.

1. INTRODUCTION

The ability for the Coast Guard 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.

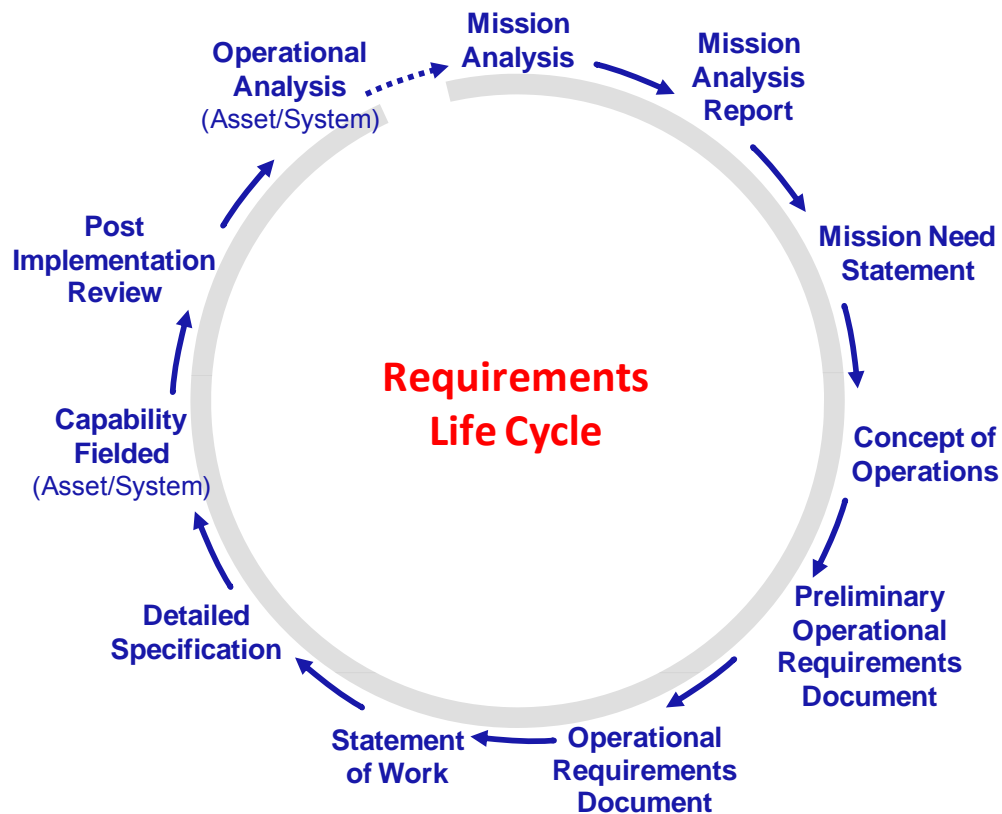


Figure 14 Requirements Life Cycle

- **Mission Analysis (MA)** is the periodic assessment of the Coast Guard's 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 want 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 annual Operational Analysis (OA), conducted for each asset, will be included as supporting information for the MA.

- **Mission Analysis Report (MAR)** documents the results of the mission analysis. It documents materiel and non-materiel solutions that can be used to close the mission capability gaps identified in the MA. If the identified mission gap cannot be closed by any other means (i.e., force mix, training, policy, etc.) then the MAR will document the need for a materiel solution. A materiel solution means that a new or upgraded physical asset (i.e., cutter, aircraft) must be added to the Coast Guard's inventory in order to fill the capability gap. Materiel solutions should be presented as a range of potential solutions.
- **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 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 acquisition that will fill the gap. An approved MNS is required at ADE-1 and marks the formal transition out of the Need Phase.
- **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, and other user entities within the Coast Guard on the operational concept of a proposed system.
- **Preliminary Operational Requirements Document (PORD)** is the initial statement of requirements and incorporates the vision set out in the CONOPS assigning desired operational performance expectations. The PORD is derived from the MNS, CONOPS, and early sponsor analysis. The PORD expresses the requirements statement and priorities needed to guide further analysis for the asset or system that is to be acquired. The PORD is a required document for every major systems acquisition unless a waiver is approved by Commandant (CG-771), per Chapter 1, Para 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 acquired proposed concept or system. It describes an operational system in terms of a range of acceptable and desirable standards of performance. 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 project. Once approved, the ORD serves

as a “contract” between the Sponsor and the PM. An approved ORD is required at ADE-2A/2B and revalidated for ADE-3 to support the production and deployment decision by the ADA.

- **Specifications or Statement of Work (SOW)** is used to translate the requirements stated in the ORD into a level of detail from which industry (contractors) can develop a reasonably priced proposal. More information on SOW preparation can be found in *MIL-HDBK 245-D, DoD Handbook for Preparation of Statement of Work (SOW), April 1996*.
- **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 projects 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 project management practices.
- **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 done by the sponsor on an annual basis. The results of the OA provide an input into the MA. A PIR, conducted during the Produce/Deploy and Support phase, also 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.

OAs are to be conducted on an annual basis by the Sponsor for all Level 1, 2, and 3 IT acquisitions and Level 1 and 2 non-IT acquisitions. Results of OAs for all IT projects are reported annually to DHS using the DHS *Operational Analysis Template* provided in the *DHS Operational Analysis Guidance*. Non-IT projects report results to Commandant (CG-5) with copy to Commandant (CG-8) via the Exhibit 300 submittals. The Sponsor is responsible for preparing 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 SOW is 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.

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

2. MISSION ANALYSIS

Purpose: Mission Analysis (MA) is a continuous, iterative analysis of assigned mission responsibilities to identify gaps in current and projected Coast Guard mission capabilities. The purpose of mission analysis is to assess the ability of the Coast Guard 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 Mission Analyses.

Discussion: DHS and Coast Guard Strategic Goals and Coast Guard Missions are the starting points that are used to establish the Coast Guard sphere of responsibility for which the Coast Guard conducts ongoing mission analyses. DHS annually issues its Integrated Planning Guidance (IPG) as part of the Capital Planning and Investment Control (CPIC) process (See Chapter 6) to provide a focused statement of DHS priorities given the current and projected view of world and national state of affairs. Mission Analysis should also align with the DHS Strategic Plan and Quadrennial Homeland Security Review report.

*The Coast Guard has the following Non-Homeland Security and Homeland Security Missions:

Non-Homeland Security Missions – Search and Rescue; Marine Safety; Aids to Navigation; Ice Operations; Marine Environmental Protection; and Living Marine Resources.

Homeland Security Missions: 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 mission analysis. 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). The shift to a capability-based requirement system is important to meet the needs of the DHS Acquisition Review Process (ARP) in identifying, assessing, and prioritizing CG/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 Coast Guard's DOTMLPF+R/G/S. If changes can be made within the Coast Guard'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 Coast Guard Project Identification Review (ADE-0) through the MAR as candidates to proceed to a Coast Guard major systems acquisition if the preliminary total life cycle cost estimate exceeds DHS thresholds for Level 1 and 2 major acquisitions. A technology assessment is to be accomplished concurrent with the MA. Promising technologies are to be identified that may support the materiel solutions of the MAR.

At ADE-0, the results of the mission analysis are to be presented (including the results of the DOTMLPF+R/G/S analysis and any ongoing Research and Development/Science and Technology initiatives). Recommended projects are identified and presented (with the capability gaps they will close) by the mission program manager; and an initial affordability determination and technology assessment is presented. Upon successful completion of ADE-0, the ADA will authorize entry into the Need Phase and direct development of a MNS, initial Exhibit 300 and a CONOPS.

The Project Identification Phase is used by the mission manager to perform an ongoing mission analysis to identify shortcomings in Coast Guard capabilities as shown in **Figure 15 Mission Analysis Process**.

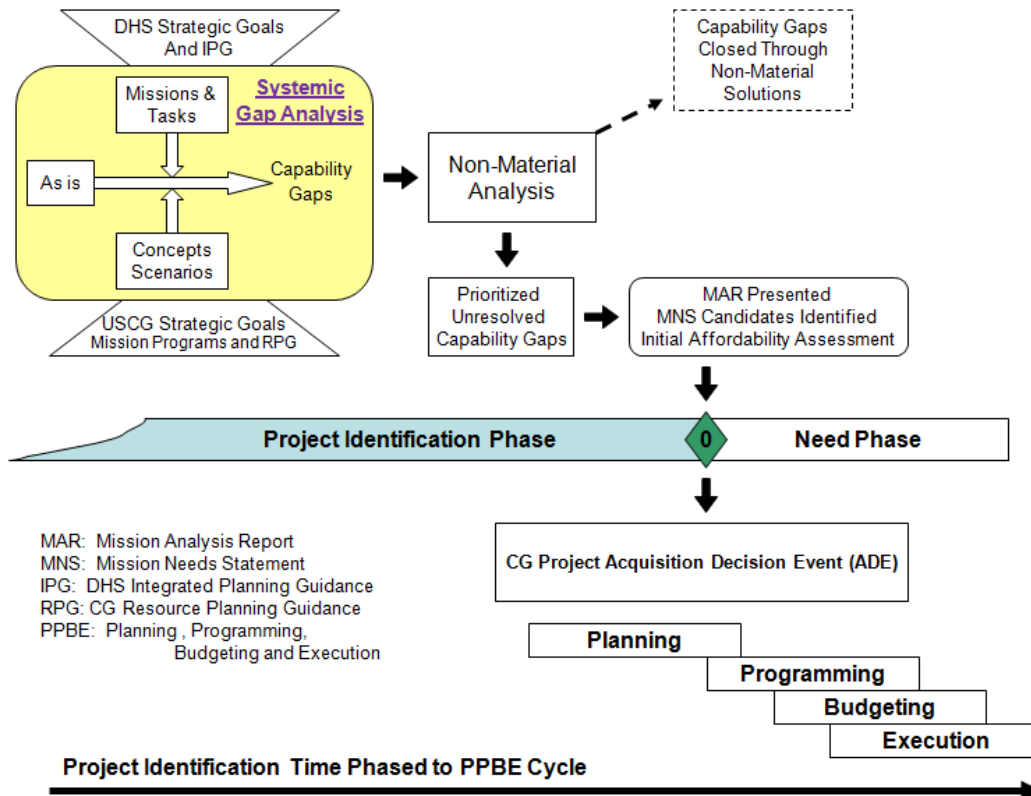


Figure 15 Mission Analysis Process

Roles and Responsibilities

Commandant (CG-5) and Sponsor Responsibilities
CG-5 is responsible for conducting the Mission Analysis with support from Sponsors, Technical Authorities, and Support Organizations
Brief VCG at Project Identification Review (ADE-0)

Sponsor and Technical Authority Responsibilities
Support CG-5 in conducting Mission Analyses
Provide early cost assessment on the proposed materiel solutions

Commandant (CG-8) Responsibilities
Provide early affordability assessment on the proposed materiel solutions

VCG Responsibilities
VCG authorizes entry into the Need Phase
VCG directs initiation of Resource Allocation Plan, Mission Need Statement, CONOPS, Capability Development Plan and Exhibit 300

3. MISSION ANALYSIS REPORT

Purpose: The Mission Analysis Report (MAR) documents the mission analysis results and supports initial acquisition strategies.

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 encapsulates the deficiency in functional capability 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 document the need for a materiel solution. Specific guidance and a template for development of the MAR are contained in Appendix A of this Manual.

Mission Analysis is the responsibility of the Operational Authority. The Mission 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 & Assessment (CG-DCO-81) will coordinate review and submission of the MAR for approval by DCO. The Vice Commandant will review the MAR as part of the Project Identification Review (ADE-0) and authorize entry into the Need Phase.

4. MISSION NEED STATEMENT

Purpose: The Mission Need Statement (MNS) is a high level synopsis of specific functional capabilities needed to accomplish DHS mission and objectives. It provides a strategic framework for acquisition planning and capability delivery and is a crucial part of the acquisition process. In the Coast Guard, it serves to formalize 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 project will not be required.

Note: For Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) and IT, the MNS describes specific architecturally-based functional capabilities required to satisfy DHS and Coast Guard Enterprise Architecture (EA) requirements.

Discussion: Based on the capability gap derived from mission analysis, the Sponsor will prepare the MNS and then circulate it for concurrent clearance. The MNS must align to 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.

Format: Part 1 of the MSAM Handbook (Appendix A of this Manual) provides overall documentation guidance and the process for obtaining concurrent clearance. Part 2 of the MSAM Handbook provides the MNS template and content requirements.

Refer to Commandant (CG-7) Requirements Generation and Management Process (Pub 7-7) for more details on development of the MNS.

Roles and Responsibilities

Sponsor's Representative Responsibilities
Drafts the MNS
Sponsor Responsibilities
Submits the MNS

Component Acquisition Executive (CAE) Responsibilities

Provides Coast Guard approval for MNS

DHS Acquisition Decision Authority (ADA) Responsibilities

Approves MNS at ADE-1

5. CONCEPT OF OPERATIONS

Purpose: The Concept of Operations (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 project 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 project for later development of the asset or system and also serves as a useful reference document throughout the duration of the project. CONOPS development normally involves a multi-function team. By demanding user involvement, early analysis, and collaboration, the CONOPS process creates consensus among the mission managers, sponsor, acquirer, developer, support, and other user entities within the Coast Guard, encourages organizational decision making, and sets the stage for writing solid requirements. 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.

When initiating a CONOPS development effort, it is first important to ensure that a CONOPS document is appropriate to the acquisition being sought. A CONOPS addresses the employment and support of a system or asset that operates within a system of systems or family of systems instead of as a stand-alone component. It is well suited for acquisitions of assets or systems that have extensive user, interoperability, and/or compatibility considerations. Since it is focused more on the major asset or system, there are several key sections of the template that may not be appropriate for smaller acquisitions of hardware, equipment, weapons, or tools. Before commencing the level of effort required to formulate a CONOPS, verify that all of the sections of the template are applicable to the acquisition.

Format: Part 1 of the MSAM Handbook (Appendix A of this Manual) provides overall documentation guidance and the process for obtaining concurrent clearance. Part 2 of the MSAM Handbook provides the CONOPS template and content requirements.

Roles and Responsibilities

Sponsor's Representative Responsibilities
Drafts the CONOPS

Sponsor Responsibilities
Endorses the CONOPS

Refer to Commandant (CG-7) Requirements Generation and Management Process (Pub 7-7) for more details on development of the CONOPS.

6. OPERATIONAL REQUIREMENTS DOCUMENT

Preliminary Operational Requirements Document (PORD): The PORD is the first requirements document that incorporates the vision set out in the CONOPS and assigns desired operational performance expectations.

Purpose: The PORD sets the context of the gaps to be addressed to guide the development and evaluation of alternative design concepts. The PORD is derived from the MNS, CONOPS, and associated cost estimates, early sponsor analysis (i.e., force structure assessment and C4ISR) and the historical baseline. Developed early in the Analyze/Select Phase, the PORD describes the missions, operational capabilities, operating environment, and system constraints that competing system concepts must satisfy. The PORD expresses the requirements statement before capabilities are removed or lessened due to cost trade-offs, assessment of system component technical maturity and risk, or other factors. The PORD serves as the sponsor's guidance to the project office specifying the issues to address in the AA. Using the PORD, and working closely with the Sponsor's Representative, the PM conducts feasibility studies and/or trade-off studies. 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. These early studies help refine requirements as the PORD ultimately evolves into the ORD.

Initial Key Performance Parameter (KPP): The PORD should define the system characteristics of the new system reflecting ORD IPT consensus. Initial Key Performance Parameters (KPP) are generally associated with operational gaps stated in the MNS, critical issues derived from the CONOPS, and overarching guidance provided by higher authority.

Critical Operational Issue (COI): COIs are the operational effectiveness and operational suitability issues that must be examined during testing to evaluate/assess the system's ability to provide the desired capability. The Sponsor shall develop preliminary COIs for inclusion in the PORD and ORD that will be refined by the Operational Test Agent (OTA) for inclusion in the Test and Evaluation Master Plan (TEMP).

Requirement Priority for Trade-Off Analysis: The PORD 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 PORD. The purpose of including trade-off priorities in the PORD 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 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, trade-offs are no longer required since the trade-off decisions that have been made by the IPT are captured as user needs in unambiguous, affordable and feasible requirements.

Operational Requirements Document (ORD): The ORD is a top-level decision document which establishes 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.

Purpose: The ORD is the formal statement, developed by the sponsor in collaboration with stakeholders, of the performance and related operational parameters for a proposed concept or system. It describes an operational system in terms of a range of acceptable and desirable standards of performance. 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 SE activities, ongoing requirements analysis, and cost estimating to ensure the success of the project. An approved ORD is required at ADE-2A and revalidated for ADE-3 to support the production and deployment decision by the ADA.

Context: Requirements definition is part of the initial acquisition activities and includes shared responsibilities between the Sponsor (users) and the acquisition community (Project Manager) to translate operational needs into specific requirements that can be met. The materiel acquisition process can be accelerated if the ORD is properly prepared and coordinated prior to approval. The ORD, along with the CONOPS, are formal documents that provide a bridge between the 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. The ORD translates the MNS and the CONOPS into system-level performance capabilities and expounds upon inherent capabilities required of the system that are not explicitly stated in the CONOPS or MNS. Building from the PORD, the ORD uses the various studies, analysis, and systems engineering activities conducted in the Analyze/Select phase to document a more defined set of requirements. The ultimate goal of the ORD IPT in its development of the ORD is

to define the requirements and measures of success needed to develop and field useful and appropriate capability for mission success.

Discussion: The ability of the Coast Guard 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 Acquisition Directorate. 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-2 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.

Precepts: To effectively develop an ORD and be able to translate it into an affordable acquisition project, there are a number of precepts related to the ORD that need to be well understood.

- The ORD is an acquisition document. Its purpose is to identify and provide the performance parameters that will be needed in an asset or system in order to provide the user with the capability that will either fully or partially close the mission gap(s) identified in the MNS. It is used by developers to understand the operational requirements in operationally relevant terms.
- The ORD requires collaboration. An ORD IPT serves well to establish and maintain a collaborative requirements development effort. The IPT must ensure that the required operational capability is not compromised through trade-offs; however, the IPT must also guard against setting specific elements of the requirements (such as system performance parameters) at levels that are unachievable or unaffordable. The stated needs of the operator must be a controlling issue, but factors of cost, schedule, testability, and the technical feasibility of performance levels must be given their due weight.
- The ORD specifies KPPs. KPPs are 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 Coast Guard 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 is a project "breach" and can be cause for the system selection to be reevaluated or the project to be reassessed or possibly terminated.

The ORD must consider Information Systems Interoperability within and external to the Coast Guard. If interoperability with other systems, DHS Components or other government agencies is a critical factor in mission accomplishment, an interoperability KPP shall be included. The interoperability KPP should include a detailed list of systems or other capabilities with which the asset or system to be acquired is intended to be interoperable, including an explanation of the attributes of interoperability.

The ORD should only contain a limited number of KPPs (eight or fewer) that capture the parameters needed to reach the overall desired mission capabilities.

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 because the PM must build the project's budget to the ORD objective level and determine what level of performance can be attained during the contracting and selection process. To do this, the objectives need to be included within the evaluation factors of the Request for Proposal (RFP) so that the contractor has incentive to bid to the objective level of performance as part of a best value solicitation for the government.

Note: For planning purposes, the number of objectives in an ORD should be limited to five without agreement between the Sponsor and Commandant (CG-9) that a higher number is reasonable and is expected to be executable. An objective is not required for each KPP. Where there is no objective, the ORD and other requirements documents should include the statement, "Objective equals threshold".

- The ORD needs to reflect affordability. To achieve the requirements identified in the ORD, the budget and appropriations need to match the cost of doing the work in developing the capability. It is the PM's responsibility to highlight to senior management and the Acquisition Decision Authority if there is a disconnect between the PM's cost estimate for achieving the ORD and the Coast Guard's proposed (or approved) budget and/or Congressional appropriation. The PM must either seek funding adjustments to meet the approved ORD requirements or seek modification of ORD requirements to meet funding constraints.
- The ORD is a living document. During the life of the project, events may occur that jeopardize the PM's ability to achieve the ORD as it was initially approved. Those events can range from unexpected technical difficulties in developing the

asset/system to insufficient funding in the Coast Guard budget or in the Congressional appropriation revisions to achieve the approved ORD. Irrespective of the cause, the ORD must reflect the asset or system when it is fielded for test and evaluation.

- 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 Commandant (CG-771)'s review.

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 resource for the process. IPT membership should include representatives from the following:

- Commandant (CG-4) (engineering, logistics, and configuration management)
- Commandant (CG-6) (enterprise architecture, IT, Information Assurance, Spectrum, etc.)
- Commandant (CG-1B3) (human engineering, personnel, training, manpower, system safety)
- Commandant (CG-93) Project Manager
- Commandant (CG-924) Office of Acquisition Support
- Commandant (CG-926) Office of Research, Development, Test and Evaluation
- OT&E representative (typically Operational Test Agent)
- Ad Hoc members as needed (Commandant (CG-2), Commandant (CG-5), users, etc.)

The ORD IPT will receive requirements generation training provided by Commandant (CG-771) at the initiation of the team, in accordance with Requirements Generation and Management Process (Pub 7-7), Chapter 1.E.2.

ORD Development Process: Developing an ORD for a major systems acquisition is a significant application of personnel, time, and resources. Generally speaking, the process shown in **Figure 16 Requirements Development Process** highlights the key stages the ORD IPT will go through as the requirements are identified and documented.

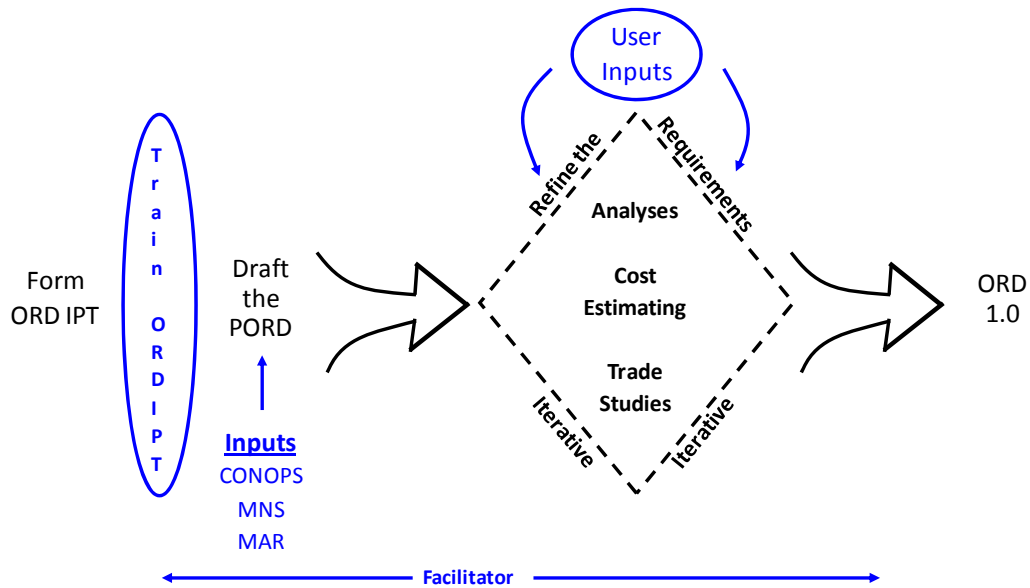


Figure 16 Requirements Development Process

A relational database shall be used to capture and document the requirements identified by the team. See Requirements Generation and Management Process, USCG Commandant (CG-7) Requirements Generation and Management Process (Pub 7-7) for more details. Key attributes the database needs to provide to the team include:

- The ability to provide unique identity to each requirement.
- The ability to baseline requirements so that changes can be clearly tracked.
- The ability to develop and export/print a requirements traceability matrix.

The database should be initiated and maintained by the Sponsor through the development of the ORD. The PM will continue to use the database in the development of the SOW and specification.

Format: Part 1 of the MSAM Handbook (Appendix A of this Manual) provides overall documentation guidance and the process for obtaining concurrent clearance; part 2 provides further details on required content and the appropriate template.

Roles and Responsibilities: The responsibility for defining requirements in the PORD and ORD lies with the Project Sponsor, who has the primary need for the system.

Roles and Responsibilities

Sponsor Responsibilities
Directs the Sponsor's Representative to prepare the PORD/ORD
Submits a PORD via the PM to the Commandant (CG-9) for acceptance
Submits an ORD to Commandant (CG-9) for Coast Guard Acquisition Review Board (CG ARB) review and approval by VCG

Sponsor's Representative Responsibilities
Preparation of PORD/ORD
Co-Chair the ORD IPT

Commandant (CG-771) Responsibilities
Provides requirements generation training to the ORD IPT
Provides a Requirements Officer to assist the ORD IPT in requirements generation
Serves as process gatekeeper for CG Requirements; reviews PORD/ORD for compliance with requirements generation process

Project Manager Responsibilities
Assists the Sponsor's Rep in defining the operational and support requirements for the system as a member of the ORD IPT
Provides funding to support the analyses needed for developing the ORD
Reviews and comments on PORD/ORD
Endorses PORD/ORD and recommends acceptance/endorsement by Commandant (CG-9)

ORD IPT Responsibilities
Provides cross-functional knowledge in identifying, assessing, and documenting requirements
Includes representatives from the Technical Authorities to provide input on technical standards and policies that will apply to the ORD
Utilizes the analytical services of the APO, RDT&E Center and Service Centers, as appropriate, to refine and verify requirements

Director of Acquisition Programs (CG-93) Responsibilities
Reviews and comments on PORD/ORD
Endorses ORD submitted by Sponsor

Commandant (CG-9) Responsibilities
Accepts PORD submitted by the Sponsor
Endorses ORD and submits to VCG

Vice Commandant (VCG) Responsibilities
Approves the ORD and submits to APMD for DHS approval

DHS Acquisition Decision Authority (ADA) Responsibilities
Approves the ORD

7. SPECIFICATIONS OR STATEMENTS OF WORK

Specifications or Statements of Work (SOW): Once a specific need is identified through the ORD, the PM must describe the requirement(s) to satisfy the Coast Guard need(s). This description is known as a specification or SOW. Generally, a specification describes an item, component, or system and a SOW describe services. For brevity, this

instruction refers to specifications and SOW collectively as “the specification.” The specification is one of the most important elements in the development of the RFP and resulting contract. How it is written impacts the success of the project. Specification writers should consider the following points when drafting a specification.

1. The specification has legal significance. It tells potential offerors what they must do to fulfill the Government’s requirement, constitutes the basis for evaluating offers to determine if they satisfy the Government’s needs, and binds the successful contractor to perform in accordance with the specification. Therefore, when developing a specification, consider how effectively an offeror can assess their performance when compared to the specification requirements.
2. By law, specifications must permit full and open competition to the maximum extent practicable and they must not be unduly restrictive. To this end, specifications should reflect only the Government’s minimum needs, 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.
3. The specification must be drafted to ensure the Coast Guard and the contractor 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.
 - Do not “borrow” requirements in whole or in part from another specification unless you fully understand the requirement. Too often specifications are drawn from previous or similar specifications, and stated requirements are inapplicable or their meaning unknown.
 - Read all reference materials (e.g., publications, standards, specifications, etc.) before incorporating them into a specification to ensure all requirements in these documents apply. If necessary, incorporate only the applicable portions of referenced material in the specification.
 - State a requirement only once and, to the extent practicable, incorporate all reference material in full text.
 - 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 inconsistent 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 or interoperability.

Chapter 5: Project Management Planning

Note: All project 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 Appendix A of this Manual for details on the concurrent clearance process and Part 2 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. Keeping this in mind, PMs must engage DHS early, and consider including DHS representatives as members of the associated IPTs for the following documents: AP, MNS, ORD, CDP, TEMP, ILSP, and PSTP.

1. CAPABILITY DEVELOPMENT PLAN

Purpose: The purpose of the Capability Development Plan (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 phase leading up to ADE-2A/2B. The PgM 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.

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 projects or systems, acquisition planning, integrated logistics planning, lifecycle cost estimating, and project office resources needed. The CDP shall function as the PSTP for the Solution Engineering Stage until the PSTP is developed prior to ADE-2A/2B. As such, it needs to also discuss the Study Plan, Study Plan Review (SPR) and the System 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/2B acquisition decision will be available.

Roles and Responsibilities

Project Management Responsibilities

Prepare and submit CDP

Commandant (CG-9) Responsibilities

Endorse and approve CDP for Coast Guard

DHS Acquisition Decision Authority (ADA) Responsibilities
Approve CDP

2 ACQUISITION STRATEGY AND ACQUISITION PLAN

Purpose: The Acquisition Strategy (AStr) 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 AStr and AP serve as mechanisms: to review, approve and document acquisition decisions and create a roadmap for the implementation of acquisition decisions. An AStr is required for all major system acquisitions and an AP is required for all contractual actions greater than \$10M.

Discussion: The AStr includes a strategic-level overview of all known planning, technical, business and management activities for the project (e.g., logistics support, technology development and test and evaluation strategies). The AStr begins as a briefing to the CAO (CG-9) prior to ADE-1, then progresses into a formal brief to the CAE (VCG) for approval 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 and what options are being considered for level of competition and overall contracting strategies. For Coast Guard major acquisitions, the strategic-level AStr evolves into a detailed-level AP prior to any contract action greater than \$10M and/or no later than ADE-2A/2B.

Acquisition Plans shall be in writing and prepared in accordance with FAR Subpart 7.1, FAR 34.004, DHS Directive 102-01 and HSAM 3007 Appendix H (DHS Acquisition Planning Guide). As noted in HSAM Chapter 7, paragraph 3007.102; “No synopsis for a solicitation may be released, solicitations issued, or funds transferred within or outside the Department until an acquisition plan has been completed and approved.”

Roles and Responsibilities

Project Manager Responsibilities
Prepare Acquisition Strategy and Acquisition Plan

Contracting Officer Responsibilities
Support PM in formulating the Acquisition Strategy and Acquisition Plan

DHS Office of the Chief Procurement Officer (OCPO) Responsibilities
Reviews (but does not sign) Acquisition Plans prior to HCA approval for acquisitions greater than \$50 million but less than \$300 million procurement cost
Approves Acquisition Plans for acquisitions equal to or greater than \$300 million procurement cost.

Head of Contracting Activity (HCA) Responsibilities
Review and endorse Acquisition Plans for acquisitions equal to or greater than \$300 million procurement cost
Review and approve Acquisition Plans for acquisitions less than \$300 million procurement cost

¹See Chapter 3007 and Appendix H of the HSAM for latest guidance.

Note: Competition is an issue that must be addressed at several points in a program or system's acquisition. Competition can be a powerful and beneficial method of contracting. Conversely, the reason for not using competition can take time to be approved, and consequently can hold up approval of a program's overall Acquisition Strategy and the Acquisition Plan document. Consideration of competition in contracting is required by law (Competition in Contracting Act (CICA) of 1984), Coast Guard 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 6302.1 through 6302.6) or Determination and Findings (FAR 6302.7).

3. HUMAN SYSTEM INTEGRATION PLANNING

Purpose: Human System Integration (HSI) is a disciplined, unified and interactive approach to integrate human considerations into system design. Where practicable, HSI efforts impact system designs to minimize characteristics that require excessive cognitive, physical, or sensory skills; entail extensive training or workload-intensive tasks; result in mission-critical errors; or produce safety or health hazards. Planning for HSI activities should occur at the onset of the project acquisition process to set human requirements, optimize total system performance, minimize total ownership costs, and ensure that the system is built to accommodate the characteristics of the user population that will operate, maintain, and support the system.

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, and support (to include providing training) the system.
4. **Performance Support and Training:** Develops options for individual, collective, and joint training for operators, maintainers and support personnel, 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):** This domain integrates across disciplines and into systems engineering to determine system design characteristics that can minimize the risks of acute or chronic illness, disability, or death or injury to operators and maintainers; and of equipment damage, failure or loss.
6. **Survivability:** Addresses personnel survivability issues including protection against detection, fratricide, Chemical, Biological, Nuclear, Radiation and High-Yield Explosives (CBNRE) 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 technical authority for HSI across all system's life cycle. Commandant (CG-1B3), the Human Systems Integration for Acquisition Division, is the Commandant (CG-1) technical authority representative. As such Commandant (CG-1B3), the Sponsor, PgM, PM, other TAs and project staff shall partner to plan, resource, coordinate, and execute project and supporting HSI activities from Project Identification through Produce/Deploy and Support. Commandant (CG-1B3) has the technical staff organization to guide and advise sponsors and project managers on HSI activities and requirements and perform its technical authority representative oversight role. Commandant (CG-1B3) performs these functions for each and every acquisition project considering each of the seven HSI domains. With no direct HSI funding source, Commandant (CG-1B3) is dependent on sponsor and project manager resourcing to plan and execute HSI activities in support of each project.

Documentation: This Manual outlines required documentation required for each major acquisition project. There are very few acquisition documents that do not impact HSI issues and the user aspects of the total system. Therefore, full engagement with Commandant (CG-1B3) is essential when drafting, reviewing and gaining Commandant (CG-1) endorsement of acquisition documents. The following are significant HSI-specific documents critical for various ADE milestones:

1. **Human Systems Integration Plan (HSIP):** The HSIP describes the human systems integration program, identifies the HSI elements, HSI activities, project roles and responsibilities and how the HSI domain plans will be managed and integrated with other project elements. Commandant (CG-1B3) provides technical guidance and management of HSIP development.
2. **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. CG-1B3

provides technical guidance and management of MER development. Commandant (CG-1) approves the MER.

3. **Manpower Requirements Analysis (MRA):** The MRA must describe all manpower requirements to operate, maintain and support a system consistent with planned operating and logistic concepts. Manpower offsets are identified if required. It informs cost estimates. The Sponsor's Rep or PM resources the MRA analysis. Commandant (CG-1B3) drafts the MRA and Commandant (CG-1) approves the MRA.
4. **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. Safety and Environmental Health Manual, COMDTINST M5100.47 (series) refers.
5. **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.

4. ALTERNATIVES ANALYSIS

Purpose: The purpose of the Alternatives Analysis (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. The Coast Guard's AA is similar in function to the DHS's Analysis of Alternatives and satisfies the DHS requirement.

Discussion: In the Coast Guard, the sponsor conducts and reviews OA of current systems and MA that includes DOTMLPF+R/G/S assessments to determine mission capability gaps. 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. 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 Coast Guard systems;
- Procurement or modification of commercially available products, services or technologies from domestic or international sources;
- A Joint, DoD or DHS Component or Other Government Agency development program; or,
- 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. 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 Coast Guard, the AA must be led by an organization independent of Commandant (CG-93) and the Sponsor. Based on this definition, the Coast Guard'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. 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 A-11, requires a minimum of three viable alternatives to be identified.
3. During the Analyze/Select phase, the AA Study Plan is developed jointly in accordance with the ground rules and assumptions contained in the CDP. The AA Study Plan development should start shortly after ADE-1 and be completed within 30 days or less. Review and approval of the joint AA Study Plan will depend on the project's scope, size, criticality and other key factors. The AA Study Plan 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;
 - Study schedule;
 - AA team interface planning with concurrent ORD effort; and,
 - The AA review and approval process.

A 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 APMD will be invited to participate in the SPR. Final approval of the Study Plan is by the Coast Guard Chief Acquisition Officer (CG-9).

4. After Study Plan approval, the alternatives analysis 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) in order to provide an evaluation framework for the

alternatives. These MOEs and MOPs eventually help form 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.

Roles and Responsibilities

Project Manager Responsibilities
Support AA Study Plan Director in development of the Alternatives Analysis Study Plan
Support the Alternatives Analysis as requested for trade studies, Life Cycle Cost Estimates, and Cost-Benefit Analyses
Review and endorse the Alternatives Analysis Report
Independent Study Team Director Responsibilities
Prepare Alternatives Analysis Study Plan
Present AA Study Plan for approval at AA Study Plan Review
Lead AA Study Team in Alternatives Analysis effort
Prepare and submit final report
Sponsor Responsibilities
Participates in the Alternatives Analysis process to compare operational requirements to cost estimates and make refinements for affordability, as appropriate
Commandant (CG-9) Responsibilities
Approve Alternatives Analysis Study Plan
CAE Responsibilities
Approve Alternative Analysis Report

5. LIFE CYCLE COST ESTIMATE

Purpose: The Life Cycle Cost Estimate (LCCE) provides the foundation for the Coast Guard business decisions concerning project affordability at each ADE. A life cycle cost estimate provides an exhaustive and structured accounting of all resources and associated cost elements required to develop, produce, deploy, and sustain a particular project.

Discussion: Developing a quality LCCE is at the core of the Coast Guard's ability to successfully manage a project within cost and affordability guidelines. In order to improve the fidelity of cost estimates, the PM is expected to develop a LCCE and fund a parallel effort for Commandant (CG-928) to develop an Independent Cost Estimate (ICE). The PM, with Commandant (CG-928) support, is then expected to adjudicate differences to produce the PLCCE. This estimate is then used to support project planning and budget justification. An approved PLCCE is required to support the ADE-2A/2B decision. The PLCCE will be maintained for all subsequent ADEs. In addition, all Level 1 acquisition projects are required to have the PLCCE validated by DHS Cost Analysis Division (CAD) within the office of the Chief Procurement Officer,

beginning at ADE-2A. PMs for Level 1 projects shall comply with DHS Memorandum, Program Life Cycle Cost Estimate (PLCCE) Validation Process of 6 May 2010 including development of a Cost Estimating Baseline Document (CEBD) and verify latest guidance with Commandant (CG-928) prior to development or update of their PLCCEs. The PLCCE Validation Process memorandum is located at: <http://dhsconnect.dhs.gov/org/comp/mgmt/cpo/cad/Pages/default.aspx>.

Step 1A: Developing LCCEs

When developing a LCCE, PMs are to:

- Develop the LCCE for the preferred solution from the AA. The GAO Cost Estimating and Assessment Guide, March 2009, GAO-09-3SP, available at <http://www.gao.gov/new.items/d093sp.pdf>, provides guidance and best practice information. Use of the guide is specified by DHS and is included as Appendix I in DHS 102-01-001.
- Provide a record of the procedures, ground rules and assumptions, data, methodology, environment, and events that underlie the cost estimate.
- Ensure LCCE is constructed in such a manner that it can be replicated and substantiated by an independent third party. 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.
- Use a project WBS in developing the LCCE. The WBS should be based on MIL-HDBK-881A (for acquisition cost elements) and the GAO Cost Estimating and Assessment Guide, and further tailored to lower levels of detail as applicable to each acquisition project.
- Develop the estimate to the performance parameter level. Understanding the cost of specific levels of performance allows the PM and Sponsor to effectively perform trade-off analyses in developing the operational requirements. This cost to the performance parameter level for the operational requirements is to be documented in an attachment to the LCCE.
- Develop the estimate to the objective values of the KPPs in the ORD. Provide the difference in costs between the threshold and objective parameters.
- Ensure all sunk costs are reported as part of the LCCE in order to show the full cost of the asset from initial concept through acquisition, operations, support, and disposal.
- Include all personnel costs to operate and maintain the asset.

Step 1B: Independent Life Cycle Cost Estimates

Commandant (CG-9283) will develop independent LCCEs, also called an Independent Cost Estimate (ICE), for each major acquisition project in preparation for ADE-2 decisions and subsequent ADEs. 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 project 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 project documents and project office staff. 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 effort.

Step 2: Project LCCE

Project Managers and Commandant (CG-9283) compare the ICE and the Project developed LCCE, and adjudicate the differences in order to establish the final project cost position as determined by the PM in preparation for ADE-2. This adjudicated LCCE (also called the PLCCE) is the final version that will be submitted for approval. Updates will be required if there are significant project funding changes in the CIP and in preparation for each subsequent ADE. While the PLCCE is approved by the Coast Guard Chief Acquisition Officer (CG-9), PLCCEs for Level 1 major acquisitions are to be reviewed and validated by the DHS Cost Analysis Division.

Roles and Responsibilities

Project Manager Responsibilities
Develop LCCE
Coordinate and compare LCCE with ICE
Submit adjudicated PLCCE for approval

Commandant (CG-928) Responsibilities
Develop ICE
Coordinate and support LCCE/ICE adjudication of differences

Commandant (CG-9) Responsibilities
Approve the PLCCE

6. ACQUISITION PROGRAM BASELINE

Purpose: The Acquisition Program Baseline (APB) formally summarizes the project's critical cost, schedule, and performance parameters, expressed in measurable, quantitative terms that must be met in order to accomplish the project's goals. By tracking and measuring actual project performance against this formal baseline, project management 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 project cost, schedule, and performance objectives between the PM and the ADA. The scope of the APB encompasses the entire planned execution of the project. Its parameters trace back to the mission gaps expressed in the MNS, requirements established in the ORD 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 project to achieve this baseline. The project APB is formally submitted for approval prior to ADE-2A/B and revised as needed prior to ADE-3. ADA approval of the APB establishes the formal program/project 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 of cost, schedule or performance is defined as the inability to meet the threshold value of the specific parameter. Breaches to the APB can be driven by multiple causes, many of which are fact-of-life changes in requirements, budget-induced breaches (caused by changes in funding profiles), resources, or schedule that are beyond the PM's control. If a project breaches an approved APB parameter threshold (or the PM determines that the project will so breach in the future), the PM must promptly notify the Component leadership and ADA via a formal memo. The PM must submit (1) a remediation plan both explaining circumstances of the breach and proposing corrective action within 30 days of breach notification; and (2) if required, a revised APB for ADA approval within 90 days of breach notification. A sample APB Breach Memorandum and Remediation Plan template is provided in Appendix A of this Manual.

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.

Table 9 Acquisition Program Baseline Breaches

Key Parameter	Breach
Cost	Exceeds threshold Total Acquisition Cost parameter (Thresholds for cost parameters are established at 8% above the Total Acquisition Cost APB objective levels)
Schedule	Exceeds threshold schedule parameter (\geq 90 day slip beyond objective for projects 3 years or less in duration or 180 day slip beyond objective for projects more than 3 years in duration)
Performance	Doesn't satisfy one or more threshold Key Performance Parameters (KPPs)

Note: In compliance with the Coast Guard Authorization Act of 2010, the Commandant must submit a report to Congress in the case of failure to achieve the KPP or if cost overrun will exceed 15 % or likely delay will be more than 180 days. If there is substantial variance in cost or schedule where the cost overrun is greater than 20 percent or likely delay is greater than 12 months from program baseline, the Commandant must include a certification of need to Congress providing justification for continuing the project.

Roles and Responsibilities

Project Manager Responsibilities

Prepare/update and submit APB

Commandant (CG-924) Responsibilities

Conduct an Independent Verification and Validation of the APB

Commandant (CG-93 PgM, 93, 9, 8 and Sponsor) Responsibilities

Endorse APB

Component Acquisition Executive (CAE) Responsibilities

Approves APB for the Coast Guard

Acquisition Decision Authority (ADA) Responsibilities

Approves APB

7. PROJECT MANAGEMENT PLAN

Purpose: The Project Management Plan (PMP) establishes procedures for the overall management of the approved acquisition project. It provides the framework to define the activities/tasking, responsibilities, and the sequence of events, and supports implementation of the SELC. It is the PM's blueprint for project management.

The PMP provides centralized authority and control over all technical, business, and risk management aspects of the project. 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 project planning for the acquisition of an individual asset or system. However, if a System of Systems (SoS) or Family of Systems (FoS) is being followed, the PMP must also address how the planning ensures compliance with the overall systems architecture and supports the overall systems performance and interoperability requirements.

Discussion: Project planning is the process of establishing detailed project phase objectives and determining the sequence of development activities needed to attain those objectives. The planning process includes defining key events, accomplishments, and success criteria. The PM should prepare a draft PMP in consultation with all involved operational and support organizations to ensure all appropriate tasks are addressed and assigned to appropriate activities for completion.

Roles and Responsibilities**Project Manager Responsibilities**

Prepare and submit PMP

Update or validate PMP annually prior to the end of the third quarter (3QFYXX)

Program Manager Responsibilities

Review the PMP to ensure the Project has adequate resources

8. SOLICITATION AND SOURCE SELECTION PLANNING

Purpose: Solicitations are the means by which the PM communicates the needs of the government to the commercial industry. A good, solid solicitation package is foundational to the success of a project. Source Selection planning permits the government to establish and educate the Source Selection team, and develop ground rules that will be used for industry proposal review and Source Selection.

Discussion: Planning for competition, including building a solicitation package and developing a Source Selection plan is complex and difficult, but represents some of the most important activities for the PM and government Contracting Officer. The quality of the solicitation package - its completeness, internal coherency, clarity, and full representation of the approved requirements - is critical for project 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 Coast Guard needs or changes to meet the needs will result in greater cost and/or schedule delays.

In an effort to support the development of a quality solicitation package, an independent review of Level 1 solicitation packages should be accomplished prior to its release. This review will be coordinated by the PM through Commandant (CG-924) and will be accomplished in two parts:

1. A review of the contracting strategy by a senior management team, supplemented with personnel with significant acquisition and contracting experience.
2. A review of the full solicitation package by an independent team (usually a team that can be composed of Coast Guard personnel from the TAs, Sponsor's Representative, and personnel external to the Coast Guard).

DHS OCPO peer review of full solicitation packages may be required by DHS. Additionally, the reviews are to be funded by the projects. Commandant (CG-924) is to be consulted when PMs are developing the project's budget and spend plans to obtain an estimated cost for the reviews that will need to be included in the project's budget.

To ensure stable requirements, RFPs for the primary element of the project are not to be released unless the ORD is approved. A waiver, approved by Commandant (CG-9), is required to release the RFP earlier. If a waiver is approved, an approved ORD is

required before a production award may be made.

Prior to release of the RFP, the PM should work with the Contracting Officer and Legal Counsel on a strategy for source selection. The PM will provide project background information to the Contracting Officer that helps inform the source selection team of project details. Within the major systems acquisition framework, the Source Selection process is managed by the Head of Contracting Activity (HCA), the process owner for selecting sources for high dollar, competitive, negotiated acquisitions. Refer to Coast Guard Standard Operating Procedure (SOP) 024, Formal Source Selection Procedures Best Practices Guide (located in CG-913 Unit Documents folder on CG PORTAL): <https://cgportal.uscg.mil/delivery/Satellite/CG913/Article/CG913CG912STANDARDOP>

Additionally, DHS offers a Practical Guide to Source Selection (See <https://dhsonline.dhs.gov/portal/jhtml/dc/sf.jhtml?doid=117024>).

Roles and Responsibilities

Project Manager Responsibilities
Develop Contracting Strategy in coordination with the Contracting Officer
Support Contracting Officer in development of Solicitation Package
Include budget support for conduct of solicitation package reviews
Review the RFP to ensure that it is complete, clear and fully represents the project needs
Contracting Officer Responsibilities
Develop Contracting Strategy in coordination with the Project Manager
Develop Solicitation Package

9. RISK MANAGEMENT PLAN

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

Discussion: Risk is the potential for negative variation in the cost, schedule or performance of a project or its products. A description of risk in future terms helps to identify both possible future effects and the uncertainties. Risk can be associated with any aspect of a project (e.g., technology maturity, supplier capability, design maturation, performance against plan) and may affect any element of the WBS and any Integrated Master Schedule (IMS) 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 minimize or mitigate cost, schedule, or performance impacts on acquisition projects. Successful risk management is dependent on the consistent early identification and mitigation of identified risks.

Risk management is most effective if it is fully integrated within the project's systems engineering and management processes.

The RMP identifies the basic approach and working structure the project will use for risk management and the upfront activities needed for a successful risk management project.

The Acquisition Directorate (CG-9) Standard Operating Procedure #7 provides guidance for Commandant (CG-9) processes for managing risk and for risk tracking and reporting.

Roles and Responsibilities

Commandant (CG-9283) Responsibilities
Collect individual project Risk Watch List submissions
Publish a monthly Risk Watch List documenting the status of all project risks
Project Manager Responsibilities
Develop, implement and maintain a Risk Management Plan (RMP)
Establish, execute and fund a risk management process that is integrated with all project management disciplines
Designate a project risk manager in writing
Establish a risk management IPT
Ensure that project acquisition plans and strategies provide for risk management, and that identified risks are considered as part of all major programmatic and technical reviews and decisions
Provide appropriate risk management training
Ensure that project contracting efforts include provisions to support a defined risk management plan and process
Project Risk Manager Responsibilities
Responsible for managing the project risk management process for the PM
Lead for the risk management IPT
Principal point of contact for risk management within and external to the project
Project Risk Management IPTs (RM IPT) Responsibilities
Responsible for coordination of the risk management process across the project
Conduct risk assessments to ensure that risks that jeopardize the achievement of significant project requirements, thresholds, objectives or safety are properly identified, analyzed and mitigated
Develop appropriate risk mitigation strategies, including estimation of funding requirements
Report project risks to the risk manager

Other Integrated Project Teams (IPTs) Responsibilities

Assist in the assessment of and mitigation planning for risks that affect or will be mitigated by the IPT

Assist the risk owners with the mitigation of risks that affect IPT areas of responsibility

Report the status of project risks to the RM IPT

Technical Authorities Responsibilities

Provide risk management technical assistance and expertise for assessment of and mitigation planning for risks

10. TEST AND EVALUATION MASTER PLAN

Purpose: The Test and Evaluation Master Plan (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 production. The TEMP defines and establishes threshold developmental test and evaluation and operational test and evaluation to be performed to inform the production decision. A fundamental purpose of test and evaluation is to verify attainment of technical performance specifications, operational effectiveness, operational suitability and limitations.

Discussion: During the early phases of the project, test and evaluation is conducted to demonstrate the feasibility of 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 DT&E to OT&E. DT&E is concerned chiefly with verifying contract requirements are met and engineering design goals and manufacturing processes have been achieved. OT&E focuses on Critical Operational Issues (COIs) that validate operational effectiveness and operational suitability. The TEMP must be approved prior to commencing any test and evaluation activity. Additionally, an approved DT Plan and an approved OT Plan are required prior to commencing DT&E and OT&E respectively.

Key components of the TEMP include:

- The KPPs to be resolved through the integrated test and evaluation strategy.
- COIs to assess operational effectiveness and operational suitability.
- Test and Evaluation Resource Summary to define needed funding.

T&E shall be included in the project WBS and a schedule of T&E events shall be included in the project IMS.

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.

The PM will plan and manage the project's overall T&E effort. The PM performs this task with the assistance of the Sponsor/Sponsor's Representative, Support Program Managers (including T&E, logistics and human systems integration), as well as 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. The PM provides technical and funding support for OT&E. OT&E is managed by the Operational Test Agent (OTA).

For all major systems acquisition projects, a Test Management Oversight Team (TMOT) or Test IPT shall be established to serve as the primary test management planning forum. The TMOT will be chaired by the project T&E Manager, representing the PM. The TMOT/Test IPT should consist of representatives from Commandant (CG-926) and each organization involved in the overall T&E program for the particular project.

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 will nominate an appropriate OTA for each project and will submit the nomination for DHS approval.

Commandant (CG-926) will coordinate with the sponsor to identify the OTA as early as possible in the acquisition process. Once the OTA is identified, Commandant (CG-926) will submit an OTA approval request to DHS.

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 Director Operational Test and Evaluation (DOT&E) 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 project 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: In compliance with the Coast Guard Authorization Act of 2010, safety concerns identified during DT or OT shall be communicated as soon as practicable (NLT 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) 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.

Roles and Responsibilities

Project Manager Responsibilities

Prepares the Test And Evaluation Master Plan within three months of ORD signature
Prepares the DT&E Plan
Identifies Operational Test Agent (with Sponsor concurrence and DOT&E approval)
Prepares the DT&E Report(s)
Conducts Operational Test Readiness Reviews (OTRR) to determine system readiness prior to entering Initial OT&E,
Provide resources for all test and evaluation efforts.
Reviews and comments on draft OT&E Report
Provides interface between the development contractor and the government testing community

TMOT/Test IPT T&E Responsibilities

Serves as the primary test management planning forum
Assists the PM in preparation of the TEMP
Assists the PM in updating the TEMP
Assists PM in preparing the DT&E Plan
Reviews and comments on the final DT&E Report
Assists the OTA in preparing the EOA Plan (optional) and the OT&E Plan
Assists in the execution of the DT&E Plan and the OT&E Plan

Sponsor/Sponsor's Representative Responsibilities

Reviews and comments on TEMP
Reviews and comments on DT Plans
Reviews and comments on TEMP Updates
Participates in Operational Test Readiness Review

Operational Test Agent Responsibilities

Reviews Operational Requirements Documents for testability, provides feedback to Sponsor
Develops the OT Section and OT portion of Resource Section of the TEMP, and refines the COIs
Reviews and comments on the TEMP and any updates
Participates in Operational Test Readiness Review
Prepares the OT&E Plan(s)
Conducts/Manages OT&E
Prepares/Submits the OT&E Reports (EOA, OA, IOT&E and FOT&E)

Director of Operational Test and Evaluation (DHS) Responsibilities
Reviews Operational Requirements Documents
Approves Operational Test Agent
Approves Test and Evaluation Master Plan
Participates in TMOT activities
Issues Letter of Assessment for Operational Test Reports
Participates in Operational Test Readiness Review
Observes Operational Testing

11. INTEGRATED LOGISTICS SUPPORT PLAN

Purpose: The Integrated Logistics Support Plan (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 logistics support activities for each ILS 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 the system during its design and development and influence the design to ensure it can be cost effectively supported within the logistics constraints and requirements that are identified;
- Design the logistics support system and support structure appropriately for the system that is being acquired;
- Acquire and field the necessary logistics resources in a timely and cost effective manner to achieve system readiness requirements; and
- Deploy a fully functioning logistics support capability for use during Operations and Support.

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 other concerns related to ILS, including 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, the applicable Logistics Centers and Service Centers of the Mission Support Organization, the Project Resident Office (PRO), the Sponsor's Representative, other interested organizations, and contractor representatives, as appropriate for the project. 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 and Training
- 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

ILS shall be included in the project WBS and a schedule of ILS events shall be included in the project IMS. The ILS portion of the IMS 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 Independent Logistics Assessments, COMDTINST 4081.19 (series) and Logistics Readiness Reviews, 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 project planning documents to ensure that they project 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 project successfully.

The LRR focuses on logistics execution and delivery to examine whether the project ILS 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 project budget). Commandant (CG-44) is responsible for conducting the ILA/LRR and producing the final report. The PEO (Project, CG-93AL and APO) should have some level of awareness and engagement with the ILA/LRR team during analysis and report development.

Chapter 2 and, Appendix A, Part 2, Sections 16 and 17 of this Manual provide amplifying information on ILA/LRR timing, responsible parties, and conduct.

Roles and Responsibilities

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

ILS Manager Responsibilities
Formulate, coordinate and implement the ILS program
Coordinate with the PM for joint budget planning and coordination, and complying with Commandant (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)

ILS Management Team Responsibilities
Logistics support planning
Review, develop, coordinate, and integrate ILS requirements and resolve problem areas

Technical Authorities Responsibilities

Review and endorse ILSP

Sponsor Responsibilities

Review and endorse ILSP

Commandant (CG-93) Responsibilities

Review and endorse ILSP

Commandant (CG-01) Responsibilities

Approve ILSP for Coast Guard

DHS Acquisition Decision Authority (ADA) Responsibilities

Approve ILSP

12. CONFIGURATION MANAGEMENT PLAN

Purpose: The purpose of the Configuration Management Plan (CMP) is to establish a process for Configuration Management (CM) in order to identify, document, audit, and control changes to the configuration of the new system/equipment being acquired.

Discussion: CM is an integral part of acquisition and project management for both hardware and software systems. An asset's configuration represents its functional (performance) and physical (form and fit) characteristics. These characteristics are described in technical documentation, assessed, and verified in a series of technical reviews and configuration audits.

CM objectives include:

- Identify and document the functional and physical characteristics of selected system components designated as configuration items, during the life cycle;
- Control changes to configuration items and their related technical documentation using a defined process;
- Record and report information needed to manage configuration items effectively, including the status of proposed changes and implementation status of approved changes; and
- Ensure that the complex aggregate of configuration items meets the system specified and operational requirements, and verify actual product configuration against required attributes.

CM processes span the entire life cycle and are driven more by project technical and CM events rather than a specific acquisition phase. Configuration changes occur throughout the life of the asset as more knowledge of the asset design, operation, and maintenance concepts is gained, and mission requirements change. Acquisition Directorate (CG-9) Policy Statement #1 *Program and Project Cost Management*

provides specific guidance on the scope of modifications to major acquisition contracts that may be approved by PMs, in coordination with the PgM, Contracting Officer and, as necessary, Counsel. It also calls for inclusion of a change order account in the project budget to promote value engineering and correct Government responsible deficiencies.

Each major systems acquisition project 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 process that will be followed. CM shall be included in the project WBS and a schedule of CM events shall be included in the project IMS. Coast Guard CM Policy requirements and responsibilities are outlined in Coast Guard Configuration Management Policy, COMDTINST 4130.6 (series) and EIA-649 National Consensus Standard for Configuration Management. Annex 3 of GEIA-HB-649 includes a checklist for CMP development. Additional guidance is available in MIL-HDBK-61.

A 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.

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 at Appendix A, Part 2, Section 18.4 of this Manual.

Roles and Responsibilities

Project Manager Responsibilities
Establish a CM program
Designate a CM Manager responsible for overall conduct of CM and technical data management for the acquisition project, notify Commandant (CG-444) of designated individual
Complete/Update CMP and submit for approval
Draft the Configuration Control Board (CCB) charter not later than DHS ADE-2A
Convene and chair the acquisition project 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
As CCB Chairperson, receive CCB recommendations on the disposition of requested change proposals to allocated and product baseline, and approve/disapprove change proposals

CCB 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 project Configuration Manager to ensure the system configuration remains in agreement with the approved configuration baseline(s); the Configuration Status Accounting database is current; and configuration control is being exercised effectively
Review change proposals and requests for deviations to ensure that they are consistent with the operational requirements and that they are properly analyzed and documented
Monitor implementation of approved changes
CG-93 Responsibilities
Approve CMP
Review and approve or submit major changes (in excess of PM approval authority) to the EOC
EOC Responsibilities
Review and approve major changes (in excess of PM approval authority) that impacts overall Coast Guard budget

13. PROJECT SELC TAILORING PLAN

Purpose: The Project SELC Tailoring Plan (PSTP) is used to establish the appropriate level of systems engineering for the project or the discrete segment by identifying the SELC stages and products that will be executed during the Obtain Phase.

Discussion: Since no two projects are identical in scope or content, each project systems engineering approach can be tailored for optimum success. The SELC should be applied in a tailored manner appropriate to project size, scope, complexity, risk, and security categorization. Tailoring facilitates flexibility in the design and application of an appropriate development life cycle to fit project characteristics, while ensuring compliance with the requirements of Appendix B of DHS 102-01-001, *Systems Engineering Life Cycle*. The number of SELC activities and documents required for project development may differ between acquisitions due to each project'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 projects with significant IT content and C4IT projects will follow the overall guidance of the SELC; however, tailoring may require inclusion of C4IT specific guidance contained in the Coast Guard CIO System Development Life Cycle (SDLC) process. Non-major C4IT projects will comply with the SDLC process. The SDLC process is provided in C4IT System Development Life Cycle (SDLC) Policy for Acquisitions, COMDTINST 5230.66 (series) and meets the intent of the DHS SELC

for non-major acquisitions.

Project Manager: The PM is responsible for the planning and execution of the project’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 project that is a C4IT project or has been determined by Commandant (CG-6) to have a major C4IT element within the project. 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 project interfaces with a platform manager and or a C4IT project manager, 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

Project Manager Responsibilities
Develops Project SELC Tailoring Plan
Provides technical and funding support for SELC activities
Executes approved Project SELC Tailoring Plan (PSTP)
Asset Manager (C4IT only) Responsibilities
Lead Point of Contact for Project to Commandant (CG-6) interface
Assists PM in developing the Project SELC Tailoring Plan
Shepherds project through CG EAB
Coordinates DHS EAB interface
Assist PM in planning and managing C4IT activities
Commandant (CG-6) Point of Contact (POC) for C4IT SELC activities
Director of Acquisition Programs (CG-93) Responsibilities
Approve the Project SELC Tailoring Plan for the Coast Guard
DHS APMD and CIO Responsibilities
Approve the Project SELC Tailoring Plan

14. DEPLOYMENT PLAN

Purpose: The Deployment Plan (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 project 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 should 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 project management matrix/IPT.

Roles and Responsibilities

Sponsor's Representative Responsibilities

Prepares the DP to identify how the new assets will be deployed

Project Manager Responsibilities

Provide the schedule for new asset/capability delivery

Review and endorse the DP after it is prepared

Director of Acquisition Programs (CG-93) Responsibilities

Endorse the DP

Sponsor Responsibilities

Approve the DP

15. POST IMPLEMENTATION REVIEW

Purpose: The purpose of a Post Implementation Review (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 projects 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 project management practices by applying lessons learned.

Discussion: As discussed in OMB Circular A-11, DHS Capital Planning and Investment Control Guide, and DHS Instruction/Guidebook 102-01-001, PIR evaluations and assessments are conducted to determine the degree of project 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 of an asset. Lessons learned during the review process should be applied to improve continuing support functions and fed back to Commandant (CG-9) to improve overall acquisition project 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

Sponsor’s Representative Responsibilities
Prepare the PIR with support from the PM
Project Manager Responsibilities
Provide input regarding cost, schedule and performance
Review and endorse the PIR after it is prepared
CG-93 PgM/93/9 and Support Program Manager Responsibilities
Endorse the PIR subsequent to the PM’s endorsement
Sponsor Responsibilities
Approve the PIR

16. PROJECT TRANSITION PLAN

Purpose: The Project Transition Plan (PTP) sets the requirements and establishes procedures for handoff 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 and accomplish successful acquisition project closure. On the handoff date, the operational and support organizations will assume responsibility for the delivered products/capabilities throughout the remainder of the Produce/Deploy and Support Phase 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.

The PTP should be prepared prior to the delivery of the last unit of the project's production or the planned acquisition project's closeout date.

Roles and Responsibilities

Project Manager Responsibilities
Identify and coordinate all the project's transition tasks
Prepare and submit the PTP
Project Sponsor and Supporting Organization Responsibilities
Review and endorse after the PTP is prepared
Director of Acquisition Programs (CG-93) Responsibilities
Approve the PTP

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Chapter 6: Capital Investment Planning

1. 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 an component's portfolio of capital assets to achieve strategic goals and objectives with the lowest life cycle cost and least risk. OMB Circular A-11, Capital Programming Guide provides guidance on the principles and techniques for effective capital programming. The contents of this chapter are provided to highlight the relationship between capital programming and major systems acquisition processes. Capital programming is calendar-based while acquisition is event-based. 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, acquisition and management of capital assets into the budget decision-making process. The major challenge for PMs is to integrate the acquisition management process (event based) with the budget process (time based).

2. PLANNING, PROGRAMMING, BUDGETING, AND EXECUTION

Planning, Programming, Budgeting, and Execution (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*. The objective of the PPBE process is to articulate DHS goals, objectives, and priorities and to align those goals to develop and implement a program structure with time-phased financial resources and personnel requirements to accomplish those goals and objectives. The PPBE Model is depicted in **Figure 17 PPBE Process**.

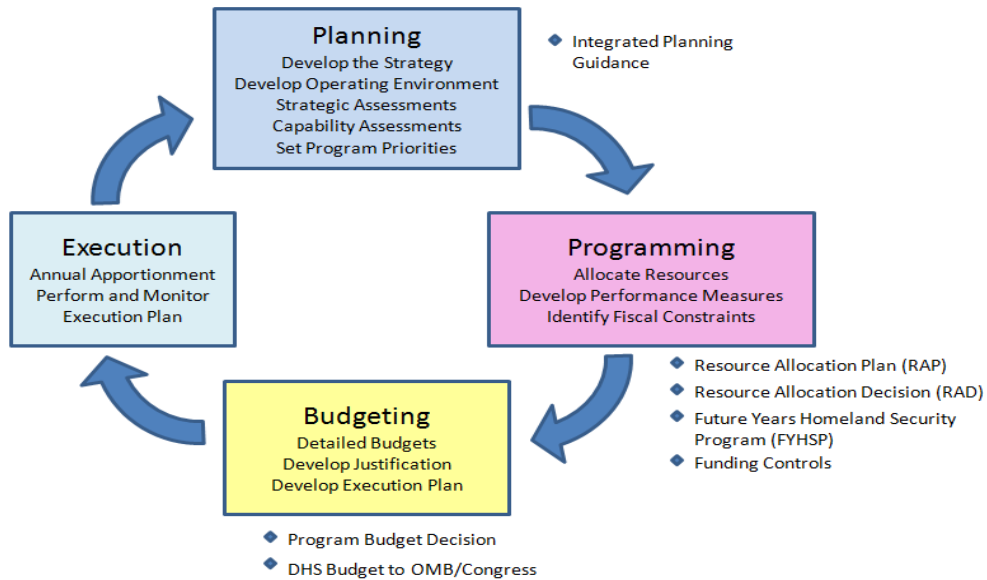


Figure 17 PPBE Process

The Coast Guard follows the PPBE process to articulate a budget strategy; identify size, structure, and equipment for operating forces; allocate resources; and evaluate actual outcomes against planned performance to adjust resources as appropriate. The following overview is provided to help PMs gain a better understanding of the PPBE process.

- **Planning:** Establishes the priorities, and capabilities required to achieve strategic goals (long-term 5-10 years). Planning includes an assessment of current capabilities and a review of existing and emerging threats to identify gaps and deficiencies to develop budget guidance to address these gaps. The DHS IPG provides the direction and guidance for the Coast Guard to develop their five year CIP and to begin preparation of the annual Acquisition, Construction and Improvement (AC&I) budget submission. The CIP reflects the AC&I funding stream for major systems acquisitions. The planning phase ends when the DHS IPG is issued.
- **Programming:** Applies the limited resources (funding and personnel) to programs that provide the capabilities (hardware, services) required to achieve the priorities and strategic goals (mid-term 5-years) as documented in the annual DHS IPG. Programming turns guidance into affordable, achievable packages and allocates resources to maximize the achievement of component goals. Each January, DHS issues top-line fiscal guidance to each Component. These financial targets are negotiated in close coordination with OMB. Fiscal guidance, the IPG and formal instructions provided by Office of Chief Financial Officer (OCFO) Program Analysis and Evaluation (PA&E) serve as the guidelines for Component Resource Allocation Plan (RAP) submissions. This phase is resource constrained and results in a RAP for submittal to DHS. The RAP must prioritize what is affordable within fiscal constraints in addition to identifying any unfunded requests. The RAP is the Coast Guard's preliminary budget request to DHS. The DHS Program Review Board (PRB) reviews RAP

submittals from each component and issues a Resource Allocation Decision (RAD). The RAD is the DHS pass-back to the Coast Guard RAP, and is the Secretary's formal approval of the 5-year program funding levels and becomes the basis for the individual budget for each component and Future Years Homeland Security Program (FYHSP) submissions to OMB.

- **Budgeting:** Applies the available funding towards the approved acquisition projects, with supporting justification and an execution plan (1-year) for accomplishing goals and objectives. Budgeting includes the process to request resources to be appropriated by Congress. The final output is the DHS Budget and the FYHSP submitted to Congress for approval and appropriation of funds. The FYHSP is a 5-year budget approach as required by the Homeland Security Act Section 874 (e.g., the Fiscal Year (FY) 11-FY15 FYHSP includes the FY11 budget with out-year targets to FY15 showing percentage based caps that cannot be exceeded for each year).
- **Execution:** Includes the final actions required to effectively, efficiently, and economically accomplish the prioritized acquisition projects for which funds were requested and approved. Funds execution and actual project performance feed back into subsequent planning, programming, and budgeting phases. The PM will utilize PMDS to report asset delivery, costs and expenditures for submission to Commandant (CG-8) in accordance with the Financial Resource Management Manual (FRMM) COMDTINST M7100.3 (series).

Acquisition PMs need to understand the PPBE process and get involved early in the process for the overall benefit of their projects – without resources (funding and personnel) there is no acquisition project. The primary Coast Guard inputs to the PPBE process are the Vice Commandant (VCG) Budget Guidance and the individual Resource Proposals (RPs). Within the Coast Guard, an Investment Board is chartered by Vice Commandant to build a budget for execution and position the Coast Guard for the future with capital investments. The Investment Board is charged with ensuring that the budget build process reflects the planning and priorities outlined in the DHS/CG Strategic Plans. The Resource Group is an advisory body to the Investment Board and charged to prioritize and recommend investments for consideration in planning, programming, and budget proposals.

The PPBE process supports development of the Coast Guard's Fiscal Year budget and CIP for submission to DHS. The FY Budget becomes part of the DHS Presidential Budget submission and the CIP is the Coast Guard's AC&I portion of the DHS FYHSP (**Figure 18 PPBE Overlapping Cycles**). The CIP and FYHSP provide project funding allocations, performance, and ADEs for the budget year plus four years in support of DHS goals and priorities as identified in the IPG.

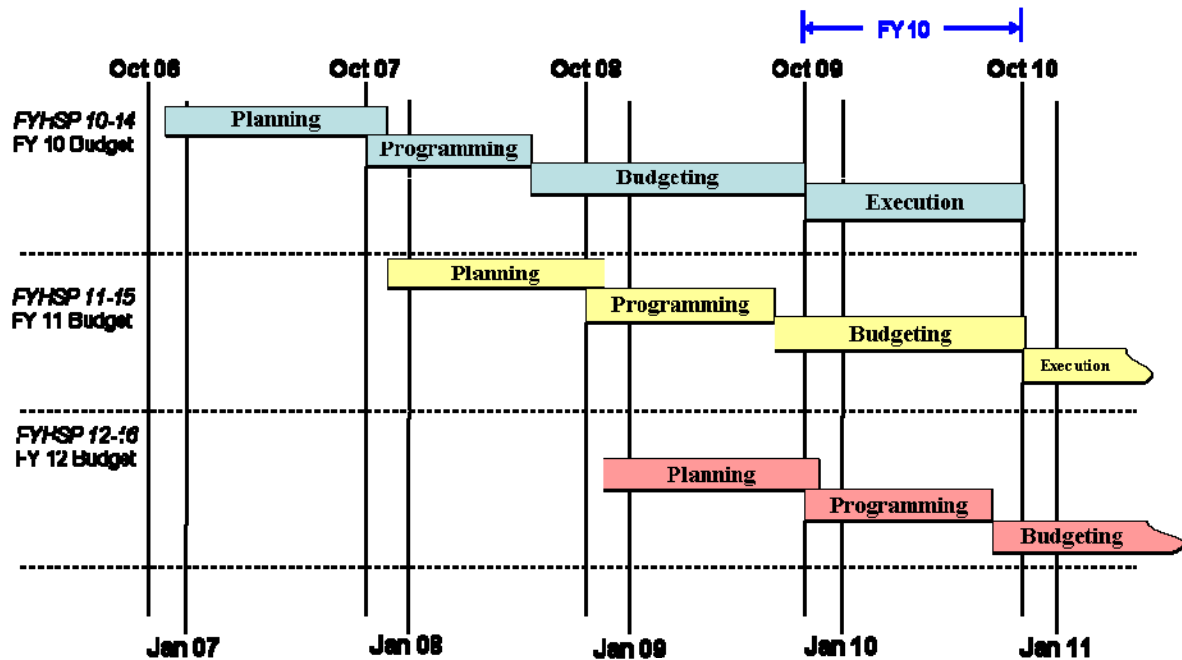


Figure 18 PPBE Overlapping Cycles

3. EXHIBIT 300

An annual Exhibit 300 Business Case is required by OMB Circular A-11 and DHS to be submitted for all major capital asset acquisitions. All major capital asset investment projects shall refer to OMB A-11 (series) for Exhibit 300 template and submission guidance. In addition, the projects shall refer to Appendix K of DHS Directive 102-01 (series) to understand limitations of the project’s milestones.

The Exhibit 300 is submitted through Commandant (CG-822), along with the Coast Guard budget submittals, to DHS and OMB. OMB Exhibit 300s for IT projects are tracked and reported in the Federal IT Dashboard (<http://it.usaspending.gov/>) annually.

Exhibit 300s are reviewed and scored to ensure that spending on acquisitions directly supports DHS strategic goals and the President’s Management Agenda. New projects 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. As described in **Table 10: Exhibit 300 Mapping to Acquisition Project Documents**, the project’s acquisition documents serve as an essential source of Exhibit 300 information. Project Managers need to provide risk-adjusted cost and schedule goals with measurable performance benefits identified. Projects 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 life cycle cost estimates. Documentation starts with the PIR and continues with annual OAs.

Table 10 Exhibit 300 Mapping to Acquisition Project Documents

OMB Exhibit 300 Section		Acquisition Decision Event					
Section	Title	ADE-1 "Validate the Need"	ADE-2A "Approve the Acquisition"	ADE-2B "Approve Acquisition Type"	ADE-2C "Approve LRIP"	ADE-3 "Approve Production"	ADE-4 "Project Transition"
Part I Summary Information and Justification (All Capital Assets)							
A	Overview	MNS	MNS CONOPS	MNS CONOPS	MNS CONOPS	MNS CONOPS	PIR OAs
B	Summary of Spending (Budget Authority for Capital Assets)	FYHSP (Wedge Values)	PLCCE	PLCCE	PLCCE	PLCCE	
C	Acquisition/Contract Strategy	AP (Analyze/Sel ect efforts only)	AP	AP	AP	AP	
D	Performance Information	MNS	APB	APB	APB	APB ILSP	
Part II Planning, Acquisition and Performance Information							
A	Cost and Schedule Performance		APB	APB	APB		
Part III For "Operation and Maintenance" Investments Only (Steady State)							
A	Cost and Schedule Performance						OA

The Exhibit 300 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 acquisitions 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). Major IT investments also must report Exhibit-53.

4. DHS ACQUISITION REVIEW PROCESS

DHS Directive 102-01 establishes an Acquisition Review Process (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, APMD works with Department stakeholders, the PgM 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.

1. Prior to the ARB, APMD 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: (a) a briefing to the ART on the project's current status and known issues; (b) the collection of comments from ART members and other stakeholders and the assembly of a common set of issues to be addressed by the ARB; and (c) a briefing of the ART by APMD to summarize the issues and decisions to be made at the ARB. Following this review, APMD prepares an issue paper for the ARB.
2. Following an ARB meeting, APMD shall prepare an Acquisition Decision Memorandum (ADM) as the official record of the Acquisition Decision Event, 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.
3. Following the approval of the ADM, APMD shall track the action items contained in the ADM and report to the ADA on any failure to satisfy such conditions. Completion of such action items is a prerequisite for advancement to the next phase of the Acquisition Lifecycle.

Figure 19 Capital Acquisition Planning shows the inseparable link between the ARP and the PPBE process.

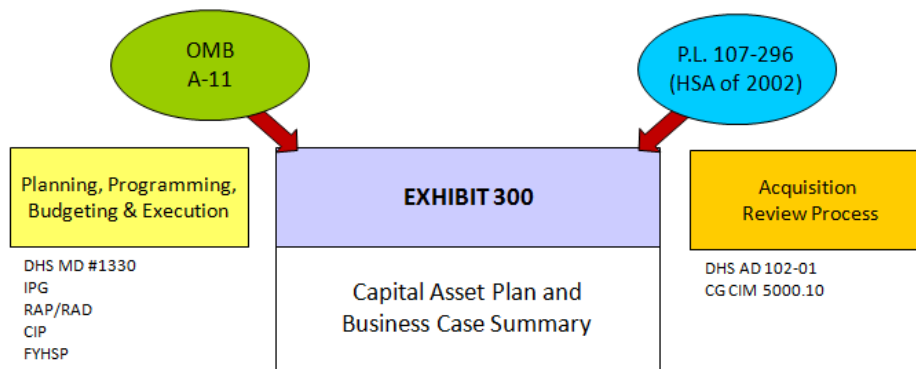


Figure 19 Capital Acquisition Planning

5. AFFORDABILITY ASSESSMENT

Affordability is the degree to which the life cycle cost of a capital asset acquisition project is consistent with the overall Coast Guard CIP and DHS FYHSP. Programming and affordability decisions at each ADE are considered and balanced against the annual budget costs and priorities of all Coast Guard acquisition programs/projects planned for a five-year period.

Each major systems acquisition enters the acquisition process with a ROM cost estimate and funding stream projection in the MNS. The ROM cost estimate is successfully honed during the acquisition process through cost and performance trade-off analyses and feasibility studies. PLCCEs should be of fairly high confidence by the time the ORD is finalized and approved. At the end of the Analyze/Select Phase, the APB is established for all key cost parameters, to include at a minimum, Total Acquisition Cost, Program Life Cycle Cost, and Program Acquisition Unit Cost.

The Sponsor's Representative (during Pre-Acquisition) or the PM is responsible for initiating the Affordability Assessment (AAS) for each major systems acquisition. The Office of Resource Management, Commandant (CG-928) will review all affordability Assessments. A copy will be provided to Commandant (CG-928) for review prior to ADE-2 and all subsequent ADEs. Commandant (CG-928) and the Office of Budget and Programs, Commandant (CG-82) each has the responsibility to review the AAS to validate the funding listed within the assessment, and to provide a recommendation to Commandant (CG-8) concerning the project's cost as it relates to the expected Coast Guard budget. The AAS includes consideration of support and personnel requirements, as well as the fiscal constraints of the organization. DHS ADA approval and authorization to enter subsequent acquisition phases will not be granted unless sufficient resources are or will be programmed to support the next phase of the acquisition project. The AAS describes the acquisition project's programming and affordability impacts on the CIP, the FYHSP, and the annual budget cost and priorities.

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Chapter 7: Reports and Reviews

1. INTRODUCTION

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

2. REPORTS

One of the responsibilities of the PM is to provide various reports to senior management in the Coast Guard. The following information describes the required reports that the PM will use to carry out his/her administrative duties contained in the PM Charter. Acquisition Directorate Standard Operating Procedure #8 for Project Performance Reporting defines the process for Commandant (CG-9) project performance reporting.

Monthly Project Report (MPR): This report provides monthly project status information to senior management and DHS. The PM completes the report at the end of each month with assistance from the Office of Resource Management, Commandant (CG-928). This report provides the current status of cost, schedule, performance (technical), and logistics performance. In Section 4A, the project should ensure that the most recently approved CIP data is reflected. This is to include adjustments to quantities to reflect planned buys per fiscal year, vice expected deliveries, that meet the new funding profile. Section 4B is to include any updates to show all changes to the project's major contracts. Projects using earned value also report contract status using earned value performance measures. This information is also to be reflected in the Quarterly Project Report (QPR) discussed in greater detail below.

Quarterly Project Report (QPR): The PM completes a QPR at the end of each fiscal quarter. This report provides project status information to senior CG management and DHS. A QPR is required from all major systems acquisitions and is distributed to the Component Acquisition Executive, TAs and sponsors. This report provides information and status on the following elements:

- General Information
- Project Status (APB Assessment)
- Project Status (Functional Assessment)
- Risks (Top 3)

- Budget and Funding Status (AC&I)
- Contract Status
- Project Schedule and Milestones (APB)
- Top 5 Significant Accomplishments (Previous Quarter)
- Top 10 Key Events/Activities (for next 12 months)
- Key Project Documents
- APB Comparison
- Key Performance Parameters (KPP)

Projects using earned value also report cost and schedule using earned value performance metrics.

Probability of Project Success (PoPs) Report: The PoPS report provides a tool for DHS and the Coast Guard to accurately assess an acquisition project’s likelihood to succeed and then clearly/concisely represent that assessment to DHS and Coast Guard leadership. It accomplishes this by reporting on a number of internal and external factors integral to project success that is measured based on established criteria. The evaluation process used to obtain a score represents a comprehensive assessment of the ability of the project to complete its objectives, considering the current state and anticipated future performance. There are five factors making up the report: Project Foundation, Project Resources, Project Execution, Project “Fit” in Capability Vision and Project Advocacy. Each Factor is broken down into level 2 Metrics. Factors and Metrics that are considered in the report and the associated reporting responsibilities are shown in **Table 11 Metric Assessment Responsibilities**.

Table 11 Metric Assessment Responsibilities

Metric	USCG Responsibility
1.0 Project Foundation	
1.1 Project Requirement	CG-924
1.2 Acquisition Strategy	CG-924
1.3 Alternative Consideration	CG-924
2.0 Project Resources	
2.1 Budget / Funding	CG-928
2.2 Staffing	CG-921
2.3 Contractor Health	Project Manager
3.0 Project Execution	
3.1 Earned Value Management	CG-928
3.2 Performance Assessment	CG-924

Metric	USCG Responsibility
3.3 Logistics Assessment	CG-93AL
3.4 Testing Status	CG-926
3.5 Risk Assessment	CG-924
3.6 Technical Maturity	CG-926
4.0 Project “Fit” in Capability Vision	
4.1 DHS Vision	CG-924
4.2 USCG Vision	CG-924
5.0 Project Advocacy	
5.1 USCG	CG-924
5.2 DHS Leadership	CG-924
5.3 Congress	CG-925
5.4 Industry	CG-925

To ensure reporting independence, the PoPS assessment is conducted by personnel independent of the project office with the exception of Metric 2.3. The completed PoPS assessment is provided to the PM for review and concurrence. If the PM does not concur with the independent assessment, the assessor/grader and PM will try to resolve the dispute. If the dispute has not been resolved within the five days, the assessor/grader must notify Commandant (CG-928). Commandant (CG-928) consolidates and forwards all disputed assessments to the Deputy Assistant Commandant for Acquisition, who will make the final determination on the grade and assessment for adjudication. Completed Quarterly PoPS assessments along with performance trend analysis provided by Commandant (CG-924) are available on the CG Portal (Acquisition Project Management System (APMS)) website. Assessment Guidance is provided in the Probability of Project Success (PoPS) Operations Guide available from Commandant (CG-924).

Note: Starting 1QFY11, DHS implemented a pilot PoPS report where PMs conduct the assessment and report their assessment to DHS using the Next-Generation Project Reporting System (nPRS).

Quarterly Acquisition Report to Congress (QARC): This report provides a quarterly assessment of project status to the respective Chairpersons of the Senate and House Authorization subcommittees that have oversight over DHS and the Coast Guard. The QARC incorporates the QPR for each major acquisition project as well as information on AC&I Shore Construction Projects, OE (boats) lease/buy and AC&I Personnel Expenditures. The Program Review Division, Commandant (CG-821) and the Budget Execution Division, Commandant (CG-831) provide assistance with the review and coordination of the report through DHS and OMB.

3. 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 oversight officials to obtain approval to continue to the next stage of development or the next phase of the acquisition.

a. Coast Guard Reviews

Executive Oversight Council: The Coast Guard Executive Oversight Council (EOC) is a Flag/SES-level forum that monitors major risk, addresses emergent issues, reviews acquisition decision event exit criteria, and provides direction to cross-directorate teams as required to support successful execution of major acquisition projects. The EOC includes key stakeholders in the acquisition process. Commandant (CG-924) is designated as the Executive Secretary for the EOC.

Primary responsibilities of the EOC are:

- Monitor major risks and approve mitigation plans to balance cost, schedule and performance tradeoffs. [when outside the PM's management control or scope]
- Synchronize projects with planning, programming, budgeting and execution milestones to align them for successful completion of key events milestones and ADEs.
- Address and resolve cross-sponsor and cross-enterprise issues.
- Control requirements creep by reviewing proposed significant changes to requirements and technical configuration that could increase cost and extend schedule.
- Provide a forum for the Chief Acquisition Officer (CAO) and Program Executive Officer (PEO) 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.
- Review de-scoping of requirements or adjustments to technical authorities in response to funding constraints.
- Serve as a review board for endorsing proposed acquisition strategies and prioritizing new starts.
- Provide coordinated guidance to staffs.
- When appropriate, make vetted recommendations to the CAE through Commandant (CG-01) and DCO.
- When appropriate, approve SELC Stage review Completion Letter.

The EOC is chaired by the Coast Guard Chief Acquisition Officer, Assistant Commandant (CG-9). Membership is shown in **Table 12 EOC Membership**.

Table 12 EOC Membership

CG-9 (Chair)			
CG-1	CG-2	CG-4	CG-5
CG-6	CG-7	CG-8	CG-91
CG-92	CG-93	CG-094	CG-095

Coast Guard Acquisition Review Board (CG ARB): The CG ARB serves as the primary source of advice to the CAE. This board is kept apprised of major acquisition performance through a series of annual reviews. The CG ARB serves as an oversight forum that assesses issues, risks, identifies project top priority actions, and promotes an understanding of project impact on missions.

The CG ARB conducts acquisition decision event (ADE) reviews of major systems acquisition projects prior to their review by DHS. Appendix A of this Manual provides recommended format and content guidance for CG ARB presentations.

Annual reviews allow for review of major systems acquisition projects 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 project. Guidance on preparation for the Annual Review can be found in Appendix A of this Manual.

Note: Commandant (CG-924) coordinates ADEs and Annual Review briefings.

The CG ARB:

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

The CG ARB consists of three primary members shown in **Table 13 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 13 CG ARB Core Membership

CG ARB Core Members		
VCG (CAE) ¹	CG-01 ¹	DCO
EOC		

Note:¹CAE will chair CG ARB whenever ADA is S2, but may delegate to Commandant (CG-01) for Level 1 ADE-2A/2B/2C and ADE-3.

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

- Monitors project progress;
- Ensures project compliance with approved policy, process and guidance;
- Distributes documents to CG ARB members for review;
- Serves as the central point of contact for all issues and documentation submitted to the CAE;
- Coordinates CG ARB meetings and provides administrative support for effective meeting facilitation;
- Prepares Acquisition Decision Memoranda (ADM) for decision authority signature; and
- 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).

Coast Guard Enterprise Architecture Board (EAB) Reviews: The Coast Guard EAB supports the DHS EAB by conducting enterprise architecture reviews of all C4IT project decision requests. 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).

b. 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 projects prior to DHS ARB review. The DHS EAB reviews select non-IT project 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 project elements.

DHS ARB: The DHS ARB is the departmental executive board that reviews Level 1 and 2 major acquisitions for executable business strategy, resources, management, accountability, and alignment to strategic initiatives. The DHS ARB supports the ADA in determining appropriate directions for the acquisition at key ADEs. Chaired by the ADA, the DHS ARB conducts systematic reviews of acquisitions to ensure that they are progressing in compliance with approved documentation (i.e., the CDP for the Analyze/Select acquisition phase, and the APB and PSTP for the Obtain and Produce/Deploy and Support phases). The DHS ARB is comprised of the ADA, representatives from USM, CFO, CIO, CAO, CPO, CSO, other Line of Business (LOB) chiefs, Assistant Secretary for Policy, General Counsel, Director OT&E, other HQ representatives, and Component representatives.

DHS ARB Acquisition Review Process (ARP): The following description of the DHS ARP is provided for better understanding of the DHS planning process.

Figure 20 DHS Acquisition Review Process provides a graphic representation of the process. The DHS ARP has eight steps:

1. ARP Initiation. Notionally, 45 days in advance of a planned ADE, initial coordination occurs between APMD and Commandant (CG-924). An intake/entrance conference is scheduled.
2. Intake/Entrance Conference: DHS APMD conducts an intake/entrance conference with the PM and Commandant (CG-924) to discuss the decision being requested, requisite supporting documentation, key issues and the planned schedule for the upcoming ADE.
3. Acquisition Review Team (ART) Review:
 - ART In-Brief: PM briefs the ART on the project's current status and known Subject Matter Expert (SME) issues.
 - Documentation Review: APMD provides a copy of requisite project documentation to the DHS Acquisition Review Team (ART) for internal DHS review and then coordinates adjudication of emergent questions or issues. ART members and other stake holder comments, along with an assembly of common issues are collected.
 - ART Out-Brief: APMD briefs the ART to summarize comments of project documentation, decisions and issues; prepares an issue paper for the DHS ARB.

4. Schedule the DHS ARB: Upon satisfactory completion of the DHS ART review and the resolution of relevant issues, APMD prepares an ADE schedule for approval and coordinates the DHS ARB review.
5. ADE Briefing Book: The project PM prepares a brief in accordance with APMD direction and the briefing format provided in Part 3 of Appendix A. APMD creates the ADE briefing book which is provided to DHS ARB members four days in advance of the ADE.
6. DHS ARB conducts ADE.
7. ADM Drafted: With Commandant (CG-924) and PM input, the APMD drafts an ADM and submits it to the ADA for signature.
8. Formal ADE Approval – The ADE decision process is complete upon ADA signature of the ADM.

The DHS ARP steps are shown in **Figure 20 DHS Acquisition Review Process**.

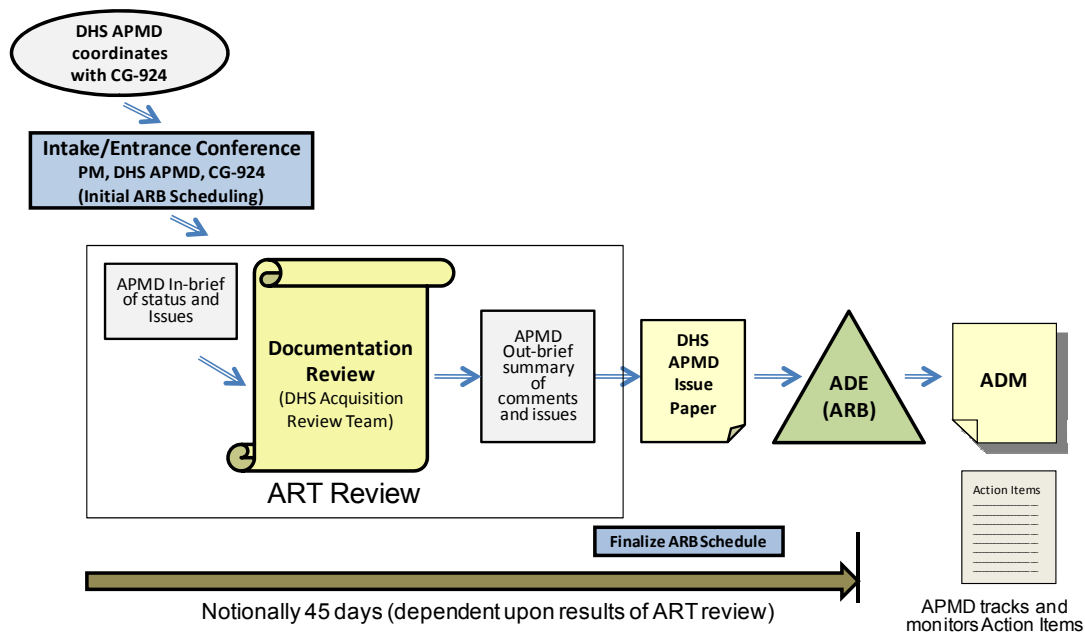


Figure 20 DHS Acquisition Review Process

DHS Annual Portfolio Reviews: Annual Portfolio Reviews are high level briefs conducted to provide visibility into each project's cost, schedule and performance status within the overall context of Coast Guard Air, Surface and C4IT Programs. General information on DHS Annual Portfolio Reviews can be found in Appendix A of this Manual.

4. RECORDS MANAGEMENT AND DOCUMENTATION

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

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

The Information and Life Cycle Management 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>

b. Privacy Act.

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 (aka breaches) are prevented through the system's life cycle, including final disposal.

c. 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 assessable to people with disabilities. Federal agencies must now use these standards in all their EIT acquisitions. DHS Management Directive, MD 4010.2 (series) and Cost 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.

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." DHS MD 4010.2 (series) Section VI B addresses procedures that must be followed.

DHS developed a tool to assist users in including the correction 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 Statement of Work 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.

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Acquisition Directorate

Major Systems Acquisition Manual Handbook Appendix A

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INTRODUCTION

The Coast Guard Major Systems Acquisition Management Handbook is organized as follows:

- a. PART 1: DOCUMENTATION
- b. PART 2: MAJOR ACQUISITION DOCUMENTATION TEMPLATES
- c. PART 3: BRIEFINGS

This Handbook was developed for the Coast Guard acquisition workforce and associated integrated product team/matrix members and support staffs. The Handbook should be used as a quick, ready reference to identify the organization, format and suggested content for required documentation and briefings. This information should be used in concert with this Manual.

Constructive changes/recommendations to this Handbook are encouraged. The Chief, Acquisition Support Office, Commandant (CG-924) will manage all changes.

VERSION SUMMARY

This appendix to this Manual reflects significant changes and refinement to reference material, formats and templates provided in previous versions. Major changes include:

- Created separate section for Templates
- Updated concurrent clearance process to include DHS involvement and streamlining recommendations
- Updated Templates to include DHS review or approval
- Updated Briefings Section

Table of Changes

Version #	Date	Section	Paragraph	Description
1.0				

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PART 1. DOCUMENTATION

1.0 DOCUMENT REVIEW AND APPROVAL PROCESS

1.1 Review and Approval Levels

Each draft acquisition document or plan must undergo a Matrix-level concurrent clearance review. It is not necessary that reports go through concurrent clearance. Any questions or concerns should be resolved with assistance from Commandant (CG-924). If the Matrix-level (typically O-6/GS-15) review results in an irresolvable non-concur, or a significant change to the document, an EOC-level concurrent clearance may be required. The following tables provide the project documentation approval authorities.

Table A-1 Acquisition Documents Requiring DHS Approval

Document	Prepared by	Coast Guard Approval Authority	DHS Approval Authority
Acquisition Plan ¹	PM	HCA	OCPO
Mission Need Statement	Sponsor's Rep	CAE	ADA
Capability Development Plan	CG-93 PgM	CG-9	ADA
Operational Requirements Document	Sponsor's Rep	CAE	ADA
Acquisition Program Baseline	PM	CAE	ADA
Project SELC Tailoring Plan	PM	CG-93	ADA
Integrated Logistics Support Plan	PM	CG-01	ADA
Test and Evaluation Master Plan	PM	CG-9	DOT&E
Operational Test Plan	OTA	N?A	DOT&E

¹Acquisitions with contracting actions \geq \$ 10M require an Acquisition Plan. The HCA is approval authority for AP's $<$ \$300M. DHS OCPO approves AP's \geq \$300M.

Table A-2 Acquisition Documents Requiring Coast Guard Approval

Document	Prepared by	DHS Review Required?	Coast Guard Approval Authority
Mission Analysis Report	CG-DCO-81 or Program/Mission Manager	N/A	DCO
Alternatives Analysis Study Plan	Study Director	Yes ¹	CG-9
Alternative Analysis Report	PM/Study Director	N/A	CAE
Concept of Operations Document	Sponsor's Rep	N/A	Sponsor
Project Management Plan	PM	N/A	CG-9

Document	Prepared by	DHS Review Required?	Coast Guard Approval Authority
Preliminary Operational Requirements Document ²	Sponsor's Rep	N/A	CG-9 (accepts)
Life Cycle Cost Estimate	PM	Yes	CG-9
Affordability Assessment (AAS)	Sponsor's Rep/PM	N/A	CG-82
Configuration Management Plan	PM	N/A	CG-93
Independent Logistics Assessment	CG-441	N/A	CG-4
Logistics Readiness Review	CG-441	N/A	CG-4
Risk Management Plan	PM	N/A	CG-93
Deployment Plan	Sponsor's Rep	N/A	Sponsor
Project Transition Plan	PM	N/A	CG-93
Post Implementation Review	Sponsor's Rep	N/A	Sponsor

¹Commandant (CG-924) will provide a read-ahead copy of the Study Plan and an invitation to attend to DHS APMD 15 days prior to the Study Plan Review.

²PORDs are accepted, not approved, by Commandant (CG-9)

Table A-3 Acquisition Documents Not Requiring Coast Guard Approval

Document	Prepared by
Exhibit 300 (initial)	Sponsor's Representative
Exhibit 300 (post-ADE-1)	PM
Developmental Test Report	PM
Operational Test Report	OTA

1.2 Concurrent Clearance

Purpose: The purpose of concurrent clearance is to communicate important project information to key stakeholders in order to solicit their comments and ultimately, their concurrence prior to the document's approval. Concurrent clearance is a necessary activity for communicating the complex elements of acquisition projects to the stakeholder to ensure the project is aligned with current policies and standards, and to improve the projects plans having knowledgeable persons outside the project provide their professional review and comment. Effective use of the IPTs and Matrix teams can ease the process, but cannot supplant it.

Concurrent clearance takes place in two parts; at the Matrix-level and subsequently at the EOC-level (if needed).

A EOC-level review is required for any document or plan in which there is a significant

comment that cannot be adjudicated successfully between the originating office and the commenting office during the Matrix-level concurrent clearance. If Matrix-level review comments have been properly adjudicated, the EOC-level review may be waived by Commandant (CG-924), the CG EOC Executive Secretary. The PM, or document originator, can request a waiver of the EOC concurrent clearance with a memo in the document package.

Note: Successful adjudication is accomplished when the originating office and the commenting office are in agreement for the disposition of the critical and significant comments that were provided on the document or plan.

Matrix-level Concurrent Clearance

For the Matrix-level concurrent clearance, **Figure A-1 Concurrent Clearance Matrix** lists the documents that are required to go through a concurrent clearance review and the offices that are to be put on distribution to review and comment on a document. Where multiple offices are listed within a Directorate, the project should include each office that is involved in the project as well as the office that establishes policy for the functional area the document is addressing. Example: An ILSP should go to the engineering office(s) supporting the project and the logistics policy office, Commandant (CG-44).

	Sponsor	CG-924	CG-1B3	CG-21/22/25/26 ^{1,2}	CG-4EA for Distribution	CG-51/52/53 ¹	CG-6EA for Distribution	CG-71/72/73/74/75/76/77 ¹	CG-81/82	CG-926	CG-928	CG-93PM/93PM	CG-93AL	CG-0949	OTA ⁴	DHS ⁵
MNS	X	X	X	X	X	X ³		X	X	X					I	X
CONOPS	X	X	X	X	X	X ³		X	X	X		X	X		I	X
CDP		X							X	X					I	X
ORD	X	X	X	X	X	X ³		X	X	X		X	X		I	X
PMP		X	X		X	X ³	X		X	X	X				I	
RMP		X	X		X	X ³	X		X							
TEMP	X	X	X	X		X ³	X	X		X					I	X
ILSP	X	X	X	X	X	X ³	X		X				X	I		X
CMP		X			X	X ³	X						X			
PSTP		X	X		X	X ³				X						X
DP	X	X	X		X	X ³		X	X			X	X			
PTP	X	X	X		X	X ³	X		X						I	
DT Plan		X	X	X	X	X ³	X			X					I	X

Concurrent Clearance Matrix

X - Provide document for comments I - Provide document for information

Notes: 1. Select the most appropriate office(s) to include in the concurrent clearance.

2. Provide if project involves an intelligence system/capability.

3. Provide if project is an IT project.

4. OTA: Operational Test Agent

5. Send to "APMD.CAD@DHS.gov". DHS comments will be returned directly to the originating office.

Figure A-1 Concurrent Clearance Matrix

A completed draft document will be distributed for Matrix-level concurrent clearance along with a Concurrent Clearance, Form CG-4590 that provides instructions and due

date to the matrix reviewers.

Figure A-2: Concurrent Clearance Process is a flow diagram of the concurrent clearance process. The following is a step by step explanation of the process:

Step 1: Draft the Document. The office responsible for preparing the document (identified in **Table A-1 Acquisition Documents Requiring DHS Approval** and **Table A-2 Acquisition Documents Requiring Coast Guard Approval**) drafts the document.

Step 2: Submit Document for Matrix-level comment. Submit concurrently to all offices by email.

The following steps apply for this step:

- a. Fill out Concurrent Clearance, Form CG-4590 in accordance with instructions in **Table A-4 Matrix-Level Concurrent Clearance, Form G-4590, Instructions**.
- b. Ensure the offices listed in **Figure A-1 Concurrent Clearance Matrix** for the specific document are listed in the form.
- c. Develop a comments matrix document (word or excel) for respondents to use to provide comments (Commandant (CG-9) has a standard template).
- d. Once completed, email the document, the Concurrent Clearance, Form CG-4590 (a scanned version of the original signed copy), and the comments matrix to each office listed in the form.

Step 3: Originator receive and adjudicate comments and revise the document. Comments are to be adjudicated with the offices submitting them. Adjudication means concurrence from the originating office to the proposed verbiage reflecting the change. Use a summary table (Commandant (CG-9) template) to consolidate and document the comments and deposition.

Step 4: Submit the document package to Commandant (CG-924). Build a Concurrent Clearance package per **Table A-5 EOC Concurrent Clearance Package Contents, and Figure A-4 EOC Concurrent Clearance Package**. Include in it a request for a waiver from EOC Concurrent Clearance if there are no outstanding critical or significant disagreements remaining for the comments that were submitted. The waiver request should be to Commandant (CG-924), EOC Executive Secretary.

Step 5-6: Validate comments are properly adjudicated. Commandant (CG-924) reviews the package for proper adjudication. If comments are properly adjudicated proceed to Step 8.

Step 7: If comments have not been properly adjudicated, return to Step 3.

Step 8: Commandant (CG-924) approves EOC Concurrent Clearance Waiver.

Step 9: Commandant (CG-924) returns Package to the document's originating office with approved waiver request.

Step 10: Originating office routes document for approval. The document is placed into approval signature routing by the originating office.

Step 11: Document 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 Concurrent Clearance

Step 6-7: If there is an irresolvable critical and significant comment(s) on the document, then the document must go through EOC Concurrent Clearance.

- **Steps A and B:** Commandant (CG-924) will initiate the EOC Concurrent Clearance process by distributing the document package to the EOC members. Comments from the EOC Concurrent Clearance are to be provided to the originating office. The document's originating office is responsible for tracking the status of the package and receipt of comments.
- **Step C:** Originating Office receives and adjudicates comments. The document's originating office will receive the comments and adjudicate them (same rule as Step 3).
- **Step D and E:** Submit document package (**Figure A-4 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 will establish the due date based on the document's time sensitivity and other documents out for EOC-level review and will distribute copies of the document package to appropriate EOC offices for review. The originator's contact, as provided by the PM or Sponsor's Representative, will collect the EOC responses. The originating office will be responsible for adjudicating responses to any EOC-level review comments and making appropriate changes to the document.

An example form is provided in **Figure A-3 Concurrent Clearance, Form CG-4590**.

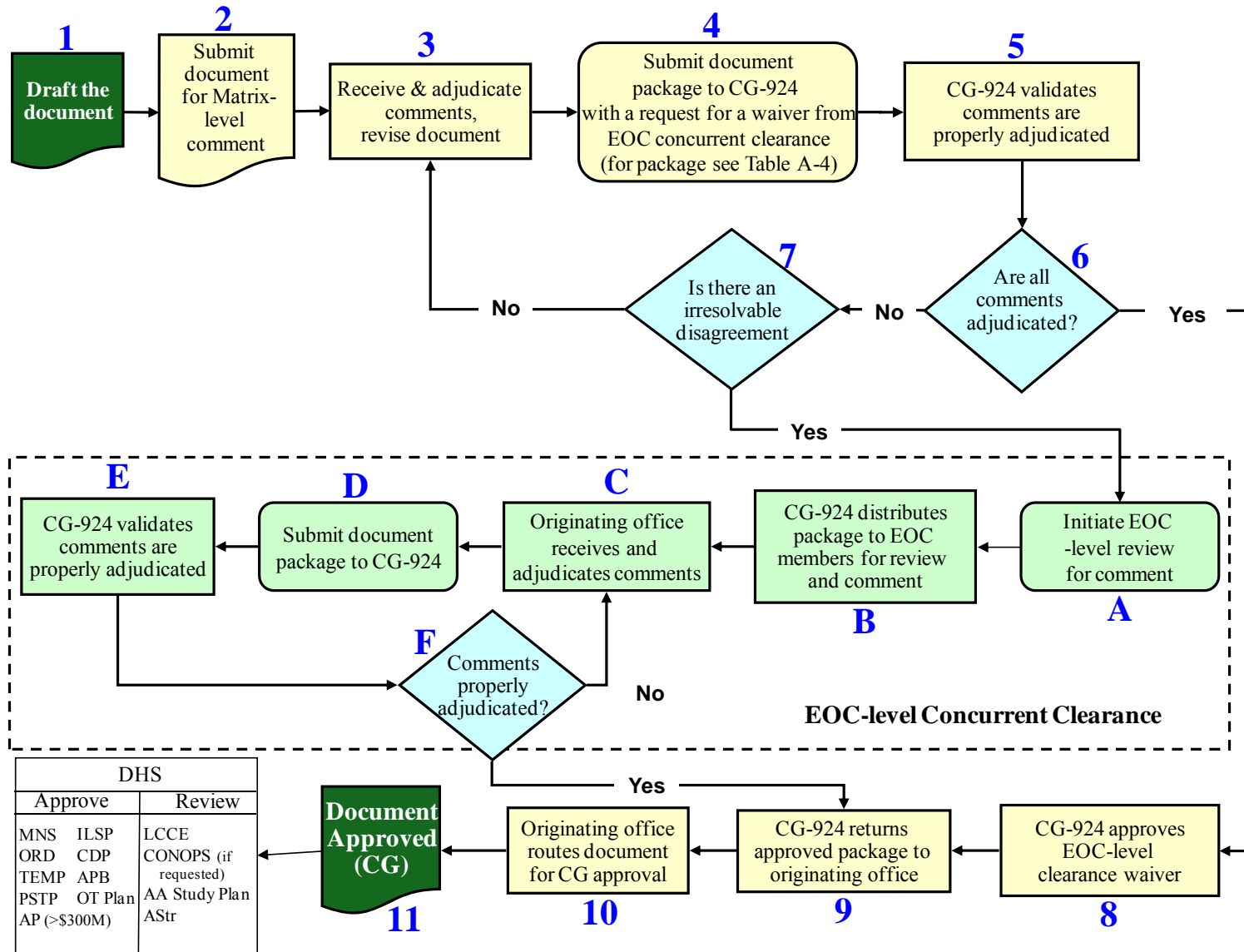


Figure A-2 Concurrent Clearance Process

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 A-3 Concurrent Clearance, Form CG-4590

Instructions for filling out the Concurrent Clearance, Form CG-4590 are provided in **Table A-4 Matrix-Level Concurrent Clearance Form Instructions**.

Table A-4 Matrix-Level Concurrent Clearance Form Instructions

Concurrent Clearance. Form CG-4590 Item	Information Required
TO	"DISTRIBUTION"
IDENTITY OF MATERIEL	Name of document being cleared
RETURN TO	Routing symbol of PM 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 A-1... 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	PM or Sponsor or designee's typed name, and signature
DATE	Date signed
DEADLINE DATE FOR RETURN TO ORIGINATOR	Date for comments to be returned to originator's contact, usually two 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
ROOM	Room number of Originator's Contact
PHONE	Phone number of Originator's Contact

EOC-Level Concurrent Clearance

The requirement for all documents to go through the EOC-level concurrent clearance is the same, except if the Matrix-level review resolves all comments, the PM or document originator can request a waiver from the EOC-level concurrent clearance from the EOC Executive Secretary, Commandant (CG-924). The PM (or Sponsor's Representative for the ORD) will provide an adjudicated document package in a blue-pocketed file folder (see Table A-5 and Figure A-4) to the EOC Executive Secretary to initiate a EOC-level concurrent clearance (or waiver request).

If all of the comments are adjudicated resulting in no outstanding issues, then the PM should include a memo in the document package requesting a waiver of the EOC-level concurrent clearance requirement.

Table A-5 EOC Concurrent Clearance Package Contents

Left Side of Folder (Back to Front)	Right Side of Folder (Back to Front)
Copy of the document package sent out for Matrix-level concurrent clearance Review	Revised draft document
Copy of each matrix-level response	Memo from PM to CG EOC Executive Secretary, Commandant (CG-924) requesting and justifying waiver of EOC-level concurrent clearance requirements.
Summary of comments and additional responses	
Original concurrent clearance form sent to the matrix with the bottom filled out as to who responded and their response (i.e., concur, concur with comments, non-concur)	

Figure A-4 EOC Concurrent Clearance Package provides a pictorial of the contents of the EOC Concurrent Clearance Package.

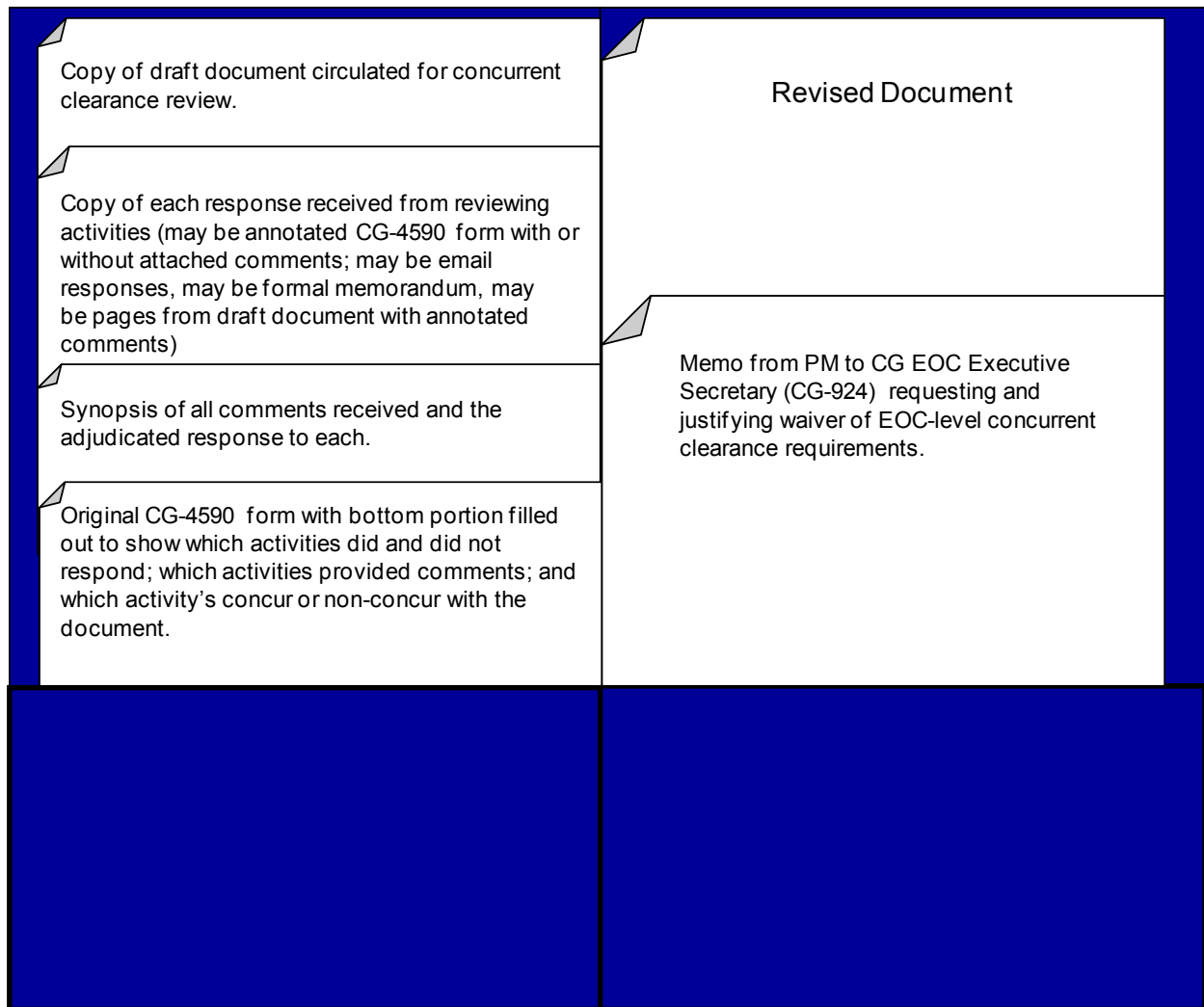


Figure A-4 EOC Concurrent Clearance Package

1.3 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 A-5 EOC Concurrent Clearance Package Contents, and Figure A-4 EOC Concurrent Clearance Package** with the request for waiver of an EOC-level concurrent clearance 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 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.

Concurrent and Sequential 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 or endorsement. Where appropriate, the document can be routed concurrently to several offices to streamline the approval process. In the templates shown in Part 2 of Appendix A, those directorates/offices that are recommended for concurrent document routing are highlighted in light grey on the title/signature pages. Those not highlighted should be routed in sequence for signature. (Note: 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.

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

1. The originator prepares the routing package for sequential signature as described above in this section.
2. 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 to 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."
3. 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.
4. 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.

1.4 Documentation Updates and Revisions

As the project progresses through the various acquisition phases, project 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 at each subsequent DHS ADE. In addition, each document shall be updated if significant changes in project execution plans, schedule, funding or resource requirements occur. The approval process for major updates shall be the same as the review and approval process discussed above.

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) should increment in tenths, as in Version 1.1.
- Major changes in direction or composition should increment in whole numbers higher than the previous version, as in Version 2.0.
- 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 to the document’s Executive Summary. The Table of Changes should reflect the version number and date discussed and should be as shown below.

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 A-6 Date Formats** should be used.

Table A-6 Date Formats

Key Event To Occur:	Date Format Convention:
Past History	Use Month and Year, e.g., 10/09
Within 3 Years	Use Quarter and Fiscal Year, e.g., 1QFY11
Beyond 3 Years	Use Fiscal Year, e.g., FY15

1.5 Management of Scientific and Technical Information

This section addresses the Management of Scientific and Technical Information (STINFO), including Coast Guard requirements for marking and controlling unclassified, limited-access technical documentation with the appropriate distribution statements, export control warnings and destruction notices.

Management of Scientific and Technical Information (STINFO), COMDTINST M5260.6 (series) establishes policy and processes for appropriately safeguarding Scientific and Technical Information (STINFO), specifically including data subject to International Traffic in Arms Regulations (ITAR) and other export controls, and intellectual property subject to limited data rights. Its purpose is to provide content, educate, and ensure compliance of Coast Guard acquisition and contracting staffs. It introduces the spectrum of security considerations and special category handling which must be considered and addressed by the Program Managers (PMs) and project staffs/matrices, and covers contracting and training requirements.

As outlined in Management of Scientific and Technical Information (STINFO), COMDTINST M5260.6 (series), STINFO is defined as all communicable classified and unclassified limited-access information that relates to military operations and systems including:

- Research, development, engineering, testing, evaluation, production, logistics, and operations.
- Information that can be used to design, procure, support, maintain, repair or overhaul products, services and equipment.

Technical documentation includes technical publications, instructions, manuals, specifications, drawings and standards, both hard copy and electronic, Computer Automated Design (CAD) and other types of electronic drawing files and technical documentation contained in Interactive Electronic Technical Publications (IETPs). Appropriate ITAR and Export Administration Regulations (EAR) clauses (refer to Chapter 3.C.3. of the COMDTINST) must be included in contract language when export-controlled items are expected or known to be involved in the performance of a contract. Additionally, use the Standardized STINFO Distribution Statements (enclosure 2 of the COMDTINST) and the Full Export-Control Warning Statement (enclosure 3 of the COMDTINST), in Block 9 of applicable CDRLs and other contract documentation as appropriate. PMs must ensure that contractors understand the requirements for handling and marking this documentation/data appropriately and then validate that it is marked as specified before accepting delivery.

Originators, procurers, and users of such information, including drawings, schematics, and design documentation of Coast Guard assets and systems, are to familiarize themselves with Management of Scientific and Technical Information (STINFO), COMDTINST 5260.6 (series), review current processes, and update those processes as needed to ensure compliance with this policy.

The Aviation Logistics Center (ALC) technical publications branch has been designated the Coast Guard Center of Excellence for STINFO. Questions related to program requirements may be forwarded to Chief, ALC Technical Publications Branch, at (252) 335-6829.

Official distribution is electronically available at the following websites:

- CG directives system on the CG web:

<http://cgweb2.comdt.uscg.mil/cgdirectives/welcome.htm>

- CG directives system on the www:
<http://www.uscg.mil/directives/cim.asp>

1.6 End Use Certificates (EUCs) and Declarations by End Users (DEUs)

This section addresses End Use Certificates and Declarations by End User (EUCs/DEUs). EUCs and DEUs are international agreements executed in connection with a foreign-sourced defense weapon system or component. These documents typically place a restriction on the end-user, such as prohibition to re-export the item to a third party nation. EUCs/DEUs are becoming more common in USCG acquisition programs as major systems/components are being sourced from foreign vendors. Because EUCs/DEUs are bona-fide international agreements that may place use and/or re-transfer restrictions on the USCG, these documents are approved at the EOC-level.

End Use Certificates (EUCs) and Declarations by End Users (DEUs), COMDTINST 5710.4 (series) provides policy and procedures for execution and administration of EUCs/DEUs. Its purpose is to provide content, educate, and ensure compliance of Coast Guard acquisition and contracting staffs. It introduces and establishes policies, assigns responsibilities, and prescribes procedures which must be considered and addressed by the Program Managers (PMs), project staffs/matrices, and contracting staffs for administration of EUCs/DEUs.

End Use Certificates (EUCs) and Declarations by End Users (DEUs), COMDTINST 5710.4 (series) authorizes the execution of EUCs/ DEUs when such certificates are necessary to facilitate purchases of foreign products when the purchase of such products is in the best interest of the United States.

- The USCG purchases products produced by allies and friendly countries and may participate in cooperative development programs to promote interoperability, standardization, and an expanded procurement base, and to obtain products that best meet U.S. needs at the lowest cost.
- U.S. worldwide security responsibilities are extensive and recognition of these special circumstances has resulted in long-time acceptance in international agreements, by allies and friends, of the need for flexibility in the authorized uses or transfer of purchased or co-developed articles and data.
- The USCG may execute EUCs/DEUs, in accordance with the policy and procedures outlined in End Use Certificates (EUCs) and Declarations by End Users (DEUs), COMDTINST 5710.4 (series). While most EUCs/DEUs requested by foreign governments use general language, their effects may be divided into three categories, defined by the degree of restriction placed upon the USCG. Authority to approve their execution is delegated no lower than the USCG Component Acquisition Executive (CAE).

Originators, procurers, and users of such information, including drawings, schematics, and design documentation of Coast Guard assets and systems, are to familiarize themselves with End Use Certificates (EUCs) and Declarations by End Users (DEUs), COMDTINST 5710.4 (series), review current processes, and update those

processes as needed to ensure compliance with this policy.

The Office of International Acquisition (CG-922) has been designated the Coast Guard point-of-contact for EUCs/DEUs. Questions related to program requirements may be forwarded to Chief, Commandant (CG-922), at (202) 475-3035.

Official distribution is electronically available at the following websites:

- CG directives system on the CG web:
<http://cgweb2.comdt.uscg.mil/cgdirectives/welcome.htm>
- CG directives system on the www:
<http://www.uscg.mil/directives/cim.asp>

PART 2. MAJOR ACQUISITION DOCUMENTATION TEMPLATES

1.0 MISSION ANALYSIS REPORT

1.1 Purpose

The Mission Analysis Report (MAR) documents the results of ongoing mission analyses and supports initial acquisition strategies. The purpose of mission analysis is to assess the ability of the Coast Guard to successfully carry out a specific mission in the future. The projected future mission is described as the current mission gap and the impact of current deficiencies on operational effectiveness. Potential solutions are identified that would fulfill the mission requirements. A comparison is made between the current mission capability and its costs versus an estimated lifecycle cost range for potential alternatives.

With an approved MAR, the sponsoring organization has the responsibility to complete pre-acquisition activities by development of a Mission Need Statement, Exhibit 300 inputs, funding requests, and Need Phase Exit Criteria. The sponsoring organization will work closely with Commandant (CG-9) to ensure a major acquisition is stood up to meet the needs of the new or updated Coast Guard mission.

1.2 Preparation

Mission Analysis is the responsibility of the Coast Guard operating program that becomes the sponsoring organization. The sponsoring organization should prepare the draft MAR in accordance with the template provided in section 1.3. The approved MAR will not usually be updated unless there are significant changes in Coast Guard mission requirements. Refer to Chapter 4 of this Manual for additional guidance.

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1.3 Template

MISSION ANALYSIS REPORT (MAR)

for the

[PROJECT TITLE]

Submitted by:

Office of Performance Management
& Assessment (DCO-81) or Program/
Mission Manager

Date

Endorsed by:

Assistant Commandant for Marine
Safety, Security & Stewardship (CG-5)

Date

Endorsed by:

Assistant Commandant for Capability (CG-7)

Date

Approved:

Deputy Commandant for Operations (DCO)

Date

Version #

Date:

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MISSION ANALYSIS REPORT (MAR)

CONTENT REQUIREMENTS

EXECUTIVE SUMMARY

The Executive Summary should be a brief discussion of the MAR, highlighting the salient points of each section. Include a brief description of the results and expected outcomes of the report and briefly discuss the roles and responsibilities of key participants.

SECTION 1: MISSION

1.1 Summary of Existing Mission

Briefly summarize the existing mission (or new mission if applicable) including: the scope of the mission (theater of operations) and the nature of mission.

1.2 Reasons to Perform the Mission

Briefly describe why the Coast Guard is or will be required/obligated to perform the mission. Use applicable references, i.e., statutes, regulations, policy, or MOA/MOUs as appropriate. This may include historical summaries or may be an anticipated future requirement.

1.3 Current Functional Requirements and Capabilities

Presidential, Department of Homeland Security, and Coast Guard strategy guidance are to be used to determine the functional requirements and capabilities the Coast Guard will need in order to effectively meet the strategic needs. In addition, a Mission/Function Analysis is to be conducted to assist in further identification of these functional requirements and capabilities.

1.3.1 Current Mission Functional Requirements

Provide a general description of requirements for mission fulfillment. For example, Search and Rescue (SAR): at-sea rescue response; take a person out of the water; locate people and boats, etc.

1.3.2 Current Mission Functional Capabilities

Describe capabilities for mission fulfillment, including specific platforms as appropriate, and consider equipment, buildings, land, computer hardware/software, billets/positions, resource hours, customers, funding, etc.

1.3.3 Mission Performance Measures and Gap Analysis

Describe how well the current mission is being executed, as well as gaps in effectiveness, in terms of mission, system, and human performance, customer response, costs, excess/deficient capabilities, etc. Identify any human performance deficiencies and/or safety shortfalls.

1.4 Projected Future Mission

Evaluate the projected future mission and its effectiveness goals. Discuss the requirement for the future mission or reasons for changes to the current mission in terms of system and human performance capabilities and limitations, safety, risk, statutes, regulations, policy, historical trends, technology, demographics, etc.

SECTION 2: PROBLEM STATEMENT

2.1 Mission Impact of Deficiencies

Incorporate the mission descriptions and projections, mission, system and human performance gaps, and other preceding analysis into a summary problem statement. Describe how the mission is or will be affected by the deficiencies by addressing what will not be done, what impacts it will have, by whom, and whether the future mission can be accomplished with the current functional capability.

2.2 Resource Inadequacies

Describe resource inadequacies including prohibitive costs of maintaining current capability, safety considerations, impacts of new mission on resource base using current capability, etc.

2.3 Non-materiel Alternatives Explored

Describe non-acquisition alternatives for addressing deficiencies which have been explored, e.g., changes in Doctrine, Organizations, Training, Materiel, Leadership, Personnel and Facilities plus Regulations/Grants/Standards (DOTMLPF+R/G/S).

SECTION 3: RANGE OF ALTERNATIVES

3.1 Alternatives Identification

Identify, in general terms, human factors technological opportunities as well as alternative capabilities or means of fulfilling mission requirements, including the status quo, in order to provide possible avenues for later exploration. For each identified alternative, using technology assessments and forecasts, describe the possible impact of obsolete, emerging, or future technology on mission fulfillment; estimate and assess risk and uncertainty, including resource risk; determine impact on other missions, system performance, and human performance; and, estimate the cost range, if possible.

3.2 New versus Rehabilitated and/or Upgraded Capability

Determine if the mission can be accomplished by a current capability rehabilitation or upgrade vice acquiring new capability. If not, describe why.

SECTION 4: JUSTIFICATION FOR MAJOR SYSTEMS ACQUISITION

4.1 Summary of Rationale for Acquisition

Summarize the rationale for the acquisition of the capability and include the need for the capability; explain why the new or changed mission cannot be fulfilled by changes to policy or procedures; and, provide a summary of potential solutions to be explored.

4.2 Summary of Impact of Status Quo

Provide a summary of the impact of remaining with the status quo, including its operational deficiencies; potential for current capability failures; impacts on the needed mission; potential shortfalls in resources; and safety, reliability, or supportability impacts on current assets.

4.3 Resource Estimate

Summarize the current mission fulfillment/capability costs and estimate the cost range for each

alternative. These cost estimates will serve as a long range place marker for budgeting, to determine the appropriate level of acquisition to pursue, and to aid in allocating personnel resources to the major acquisition project.

Appendix (A): Bibliography

Provide a list of references, background materials, previous studies, or other supporting documents.

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2.0 MISSION NEED STATEMENT

2.1 Purpose

The purpose of the Mission Need Statement (MNS) is to synopsise at a high level, specific functional capabilities required to accomplish the Coast Guard and Department of Homeland Security (DHS) mission and objectives. The MNS is a qualitative communication vehicle both within a project and between the project and DHS to provide a strategic framework for acquisition planning and development.

Approval of the MNS provides formal DHS executive-level acknowledgment of a justified and supported need for allocation of resources to resolve a mission deficiency with a materiel solution. In the broader view of the acquisition lifecycle, it represents the initiation of formal acquisition program management and the beginning of the acquisition process.

The MNS is the formal description of the strategic need for an acquisition and is a crucial part of the acquisition process. It is one of the earliest documents to formalize the acquisition and links the gap in mission capability to the particular acquisitions that will fill that gap.

2.2 Preparation

The Sponsor's Representative shall prepare the MNS (maximum of eight pages) in accordance with the template provided in section 2.4. The MNS should describe specific functional and architectural capabilities required to perform the Coast Guard and DHS mission, concisely but in sufficient detail for reviewers to understand the need for the acquisition within the context of the Coast Guard and DHS portfolio. It should contain much of the justification and critical insight into mission capabilities as well as mission support capabilities that were developed for the MAR. The MNS serves as the basis to render an acquisition decision to proceed to the Analyze/Select Phase. Later documents, such as the Operational Requirements Document, will take the analysis from the MAR and concepts outlined in the MNS and begin decomposing the gap requirements in detail. Commandant (CG-924) shall support the Sponsor's Representative in coordinating the review of the MNS.

The MNS is submitted by the Sponsor and approved by the CAE. For Level 1 and 2 acquisition projects, the Coast Guard approved MNS is forwarded to DHS for review by the DHS Office of Policy and approval by the ADA.

Mission Need Statement submissions that exceed eight pages and/or include solution-based requirements will normally be rejected by DHS. Refer to Commandant (CG-7) Requirements Generation and Management Process (Pub 7-7) for additional information and Chapter 4 of this Manual for additional guidance.

2.3 Requirements Management

To provide clear traceability of all requirements, a relational database should be used to capture and document the mission capability gaps/requirements identified by the team. Key attributes the database needs to provide to the team include:

- a. Provide unique identity to each requirement.

- b. Be able to baseline so that changes can be clearly tracked.
- c. Develop and export/print a requirements traceability matrix.

The database should be initiated and maintained by the Sponsor through the development of the MNS, CONOPS, and the ORD. The PM will continue to use the database in the development of the Statement of Work.

2.4 Template

MISSION NEED STATEMENT (MNS)

for the

[PROJECT TITLE]

Submitted by: _____
 Sponsor Representative (CG-YYY) Date _____

Reviewed by: _____
 Office of Requirements and Analysis (CG-771) Date _____

Endorsed by: _____
 Sponsor (CG-Y) Date _____

Endorsed by: _____
 Deputy Commandant for Operations (DCO) Date _____

Endorsed by: _____
 Chief of Staff (CG-01) Date _____

CG Approval: _____
 Component Acquisition Executive (VCG) Date _____

Endorsed by: _____
 Director of APMD Date _____

Endorsed by: _____
 Assistant Secretary for Policy Date _____

DHS Approval: _____
 Date _____

Version # _____
 Date: _____

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MISSION NEED STATEMENT

FOR (PROJECT TITLE)

EXECUTIVE SUMMARY

Include the salient points of the MNS. The Executive Summary should be very short (1-2 paragraphs) and should provide a synopsis of the acquisition requirements detailed in the body of the MNS.

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

SECTION 1 MISSION(S) AND CAPABILITIES

1.1 Required Mission(s) and Need(s)

- Identify the required mission(s) in functional terms and capabilities.
- If appropriate, discuss the threats, threat assessment and threat environment that drives the mission (e.g., terrorist attack, natural disaster).
- Describe capabilities required by the CG or its stakeholders/partners to accomplish the mission. Describe the capabilities independently of whether or not the CG currently possesses them.
- Do not specify in terms of equipment or other means that might satisfy the need; i.e., state the problem (need), not the solution (equipment).
- If a current mission has altered, discuss how or what portion of the mission has changed and how current and required capabilities are going to differ as a result.
- If there is an Information Technology (IT) or business-process gap, if IT is envisioned as

a potential investment, or if there will be changes to the business processes, describe the relationship of this capability relative to the DHS Enterprise Architecture (EA) and the Federal Enterprise Architecture (FEA).

Discuss the priority of the acquisitions that will fill the gap in relation to the overall mission.

1.2 Authority

Cite the statutory and/or regulatory authority for the mission(s).

1.3 Capability Gap(s)

- Using the Doctrine, Organizations, Training, Materiel, Leadership, Personnel and Facilities plus Regulations/Grants/Standards (DOTMLPF+R/G/S) and Requirements Generation System (RGS) factor structure (as appropriate), describe the capability gaps. These are capabilities that the CG and/or its stakeholders/partners require to perform the mission but do not currently possess and are not planned to be provided by existing programs/projects. Although the CG MNS process completed consideration of DOTMLPF+R/G/S factors prior to a focus on materiel solutions, include related DOTMLPF+R/G/S considerations and factors in the capability gap description.
- Very briefly describe at a high level, the capabilities and gaps in the context of how DHS and its stakeholders (e.g., State, Local or Tribal authorities) currently perform the mission.
- Discuss what other existing and planned systems (including IT or business) are conducting the same or similar missions or performing the same or similar functions.
- Discuss the efforts made to determine whether these existing systems and planned programs could be used or leveraged to provide the required capability.
- Assess why it is not possible to perform this mission with existing capabilities and resources by showing that existing systems cannot provide the required capability.
- For needs/gaps that have potential IT solutions describe the difference between the current capability and the future needs by describing the functions that lack systems (IT and non-IT) with the required capabilities.

SECTION 2. PROGRAM JUSTIFICATION

2.1 Linkage to Strategic Plan

- Link or trace the defined mission to DHS Strategic Plan and its goals and objectives. The Coast Guard should consider the Integrated Planning Guidance (IPG) Quadrennial Homeland Security Review (QHSR) and Bottoms Up Review (BUR) issued by the DHS Assistant Secretary for Policy and how the identified need aligns with the DHS Strategic Plan.

2.2 Compelling Federal Government Interests

- State how the investment will support core/priority mission functions that have to be performed by the Federal Government.
- State why the investment needs to be undertaken by the DHS as opposed to another governmental source (e.g., State, Local or Tribal authorities) or private sector alternative.

2.3 Efficiency and Effectiveness

- Discuss any dependency on other acquisitions and how this need and its attendant acquisitions differ from any ongoing program in the Department with similar need, function, and mission.
- Discuss what other potential stakeholders have similar initiatives and needs and the results of discussions with them.
- For IT capabilities, discuss the potential portfolio placement for this need. Discuss how the potential acquisition fits into the enterprise architecture transition strategy.
- Discuss how these acquisitions support work processes that have been or will be simplified or otherwise redesigned to reduce lifecycle costs and improve effectiveness.

2.4 Acquisition Goals and Objectives

- Discuss the proposed acquisition goals and objectives in terms of gaps required to be filled.

2.5 Impact of Disapproval

- Briefly discuss the impact of not receiving approval on the program, including impacts on current and planned mission and capabilities.

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3.0 CONCEPT OF OPERATIONS

3.1 Purpose

The Concept of Operations (CONOPS) describes a proposed asset, system or capability (referred to hereafter as the solution) in terms of the user needs it will fulfill, its relationship to existing assets, systems or procedures, and the ways it will be used in actual operations or business processes. It identifies the asset, system or capability solution characteristics from the viewpoint of any individual or organizational entity that will use or who will operate or interact directly with it.

The CONOPS serves as the bridge between the Mission Need Statement and the Operational Requirements Document by translating the stated mission need into functional capabilities. A CONOPS addresses the employment and support of a system or asset that operates within a system of systems or family of systems instead of as a stand-alone component. It is well suited for acquisitions of assets or systems that have extensive user, interoperability, and/or compatibility considerations. Since it is focused more on the major asset or system, there are several key sections of the template that may not be appropriate for smaller acquisitions of hardware, equipment, weapons or tools. Before commencing the level of effort required to formulate a CONOPS, verify that all of the sections of the template are applicable to the acquisition. If it is found that a number of sections are not applicable, then it is likely that a tailored CONOPS may be more appropriate and could be included as a section in the ORD.

3.2 Preparation

The Sponsor's Representative (as the user/operator representative) shall prepare the CONOPS in accordance with the template provided in section 3.4 in consultation with Mission Managers in Commandant (CG-5). The Sponsor's Representative should develop the CONOPS in parallel with the MNS during the Need Phase (or begin it in that phase).

CONOPS should be developed using a multi-functional team. Recommended make up of the team is:

- Sponsor's Representative (Co-Chair)
- Commandant (CG-771) (Co-Chair)
- Commandant (CG-4) (engineering and logistics philosophy and standards)
- Commandant (CG-6) (enterprise architecture, IT, IA, Spectrum, etc.)
- Commandant (CG-1B3) (human systems integration: manpower, personnel, training, HFE, habitability, personnel survivability, and safety)
- Commandant (CG-5) (missions and mission scenarios)
- Commandant (CG-Y) Program Manager (applicable Mission Portfolio)
- Commandant (CG-924) (consulting/training)

- Ad Hoc members as needed

Refer to Commandant (CG-7) Requirements Generation and Management Process (Pub 7-7) for additional information and Chapter 4 of this Manual for additional guidance.

3.3 Requirements Management

To provide clear traceability of all requirements, a relational database should be used to capture and document the mission capability gaps/requirements identified by the team. Key attributes needed of the database include:

- a. Provide unique identity to each requirement.
- b. Be able to baseline so that changes can be clearly tracked.
- c. Develop and export/print a requirements traceability matrix.

The database should be initiated and maintained by the Sponsor through the development of the MNS, CONOPS, and the ORD. The PM will continue to use the database in the development of the Statement of Work.

3.4 Template

CONCEPT OF OPERATIONS (CONOPS)

for the

[ASSET/SYSTEM TITLE]

Submitted by: _____
Sponsor Representative (CG-YYY) _____ Date _____

Reviewed by: _____
Office of Requirements and Analysis _____ Date _____
(CG-771)

Endorsed by: _____
Assistant Commandant for Marine Safety, _____ Date _____
Security & Stewardship (CG-5)

Endorsed by: _____
Assistant Commandant for Human _____ Date _____
Resources (CG-1)

Endorsed by: _____
Assistant Commandant for Intelligence and _____ Date _____
Criminal Investigations (CG-2)

Endorsed by: _____
Assistant Commandant for Engineering _____ Date _____
and Logistics (CG-4)

Endorsed by: _____
Assistant Commandant for C4IT _____ Date _____
(CG-6)

Endorsed by: _____
Assistant Commandant for Capability _____ Date _____
(CG-7)

Approved: _____
Sponsor (CG-Y) _____ Date _____

Version # _____ Date: _____

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Sample Template and Guidance

Concept of Operations

PREFACE The following provides a high level discussion of the definition and purpose of the CONOPS.

What is a CONOPS?

The CONOPS, or Concept of Operations, is both an analysis and a formal document that describes how an asset, system or capability will be employed and supported. It is developed to bridge the gap between the Mission Need Statement (MNS) and the Operational Requirements Document (ORD) by identifying the capabilities needed to perform the missions and fill the gaps expressed in the MNS.

The CONOPS is a communication vehicle to inform the mission managers, capability managers, project management staff, designers/developers, operational and mission support commanders, tactical users and other stakeholders of intended uses and methods of support of assets, systems or capabilities. It enables an early assessment of the fit of a solution in its operational environment and its expected performance in achieving missions and tasks.

Note: The CONOPS is neither a specification nor a formal statement of requirements. It is used as a source of information for the development of such documents and for project planning and decision making. It is written in common-user language, without requiring the provision of quantified, testable specifications.

How does the CONOPS fulfill its purpose?

The CONOPS expresses the employment and support vision of the users, capability managers, and supporters prior to commencing work on the ORD. The CONOPS process is used to gain consensus among stakeholders on the uses, operating and support concepts, employment, capabilities, and benefits of an asset, capability, or system. To achieve consensus, stakeholders must collaboratively balance the desires of mission success against the realities of technology, budget, schedule, and risk. The CONOPS focuses on the performance of solutions in their intended operational setting.

The CONOPS uses mission and support scenarios to describe, in non-technical terms, a “Mission-Day” for the asset, system, or capability. These scenarios are notional but realistic depictions of the asset or system in operation or being supported in order to achieve mission readiness. They are written or validated by the hands-on mission users who must perform operational tasks and functions. From these scenarios, needed capabilities can be derived and validated.

Sample Template and Guidance

Development of the CONOPS should include careful consideration of the full range of factors that together are required to fulfill the mission. For example, the ability to prevent illegal border

crossings is a combination of capital and service acquisitions of personnel, training and technology factors. This is accomplished by following the Doctrine, Organization, Training, Leadership, Materiel, Personnel, Facilities, and Resources plus Regulations, Grants and Standards (DOTMLPF+R/G/S) resource factor structure of the new DHS Strategic Requirements Planning System to identify non-materiel as well as materiel capabilities. In the Coast Guard, non-materiel factors are considered prior to the MNS being prepared. Nevertheless, these factors should be described in the CONOPS to realistically depict how the asset or solution system would work in a real world scenario where most, if not all, of the DOTMLPF+R/G/S factors are involved.

Outputs from the CONOPS:

The CONOPS culminates in two matrices of prioritized functional capabilities which provide ORD teams a starting point as well as a traceability tool in which to base their efforts.

The CONOPS conveys the operational and support concept of the asset or system to the ORD team and future stakeholders so that they may better understand the intended employment and support.

The CONOPS initiates the thought process of verifying suitability and effectiveness of the system or asset by providing a reference for determining “fitness for purpose and effectiveness in use.”

The CONOPS development process can enable operational, maintenance, support, acquisition, and supplier personnel to improve their understanding of the user needs and expectations.

CONCEPT OF OPERATIONS

CONTENT REQUIREMENTS

EXECUTIVE SUMMARY

This section is a succinct summary of the "core parts" of the document including a top-level description of the asset, capability or system, its major features and sub-capabilities. The executive summary focuses the reader's attention on the most important aspects of the document and provides sufficient information for the executive decision maker to understand the contents of the CONOPS. To ensure that all of the highlights have been captured, the executive summary should be written last.

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

SECTION 1: CAPABILITY NEED

This section is a synopsis of the MNS (and can in fact be used to develop the MNS). It should be a short explanation of the need/gap. The principal source for the capability needed for the mission is the MNS. The following section of the MNS should be summarized or referenced to identify the capabilities needed for the mission (irrespective of whether the Component or DHS actually possesses these capabilities):

1.1 MNS Required Mission(s) and Need(s)

- Identify the required mission(s) in functional terms.
- If appropriate, discuss the threats, threat assessment and threat environment that drive the mission (e.g., terrorist attack, natural disaster).

- Describe capabilities required by DHS or its stakeholders/partners to accomplish the mission. Describe the capabilities independently of whether or not DHS currently possesses them.
- Do not specify capabilities in terms of assets, equipment or other means that might satisfy the need; i.e. state the capability (need), not the solution (equipment). The next part of this section also builds upon and references the MNS section cited below. More detail than in the MNS may be provided.

1.2 MNS Capability Gap

- Using the DOTMLPF+S/R/G factor structure (as appropriate) describe the capability gaps. These are capabilities that DHS and/or its stakeholders/partners require to perform the mission but do not currently possess and are not planned to be provided by existing programs.
- Very briefly describe at a high level, the capabilities and gaps in the context of how DHS and its stakeholders currently perform the missions.
- Discuss what other existing and planned systems (IT or non-IT) are conducting the same or similar missions or performing the same or similar functions.
- Discuss efforts made to determine whether these existing systems and planned programs could be used or leveraged to provide the required capability.
- Assess why it is not possible to perform this mission with existing capabilities and resources by showing that the existing systems cannot provide the required capability.
- For needs/gaps that have potential IT solutions, describe the difference between the current capability and the future needs by describing the functions that lack systems with the required capabilities.
- Discuss how the potential investment fits into the DHS Enterprise Architecture (EA) Transition Strategy.

Current Situation: If appropriate, provide a brief description of the current operational situation, and address the gap in relation to this context. As a notional example, currently agents from two DHS organizations must coordinate plans and operations in mountainous terrain, where there are no commercial communications networks. Their current line of sight radio equipment is unable to connect these forces. Therefore, they cannot share a common understanding of the situation and cannot collaborate with each other. Future capabilities with superior technology will be a “fit” into this operational context to determine if and how well they solve the gap/need.

SECTION 2: OPERATIONS AND SUPPORT DESCRIPTION

This section is used to identify and explain the missions, nodes, user groups, organizations, environment, interdependencies and other circumstances in which the solution must operate.

2.1 Missions (Primary/Secondary). List, in priority order (if possible), each of the statutory Coast Guard and/or DHS missions that the solution will contribute to or perform. Indicate if the mission is primary or secondary. This sub-section provides linkage to the appropriate Mission Manager(s) in Commandant (CG-5), provides linkage to the MNS, lays the foundation for scenario development, and informs development of a subsequent ORD.

2.2 Users and Other Stakeholders. List and briefly describe the various groups of people/user classes who will interact with the asset. Factors that distinguish a user class include common responsibilities, skill levels, work activities, and modes of interaction with the asset, capability or system. In this context, a user is anyone who interacts with the existing system, including operational users, data entry personnel, system operators, operational support personnel, system maintainers, and trainers. It also includes non-operators who are using the output of the asset or system. Graphical diagrams, such as Use Case Diagrams, are very helpful when describing users and stakeholders and their level of involvement with the system.

2.3 Policies, Assumptions, and Constraints – List any policies, assumptions or constraints that apply to the current or proposed asset or system.

2.3.1 Policy. Guidance that is directive or instructive, and includes tactics, techniques, and procedures. [Source – Joint Pub 1-02; Dictionary of Military and Associated Terms, DHS Lexicon, Dec 2008, JP 1-02; National Cryptologic Doctrine, CP 1-0] Policies normally govern the operations of the current asset or system, normally in the form of general statements or understandings that guide or limit decision-making activities, but do allow for some discretion. Policies also include laws and regulations that inform or limit project decision-making. For example, compliance with safety regulations and environmental protection laws may limit or preclude certain capabilities or activities. Restraints are internally imposed but removable.

2.3.2 Assumption. An assertion about some characteristic of the future that underlies the current operations or plans of the organization. An assumption is treated as if it is true until proven otherwise. [Source – Coast Guard Pub 5-0 lexicon (draft). See also JP 1-02]. Assumptions are self-imposed but needed to permit planning/ops to continue. Assumptions must be firmly based, however, and not made arbitrarily. Also, it is important to list all of the assumptions made, in order to ensure continuity.

EXAMPLES:

An assumption may be that a Component's mission scope will be increased in the near term necessitating additional capabilities.

If the CONOPS for a large cutter is written to include helicopter operations, an appropriate assumption is that it will have a flight deck.

2.3.3 Constraint. A requirement placed on the command by a higher command that dictates an action, thus restricting freedom of action. See also operational limitation; restraint. [Source: Joint Pub 1-02] Operational constraints are limitations placed on the operations of the current asset or system (e.g., available hours of system operation, available number of personnel to operate the system, computer hardware and operational facilities constraints). Constraints are

externally imposed and not easily removable.

2.4 Operational Description. Briefly describe – from a user-oriented perspective – the proposed solution (asset, capability, or system), its general employment/operation, and its organizational setting. The operational description includes:

2.4.1 Operating Concept (OpCon). An OpCon is a description, usually graphical, showing the major, interactive participants/players/subsystems and their interrelationships. Provide and describe the proposed system's high-level operational view (OV) graphic(s).

2.4.2 Employment Modes. Describes the general asset configurations and methods of operation in various situations or environments. For a ship or aircraft, these may include: peacetime mission execution; transit; contingency operations with allies/coalition partners; training. For an IT system, they may include: routine use; maximum user loading; emergency use (e.g., when normal power sources are down); downloading data; uploading data; real-time operations.

2.4.3 Scheduling and Operations Planning. This section can be used to describe what is envisioned in terms of availability, readiness, frequency of use or employment, home-porting, and basing.

2.4.4 Operating Environment. This section is used to describe the conditions and environment, both natural and artificial, in which the system will operate. The information contained in this sub-section informs development of a subsequent ORD and Required Operational Capability/Projected Operational Environment (ROC/POE) document.

2.4.4.1 Geographic Area(s). Provide a bulletized list of the geographic area, Coast Guard region or regions where the asset will normally operate. Specific descriptions of regions may be found elsewhere, such as in the Coast Guard Deepwater Concept of Operations (CONOPS) 2025: Deepwater Operating Area of Responsibility (AOR), COMDTINST M16014.2 (series). In this case, they do not need to be re-described here, provided the reader is directed to the source document.

2.4.4.2 Environmental Conditions. Define the environment in which the asset or system will be operated and maintained. Consider: environmental compliance, electromagnetic/frequency interference, meteorological and oceanographic conditions. Whenever possible, be as specific as possible regarding environmental conditions. Include specifics such as: temperature ranges, sea states, wind velocities, precipitation, humidity levels, etc. possible in the geographic areas listed above.

2.4.5 Threats and Hazards. This section should explain all of the hazards (natural) and threats (manmade) that the asset or system may face. In the case of threats, list opposing forces expected and their general capabilities. Briefly discuss the security factors necessary to maintain overall operational and/or mission support effectiveness. Threat descriptions require caution, however, as often times, the source information is classified. As it is desirable to keep the CONOPS at the lowest classification level possible, using a pointing statement, such as “for information on classified threats, see appropriate documentation” may be appropriate. For

hazards, describe the natural dangers to mission execution. Briefly discuss the safety aspects and considerations necessary to ensure a safe environment for the system and operators. If any applicable directives and regulations are identified, be sure to list them in sub-section 6.4.

2.4.6 Interoperability with other Elements. Describe how the asset or system will be integrated into the Coast Guard and DHS command and control structure that is forecast to exist at the time the asset or system is fielded. Identify the information exchange interfaces with other Coast Guard; DHS; DOD; international, federal, state and local governments; as well as the general public. If interoperability with other systems or agencies is a critical factor in mission accomplishment, an interoperability KPP shall be included in the ORD. This section should also identify all other system and assets which the new asset must interface with both internal and external to the Coast Guard.

2.5 Mission Support Description. Mission success depends upon two equally important components: Operations and Support. While operations is initially described in the MNS (as mission performance), support of the asset or system is first described in the CONOPS. Support is integral to the CONOPS because it is interlaced with operations. Support questions are addressed in a CONOPS.

EXAMPLES:

If a cutter experiences a significant equipment casualty while underway, it may cease mission execution until the casualty is repaired. The plan to provide repair support affects the CONOPS. In this example, the support plan may limit ship operations closer to homeport. If the same personnel performing operation functions on the ship also perform support functions, as in a minimal crew paradigm, they may not have the skills or tools to fix major problems and therefore must avoid hazardous conditions. This may in turn limit their effectiveness in accomplishing the mission.

2.5.1 The support analysis conducted prior to commencing the draft phase of the CONOPS should provide the information required to describe the support vision of the appropriate organizations. However, since support plays such an important role in this document, the CONOPS IPT should also include adjunct members from the support organizations during the CONOPS draft phase.

2.5.2 Since support plays such an important role in this document, the CONOPS working group if one is formed must include members from the support organizations during the CONOPS draft phase.

2.5.3 There are two common models that help describe the support of a system or asset, The Six Facets of Readiness or The Thirteen Elements of Logistics. (See chart below) Either may be followed as a guide when writing the mission support description. Briefly describe – from a user-oriented perspective – the concept of mission support for this asset using the Six Facets of Readiness or The Thirteen Elements of Logistics framework as a guide. In other words, describe how the Coast Guard/DHS will support these facets in order to ensure readiness to perform the assigned missions. Topics to discuss include support agency(ies); administrative and medical support; Morale, Welfare and Recreation and work-life considerations; facilities; equipment;

configuration management; information technology support; repair/replacement criteria; maintenance levels and cycles; storage, distribution, and supply methods.

Table 14 Six Facets of Readiness/Thirteen Elements of Logistics

Six Facets of Readiness	Thirteen Elements of Logistics
People	Maintenance
Training	Supply Support
Equipment	
Support	Support Equipment
Infrastructure	Manpower, Personnel, and Training (MPT)
Information	Packaging, Handling, Storage and Transportation (PHS&T)
	Environmental, Safety and Occupational Health (ESOH)
	Facilities/Infrastructure
	Information Technology Resources
	Automatic Identification Technology (AIT)
	Product and Technical Data
	Obsolescence Management
	Deployment and Fielding
	Post-Production Support

EXAMPLE:

Applying the *Six Facets of Readiness* model, the following questions may be answered by the mission support description:

How will the **people** that deploy with the asset receive routine medical care?

How will the Coast Guard **train** the maintainers for this new asset?

Who is going to maintain configuration control of the **equipment** that is put into the asset?

How will maintainers and suppliers **support** the asset if it breaks down while deployed?

Will the current Coast Guard/DHS or other **infrastructure** support the new system or will new or upgraded infrastructure (air stations, homeports, buildings, equipment, etc.) be required?

Who will be in charge of maintaining **information** on the new system, including

publications and instructions?

2.5.4 Number each facet or element individually as 2.5.X.

2.5.5 Identify the different support modes that the asset or system could be in. These support modes later become the titles for the mission support scenarios. For instance, a cutter might have the following support modes: Homeport, Underway, Inport – deployed, Inport – foreign, Dry-dock. An aircraft might use: Home Station, Airborne, Deployed – Foreign, Deployed – Border Patrol Facility, Deployed – Coast Guard facility, Deployed – civilian facility, Depot repair. Information and communication systems might have normal, alerted, high alert, maintenance, etc.

2.6 Potential Impacts. Describe anticipated operational, mission support and other organizational impacts the proposed asset, capability, or system will have on the user, acquirer, developer, and support and maintenance organizations. These impacts may include changes in interactions and interfaces with command centers; change in procedures; use of new data sources; changes in quantity, type, and timing of data to be input to the system; changes in data retention requirements; new modes of operation based on peacetime, alert, wartime, or emergency conditions, modification of responsibilities; addition or elimination of responsibilities or positions; need for training or retraining; changes in infrastructure, including facilities and services; and changes in number, skill levels, position identifiers, or location of personnel in various modes of operation. This information allows all affected organizations to prepare for the changes that will be brought about by the new system and to plan for the impacts during development and transition to the new system.

SECTION 3: SCENARIOS

Scenarios are one way to gain insight into how a capability solution will perform and fit into the processes, activities, organizations, personnel, procedures, environment, threats, constraints, assumptions, and support involved in responding to the mission(s). In general, scenarios describe the role of the asset or system, how it will interact with external entities (both inside and outside the Coast Guard) in various modes and how key internal interfaces or key internal capabilities are used. In other words, HOW does the asset or system dynamically perform to deliver mission outputs or provide capability? Other ways to determine fit may include modeling and simulation, prototyping and piloting.

- Carefully selected and defined scenarios tie together all parts of the asset, capability, or system, the users, and other entities by describing how they interact. As such, scenarios perform a number of important roles in the development of the CONOPS.
- Scenarios illustrate the more general needs expressed in other parts of the CONOPS, providing a simple justification for why a particular capability, operational, or support characteristic is needed.
- Scenarios bind together different capabilities, showing how the capabilities are related.

- In developing and 'working' a scenario (usually in a work group), additional needs are usually revealed.
- By focusing on a real situation, deficiencies and omissions in the defined needs can be detected.
- Because scenarios describe operations and support in plain language, they assist all non-users to understand the operational and support domains, including the roles and needs of the users.
- Scenarios can also provide detailed and validated information which can be used for analysis and modeling tasks later in the project.
- Because scenarios represent realistic specific situations, they can contribute to the development of acceptance and operational testing.

3.1 Mission Operational Scenario(s)

3.1.1 (mission name) – In collaboration with the appropriate Mission Manager and current or future hands-on users, develop one or more representative “stories” that depicts the asset and its operational functional capabilities in action. Usually, each story has a set of activities carried out by agents/organizations working together. Each scenario depicts “how” the asset, capability, or system helps in this broad operational context to deliver operational results. Several scenarios may be constructed to more fully represent the mission(s) and environment(s). They should be distinct enough to cover the spectrum of factors affecting the mission. Normally, three to six scenarios are developed.

3.1.2 Functional Capabilities Needed – First, identify the specific activities taking place in the scenario. Then group the activities, if possible, by the functional capabilities required by the capability solution (e.g., asset) to perform the activities. Using bullets, list in this section each functional capability identified in the scenario. Later, similar functional capabilities from all of the operations scenarios are combined and used as titles for the individual functional capabilities descriptions in sub-section 4.1 and in the Functional Capabilities Matrix, sub-section 4.3.

3.2 Mission Support Scenario(s)

3.2.1 (support mode name) – In collaboration with appropriate Mission Support Managers, develop a representative “story” that depicts the asset and either (a) its functional mission support capabilities in action or (b) the support the capability solution (e.g., asset) requires to operate. Each scenario should depict “how” the asset or system conducts mission support activities or is provided with support and sustainment to deliver mission support outputs. In each scenario, consider the facets or elements used in the mission support description in section 2.5.

3.2.2 Functional Capabilities Needed. First, identify the specific support activities taking place in the scenario. Then group the activities, if possible, by the functional capabilities required by the system to perform the activities. Using bullets, list in this section each functional capability identified in the scenario. Later, similar functional capabilities from all of the support

scenarios are combined and used as titles for the individual functional capabilities described in sub-section 4.2 and in the Functional Capabilities Matrix, sub-section 4.3.

3.2.3 Functional Capabilities Delivered by Alternatives – Following identification of capabilities needed, a comparison can be made to potential alternative solutions (e.g. assets, systems) to determine how well they meet/match the requirements; this helps the AA and LCCE teams to trade off solutions and recommend a preferred solution (or range of options) to leadership.

SECTION 4: FUNCTIONAL CAPABILITIES

This section describes the functional capabilities of the asset and how they achieve mission operations and mission support objectives. Each description should include those activities performed by the asset or system that produce capabilities and, in turn, affect mission outcomes. A short discussion on the physical components and interfaces to the environment should be included.

4.1 Mission Operations. Provide an individual description for each capability listed in paragraphs 3.1.#.1. Number each as a sub-section in 4.1 (i.e., 4.1.#).

4.2 Mission Support. Provide an individual description for each capability listed in paragraphs 3.2.#.1. Number each as a sub-section 4.2 (i.e., 4.2.#).

4.3 Functional Capabilities Matrix. Insert two tables (see below example) that list the functional capabilities identified in the previous two sub-sections respectively.

4.3.1 Mission Operations Matrix. Populate the left column with the title of each Mission Operations functional capability listed in Sub-section 3.1 above. List the functional capabilities in order (descending) based on number of occurrences throughout the scenarios. Populate the top row only with those missions identified in the MNS. Within the matrix field, insert a “P” to indicate the functional capability is primary, or essential to mission success. Insert an “S” to indicate the functional capability supports the mission indicated yet is secondary, or not essential to mission success. This sub-section provides linkage to the appropriate Mission Manager(s) in Commandant (CG-5), lays the foundation for the development of the ORD and refinement of the Required Operational Capabilities/Projected Operational Environment (ROC/POE), and assists the requirements team with prioritizing requirements.

Table 15 Mission Operations Matrix

Functional Capability	Missions										
	SAR	CD	AMIO	LMR	OLE	PWCS	DR	MS	MEP	ICE	WWM
Boat Operations	P	P	P	P	P	S	P				
Helo Operations	P	P	S	P	S	P	P				

4.3.2 Mission Support Matrix - Populate the left column with the title of each Mission Support functional capability listed in Sub-section 3.2 above. List the functional capabilities in priority order (descending). Prioritization is based on an assessment of support to the mission scenarios through a prioritization matrix or count of the number of occurrences throughout the scenarios. Populate the top row only with those support modes identified in section 2.5.4. Within the matrix field, insert a “P” to indicate the functional capability is primary, or essential to readiness. Insert an “S” to indicate the functional capability support the mission indicated yet is secondary, or not essential to readiness. When determining “P” or “S”, consider whether or not the asset needs to have the capability while in the specific support mode. An example is provided below:

The table below represents a cutter. A question to consider is, “Does the cutter need the capability for medical care while underway?” and further, “Does the cutter need the capability for medical care while the ship is in dry dock?” The answer to the first question is that medical care is essential to readiness when underway, there is no alternative for this functional capability; it is listed as primary, “P.” While in dry dock there are alternatives that result in this functional capability not being required at all; hence that entry is blank.

Table 16 Mission Support Matrix

Functional Capability	Support MODES					
	Homeport	Underway	Inport	Inport Foreign	Dry Dock	
Administration		P	P	P		
Organic Maintenance	S	P	P	P		
Subsistence		P	S	P		
Medical		P	S	P		
Inorganic Maintenance	P		S	S	P	
MWR	S	P	P	P		

SECTION 5: CONOPS DEVELOPMENT TEAM. List the office codes and names of personnel who made meaningful contributions to the document. This provides the reader with points of contact to follow-up when questions arise.

SECTION 6: APPENDICES

6.1 Analysis Reports – Include each report of analysis conducted to include:

6.1.1 Human Resources Analysis

6.1.2 Operational Analysis

6.1.3 Support Analysis

6.1.3 Budgetary Assessment

6.1.5 Marketplace Assessment

6.2 Glossary of Terms. Include an alphabetical listing of any terms and definitions needed to understand this document

6.3 Acronym Listing. Include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document

6.4 References – Provide a list of all documents used in the development of the CONOPS. Each document listing includes the number, title, revision, and date. This includes but is not limited to legislation, feasibility studies, cost benefit studies, system architectural studies, documents concerning related projects, relevant technical documentation, MNS and ORD, instructions, program management directives, system handbooks, policy directives and OPLANS, etc. Include all documents referenced in this document. Identify the source for all documents that are not available through normal Government stocking activities.

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4.0 CAPABILITY DEVELOPMENT PLAN

4.1 Purpose

The purpose of the Capability Development Plan (CDP) is to assure that the necessary analysis and information will be developed during the Analyze/Select phase to enable an informed ADE-2A/2B acquisition decision. The CDP is developed during the Need Phase by the assigned Project Manager in Commandant (CG-93) and approved by the Coast Guard Component Acquisition Executive (CAE) and the DHS Acquisition Decision Authority (ADA). The CDP is implemented during the Analyze/Select Phase and defines the fundamental agreement between the acquisition project manager, the Chief Acquisition Officer, CAE and the DHS ADA on the activities, cost, schedule, and performance boundaries for the work to be performed.

Once the CDP is approved, the Project Manager must notify the PEO and DHS Acquisition Program Management Division in a timely manner of significant variances in the execution of CDP plan of action and milestones (such as schedule slippages).

4.2 Content

The CDP should discuss topics and issues, specific to the acquisition, that allow the Project Manager to clearly define the “body of work” that must be accomplished during the Analyze/Select Phase. The CDP explains the strategy and approach to determining the “optimum” solution(s) within the trade-space and the risks of the preferred alternative. Overall, the CDP describes the key activities already stated in the Analyze/Select Phase in preparation for ADE-2A/2B. To the extent possible, the CDP should include planning in all areas where project documentation will be developed during the Analyze/Select phase. The CDP shall describe the SE activities and events for the Solution Engineering Stage. As such, it needs to also discuss the Study Plan, Study Plan Review and the Solutions Engineering Review.

Refer to Chapters 3 and 5 of this Manual for additional guidance.

4.3 Roles and Responsibilities

Project Management Responsibilities
Prepare and submit CDP
Notify CAE of significant variances from the plan.
CG-93 Responsibilities
Endorse CDP
CG-9 Responsibilities
Approves CDP for CG
DHS Acquisition Decision Authority (ADA) Responsibilities
CDP approval

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4.4 TEMPLATE

CAPABILITY DEVELOPMENT PLAN (CDP)

for the

[PROJECT TITLE]

Submitted by: _____
Program Manager (CG-93 PgM) Date _____

Endorsed by: _____
Director of Acquisition Programs (CG-93) Date _____

CG Approval: _____
Chief Acquisition Officer (CG-9) Date _____

DHS Approval: _____
Date _____

Version #

Date:

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<u>Title/paragraph</u>	<u>Page Number</u>
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3.2 Plan of Actions and Milestones (POA&M)	
3.3 Participation of Users/Operators	
3.4 Alternatives Analysis (AA) Approach	
3.5 Technology Demonstrators	
3.6 System Engineering Reviews	
3.7 Alignment with Enterprise Architecture	
3.8 Technology Approach	
3.9 Project Dependencies and Interfaces	
3.10 Acquisition Planning	
3.11 Integrated Logistics Sustainability and Support	
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Section E. References	

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CAPABILITY DEVELOPMENT PLAN

CONTENT REQUIREMENTS

EXECUTIVE SUMMARY

This section is a succinct summary of the "core parts" of the document including a top-level description of the asset, capability or system, its major features and sub-capabilities. The executive summary focuses the reader's attention on the most important aspects of the document and provides sufficient information for the executive decision maker to understand the contents of the Capability Development Plan. To ensure that all of the highlights have been captured, the executive summary should be written last.

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

Section 1. Introduction

This section is a synopsis of the CDP (and can in fact be used to develop the CDP). It should be a short explanation of the planning required.

Section 2. Capability Statement

This section provides background on the capability needed and a summary of the most critical requirements (traceable to the MNS once it is approved). Essential elements from the CONOPS should be included to highlight environmental restrictions or other mission context that may be important in the development of the capability.

Section 3. Capability Development Planning

The CDP format can be modified at PM discretion. The CDP should include the following topics, as appropriate to the needs and strategy of the intended acquisition project:

- 3.1 Frame the Analyze/Select Trade Space** – Identify the potential range of alternatives to be examined. Describe any bounds or constraints on the project such as expected time to deliver capability and potential resources available. – Describe the approach for identifying, managing and mitigating risks (to the extent known) of potential solutions and alternatives. Describe the methods to continuously identify risks throughout the analysis activity, and how the risks for the preferred alternative will be translated into a risk management plan that will describe how they are to be mitigated (e.g., accepted, controlled, avoided or transferred).
- 3.2 Plan of Actions and Milestones (POA&M)** – Identify (in the form a table or chart) the MSAM and SELC required activities, reviews and documentation/artifacts and associated schedule that will be performed during the Analyze/Select Phase.
- 3.3 Participation of Users/Operators** – Describe how users/operators will be engaged in this phase, particularly for developing the CONOPS and ORD, and assess potential alternatives for operational utility.
- 3.4 Alternatives Analysis (AA) Approach** – Describe the approach to the analysis. Establish the ground rules and assumptions for the AA and the constituent LCCE. Describe the level of detail in the AA. Identify the AA lead or the manner in which an independent AA lead will be selected
- 3.5 Technology Demonstrators** – Describe any technology demonstrators that will be conducted and how these will be managed.
- 3.6 System Engineering Reviews** – Set out the ground rules for the two Systems Engineering Reviews: Study Plan Review (SPR) and the Solution Engineering Review (SER) that are to be conducted during the Analyze/Select Phase.
- 3.7 Alignment with Enterprise Architecture** – Describe the approach to ensure alignment with both the Coast Guard and DHS enterprise architectures and standards.
- 3.8 Technology Approach** – Identify the approach for identifying and assessing the maturity of key technologies required and the approach to mitigate any technology maturity risk.
- 3.9 Project Dependencies and Interfaces** – Describe the approach for identifying systems or information sources that this capability will be required to interface with (both internal and external to CG/DHS) to the extent known, and how the program will work with these sources. Describe the approach for identifying any other systems or projects that may contribute to meeting the need/gap and the approach to leveraging and collaborating with them (cite actual programs if known).
- 3.10 Acquisition Planning** – State the goals and ground rules that will be used to develop the Acquisition Plan for the proposed program to the degree known. This should include Government and contractors (support and system development) over the life of the program (development, production, fielding operation and logistics) and potential mechanisms such as services acquisitions.
- 3.11 Integrated Logistics Sustainability and Support** – Describe the approach for

planning for supportability and sustainment (logistics support) that will be analyzed during this phase.

3.12 Project Life Cycle Cost Estimate (PLCCE) – Describe the approach for developing the PLCCE in accordance with Appendix A, Part 2, Section 8.0.

3.13 Program Management Office Resources – Address the adequacy of Program Management Office (PMO) resources, including staff/qualifications, funding, and facilities to accomplish the above tasks. Identify critical shortfalls in resources and proposed solutions.

References – List all references that are key to the proposed project, particularly those that pertain to the activities performed in the Analyze/Select Phase.

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5.0 ACQUISITION STRATEGY/ ACQUISITION PLAN

5.1 Purpose

The Acquisition Strategy (AStr) and Acquisition Plan (AP) are the means to discuss the acquisition process and document the decisions made prior to processing each major contract action. The AStr and AP serve as mechanisms to review, approve and document acquisition decisions and create a roadmap for the implementation of acquisition decisions. Acquisition Strategies are required for all major system acquisitions and an Acquisition Plan is required for all contractual actions greater than \$10M.

5.2 Preparation

Policies and procedures for Acquisition Planning are set forth in Chapter 3007 of the Homeland Security Acquisition Manual (HSAM). The content of the Acquisition Plan is specified in the DHS Acquisition Planning Guide (HSAM Appendix H). The Acquisition Planning Guide is written in three parts. Part I is general information about acquisition planning. Part II provides narrative detailed information on the contents required in an AP and how to prepare an AP. Part III provides definitions and acronyms.

As noted in Chapters 2 and 5, the Coast Guard Acquisition Strategy begins as a briefing to the CAO (CG-9) four to six months prior to ADE-1, then progresses into a formal brief to the CAE (VCG) for approval prior to ADE-1. For the Coast Guard, the strategic-level AStr evolves into a detailed-level AP prior to any contract action greater than \$10M and/or no later than ADE-2A/2B. Essentially, the AP contains detailed information that evolves from the strategic-level Acquisition Strategy. Once approved, the AP provides direction and approval for execution of the associated contract action.

An Acquisition Strategy should convey the overall purpose and need for the asset or system, how and where it will be used, the overall plan and schedule for the acquisition, competition and contracting considerations, and the overall business and technical management approach.

Acquisition Strategies must:

- Be tailored to a particular major acquisition program; and
- Provide the Program/Project Manager's overall plan for satisfying the mission need in the most effective, economical, and timely manner through one major or a portfolio of multiple acquisitions.

As the AStr evolves into the AP, minimum content for the AP varies with each ADE. For example, the AStr at ADE-1 covers only the basic acquisition approach that must be approved since limited information is available. As more detailed and specific information becomes available – a more complete and detailed Acquisition Plan is presented at subsequent ADEs. **Table A-7 Acquisition Strategy/Acquisition Plan Minimum Content by ADE** provides a listing of AP sections and level of detail expected for each ADE. The full definition of each section is contained in HSAM, Appendix H: DHS Acquisition Planning Guide.

Table A-7 Acquisition Strategy/Acquisition Plan Minimum Content by ADE

	ADE-1	ADE-2A/2B
Level of Detail:	Acquisition Strategy Brief Very Strategic	Acquisition Plan Specific Detail
	<p>Section A1: Statement of Need</p> <p>Section A3: Cost (ROM)</p> <p>Section A4: Capability or Performance</p> <p>Section A7: Risks</p> <p>Coast Guard AStr Brief Items above plus: Include a preliminary strategy for contracting to support budget planning plus any other known information pertinent to the AP. Include separate line for resources necessary to accomplish specified CDP activities.</p>	<p>Sections A1-A4: Statement of Need, Applicable Conditions, Cost, Capability or Performance</p> <p>Section A5: Delivery or Period of Performance</p> <p>Sections A6-A8: Trade Offs, Risk, Acquisition Streamlining</p> <p>Sections B1-B10: Sources, Competition, Source Selection Procedures, Contract Type Selection, Contracting Considerations, Budgeting and Funding, Product or Service Descriptions, Priorities, Contractor vs. Government Performance, Inherently Government Functions</p> <p>Section B11: Management Information Requirements</p> <p>Section B12: Make or Buy Decision</p> <p>Section B13: Test and Evaluation</p> <p>Section B14: Logistics</p> <p>Sections B15-B21: Government Furnished Property, Government Furnished Information, Environment and Energy Conservation Objectives, Security Considerations, Contract Administration, Other Considerations, Milestones for the Acquisition Cycle</p>

The PgM or PM will coordinate with members of an Integrated Project (or Product) Team (IPT) comprised of all personnel responsible for significant aspects of the strategy (e.g., contracting, fiscal, legal, small business, technical, security, environmental, privacy, testing and logistics). Working together, the PM and the IPT prepare the acquisition strategy and are responsible for executing it. An Acquisition Strategy IPT should include, at a minimum:

- Program Manager (PgM) or PM if assigned
- Contracting Officer
- Contracting Officer’s Technical Representative (COTR)
- Commandant (CG-928)

Other representatives from the PM’s staff, the sponsor’s office, and the contracting officer’s staff may participate in the development of the AStr and subsequent AP. Other participants may also include representatives from Commandant (CG-094), Commandant (CG-913), the Small Business Specialist, security and other specialists depending upon the acquisition objectives.

The Coast Guard Head of Contracting Authority (HCA) shall coordinate DHS OCPO approval for all APs ≥ \$300 Million.

APs are reviewed annually and updated as needed. The AP is revised whenever there is a major program change or other significant change to the approved plan or strategy. An AP change is significant if what is being procured changes; how it is being procured (including method and

contract type) changes; or when there are significant funding changes that affect the overall acquisition strategy. If, during the AP annual review, the PM determines that the AP is current and does not require revision, the PM shall certify in writing that the information contained in the AP is accurate, complete, and that no change is required. The PM shall forward the AP Certification Memorandum to the HCA, via the CG ARB Executive Secretary, and Commandant (CG-9), for endorsement.

The Coast Guard shall assign a nine-digit identifier followed by the approval date for each formal written AP. The first four digits on Coast Guard AP will be "HSCG". The next two digits will be the fiscal year in which the AP was or will be approved. The last three digits will be assigned sequentially by the Office of Procurement Policy and Oversight Commandant (CG-913). The AP date is the date the original AP was approved. Revision to the AP shall be identified with the identification number of the original AP followed by the revision number and date the revision was approved (see Part 1 of the DHS Acquisition Planning Guide (HSAM Appendix H) Handbook for specific instructions for revision marking).

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5.3 Template

ACQUISITION PLAN (AP)
for the
[PROJECT TITLE]
AP # HSCG10001 – MM/DD/YY

Submitted by: _____ Date _____
 Project Manager (CG-93 PM)

Endorsed by: _____ Date _____
 Program Manager (CG-93 PgM)

Endorsed by: _____ Date _____
 Small Business Specialist (CG-91Y)

Endorsed by: _____ Date _____
 Contracting Officer

Endorsed by: _____ Date _____
 Chief, Contracting Operations Office
 (CG-912)

Endorsed by: _____ Date _____
 Director of Acquisition Programs
 (CG-93)

Endorsed by: _____ Date _____
 Head of Contracting Activity (CG-91)

Endorsed by: _____ Date _____
 DHS Chief Procurement Officer

DHS Approval: _____ Date _____

Version # _____ Date: _____

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6.0 PRELIMINARY OPERATIONAL REQUIREMENTS DOCUMENT AND OPERATIONAL REQUIREMENTS DOCUMENT

6.1 Purpose

The ability of the Department of Homeland Security and the Coast Guard 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 the DHS, Coast Guard and specific Sponsor's mission performance needs. To put the requirements in context, the Operational Requirements Document (ORD) should clearly define the capability gap this project will address and discuss the threat that will be mitigated by the project. The Sponsor establishes absolute minimums (thresholds) below which the mission cannot be successfully performed. The Sponsor also sets objectives for selected requirements (not necessarily all requirements) to define a value beyond the threshold that reflects the maximum desired yield for project performance. Objectives define a value beyond the threshold that reflects an operationally meaningful and cost effective increment to an operationally effective system. Projects are to budget to achieve the "Objective-level" requirements. The Preliminary Operational Requirements Document/Operational Requirements Document (PORD/ORD) prioritizes the various requirements to guide future trade off analyses.

The ORD, along with the Concept of Operations (CONOPS), are formal documents that provide a bridge between the top level capability needs spelled out in the Mission Need Statement (MNS) and the detailed technical requirements found in the specifications that ultimately govern development of the system. The ORD translates the capabilities defined in the MNS into system-level performance requirements that complement the approved CONOPS. The ORD's performance requirements are also a source for developing the Critical Operational Issues (COIs) formalized in the Test and Evaluation Master Plan (TEMP).

6.2 Overview

The PORD is the first requirements document and incorporates the vision set out in the CONOPS assigning desired operational performance expectations. The PORD is derived from the MNS, CONOPS, and early sponsor analyses. The PORD establishes the trade space between an initial set of thresholds and objectives. The PM and the Sponsor's Representative will use this trade space to further refine the requirements in light of cost, schedule, and performance to a final set that will be captured in the ORD. The PORD is a required document for every major systems acquisition unless a waiver is approved by Commandant (CG-771).

To effectively develop an ORD and be able to translate it into an affordable acquisition project, there are a number of precepts related to the ORD that need to be well understood.

The ORD is an acquisition document. It is prepared by the Sponsor with assistance from other activities. Its singular purpose is to identify and provide a number of performance parameters that will be needed in an asset or system in order to provide a useful element of capability to the user that either fully or partially closes the mission deficiency(s) identified in the MNS.

Operational Performance Thresholds and Objectives. The minimum level of operational performance that the Government is willing to accept is considered a threshold value within the

ORD. A level of performance that significantly improves mission performance, safety or supportability beyond that of the threshold value, and represents the maximum desired yield for program performance is considered an objective. In simple terms, the asset is acceptable at the threshold level but will be much more effective at the objective level. Objective values are not required. If objectives are included, caution must be used in objective selection. The objective value must be supported by analysis and expressed in quantitative terms. The number of objectives in the ORD should be kept to a minimum because the PM must build the project's budget to the ORD objective level and determine what performance can be attained in the contracting and selection process.

To do this, the objectives need to be included within the evaluation factors so that the contractor has incentive to bid to the objective level of performance as part of a best value solicitation for the government. Some requirements will have only a single parameter value. When this is the case, these values are essentially thresholds.

Note: For planning purposes, the number of objectives in an ORD is limited to five without a memorandum of agreement between the Sponsor and Commandant (CG-9) that a higher number is reasonable and executable in a contracting arena.

Key Concepts. Key concepts that should be addressed during ORD development include end-user input and verification, testability, interoperability, security, human system interface (if applicable), training, and supportability and sustainment.

Measurable and Testable Requirements. Each threshold, objective, and KPP must be measurable and testable in order for users and acquirers (and other stakeholders) to determine: 1) whether the delivered capability meets its approved requirements, and 2) to what degree they are met. This is particularly critical for KPPs since they are non-negotiable requirements that must be met for the system to fully meet its fundamental purpose.

Initial Operational Capability (IOC) and Full Operational Capability (FOC). Key schedule dates (IOC, FOC) are included in the ORD. Threshold values for schedule parameters represent when that event is needed to close the capability gap. Objective values represent an affordable and operationally useful acceleration in the schedule.

Affordability and Impact of Objectives on Budgeting. To achieve the requirements identified in the ORD, the budget and appropriations need to match the cost of doing the work in developing the capability. It is the PM's responsibility to highlight to senior management and the acquisition decision authority if there is any disconnect between the PM's cost estimate for achieving the ORD, the Coast Guard's proposed (or approved) budget and the Congressional appropriation. The PM is required to build the project's budget to meet all the requirements in the ORD, including objectives.

ORD Updates to Reflect Situational Realities. During the life of the project, events may occur that jeopardize the PM's ability to achieve the ORD as it was initially approved. Those events can range from unexpected technical difficulties during project development to insufficient funding in the Coast Guard budget or in the Congress appropriation to achieve the approved ORD. Irrespective of the cause, the ORD must reflect the required performance of the asset or system when it is to be fielded for test and evaluation. The initially approved ORD will be ORD 1.0. Subsequent updates will be labeled ORD 2.0, ORD 3.0, etc.

Discrete Segments. Discrete segments (or increments) of capability are desired if they can

accelerate the fielding of capability to the user. If discrete segments of capability are planned, each discrete segment must have clear identity within the ORD or have a separate ORD.

6.3 Requirements Management

To provide clear traceability of all requirements, a relational database should be used to capture and document the mission capability gaps/requirements identified by the team. Key attributes the database needs to provide to the team include:

- Provide unique identity to each requirement.
- Be able to baseline so that changes can be clearly tracked.
- Develop and export/print a requirements traceability matrix.

The database should be initiated and maintained by the Sponsor through the development of the MNS, CONOPS, and the ORD. The PM will continue to use the database in the development of the Statement of Work.

6.4 Preparation

PORD Preparation

After the MNS has been submitted for approval, the Sponsor's Representative should begin preparation of the PORD in accordance with the template provided in section 7.7. and 7.8 (Note: PORD and ORD templates are the same, the signature pages differ). The PORD amplifies and derives from the MNS and early mission analysis and affordability trade-offs. Developed early in the Analyze/Select Phase (target date within 6 months of ADE-1), the PORD describes the CONOPS operational capabilities, operating environment, and system constraints which competing system concepts must satisfy. It identifies requirements in terms of the range of minimum thresholds and operationally effective objectives needed to develop and evaluate alternative design concepts. The PORD evolves into the ORD concurrent with the Alternatives Analysis.

Using the PORD, and working closely with the Sponsor's Representative, the PM conducts feasibility studies and/or trade-off studies. The operational 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. The optimum capabilities resulting from the trade-off analyses are documented in the ORD. The accepted PORD shall be in place not later than six months after DHS ADE-1 approval.

The PM and the Sponsor's Representative shall consult with those Headquarters Offices/Staffs that will be involved in the matrix tasking of the acquisition, including all Support Managers for support requirements noted in the MNS for the project. After incorporation of comments, the resultant product will be a PORD, which accurately reflects the Sponsor's requirements and addresses the PM's acquisition concerns.

ORD Preparation

The ORD is a top-level decision document which establishes 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, the Assistant Commandant for Acquisition (CG-9).

ORD Integrated Product Team. Requirements development is to be 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 and Commandant (CG-771) will co-chair the IPT. IPT membership should include representatives from the following:

- a. Commandant (CG-4) (engineering and logistics)
- b. Commandant (CG-6) (enterprise architecture, IT, IA, Spectrum, etc.)
- c. Commandant (CG-1B3) (human engineering, personnel, training, manpower, system safety)
- d. Commandant (CG-93YY) Project Manager
- e. Commandant (CG-924) (IPT requirements training, process)
- f. Commandant (CG-926) (T&E)
- g. OT&E representative
- h. Ad Hoc members as needed (Commandant (CG-2, CG-5), users, etc.)

The ORD IPT is to receive requirements management training at the initiation of the team.

Requirements Management. To provide clear traceability of all requirements, a relational database should be used to capture and document the requirements identified by the team. Key attributes the database needs to provide to the team include:

- Provide unique identity to each requirement.
- Be able to baseline so that changes can be clearly tracked.
- Develop and export/print a requirements traceability matrix.

The database should be initiated and maintained by the Sponsor through the development of the MNS, CONOPS, and the ORD. The PM will continue to use the database in the development of the Statement of Work.

Based upon the results of the Alternatives Analysis, feasibility studies, and trade-off studies, the Sponsor’s Representative revises and clarifies the PORD to become the formal ORD. ORD development is an evolutionary process flowing from the PORD and should be prepared in consultation with the same Program and Support Managers involved in the development of the PORD in order to ensure that all mission needs and requirements have been properly addressed.

The primary responsibility for defining requirements in the PORD and ORD lies with the Project Sponsor who has the primary need for the system. The roles and responsibilities of each of the organizations involved in requirements development are shown in the following chart.

Sponsor
Directs the Sponsor’s Representative to prepare the PORD/ORD
Sponsor’s Representative
Prepares a PORD/ORD
Conducts mission utility and other analyses to validate the need for specific performance parameters

CG-771
Co-Chair the Requirements Development IPT
Validates the ORD prior to release for concurrent clearance

Project Manager (PM)
Member of the Requirements Development IPT
Provide funding to support mission utility analyses
Assists the Sponsor's Representative in defining the operational and support requirements for the system

6.4 ORD Validation

The completed ORD will be reviewed and validated by Commandant (CG-771) (with Commandant (CG-924) support) prior to being submitted for concurrent clearance. Some of the key criteria Commandant (CG-771) will be using to validate the ORD include:

- Attainability of the parameters.
- Clarity. Unambiguously written.
- Substantiation. Appropriate analyses and documentation at the parameter level.
- Testability. The parameters being called out in the ORD are testable.
- Measurable. The parameters can be measured.
- Cost estimate is to the objective value.

6.5 ORD Approval

Following resolution of User/Operator/Acquisition issues raised during the ORD preparation process, the final iteration of ORD preparation should be a Matrix-level Concurrent Clearance review. Once endorsed by the Coast Guard and a minimum of 60 days prior to (ADE)-2A/2B, the ORD is submitted to DHS APMD. APMD will facilitate routing and staffing of the ORD through DHS headquarters with final review by the Requirements Coordination Team (RCT) and/or members of the Joint Requirements Council (JRC), if stood up by DHS. As of this writing, the JRC has not been established.

Once the ORD has been staffed and reviewed by the RCT/JRC, APMD forwards the ORD to the ADA for approval. The ADA may delegate ORD approval authority to a lower level depending on project complexity and magnitude.

6.6 ORD Revisions

It may become necessary during the acquisition process to revise requirements, often as a result of changing missions, or fact-of-life funding changes. If requirements change, a revised ORD shall be prepared using the process described above. Approved procedures for revised ORDs shall be identical to those for the original ORD. **If changes to the ORD are made, the APB and the TEMP shall be reviewed for any impact and changes made as necessary.** A sample ORD cover page and table of contents, along with content and format requirements are in the following pages.

Refer to Commandant (CG-7) Requirements Generation and Management Process (Pub 7-7) for additional details and Chapter 4 of this Manual for additional guidance.

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6.7 Template

PRELIMINARY OPERATIONAL REQUIREMENTS DOCUMENT (PORD)

for the

[PROJECT TITLE]

Prepared by: _____
Sponsor's Representative (CG-YYY) Date _____

Reviewed by: _____
Office of Requirements and Analysis (CG-771) Date _____

Submitted by: _____
Sponsor (CG-Y) Date _____

Endorsed by: _____
Project Manager (CG-93 PM) Date _____

Endorsed by: _____
Program Manager (CG-93 PgM) Date _____

Endorsed by: _____
Director of Acquisition Programs (CG-93) Date _____

Accepted by: _____
Chief Acquisition Officer (CG-9) Date _____

Version #

Date:

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6.8 Template

OPERATIONAL REQUIREMENTS DOCUMENT (ORD)

for the

[PROJECT TITLE]

Prepared by: _____
 Sponsor Representative (CG-YYY) Date _____

Endorsed by: _____
 Office of Requirements and Analysis (CG-771) Date _____

Endorsed by: _____
 Project Manager (CG-93 PM) Date _____

Endorsed by: _____
 Sponsor (CG-Y) Date _____

Endorsed by: _____
 Chief Acquisition Officer (CG-9) Date _____

Endorsed by: _____
 Assistant Commandant for Human Resources
 (CG-1) Date _____

Endorsed by: _____
 Assistant Commandant for Intelligence and
 Criminal Investigations (CG-2) Date _____

Endorsed by: _____
 Assistant Commandant for Logistics (CG-4) Date _____

Endorsed by: _____
 Assistant Commandant for C4IT (CG-6) Date _____

Endorsed by: _____
 Assistant Commandant for Resources (CG-8) Date _____

Endorsed by: _____
 Deputy Commandant for Operations (DCO) Date _____

Endorsed by: _____
 Chief of Staff (CG-01) Date _____

CG Approval:

Component Acquisition Executive (VCG)

Date

DHS Approval:

Date

Version #

Date:

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OPERATIONAL REQUIREMENTS DOCUMENT

CONTENT REQUIREMENTS

EXECUTIVE SUMMARY

The Executive Summary should be a brief one or two page discussion of the PORD/ORD

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

SECTION 1: INTRODUCTION

The introduction provides a project summary and should include a brief reference to each of the following points:

1.1 Purpose

Define the purpose of the Preliminary Operational Requirements Document (PORD)/Operational Requirements Document (ORD) as it relates to accomplishing specific missions and performance goals of the Coast Guard and the Department of Homeland Security (DHS). This should flow from and be consistent with the Mission Need Statement (MNS), and the Concept of Operations (CONOPS), which should be referenced. If a documented MNS did not precede the PORD/ORD, explain the process that investigated alternatives for satisfying mission need.

1.2 Background

Provide a brief discussion of the acquisition. Briefly describe the system in general terms, without describing specific hardware requirements. When replacing an existing system, include information on age, service life, maintenance time and costs, and system availability to meet project standards that need to be solved by the replacement system.

1.3 Timeframe

Identify required timeframes for the following; include justification:

1.3.1 Initial Operational Capability Date

Initial Operational Capability (IOC) is defined as the first attainment of the capability of a platform, system, or equipment. IOC for software is when the minimum capability necessary to field the application is achieved. It must meet approved specific characteristics, be operated by an adequately trained and equipped Coast Guard unit, and effectively perform the required mission. Identify what constitutes the first operational unit for purposes of IOC (e.g., it may be the first ship, aircraft, or radar system for hardware projects; it may be when software is operating in a defined environment, such as the Standard Workstation III operating in the Acquisition Directorate; or it may be when a useable segment of a geographically diverse system such as the Ports and Waterways Safety System is performing its operational mission in a designated location). Clearly specify the operational capability or level of performance necessary to declare IOC.

1.3.2 Coast Guard Support Date

Coast Guard Support Date (CGSD) is defined as the date when all resources required to support sustained operations and maintenance are in place, either organically or through contract(s). Clearly specify all logistics support which must be in place to declare attainment of CGSD.

1.3.3 Incremental Operational Capability Date(s)

If the system is to be acquired in discrete segments of capability, state the date each segment is required. Clearly specify the operational capability or level of performance necessary to achieve each segment of capability.

1.3.4 Full Operational Capability Date

Full Operational Capability (FOC) is defined as the delivery of the last platform, system, or equipment. FOC for software is when the application provides the capability to satisfy all ORD requirements. Clearly specify the operational capability or level of performance necessary to declare FOC.

1.3.5 Other Key Dates

Identify any other important project-specific dates. In particular, identify any interdependencies between acquisition projects (e.g., the delivery of a new surface vessel may be dependent on the delivery of a new radar system which is being developed in another project).

1.4 Constraints

List all constraints that influence or mandate specific requirements for the asset or system described in this document. Include an explanation for each constraint.

SECTION 2: MISSION REQUIREMENTS

Describe the mission requirements as contained in the MNS

2.1 Operating Requirements

In specific terms, describe:

- The requirements derived from operating environment for the system (e.g., open ocean, coastal, sea state, ice cover, etc.).

- The operational functions which must be performed to execute the mission (e.g., hoisting, towing, interdiction, surveillance, etc.).
- Interoperability requirements necessary to complete each mission area described in the CONOPS.
- The geographic area in which the operations will be performed (e.g., polar regions, Great Lakes, inland rivers, etc.).
- The climatological envelope in which the mission must be performed (e.g., temperature, humidity, wind speed, current, etc.).

2.2 Concept of Operations

In specific terms, describe operating scenarios envisioned. These scenarios should be the same or aligned with those in the CONOPS. Scenarios should describe each of the anticipated operating schemes in terms of the activities anticipated to be conducted in a typical mission. Describe schemes in terms of the activities operational personnel are expected to perform. Examples should include office settings and shipboard and aircraft settings as appropriate. The scenarios should be linked to the overall mission that is to be met; i.e., how do the operators of the system go about conducting at typical mission? If applicable, describe how the resource factors DOTMLPF+R/G/S play in the scenario. For example, describe the organizational structure and command relationships for the scenario.

SECTION 3: EFFECTIVENESS REQUIREMENTS

Identify and describe parameters, which must be part of, or met by, the system. Focus on operational parameters; i.e., those that are required for the system to effectively complete its mission. Avoid trying to design the system or overly constraining the design.

3.1 Basic Requirements

Describe the system operational capabilities necessary to effectively satisfy mission performance requirements. Basic Asset Requirements (below) lists the basic requirements that should be considered for cutters, aircraft, and other systems. Basic Information Technology Requirements provides basic C4 and IT requirements.

Basic Asset Requirements

Cutters & Boats	Aircraft
Length	Speed
Beam	Maneuvering
Draft	Overall Endurance
Speed	On-scene Endurance
Maneuvering	Range
Endurance	Design Life
Range	Maximum Gross Weight
Damage Control	Cargo Capacity

Cutters & Boats	Aircraft
Design Life	Personnel Capacity
Ship Control	Navigation
Sea keeping	Communications
Human Factors	Major Equipment
Safety/Environmental Health	Human Factors
Armament	Safety/Environmental Health
Outfit	Survivability Systems
Major Equipment	Navigation
Survivability Systems	Command & Control
Communications	Sensors
Navigation	
Command & Control	
Sensors	

Basic Information Technology Requirements

Computers/IT SYSTEMS	Sensors/Emitters
Architectural Compliance	Range
Speed of Calculation	Detection Limits
Memory Utilization	Jamming Protection
Throughput Capability	Reliability
Reliability	Error Rate/Signal Processing
Software Maintainability	Susceptibility
Security Controls	
Human Factors	

3.2 Communications, Information Technology and Intelligence

Identify any special or unique requirements for communications, information technology and intelligence. Identify radio spectrum requirements. Address Information Systems Interoperability within and external to the Coast Guard, and the essential external systems or elements (including those from DHS, DOD, international, federal, state and local governments) the acquired system will exchange information with in order to integrate with the Coast Guard command and control structure. If interoperability with other systems or agencies is a critical factor in mission accomplishment, an interoperability KPP shall be included.

3.3 Navigation

Identify any special or unique navigation requirements. Identify radio spectrum requirements.

3.4 Sensors

Identify any special or unique sensors, which are required. Address any interoperability issues concerning sensors. Identify radio spectrum requirements.

SECTION 4: SUITABILITY REQUIREMENTS

Address the following sustainability requirements (this section of the ORD will serve as the basis

for portions of the specification and the Integrated Logistics Support Plan (ILSP)):

4.1 Design

Identify whether the design is constrained or unconstrained (e.g., parent craft, developmental, non-developmental, off-the-shelf, etc.); advanced technology or proven technology.

4.2 Supportability and Sustainment (Integrated Logistics)

Identify Supportability and Sustainment (S&S) requirements and constraints; identify the overall S&S concept for the project. Describe any unusual or known specific support requirements needed for the project, with particular emphasis on those which could drive cost, schedule, or performance.

4.3 Reliability

Identify reliability requirements; specify the duration or probability of failure-free performance under stated conditions (i.e., the probability that an item can perform its intended function for a specific interval under stated conditions). Reliability requirements are often stated in terms of Mean Time Between Failure (MTBF).

4.4 Availability

Identify availability requirements; specify the probability that the item or system, to include equipment and personnel, are in an operable and committable state at the start of a mission when the mission is called for unknown (random) times. Availability requirements are usually stated in terms of Operational Availability (A_O).

4.5 Maintainability

Identify maintainability requirements; specify the measure of the ability of an item to be retained in or restored to specified condition when maintenance is performed by personnel having specified skill levels, using prescribed procedures and resources. Describe any unusual or known maintainability constraints or requirements. Identify any support activities required to maintain the system. Maintainability requirements are often stated in terms of Mean Time to Repair (MTTR).

4.6 Survivability

Identify survivability requirements; identify the conditions under which the system is expected to survive a hostile environment (natural or man-made) without suffering an abortive impairment of its ability to accomplish its designed mission(s). Software survivability must address security, fault tolerance, safety, reliability, reuse, performance, verification, and testing to recover from attack, failure, and accident.

4.7 Personnel, Safety, Human Factors, and Environmental Considerations

Identify factors and requirements relating to personnel, safety, human factors, and environmental considerations.

- Identify the current personnel necessary to safely operate, maintain, and support a similar existing system. Include required training requirements and Knowledge, Skills and Abilities (KSA's).
- Identify staffing goals or requirements of the system to be acquired.

- Describe, in general terms, the physical (habitability) requirements for personnel.
- Describe and unique personnel or safety requirements, system redundancy for safety purposes, installed safety-specific capabilities, or post-mishap analysis capability.
- Describe any unique human factors or human engineering requirements, such as human machine interface or ergonomic requirements to include expectations for design to support human performance in areas of sustainability, maintainability, operability, suitability, simplicity and accessibility.
- Describe any environmental considerations identified in the environmental impact analysis.

4.8 Training

Describe the training philosophy required (pipeline, On-the-Job Training (OJT), etc.) to support operational and maintenance concepts to accomplish the mission intended by the system.

SECTION 5: KEY PERFORMANCE PARAMETERS

Key Performance Parameters (KPPs) are those system capabilities or characteristics considered essential for successful mission accomplishment. KPPs should be linked to specific missions and organizational goals of the Coast Guard and DHS. The ORD should only contain a limited number of KPPs (eight or less) that capture the parameters needed to reach the overall desired capabilities for the system. Failure to meet an ORD KPP threshold will require reevaluation of the project by the Sponsor and the ADA.

ORD KPPs should be presented in a tabular form and include both thresholds and objectives; they are included verbatim in the performance section of the Acquisition Program Baseline. If interoperability with other systems or agencies is an important factor in mission accomplishment, an interoperability KPP shall be included. The interoperability KPP should include a detailed list of systems or other capabilities with which the asset or system to be acquired is intended to be interoperable, including an explanation of the attributes of interoperability.

5.1 Selection Criteria

The following guidelines should be applied when selecting KPPs:

- Is it essential for defining system or required capabilities?
- Does it align with performance measures linking capabilities with DHS and Coast Guard organizational goals?
- Is it achievable and testable?
- Can the numbers/percentages be explained by analysis?
- If not met, are you willing to cancel the project?

5.2 ORD KPP Development

Selection of valid KPPs is more than just identifying a requirement and providing a threshold/objective value. The following is a suggested method for developing KPPs:

- List system required capabilities for each mission/function as described above.

- Prioritize these requirements.
- For each mission/function build one measurable performance parameter and link to Coast Guard and/or DHS goals.
- Determine the parameters that are most critical to the system and designate them as Key Performance Parameters in the ORD.

Note: KPPs can be tied to a timeline to achieve discrete segments capabilities and a timeline for achieving full capability.

SECTION 6: CRITICAL OPERATIONAL ISSUES

COIs are the operational effectiveness and operational suitability issues (not characteristics, parameters, or thresholds) that must be examined in OT&E to evaluate/assess the system's capability to provide the desired capability.

The Sponsor with the Operational Test Agent (OTA), if assigned, shall develop preliminary Critical Operational Issues (COIs) that describe what the capability must be able to do in its operational environment to meet the mission need.

SECTION 7: TRADE-OFFS AND PREREQUISITES

For the PORD only, provide a listing in priority order of requirements and programmatic factors such as acquisition cost or life cycle costs. These factors will be analyzed during the trade-off studies conducted to obtain a balanced and affordable system. The results of the trade-off studies are incorporated into the ORD through the selection of specific requirements statements and their associated parameters.

APPENDICES

Appendix A, B, C, D, etc. Provide information on studies or other analytical activities conducted thus far. Typically this would include the results of any feasibility studies or trade-off studies conducted to refine preliminary requirements in the PORD to firm requirements in the ORD. If lengthy, Executive Summaries of the studies are appropriate. For ORD revisions, provide information or analysis which justifies all proposed revisions to requirements.

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7.0 ALTERNATIVES ANALYSIS

7.1 Purpose

The purpose of Alternatives Analysis (AA) is to provide a systematic decision making process to identify and document the most resource efficient method of satisfying an identified mission capability gap. This includes examining human performance aspects of the overall system performance and how it affects mission capability. The Alternatives Analysis is conducted during the Analyze/Select Phase and the Alternatives Analysis Report is a key document supporting the acquisition project's ADE-2A/2B decision.

The Alternatives Analysis shall consist of independent analyses to satisfy and identified mission capability gap from an integrated perspective (i.e., multiple assets, different combinations and quantities of specific assets or capabilities) if applicable. Alternatives Analysis involves the use of trade studies, identification of Rough Order of Magnitude (ROM) Life Cycle Cost (LCC) for each viable alternative, and a Cost-Benefit Analysis (CBA) for each viable alternative to establish the return on investment (ROI) measure. In order to be considered viable, an alternative must satisfy the MNS and align with (or have) a viable CONOPS. DHS Directive 102-01 requires a minimum of three viable alternatives to be identified with an analysis that additionally includes the existing asset or system solution (status quo). When an alternative is an existing asset, capability, or technology demonstrator – an evaluation of relevant safety and performance records and costs should be included.

In certain circumstances, such as a joint project with DHS or in cases where the needed asset type is unclear, a more expansive Analysis of Alternatives may be performed. The DHS Directive 102-01-001 provides additional guidance for the conduct of Analysis of Alternatives. The Alternatives Analysis provides source information for the Exhibit 300.

7.2 Study Plan and Report

An independent¹ study director is required to be assigned to develop the Alternative Analysis Study Plan and to lead the Alternative Analysis effort. The study plan director will be designated by Commandant (CG-9).

¹ Independent is defined as independent of Commandant (CG-93) (the acquiring organization) and the Sponsor.

AA Study Plan

Section 1-5 of the AA template constitutes the AA Study Plan. The AA Study Plan leverages off the ground rules and assumptions identified in the Capabilities Development Plan (CDP). It is required to be developed within 90 days of ADE-1. The AA Study Plan is reviewed and approved during the Study Plan Review (SPR) as described by the SELC. DHS APMD will be invited to participate in the SPR. The Study Plan is approved by Commandant (CG-9).

Conducting the Analysis

Only the top three most effective, viable, and affordable alternatives (and status quo) should be fully examined in the AA. The alternatives are usually conceptual solutions that satisfy the MNS. In order to properly conduct the AA, there needs to be a tight coupling between the MNS, the CONOPS, and the analyses performed to evaluate the various alternatives.

The analyses conducted during the AA (e.g., trade studies, modeling, simulation, and experimentation) must be completed at a sufficient level of resolution to clearly show the effectiveness, suitability, and ROM LCC of each of the alternatives considered. At a minimum, the AA shall include an assessment of the technical maturity of capability or asset, and technical and other risks; an examination of capability, interoperability, and other advantages or disadvantages. It is important to identify costs that will allow discrimination between alternatives. The achievable level of analysis must be balanced against the fact that project level information on alternative costs may not be readily available at this point. Upon completion of the AA, a PLCCE, derived from the LCCE, is developed for the preferred alternative to support the project's ADE-2A/B decision.

AA Report

At the conclusion of the analysis effort, the AA Report provides the analysis results (section 6) and recommended alternative and rationale (section 7). The template used for the report is the same as for the Study Plan. The final AA Report includes the approved AA Study Plan (Sections 1 through 5) with the addition of results and recommendations in Sections 6 and 7. A new signature page is added for concurrent clearance and approval by the CAE.

Refer to Chapter 5 of this Manual for additional guidance.

7.3 Template

ALTERNATIVES ANALYSIS (AA)
STUDY PLAN
for the
[PROJECT TITLE]

Submitted by: _____
Study Director Date

Endorsed by: _____
Project Manager (CG-93 PM) Date

Endorsed by: _____
Program Manager (CG-93 PgM) Date

Endorsed by: _____
Director of Acquisition Programs
(CG-93) Date

Approved: _____
Chief Acquisition Officer (CG-9) Date

Version #

Date:

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7.4 Template

ALTERNATIVES ANALYSIS (AA) REPORT

for the

[PROJECT TITLE]

Submitted by _____ Date _____
 Study Director

Reviewed by: _____ Date _____
 Project Manager (CG-93PM)

Reviewed by: _____ Date _____
 Program Manager (CG-93PgM)

Reviewed by: _____ Date _____
 Director of Acquisition Programs
 (CG-93)

Reviewed by: _____ Date _____
 Office of Resource Management
 (CG-928)

Reviewed by: _____ Date _____
 Office of Budget & Programs
 (CG-82)

Reviewed by: _____ Date _____
 Sponsor (CG-Y)

Reviewed by: _____ Date _____
 Chief Acquisition Officer (CG-9)

Approved: _____ Date _____
 Component Acquisition Executive (VCG)

Version #

Date:

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(B) CBA Documentation	
(C) References.	

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ALTERNATIVES ANALYSIS (AA) STUDY PLAN

CONTENT REQUIREMENTS

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

SECTION 1: INTRODUCTION

1.1 Background

Summarize the relevant studies/analyses that were accomplished prior to initiating the AA process. Reference the ADE-1 Acquisition Decision Memorandum, Mission Need Statement, CONOPS and any approved Exit Criteria. Identify (if applicable) any related science and technology research projects or activities.

1.2 Purpose

The purpose of this document is to identify how and by whom the Alternatives Analysis will be conducted to identify the optimal method of satisfying an identified mission capability gap.

1.3 Scope

Describe, in broad terms, the nature of the possible alternative solutions to be considered. Identify any constraints on alternatives identified by the Mission Need Statement, Capability Development Plan, and/or Operational Requirements Document and/or Concept of Operations.

1.4 Study Team/Organization

Outline the AA study organization and management approach. Provide short summaries (one paragraph apiece) on the qualifications and experience of the study director and key personnel. The project office may provide support to the study team, but the responsibility for the performance of the AA must not be assigned to the project manager, and the study team members should not reside in the project office, with the exception of Subject Matter

Experts which can be consulted on an “as needed” basis.

1.5 AA Review Process

This section describes the planned oversight and review process for the AA.

SECTION 2: GROUND RULES AND ASSUMPTIONS

2.1 Scenarios

Identify and describe the scenarios for employment of the alternatives. The scenarios should be derived from the CONOPS and augmented by more detailed and intelligence products as appropriate.

2.2 Threats

Identify any threats to which the alternative will be exposed and/or be required to counter as per the CONOPS.

2.3 Environment

Describe any environmental factors that may impact operations (e.g., climate, weather, or terrain) based on the CONOPS.

2.4 Assumptions

Identify the most significant (i.e. fundamental) assumptions to be made in the course of the analysis and any potential impact on the results. The description of these assumptions should be at a very high level for the items with the most influence on the Analysis.

2.5 Constraints

Identify any constraints or limitations of the analysis and any potential impact on the results.

SECTION 3: ALTERNATIVES

3.1 Description of Alternatives

Identify and provide a detailed description of each possible alternative that will be analyzed. Identify the legacy baseline (current system and its funded improvements) that is being replaced, if applicable. When an alternative is the status quo (existing asset, capability, or technology demonstrator); an evaluation of relevant safety, performance records and costs should be included. Include a discussion of the role Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities (DOTMLPF) and Statutes, Regulations and Grants (S/R/G) played in the selection of alternatives, if significantly different/changed from the MNS discussion.

SECTION 4: DETERMINATION OF EFFECTIVENESS MEASURES

This section describes the hierarchy of metrics selected to assess the relative effectiveness of the alternatives.

4.1 Mission Tasks

Mission tasks are usually expressed in terms of the general tasks needing to be performed to correct the identified gaps, or to obtain the needed capability.

4.2 Measures of Effectiveness

Measures of Effectiveness (MOEs) are the first step in the AA metrics process. They describe the mission utility of the capability in operationally meaningful terms. They typically derive from detailed operational analyses and are qualitative in nature.

4.3 Measures of Performance

A Measure of Performance (MOP) is a quantitative measure of a system characteristic (e.g. range, speed, logistics footprint, etc.) chosen to support one or more MOEs. Measures of Performance may, in turn, be linked to Key Performance Parameters (KPPs), Critical Operational Issues (COIs), or other parameters in the MNS, ORD, TEMP, and contract system specification.

SECTION 5: METHODOLOGY

5.1 Models, Simulations and Source Data

Describe any models, simulations, technology demonstrators or other analytical tools to be used during the course of the analysis. Describe each tool's capabilities, limitations, and sources of input data.

5.2 Operational Effectiveness Analysis

Fully describe the methodology to be used to determine the relative operational effectiveness of each of the alternatives.

5.3 Cost Analysis

Briefly summarize the techniques and data sources to be used in development of the LCCE, e.g., indexes, parametric; cost estimating relationships and models, learning curves, etc. The most recent LCCE should be attached to the AA as an appendix. If a Cost-Benefit Analysis (CBA) is required (e.g., for Capital Planning and Investment Control), briefly summarize the techniques and data sources for this information.

5.3 Cost-Effectiveness Analysis Approach

This section is the heart of the AA. It should include a complete description of the approach to relate cost and effectiveness in order to determine the best alternative.

5.4 Sensitivity Analysis

Describe how sensitivity analyses on both cost and effectiveness measures will be performed to determine which measures have the greatest effect on a given alternative.

5.5 Schedule

Include a study schedule showing the major milestones planned for the effort.

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ALTERNATIVE ANALYSIS (AA) REPORT (TO BE COMPLETED AFTER ANALYSIS)

SECTION 6: ANALYSIS RESULTS

Provide an objective presentation of the results of the analysis. Results should be shown in tabular or graphical form to clearly show differences in the results for each analyzed alternative.

SECTION 7: RECOMMENDED ALTERNATIVE AND RATIONALE

Provide the recommended alternative and provide the detailed rationale for this recommendation, based on analytic results. Identify key parameters and conditions that drove the selection, and may impact the acquisition.

APPENDICES:

- (A) ROM LCC Documentation
- (B) CBA Documentation
- (C) References

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8.0 PROJECT LIFE CYCLE COST ESTIMATE

8.1 Purpose

The Project Life Cycle Cost Estimate (PLCCE) provides the foundation for the Coast Guard business decisions concerning project affordability at each ADE. A life cycle cost estimate provides an exhaustive and structured accounting of all resources and associated cost elements required to develop, produce, deploy, and sustain a particular program. A PLCCE encompasses all past, present, and future costs for every aspect of the program, regardless of funding source. Life cycle costing enhances decision making, especially in early planning and concept formulation of acquisition. The PLCCE helps to ensure that all costs are fully accounted for so that resources are adequate to support the program. The PLCCE usually becomes the project's budget baseline for insertion into the Acquisition Program Baseline document. Developing a quality LCCE is at the core of the Coast Guard's ability to successfully manage a project within cost and affordability guidelines.

8.2 Preparation

Preparation of the PLCCE is a three-step process. The PM will develop a LCCE and fund a parallel effort for Commandant (CG-928) to develop and Independent Cost Estimate (ICE). The PM, with Commandant (CG-928) support, is then expected to reconcile differences to produce the Project LCCE (PLCCE).

The Project Manager shall initially prepare a LCCE during the Analyze/Select Phase in accordance with the GAO Cost Estimating and Assessment Guide, March 2009, GAO-09-3SP available at <http://www.gao.gov/new.items/d093sp.pdf>. A documentation template is provided in Chapter 16, Table 28 of the GAO guide. The PLCCE should provide a record of the procedures, ground rules and assumptions, data, methodology, environment, and events that underlie the cost estimate. Ensure it is constructed in such a manner that it can be replicated and substantiated by an independent third party. 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.

Use the project Work Breakdown Structure (WBS) in developing the PLCCE. The WBS should be based on MIL-HDBK-881A (for acquisition cost elements) and GAO Cost Estimating and Assessment Guide, and further tailored to lower levels of detail as applicable for each acquisition project. The DoD Operating and Support Cost Estimating Guide is another source of information (for Produce/Deploy and Support phase cost elements).

Develop the estimate to the performance parameter level. Understanding the cost of specific levels of performance allows the Project Manager and Sponsor to effectively perform trade-off analyses in developing the operational requirements. This cost to the performance parameter level for the operational requirements is to be documented in an attachment to the PLCCE.

Develop the estimate to the objective values of the ORD. Provide the difference in costs between the threshold and objective parameters. Ensure all sunk costs are reported as part of the LCCE in order to show the full cost of the asset from initial concept through acquisition, operations, support, and disposal.

The ICE will be completed independently and should closely match with the LCCE. The PM should carefully assess and adjudicate differences to establish the final project cost position with support of Commandant (CG-9283). This adjudicated LCCE becomes the Project Life Cycle Cost Estimate (PLCCE) that will be submitted for approval. An approved PLCCE is required to support an ADE-2A/2B decision. Updates to the PLCCE may be completed whenever major project changes occur, as needed to support a revision to the APB and are required for subsequent ADEs. All Level 1 acquisition projects are required to have the PLCCE validated by the DHS Cost Analysis Division (CAD) prior to ADE-2A and subsequent updates. Refer to DHS Memorandum, Program Life Cycle Cost Estimate (PLCCE) Validation Process of 6 May 2010 for more information on the PLCCE review and evaluation process.

<http://dhsconnect.dhs.gov/org/comp/mgmt/cpo/cad/Pages/default.aspx>.

Use PLCCE signature page template provided in section 8.3 of this Manual.

8.3 Template

PROJECT LIFE CYCLE COST ESTIMATE (PLCCE)

for the

[PROJECT TITLE]

Submitted by: _____
Project Manager (CG-93PM) Date

Endorsed by: _____
Program Manager (CG-93PgM) Date

Endorsed by: _____
Director of Acquisition Programs (CG-93) Date

Endorsed by: _____
Office of Resource Management (CG-928) Date

Endorsed by: _____
Office of Budget and Programs (CG-82) Date

Approved: _____
Chief Acquisition Officer (CG-9) Date

Version #

Date:

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9.0 AFFORDABILITY ASSESSMENT

9.1 Purpose

The Affordability Assessment (AAS) is an evaluation of a project's estimated cost-to-complete versus anticipated Coast Guard budget ceilings.

9.2 Preparation

The Affordability Assessment is an internal document required for all ADEs. The Project Identification Phase provides the first opportunity for senior management within the Coast Guard to assess the potential benefits of a project against the anticipated cost in relation to budget ceilings.

The Affordability Assessment is drafted by the Sponsor's Representative during the Need Phase and subsequently updated by the Project Manager during the Analyze/Select and Obtain Phase. A copy will be provided to Commandant (CG-928) for review prior to ADE-2 and all subsequent ADEs. Commandant (CG-82) will approve the Affordability Assessment via a cover memorandum. The outcome from the assessment is a Coast Guard strategy for funding the project.

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AFFORDABILITY ASSESSMENT CONTENT REQUIREMENTS

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

1.0 PROJECT HISTORY AND PURPOSE

Background

(When the mission need began, how the acquisition started and is strategized) – should be a page, no more than two pages.

Those 1-2 pages should include the below alignment.

__ Acquisition name Project alignment – Replace the ? with a ✓ as appropriate to indicate Coast Guard Missions/Programs supported by the operational assets produced by this project. Do the same for DHS Mission Goals. Note: (Shaded area shows CG alignment to QHSR- Check with Commandant (CG-821) to verify specific project alignments).

USCG Mission-Programs – per HSA (Homeland Security Act of 2002), §888

?	?	?	?	?	?	?	?	?	?	?
Search & Rescue	Marine Safety	Aids to Navigation	Ice Operations	Marine Environmental Protection	Living Marine Resources	Illegal Drug Interdiction	Undocumented Migrant Interdiction	Other Law Enforcement (Protect EEZ)	Ports, Waterways, and Coastal Security	Defense Readiness

DHS Mission-Goals – per QHSR (Quadrennial Homeland Security Review of 2010)

Mission	Goal	
1 Preventing Terrorism & Enhancing Security	1.1 Prevent Terrorist Attacks	?
	1.2 Prevent Unauthorized Acquisition/Use of CBRN Materials/Capabilities	?
	1.3 Manage Risks to Critical Infrastructure, Key Leadership/Events	?
2 Securing & Managing Our Borders	2.1 Effectively Control U.S. Air, Land, and Sea Borders	?
	2.2 Safeguard Lawful Trade and Travel	?
	2.3 Disrupt and Dismantle Transnational Criminal Organizations	?
3 Enforcing & Administering Our Immigration Laws	3.1 Strengthen and Effectively Administer the Immigration System	
	3.2 Prevent Unlawful Immigration	?
4 Safeguarding & Securing Cyberspace	4.1 Create a Safe, Secure, Resilient Cyber Environment	
	4.2 Promote Cyber security Knowledge and Innovation	
5 Ensuring Resilience to Disasters	5.1 Mitigate Hazards	?
	5.2 Enhance Preparedness	?
	5.3 Ensure Effective Emergency Response	?
	5.4 Rapidly Recover	?
6 Complementary Departmental Responsibilities & Hybrid Capabilities	A TBD	
	B TBD	
	C TBD	
	D TBD	
DHS Maturing & Strengthening the Homeland Security Enterprise	A Enhance Shared Awareness of Risks and Threats	
	B Build Capable Communities	
	C Foster Unity of Effort	
	D Foster Innovative Approaches and Solutions through Leading Edge S&T	

2.0 ASSETS TO BE ACQUIRED

By the end of ___'s FY 2015 acquisition project schedule, the USCG planned to have ___ in ___ with an expected service life of ___ years. As of month date 2010, ## assets have been delivered to the following U.S. Coast Guard ____: (fill in the blanks as appropriate)

FY	Delivered	Asset/Hull#	Location	HQ	D1	D5	D7	D8	D9	D11	D13	D14	D17
2008	Mo/Yr	1.											
()		2.											
2009		3.											
()		4.											
2010		5.											
		6.											
		7.											
		8.											
		Subtotal	Delivered to date										

LRIP: OT&E; ◆ _____; ❖

To meet the full production....

The following indicates anticipated deliveries based on current appropriations {and/or projected}. (fill in the blanks as appropriate)

FY	Deliver	Asset/Hull#	Location	HQ	D1	D5	D7	D8	D9	D11	D13	D14	D17
2010		9.											
cont'd		10.											
()		11.											
2011		12.											
()		13.											
		14.											
2012		15.											
()		16.											
		17.											
Number of {assets} delivered to a USCG District or Hq unit													
Percent of above listed {assets} per District or Hq unit													
{Assets's} Sitting Plan distribution of {asset} by District													
FOC Percent of total {_qty_assets_} distributed per USCG District													

3.0 PROJECT RESOURCE REQUIREMENTS

Table 1 – {Acquisition} Life Cycle Cost Estimate of Funding = AC&I + OE

Column headings defined:

Acquisition, Construction, and Improvement (AC&I)

Planned.....Project's Spend Plan to support the contract schedule and Acquisition Program Baseline Request.....President's Request (C-stage); shaded is FY 20__-__ {recent}-Stage CIP (Capital Investment Plan)

Enacted.....Net appropriations (recalculated gross enactments with rescissions and reprogrammings)
Order.....Number of assets placed on order for that fiscal year

() Order and Deliver quantities in parentheses are out year projections

Operations and Maintenance (O&M, a.k.a. OE)

Deliver.....Number of assets the Coast Guard conditionally accepted per fiscal year
Base.....Funding CG receives each year to operate the asset that the acquisition replaces
Follow-on.....First year "increment" that is "Annualized" and then added to subsequent FY's Base; break down:
- O&M.....Designation of non-personnel Follow-on funding to operate and maintain {new asset}
- FTE.....Full Time Equivalent; 1st year is typically partial FY to align with the assignment season
- FTP.....Full Time Positions – includes General Detail FTP

From Asset Deployment Plan, Section 4: Costs, 4.1 Recurring Deployment Costs

OE Support Funding for the old and new asset, per asset – calculated on {qty} of {assets} at any given time. (fill in the blanks as appropriate)

OE/O&M AFC Account* (\$000)	Staffing	30	42	45	30E	Totals
BASE: Existing {old asset} funding						
Required {new asset} funding – offset by base						
Follow-on: Increase Requested in {new} OE RPs						

*Staffing: personnel; AFC-30: operations; AFC-42: electronics; AFC-45: maintenance; AFC-30E: energy (e.g., fuel)

(\$000)	AC&I (five-year money)	Operating Expenses (one-year money)

Appendix A to COMDTINST M5000.10B

FY	Planned	Request	Enacted	Order	Deliver	Base ⁴	Follow-on = O&M ³ + FTE ²	FTP	**Annualized ⁴
2002									
2003									
2004									
2005									
2006									
2007									
2008									
2009									
2010									
2011									
2012									
2013									
2014									
2015									
2016									
Total	#{TAC}	n/a							
Need	\$0		\$ to fund			Recur	Nonrecur		

¹ one quarter; ² two quarters; ³ three quarters; ⁴ four quarters;

**Annualized: Follow-on is first funded for only part of FYs. Thereafter additional funding and Full-Time Equivalents (FTE) are required to provide full year resources, which are added to the prior FY's Base to calculate the subsequent FY base amount.

*** BASE is recurring for the __ year asset service life through FYs 20__-20__ (roughly \$__ M for __ years, or \$__ M). When the Total Acquisition Cost of \$__ M is added, this equates to a project Life Cycle Cost of \$__ M which compares favorably with the Project LCCE of \$__ M.

4.0 CONCLUSION {Commandant (CG-82) completes this section}

10.0 ACQUISITION PROGRAM BASELINE

10.1 Purpose

The Acquisition Program Baseline (APB) is established to enhance program stability and provide a critical reference point for measuring and reporting the status of program implementation. The approved APB is the fundamental agreement or a “contract” between the Project Manager, the Component Acquisition Executive (CAE) and the DHS Acquisition Decision Authority (ADA).

PM’s are expected to use all available and appropriate performance management measurement tools throughout the acquisition to anticipate potential problems in meeting the key performance, cost and schedule parameters.

10.2 Process

The original APB is normally drafted during the Analyze/Select (A/S) Phase of the acquisition process and serves as the baseline for total project cost, schedule and performance parameters. The APB must be approved before an Acquisition Decision Event-2 (ADE-2) decision and revised, as needed, for an ADE-3 decision. PM’s need to ensure that their project APB is reviewed and if necessary, revised and submitted to the ADA for approval immediately following the submittal of the annual President’s Budget with the corresponding 5-year Capital Investment Plan (CIP). Approved APBs must be revised as a result of a major program change that is fully funded or as a result of a project breach.

The APB is a summary document. The information contained comes from source documents such as the Operational Requirements Document (performance), Project Management Plan (schedule) and Project Life Cycle Cost Estimate (cost). These source documents are required to undergo reviews to give the opportunity for appropriate staff (including Technical Authorities) to provide meaningful input.

The PM continuously monitors cost, schedule and performance parameters to assess program implementation. The PM may trade-off cost, schedule and performance within the range between objective and threshold values (i.e., the trade space) without ADA approval. If the project has individual segments, changes may be accommodated between segments without impacting total cost, schedule and performance values for the project. The PM must follow Chief Acquisition Officer Policy Statement #1 “Program and Project Cost Management” for project trade-offs, changes and modifications.

Trade-offs outside the trade space may not be made without approval of the ADA and Operational Requirements Document (ORD) approval authority. The PM must inform the ADA when the current estimate of the program falls outside one or more APB thresholds. The ADA must be advised of the program breach via a breach notification memorandum.

10.3 Breaches

The PM continuously monitors cost, schedule and performance parameters to assess project performance. If the current estimate of total accumulated values exceed or will exceed the threshold values, the ADA must be advised of the project cost, schedule or technical performance breach via a breach notification memorandum. Thresholds for cost parameters are established at 8% above the Total Acquisition Cost and Life Cycle Cost Estimate APB objective levels. **Table A-8: Acquisition Program Baseline Breaches** contains the APB breach parameters.

Table A-8 Acquisition Program Baseline Breaches

Key Parameters	Breach
Cost	Exceeds threshold Cost parameter ($\geq 8\%$ increase of objective)
Schedule	Exceeds threshold schedule parameter (≥ 90 day slip of objective for projects 3 years or less in duration or 180 day slip of objective for projects more than 3 years in duration)
Performance	Doesn't satisfy a Key Performance Parameter (KPP) threshold

When a breach condition exists, the PM will notify the Program Executive Officer (PEO) and Commandant (CG-924) of the situation. The Commandant (CG-924) Office Chief will review the information, ensure that it meets the breach reporting policy and advise the PM to follow breach notification and reporting procedures. The PM will then work with the PEO to prepare an APB breach notification memorandum through the chain of command to the ADA.

Within 90 days of the formal breach notification, a revised APB will normally be submitted to the ADA for review and approval. Before the APB is routed for final Coast Guard approval, the PM will provide a copy of the new APB to Commandant (CG-924) for Independent Verification and Validation (IV&V). Following IV&V by Commandant (CG-924), the APB can be submitted up the chain for endorsement and approval.

10.4 Remediation Plans

Within 30 days of breach notification (VCG/CAE signature), a remediation plan will be submitted to the ADA. The remediation plan shall explain the circumstances of the breach and proposed corrective action. An APB breach notification memorandum and remediation plan template is provided at section 10.8.

10.5 Preparation

The PM is responsible for the initial preparation and submission of the APB, and for preparing and submitting any revisions. The initial APB is developed during the A/S Phase for approval at ADE-2 in accordance with the template provided in section 10.8. Projects may have multiple discrete segments of capability. For each major project with multiple discrete segments of capability, the APB will cover the total project investment and provide additional baseline parameters for each discrete

segment of capability.

For all revisions, insert a column entitled, “Version #n” and list the corresponding change(s) under the appropriate heading as shown in the sample tables within the Section 10.7 APB Template. A new column must be added each time the APB is revised. All changes need to be annotated using footnotes below the applicable table with the corresponding reason(s). In addition, all updates or changes caused by a breach need a brief explanation of the circumstances surrounding the breach in the version summary. All items that remain unchanged in the updated version are left blank. The latest version update should be “**boldfaced**”. All changes will require a subsequent approval by the ADA. If a new parameter needs to be added, state “Not Specified” in the previous column. If older parameters no longer apply, state “Deleted” in the new column. **Do not change titles and values of old or previous parameters.**

10.6 Roles and Responsibilities

Project Manager Responsibilities

Prepare/update and submit APB

CG-924 Responsibilities

Conduct an Independent Verification and Validation of the APB

Sponsor/CG-93X/93/9/01/ Responsibilities

Endorse APB

Component Acquisition Executive (CAE) Responsibilities

Endorses and approves APB for CG

Acquisition Decision Authority (ADA) Responsibilities

APB approval via ADM

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10.7 Template

ACQUISITION PROGRAM BASELINE (APB)

for the

[PROJECT TITLE]

Submitted by: _____ Date _____
 Project Manager (CG-93PM)

Validated by: _____ Date _____
 Chief, Acquisition Support Office (CG-924)

Endorsed by: _____ Date _____
 Program Manager (CG-93PgM)

Endorsed by: _____ Date _____
 Sponsor (CG-Y)

Endorsed by: _____ Date _____
 Director of Acquisition Programs (CG-93)

Endorsed by: _____ Date _____
 Chief Acquisition Officer (CG-9)

Endorsed by: _____ Date _____
 Assistant Commandant for Resources (CG-8)

CG approval: _____ Date _____
 Component Acquisition Executive (VCG)

DHS approval by ADM _____ Date _____

Version # _____ Date: _____

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TABLE OF CONTENTS

<u>Title/Section</u>	<u>Page Number</u>
Version Summary (if applicable)	VS-1
Section A: Introduction	A-1
Section B: Project Overview	B-1
B.1 Strategic Goals	
B.2 Mission Need	
B.3 Project Description	
B.4 References	
Section C: Top Level Project Baseline	C-1
C.1 Project Performance	
C.2 Project Schedule	
C.3 Project Cost	
Section D: Discrete Segment 1 Baseline (if applicable)	D-1
D.1 Discrete Segment 1 Performance	
D.2 Discrete Segment 1 Schedule	
D.3 Discrete Segment 1 Cost	

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ACQUISITION PROGRAM BASELINE

CONTENT REQUIREMENTS

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

A. Project Overview (1-2 pages in length)

Provide a narrative summary of the revisions made to the document, including the date of the revision. Changes to the baseline should be described at a high level. This annotation allows the reviewer to understand the scope change and follow the history of changes. If this APB is the first submission, indicate so in this section. Baseline dates of prior APB's need to reflect the date of DHS approval via the Acquisition Decision Memorandum in the revision summary and all performance, schedule and cost tables.

B. Introduction (1-2 pages in length)

B.1. Strategic Goals – This section describes the DHS strategic goals per QHSR (Quadrennial Homeland Security Review of 2010) supported by the acquisition project and the Coast Guard mission area(s) that correspond to each DHS goal.

B.2. Mission Need – This section summarizes the business/mission need as described in the Mission Need Statement (MNS) and describes the high-level project requirements, as contained in the Operational Requirement Document (ORD).

B.3. Project Description – This section provides a summary of the project approach and acquisition strategy. If applicable, describe the relationship of discrete segments within the project, such as how they interface, interact, or integrate.

B.4. References – This section identifies the relevant source documents used to establish the project baseline in the APB. Source documents include the Operational Requirements Document (ORD), Project Life Cycle Cost Estimate (PLCCE), and the Project Management Plan (PMP). Include any other source documents that were used to develop key cost, schedule and performance parameters. If any referenced document is not yet approved, it shall be noted as “Draft”. Include the title, version, date approved, etc.

Requirement Parameters	Cost Parameters	Schedule Parameters
Operational Requirements Document	Project Life Cycle Cost Estimate	Project Management Plan

Section C. Top Level Project Baseline

This section of the APB shall contain the project’s baseline parameters and their associated threshold and objective values. The baseline parameters must be stated in measurable, quantitative terms. The number of parameters will be the minimum number needed to characterize the project’s operational performance, technical performance, schedule, and cost. Definitions for the terms "objective" and "threshold" are listed below.

Performance Threshold The Performance Threshold is the minimum acceptable value that, in the user's judgment, is necessary to satisfy the need. If threshold values are not achieved, project performance is seriously degraded, the project may be too costly, or the project may no longer be timely.

Performance Objective The Performance Objective is that value desired by the user for which the PM is contracting or otherwise planning to obtain. The objective value should represent an operationally meaningful, time-critical, and cost-effective increment of capability above the threshold performance parameter. If no objective is otherwise indicated, the objective is annotated “same as threshold”.

Cost Threshold The Cost Threshold establishes the maximum cost the project is allowed to incur before declaring a cost breach. The cost threshold value is greater than the project's planned cost (cost objective) to obtain the performance stated in the ORD. Therefore, the Cost Threshold is a value that is 8% greater than the Cost Objective.

Cost Objective The Cost Objective is the lowest cost at which the project expects to incur in order to obtain the performance stated in the ORD. The Cost Objective is the Project Life Cycle Cost Estimate (PLCCE) to obtain the performance stated in the ORD (to include the objective performance parameters of the ORD).

Schedule Threshold The Schedule Threshold is the maximum amount of time that is allowed to achieve key project events without having to declare a schedule breach. The Schedule Threshold will always be the later date (the Schedule Objective date plus the prescribed addition (normally 3-6 months)) for each key event.

Schedule Objective The Schedule Objective is the minimum (or planned) amount of time the Project Manger intends to take to meet key project milestones. The Schedule Objective will always be the earlier date for each key event.

For documenting changes to APB parameters, the Project Manager shall create a new column or table, as appropriate, entitled “Version #” and enter only the values for the parameters that are proposed to be changed or deleted. If the ADA approves the change, that column will remain in

the table with only the changed values indicated. Previously approved APB parameters shall not be removed and are to be retained in the APB to capture the overall historical record of change to the project's baseline.

C.1. Project Performance

The performance baseline shall be based upon the Key Performance Parameters (KPPs) specified in the Operational Requirements Document (ORD). In this document, a KPP is defined as those attributes or characteristics of a system that are considered critical or essential to the development of an effective capability or system required to successfully meet the mission of DHS. The values of each KPP represent the project as it is expected to be produced and deployed. Failure to achieve a KPP (threshold is not met) would require re-baselining or termination of the project based upon the decision by the ADA.

Each KPP included in the APB must have both an objective and a threshold value. These objective and threshold values shall be consistent with those contained in the ORD. If no objective is otherwise indicated, the objective is annotated "same as threshold". Performance thresholds and objectives must be verifiable by testing. The performance baseline may include operational, technical, and supportability parameters. Other system-specific requirements, such as a cost KPP, may be specified as applicable. The Component Acquisition Executive (CAE) or ADA may mandate additional Component-wide/Department-wide performance parameters (for example interoperability, enterprise architecture, economic benefit or return on investment) as they deem necessary.

The PM shall describe the program/project KPPs with thresholds and objectives in accordance with the below table format.

Note it is anticipated that the majority of Coast Guard APBs will report at the project vice program level.

KEY PERFORMANCE PARAMETER (KPP)	BASELINE: 15 MAR 2008		VERSION 2.0	
	THRESHOLD	OBJECTIVE	THRESHOLD	OBJECTIVE
KPP #1	15 sec	5 sec		
KPP #2	99.6%	99.9%	99.0% ¹	99.4% ¹
KPP #X	65 knots; gusts to 100 knots			

Performance Revision

¹Use superscript and describe the reason(s) for each version and the impact(s) on the project.

Technical Performance Measurement

In this paragraph, briefly describe/list PM tools (i.e., Preliminary Design Review (PDR), Critical Design Review (CDR)) that are being used to monitor technical performance during the upcoming acquisition phase.

C.2. Project Schedule

The Project Manager should enter the planned completion dates for major project events. Minimum required major project events are listed in the below table. Additional program/project events, such as those in the optional list below, may be specified as well.

Schedule dates shall be specified as MONTH YR (e.g., 03/09) or QUARTER YR (e.g., 2QFY09). Objective and threshold dates for each event must be specified. The threshold value should not typically exceed the objective value by six months for projects lasting more than 3 years. For short projects lasting 3 years or less, the threshold value should not typically exceed the objective value by three months.

MAJOR PROJECT EVENT	BASELINE: 15 MAR 2008		VERSION 2.0	
	THRESHOLD	OBJECTIVE	THRESHOLD	OBJECTIVE
Solution Engineering Review (SER)	3QFY09	2QFY09		
ADE-2 Decision	4QFY09	3QFY09		
Preliminary Design Review (PDR)	2QFY10	1QFY10		
Critical Design Review (CDR)	4QFY10	3QFY10		
Production Readiness Review (PRR)	1QFY11	4QFY10		
Initial Operational Test & Evaluation (IOT&E)	2QFY11	1QFY11		
Initial Operational Capability (IOC)	3QFY11	2QFY11		
ADE-3 Decision	2QFY12	1QFY12	4QFY12¹	3QFY12¹
Full Operational Capability (FOC)	3QFY14	2QFY14		

Examples of optional project events to consider

System Definition Review	Asset Deliveries (DD-250)
Integration Readiness Review	DT&E (start/complete)
LRIP contract award	Operational Support Date
Production contract awards	First article/Prototype delivered
Operational Test Readiness Review	Project Transition (ADE-4)

Schedule Revision

¹Use superscript notes and describe the reason(s) for each version and the impact(s) on the project.

Schedule Performance Measurement

In this paragraph, briefly describe/list PM tools (i.e., IMS, EVM) that are being used to monitor schedule performance during this upcoming acquisition phase.

C.3. Project Cost

The PM shall enter program/project total cost by *Then Year dollars* (also known as *current dollars*) in millions. Cost data reflected in the baseline should reflect realistic life cycle cost estimates and be fully documented and defensible. Project cost data totals should reflect cost parameters of corresponding discrete segments documented in Section D, if applicable.

APB costs must represent total project funding requirements, not just the amount funded in the budget and programmed through the Future Years Homeland Security Program (FYHSP) (i.e., baseline costs must include unfunded requirements if those unfunded requirements are a part of the approved program). However, the APB should not include costs that are not part of the program/project approved by the ADA. The APB should contain cost parameters (objectives and thresholds) for major elements of the project life cycle costs. The cost elements include:

1. Acquisition Cost – All costs related to the acquisition including conceptualization, initiation, planning, design, development, test, contracting, production, deployment, logistics support, modification and disposal of a system to satisfy DHS/CG needs.
2. Operation & Maintenance (O&M) Cost – Including costs associated incurred for using and supporting the system or capability, such as personnel, maintenance (unit and depot), spares, and training.
3. Project Life Cycle Cost Estimate (PLCCE) - Costs of the entire life cycle of the program or project, including operations and maintenance support. Note: PLCCE must equal Acquisition Cost + O&M Cost.
4. If applicable, total system quantity (to include both Low Rate Initial Production (LRIP) and production units).
5. Any other cost objective established by the ADA.
6. Project Cost Baseline in *Then Year Dollars*
7. As a cost performance measurement reference, also show the following in this section: Program Acquisition Unit Cost (PAUC) based on Total Acquisition Cost objective/# of assets or total quantity.

Project Cost Estimate in <i>Then Year Dollars</i> (Millions)				
Current Phase: Analyze/Select (A/S)				
	15 MAR 2008		(Version 2.0)	
Cost Categories	Baseline Threshold	Baseline Objective	Version #2 Threshold	Version #2 Objective
Acquisition	110	100	119 ¹	110 ¹
O&M	1,100	1,000	1,800	1,000
Life Cycle Cost	1,210	1,100	1,199	1,110
Quantities	20	20		
Useful Life	30 Years			
PAUC (\$M)	5.0	5.5	5.95	5.5

Cost Revision

¹Use superscript and describe the reason(s) for each version and the impact(s) on the project

Cost Performance Measurements

In this paragraph briefly describe/list PM tools (i.e., Earned Value Management) that are being used to monitor cost performance during the upcoming acquisition phase.

Sections D and beyond- Discrete Segment/Project Baselines

These sections of the APB shall contain the baseline parameters for discrete segments or projects (if reported at program level) and their associated threshold and objective values. As in the top-level project baseline (if reported at the project level), the discrete segment baseline parameters must be stated in measurable, quantitative terms. The number of parameters will be the minimum number needed to characterize the operational/technical performance, schedule, and cost of the discrete segment or individual project.

10.8 Breach Memorandum and Remediation Plan Template

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

2100 2nd Street, SW, Stop xxxx
Washington, DC 20593-xxxx
Staff Symbol: CG-93xx
Phone: (202) 475-xxxx
Fax: (202) 475-xxxx
Email: Name@uscg.mil

5000

MEMORANDUM

From: **First Name MI Last Name**, RDML
Commandant (CG-93)

Reply to: CG-93xx
Attn of: **FI Last Name**
202-475-xxxx

To: ADA (CG or DHS)

Thru: (1) CG-9
(2) CG-01
(3) VCG

Subj: **PROJECT NAME** PROJECT BREACH NOTIFICATION

Ref: (a) DHS Directive 102-01
(b) **Project Name** APB (Date)

1. In accordance with reference (a), this memo serves as notice that the **Project Name (Project Name Acronym)** forecasts a breach to cost, schedule, and/or performance as summarized in reference (b).
2. A remediation plan that explains the circumstances of the breach and proposed corrective action will be submitted within 30 days.
3. A revised project APB will be submitted for approval within the next 90 days.

#

Copy to: Commandant (CG-8)

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APB Breach Remediation Plan

INVESTMENT PROGRAM: _____

FY: _____ QTR: _____

PURPOSE: This Plan should establish a sound approach/methodology to resolving the given problem. Emphasis should be placed on assessing the "Impact" to the overall investment and determine a "way ahead" for resolving the issue.

PROBLEM STATEMENT: Briefly summarize the given situation.

CAUSE OF BREACH: State the most fundamental reason for the breach. (Root cause)

Comments:

Potential causes of unfavorable outcome (Select those that apply):

Causes of unfavorable cost:

- C1 Work is more complex than anticipated
- C2 Design review comments more extensive than planned
- C3 Rework
- C4 Unfavorable market fluctuations (labor or material cost)
- C5 Poor planning
- C6 Unclear requirements
- C7 Scope Creep
- C8 Other

Explain _____

Causes of unfavorable schedule:

- S1 Manpower shortage
- S2 Revised Execution Plan
- S3 Supporting organizations are behind schedule
- S4 Late vendor delivery
- S5 Delayed customer feedback/direction
- S6 Rework
- S7 Work more complex than anticipated
- S8 Unclear requirements
- S9 Scope Creep
- S10 Other

Explain _____

Causes of unfavorable performance:

- P1 Lower than anticipated participation
- P2 Work more complex than anticipated
- P3 Unclear requirements
- P4 Scope Creep
- P5 Defects in deliverable
- P6 Other

Explain _____

PROGRAM IMPACT: Indicate the impact(s) of the breach on affected APB parameters (technical, cost, schedule). Include both the effect of the actions on program interdependencies and any resulting issues or risks; how progress will be measured/monitored in addition to Earned Value Management System; and an updated Integrated Master Schedule and revised APB, as necessary.

Cause	Deliverable/ADE	Impact(s)
		<i>Short and/or long term impact to deliverable and/or other segments (i.e. functionality expansion)</i>
		<i>Short and/or long term impact to overall investment</i>
<u>PM Comments:</u>		

CORRECTIVE ACTION: Indicate the actions taken to successfully remedy the breach.

Corrective Action	Target Completion Date	Outcome

COMMENTS/Recommendations: This section is to be used by Component /DHS HQ

Component/DHS HQ Comments/Recommendations

11.0 PROJECT MANAGEMENT PLAN

11.1 Purpose

The Project Management Plan (PMP) provides the framework and project specific detail to define the activities/tasking, responsibilities, risk management techniques, earned value management, the timing of events, serves as the Project Manager's (PM's) blueprint for project management and supports implementation of the Systems Engineering Life Cycle (SELC). It provides members of the matrix organization or IPT 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 is considered the primary project-planning document; planning in other technical and/or functional areas such as test and evaluation, integrated logistics support, environment impact analysis, and enterprise architecture documentation must be defined in, flow from and be consistent with the PMP.

11.2 Preparation

The PM shall prepare an initial PMP, in accordance with the template provided in section 11.3, as early in the project as possible, but it must be submitted for approval within six months of the approval date of ADE-1. Due to the criticality of the WBS, managers should familiarize themselves with MIL-HDBK-881A, *Work Breakdown Structures for Defense Materiel Items*.

The PM should prepare the draft PMP in consultation with all Program and Support Managers involved in the project to ensure all appropriate tasks are addressed and assigned. This should also include planning for contractor based project office support for technical and administrative assistance.

The PMP is provided as the project roadmap showing both a strategic view (long range), and tactical view (immediate to near-term) objectives of the projects to give leadership a clear and concise picture of the project's planning, and execution efforts. The strategic view depicts the Acquisition Lifecycle Framework (ALF). The tactical view presents the project's detailed planning efforts for the upcoming 12 to 18 months. The PMP is to be updated annually to support the Annual Review. Annual updates will focus on IMP (Section 2.1) and IMS (Appendix A) unless there are significant changes (e.g. resources) that require a more extensive update.

In addition, the PMP shall be updated any time significant changes in project execution plans, schedule, or resource requirements occur and approved in accordance with established procedures. Significant changes in project execution plans, schedule, or resource requirements, closely following an update of the PMP does not obviate the PM's responsibility to correct, and maintain a current PMP reflecting up to date planning activities and project status.

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11.3 Template

PROJECT MANAGEMENT PLAN (PMP)

for the

[PROJECT TITLE]

Submitted by: _____ Date _____
Project Manager (CG-93PM)

Endorsed by: _____ Date _____
Program Manager (CG-93PgM)

Endorsed by: _____ Date _____
Director of Acquisition Programs
(CG-93)

Endorsed by: _____ Date _____
Office of Resource Management
(CG-928)

Endorsed by: _____ Date _____
Office of Acquisition Workforce
Management (CG-921)

Approved: _____ Date _____
Chief Acquisition Officer (CG-9)

Version #

Date:

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11.4 Content Requirements

EXECUTIVE SUMMARY

The Executive Summary should be a brief one or two page discussion of the Project Management Plan (PMP), highlighting the purpose and salient points of each section. Be sure to include the goals and objectives of the project and expected outcomes. Briefly discuss the roles and responsibilities of key participants and discuss reports expected to be prepared and how the reports will support project decisions.

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

SECTION 1: INTRODUCTION

1.1 Scope

This section should describe the plans and objectives of the project and how the PMP will be used to accomplish these objectives. The section delineates and explains the connection between the Integrated Master Schedule and the acquisition process, and discusses the critical path of the schedule. It reviews and highlights the assumptions and risks to achieving cost, schedule, and performance goals. If the project is a System of Systems or Family of Systems acquisition, address how the planning ensures compliance with the overall systems architecture and supports the overall systems' performance and interoperability requirements.

1.2 Current Status

This section should briefly describe the key activities and accomplishments of the project to date, with bullet highlights and references, consistent with the IMS. This includes focusing on where the project is within the acquisition process (i.e., What was the last DHS ADE and when is the next ADE; what acquisition documentation has been completed; current status of pending documentation to support the next ADE and status of other critical activities). The status of the Acquisition Program Baseline (APB) should be discussed in this section.

SECTION 2: PROJECT PLANNING

2.1 Key Events

The focus should be the key actions of the upcoming 12 to 18 months required to support the acquisition strategy and the specific objectives and milestones to deliver the capability required by the sponsor. A brief description of each key event should be provided including the major accomplishments and success criteria associated with each key event and reflected in Appendix A. The below following table provides a sample format.

Key Event Description

Key Event	Major Accomplishments	Success Criteria
1	List Major Events	List Success Criteria
2	List Major Events	List Success Criteria

2.2 Resource Planning

This section should describe the current personnel assigned to the project staff or funded by the project and assigned to other staffs, and the financial resources of the project.

2.2.1 Staffing

Project Managers are to use the PMP to identify their staffing requirements as well as support required from other Coast Guard offices or activities. Project staff requirements are to be identified by billet and specific acquisition workforce qualifications required (e.g., Logistician, Level III) across time (a matrix is recommended). This section explains the PM’s plan to attain and/or train assigned project staff, by billet and specific acquisition workforce qualification requirements. This section should also assess the project’s need for certified acquisition professionals that may be required to perform a function required of a professional who is certified at the specified level.

2.2.2 Funding/Budget

A description of the resources required to execute the next acquisition phase and those planned to complete the project should be included in this section. Provide charts which show the financial resources broken out by fiscal year, including prior years, but focus on projected needs. An overview is provided for the long range plan, but annual detailed, specific planning actions are required for the upcoming Fiscal Year.

Note: Project Managers are to use Task Commitment Memoranda to coordinate and document all matrix-level personnel supporting the project. A draft Task Commitment Memorandum is available in the MSAM Appendix A, Section 22.

SECTION 3: PROJECT MANAGEMENT STRUCTURE

3.1 Organization

Describe the organizational relationships, lines of authority, and any other elements such as Integrated Product Teams (IPTs) within the project. This information should also depict any relationships the project has with any IPTs. The responsibility and authority of each Coast

Guard element with respect to the project should be stated. The plan for building up and/or scaling back the project staff should also be discussed. Describe here and also depict in Appendix (B) the project's operational and support organization chart that shows the relationships of the project within the Coast Guard as well as any relationships external to the Coast Guard. Also provide in Appendix (B) and describe here the project's contract administrative structure and its relationships within the Coast Guard and any external relationships.

3.2 Required Reports

Reports addressed here are used as tools to assist senior leadership in the oversight of acquisition projects. The periodic reports and reviews should be depicted in the IMP and IMS. The PMP is a PM developed planning agreement with the Program Executive Officer (PEO), documenting the project's planned accomplishments for the upcoming 12 to 18 months. The PMP will be developed and approved annually on the anniversary, or in support of the ALF.

3.2.1. Internal Reports

Establish and describe any reports that are required within the project and prepared by the matrix/IPT team members and provided to the PM, e.g., Risk Management Report and Risk Watch List, per Commandant (CG-9) SOP #7. The reports should provide updated status on the completion of project tasks, and should identify any problems within the project. The PM will oversee and determine the need for updating the information in any of the required reports.

3.2.2. External Reports

Establish and describe the reports that will be required of the PM. External reports will include those provided to the Department of Homeland Security (DHS), OMB and Congress.

SECTION 4: EARNED VALUE MANAGEMENT

Earned Value Management (EVM) is a project performance-measurement process that effectively integrates the contract's scope of work with schedule and cost elements at the appropriate level for optimum project planning and control. Projects will use EVM against Work Breakdown Structure (WBS) at sufficient levels to enable understanding of the performance against the time and budget allocated and will develop an Integrated Master Schedule (IMS) incorporating the WBS items. Projects will comply with DHS guidance for incorporating EVM as a project management tool. Commandant (CG-9) Standard Operating Procedure # 4, Project Earned Value Management Reporting provides additional direction to projects with respect to Earned Value Management. Commandant (CG-9) SOP #4 and HSAM 3034.202 include the requirement to conduct an Integrated Baseline Review (IBR) within three to six months of contract award.

Projects will use EVM against the WBS, contained in Appendix C at sufficient levels to enable understanding of the performance against the time and budget allocated and will develop an Integrated Master Schedule (IMS) incorporating the WBS items. The IMS will be used in management of the project, including the capture of EVM data. The IMS should include both the contractor's work and the government's work against the joint timeline.

FAR Part 34, Major System Acquisition, contains guidance and prescribes solicitation provisions. FAR 52.234 provides a clause applicable to contracts with EVM requirements.

Commandant (CG-9) Standard Operating Procedure (SOP) #4 for Earned Value Management Reporting PMs is applicable to all projects and is available at the Commandant (CG-9) CG Portal site.

4.1 EVM

This section should address the Earned Value Management (EVM) system that the project and contractor will use to objectively measure how much work has been accomplished. Compliance with ANSI/EIA Standards should be documented or plans for verification and surveillance reviews.

4.2 EVM Reporting

This section describes the reports and their frequency during the current and forthcoming phases of the project, and the responsibilities of all the parties involved.

DHS requires the use of EVM system on all major acquisitions (Level 1, Level 2, and IT Level 3) in development with total acquisition costs of \$20M or greater and on major systems in development and on their associated contracts with a contract price of \$20M and greater. Refer to SOP #4 for detailed reporting requirements. Note: In some instances, such as certain fixed-price contracts, EVMS may not be a viable tool for insight into progress and therefore would not be required.

Acquisitions using EVM are required to procure the services of a verifying organization as part of their acquisition costs. DHS has negotiated a Memorandum of Agreement (DCMA-DHS-03-0001) with the Defense Contract Management Agency (DCMA) to provide these services on a reimbursable basis. Commandant (CG-928) should be consulted for help with EVM compliance (verification and certification).

All major acquisitions (Level 1, Level 2, and IT Level 3) EVM systems are required to have full compliance with the ANSI/EIA Standard guidelines. DHS reserves the right to require an acquisition to utilize an EVMS on any particular contract based on its risk to the overall acquisition and its risk to the mission.

SECTION 5: DETAILED PLANNING DOCUMENTS

Specific plans to execute technical activities of the project are developed in detailed planning documents. These plans are not a part of the PMP. The PMP should address the completion schedule of these documents and how they relate overall to the planned project activities for the upcoming fiscal year. Particular attention should be given to the development and approval process to complete these required documents to support DHS acquisition decision events.

Appendices

The following documents should be attached as Appendices to the PMP.

(A) Integrated Master Schedule (IMS)

This appendix is the project's Integrated Master Schedule to delineate the key events of the work effort. Typically the Integrated Master Schedule is depicted as a chronological listing

of key events and their respective dates; actual and planned dates are distinguished. To add stability to the Integrated Master Schedule and to avoid the use of “point” dates, use the standard date formats in Section 1: Introduction to this Handbook. The Integrated Master Schedule will be reviewed and updated as needed.

(B) Organizational Charts

These appendices depict the Project's current organizational structure and their relationships.

- (a) Project Staff
- (b) Project Operational and Support Organizations
- (c) Contract Administration

(C) Project Work Breakdown Structure (WBS)

A Project WBS deconstructs a project's end product and all associated project activities into successive levels with smaller specific elements until the work is subdivided to a level suitable for management control. By breaking work down into smaller elements, the Project Manager can more easily plan and schedule the project's activities and assign responsibility for the work. This allows a project manager to more precisely identify which elements and functional areas are overrunning planned resource allocations or are lagging behind schedule. The Project WBS should indicate and include suitable work elements that define a discrete product, task, goal or event. It should also depict a hierarchical structure that shows how the work elements and functional areas relate to each other as well as to the overall end product.

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12.0 PROJECT MANAGER'S CHARTER

12.1 Purpose

The Project Manager's Charter provides the PM with the authority to apply organizational resources to project activities. It includes the scope of the project and the Project Manager's responsibilities and accountability.

12.2 Preparation

Section 12.3 provides the basic template for the Project Manager's Charter. The content of the charter may be adjusted as needed to meet the unique requirements associated with each project. An individual may not be assigned as a Project Manager unless the individual is a certified DHS Program/Project Manager at the appropriate level (see Table 1 in Chapter 1, Section 3).

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12.3 Template

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

2100 2nd Street, SW, Stop xxxx
Washington, DC 20593-xxxx
Staff Symbol: CG-9YYY
Phone: (202) 475-
Fax: (202) 475-xxxx
Email: name@uscg.mil

5200

MEMORANDUM

From: **First Initial MI. Last Name**, VADM
CG-01

Reply to: CG-924
Attn of: **FI. Last Name**
202-475-xxxx

To: **First Name MI. Last Name**
CG-93YY

Thru: (1) Commandant (CG-9)
(2) Commandant (CG-93)

Subj: **PROJECT NAME (Project Name Acronym)** PROJECT MANAGER (PM) CHARTER

Ref: (a) Major Systems Acquisition Manual, COMDTINST M5000.10 (series)
(b) DHS Directive 102-01(series)
(c) DHS Acquisition Certification Requirements for Program Managers, DHS MD #0782

1. Purpose. You are hereby designated Project Manager for the **Project Name (Project Name Acronym)** Project. You shall carry out your duties as the **Project Name** Project Manager in compliance with references (a) and (b). The **Sponsor Office (Sponsor Office Staff Symbol)** is designated the Project Sponsor for the **Project Name** Project, with the **Sponsor Representative Office (Sponsor Representative Office Staff Symbol)** designated as the Sponsor Representative. This Charter supersedes all previous designations.

2. Project Objectives. The **Project Name** Project *[provide a brief description of the project objectives here.]*

3. Project Manager Charter.

a. Scope of Project. The **Project Name** Project is a Department of Homeland Security (DHS) Level X acquisition in conformance with reference (b). The **Project Name** Project shall meet requirements established in the Acquisition Program Baseline, *[provide actual or planned Requirements Document(s), e.g., Operational Requirements Document(s), Memorandums, etc.]*

b. Your Responsibilities. Under the general direction and supervision of the Assistant Commandant for Acquisition, you shall:

- (1) Use project management principles and associated disciplines described in reference (a) in achieving all documented requirements to be performed within established cost and schedule parameters;
- (2) Manage project resources (funds and personnel) using sound business practices and maintain a project financial plan that ensures a complete audit trail of project funds. Ensure project financial resource management is in compliance with the Financial Resource Management Manual (FRMM), COMDTINST M7100.3 (series) and Commandant (CG-9) SOP #16 for Obligation Planning Review Process and Timeline;
- (3) Establish and monitor the effectiveness of internal controls in accordance with the Commandant (CG-9) Internal Control Program Implementation Guide with assistance from the Special Assistant to the Deputy Program Executive Officer, Director of Acquisition Programs (CG-93SA);
- (4) Coordinate submission of resource proposals for the acquisition and initial sustainment of fielded end items and software;
- (5) Comply with DHS guidance on earned value management (EVM) and Commandant (CG-9) SOP #4 for Project EVM Reporting;
- (6) Continually manage project risk while reporting risk in accordance with Commandant (CG-9) SOP #7 for Project Risk Reporting;
- (7) Serve as the principal source of information for internal and external inquiries and for project documentation;
- (8) Develop plans, documentation, reports, and briefings identified in reference (a) Commandant (CG-9) SOP #8 for Project Performance Reporting, and Commandant (CG-9) SOP #10 for Acquisition Outcome-Oriented Performance Metrics Reporting;
- (9) Collaborate with other DHS and Coast Guard acquisition projects to ensure interoperability and to address standardization;
- (10) Ensure that the interests of all Coast Guard Operating and Support Program Managers are addressed by the project;
- (11) Acquire and field an initial sustainment support capability for the delivered ***Project Name*** asset capability;
- (12) Chair the ***Project Name*** Configuration Control Board (CCB) for the duration of the acquisition project in accordance with your CCB Charter and the Chief Acquisition Officer (CAO) Policy Statement #1. For all requirement/capability changes, the PM shall brief the Executive Oversight Council on the programmatic impact and cost of those changes. Requirements/capability changes are to be documented and approved through the Operational Requirements Document revision process;

- (13) Continually populate the Acquisition Directorate’s Lessons Learned Database (coordinate with Commandant (CG-924)) as key events produce shared insights for enhancing acquisition processes; and,
- (14) Obtain Level **XXX** DHS Project/Program Manager certification, and maintain certification by satisfying annual skills currency requirements identified in reference (c) and Commandant (CG-9) SOP #5 Acquisition Workforce Certification.

c. Your Authority. You shall:

- (1) Serve as the Approving Official with final approval authority over all project funding related matters;
- (2) Serve as the Approving Official and CCB Chair for proposed engineering and configuration changes;
- (3) Obtain resource commitments from Operating and Support Program Managers to perform specific project tasks;
- (4) Sign correspondence relating to the ***Project Name*** Project as:

Project Manager
Project Name Project (CG-93PM)

d. Your Accountability. You shall be accountable to the Director of Acquisition Programs (CG-93).

4. Action. You shall comply with this Charter. By copy of this Charter, all directorates are directed to take all proper actions necessary to achieve the objectives of the project.

#

Copy to:

CG-DC0	CG-DCO-81				
CG-094	CG-0949				
CG-1	G-11	CG-13			
CG-2					
CG-4	CG-41	CG-43	CG-44	CG-45	CG-48
CG-5					
CG-6	CG-61	CG-62	CG-63	CG-64	CG-65
	CG-66				
CG-7	CG-7XX				
CG-8	CG-81	CG-82	CG-83		
CG-9	CG-91	CG-92	CG-924	CG-93	CG-93PgM

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13.0 RISK MANAGEMENT PLAN

13.1 Purpose

The purpose of the RMP is to define and support a project risk management process that supports project needs and is in compliance with Commandant (CG-9) SOP #7 guidance.

13.2 Preparation

The RMP should be drafted by the project Risk Management IPT for PM review. Projects will use terms and processes as defined in Commandant (CG-9) SOP #7, but will not repeat these definitions in the RMP. The RMP will define the project-specific implementation of these processes.

Early development of a risk management process within the project is essential for management success. The PM will submit the RMP for approval six months following ADE-1. The RMP will be updated and re-submitted for approval whenever there is a significant change to the project (i.e., at subsequent ADEs). The updates should reflect significant changes in project organization, roles and responsibilities for risk management (e.g., addition of a new prime contractor), associated process changes, and the revised project-level risk management strategy.

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13.3 Template

RISK MANAGEMENT PLAN (RMP)

for the

PROJECT TITLE

Submitted by: _____
Project Manager (CG-93PM) Date

Endorsed by: _____
Program Manager (CG-93PgM) Date

Approved by: _____
Director of Acquisition Programs
(CG-93) Date

Version # _____ Date _____

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RISK MANAGEMENT PLAN

CONTENT REQUIREMENTS

EXECUTIVE SUMMARY

Provide an Executive Summary of the Risk Management Plan. The Executive Summary should be a brief discussion of the RMP, highlighting the salient points of each section. Be sure to include the goals and objectives of the plan and expected outcomes. Briefly discuss the roles and responsibilities of key participants.

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

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SECTION 1. INTRODUCTION

1.1 Purpose

This section of the RMP should address the purpose and objective of risk management as part of the project acquisition strategy. It should include a discussion of the top project-level risks and explain how risk will be assessed and mitigated as a result of planned project activities.

1.2 Risk Management Approach

Provide an overview of the risk management approach, to include the status of the risk management effort to date. Summarize the project risk management process which will be employed to identify and analyze the risk associated with the project. Explain how the

risk management process will be integrated with other major project management processes (e.g., system engineering, test and evaluation, system safety, logistics, etc.), and with key programmatic and technical reviews and decisions.

SECTION 2. RISK MANAGEMENT PLANNING AND ORGANIZATION

Identify all organizations which will be participating in the risk management effort. Discuss in detail the roles and responsibilities of each of the identified organizations. Personnel and organizations which must be included in the risk management project include the Project Manager, the Project Sponsor, Technical Authorities, contract management, the Operational Test Authority (OTA) if applicable, and major contractors. Identify training requirements for personnel engaged in the risk management process, and explain who will be responsible for providing that training.

SECTION 3. RISK IDENTIFICATION

Explain how the project will identify potential risks using the project Work Breakdown Structure (WBS). Describe project processes, roles and responsibilities for identifying potential risks. Identify the major programmatic and technical reviews and decision points that will be supported by formal risk assessments, as well as the procedures to support continuous risk assessment between these formal assessments.

SECTION 4. RISK ANALYSIS

Explain roles and responsibilities for risk analysis and processes that will be used to define uncertainties and root causes, quantify risk consequence severity and probability of occurrence, and assign risk levels. Explain how risks will be documented and monitored once analyzed.

SECTION 5. RISK MITIGATION PLANNING AND IMPLEMENTATION

5.1 Risk Mitigation Planning

Describe the project processes, roles and responsibilities for mitigation planning. Explain how risk mitigation planning will be integrated with development of major plans, and included as part of the project decision support process.

5.2 Risk Mitigation Implementation

Describe the project processes, roles and responsibilities for approving and implementing risk mitigation plans; include risk mitigation strategies used. Explain how risk mitigation plans will be included with decision recommendations, and integrated as a part of approved project programmatic and technical plans. Explain how risk mitigation plan cost and schedule requirements will be integrated into the overall project budget and schedule control processes. Explain the process for assignment of risk owners and IPT (or other analogous management organization) risk oversight and support responsibility. Explain how approved risk mitigation plans will be documented in association with the previously documented risk descriptions.

SECTION 6. RISK TRACKING

6.1 Risk Documentation and Reports

Summarize the risk documentation processes, to include documenting required risk and mitigation plan information elements, the location and form of the project risk repository, and responsibilities for risk and mitigation plan documentation entry and updates. Documentation processes contained in prior sections may be referenced here.

6.2 Risk Mitigation Progress Tracking and Reviews

Describe the project processes, roles and responsibilities for risk and mitigation progress tracking. Describe the procedures and responsibilities for regular review of risk and mitigation plan status.

6.3 Risk Reporting

Describe the project processes, roles and responsibilities for reporting. Describe the internal project reports that will be provided to support review and management of risks and mitigation plans, and the responsibility for preparation of those reports. Internal reports should include a "Project Risk Watch list". Explain how the project will prepare and submit required external risk reports.

Appendices

(A) Risk Management Tools

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14.0 TEST AND EVALUATION MASTER PLAN

14.1 Purpose

The Test and Evaluation Master Plan (TEMP) is the “top-level” planning document for all Test and Evaluation (T&E); defined as test, analysis, demonstration and inspection, as related to a particular major systems acquisition. The TEMP must outline a comprehensive and integrated set of test activities to fully demonstrate the capabilities of the asset being acquired and enable assessment of operational effectiveness and suitability. The TEMP describes the necessary Developmental Test and Evaluation (DT&E) and Operational Test and Evaluation (OT&E), including the conduct of Early Operational Assessment (EOA), Operational Assessment (OA), Initial Operational Test and Evaluation (IOT&E), and Follow-On Test and Evaluation (FOT&E). The test regime defined in the TEMP must support the Acquisition Decision Events within the schedule defined in the Acquisition Program Baseline. The TEMP identifies all critical technical parameters, includes refined Critical Operational Issues (COIs), and describes the objectives, responsibilities, resources, and schedules for all completed and planned T&E, including Modeling and Simulation tools used in the process. It also describes all subordinate plans (e.g., DT&E Plan, EOA Plan, OA Plan, OT&E Plan), required reports (e.g., DT&E Report, EOA Report, OA Report, OT&E Report), and assigns responsibility for preparing and approving these plans and reports.

The TEMP is a living document that should accurately reflect major changes in program requirements, schedule, and funding. The TEMP is required to be endorsed and approved within the Coast Guard, and approved by the DHS Director of Operational Test and Evaluation (DOT&E). The Coast Guard has final approval authority for delegated projects; however, DHS is included in the concurrent clearance of the TEMP. The TEMP should be reviewed and updated by the PM at each ADE or whenever a breach occurs in the program’s Acquisition Program Baseline (APB). For example, the TEMP should be revised when the PM is unable to execute the TEMP as written, or when changes to the program’s cost/funding, schedule, performance make the existing TEMP obsolete. Revision of the TEMP should receive the same endorsements and approvals as the original document.

Projects are required to have an approved TEMP and subordinate test plans prior to commencing any associated test and evaluation unless a specific waiver is granted by the Chief Acquisition Officer Commandant (CG-9).

14.2 Preparation

The PM shall prepare a TEMP in accordance with the template provided in section 14.6 as early in the project as possible, but no later than three months after approval of the initial ORD. If the initial ORD is prepared in support of an ADE, the initial TEMP shall be prepared to support that ADE.

The PM will prepare the draft TEMP in consultation with all Project and Support Managers and other organizations involved in the T&E activities that are represented

on the Test Management Oversight Team (TMOT).

Commandant (CG-926), working with the PM, will recommend an Operational Test Agent (OTA) to DHS DOT&E early in the acquisition process before the TEMP is drafted for approval by DHS. The OTA must be independent of the sponsor and acquirer.

The DHS approved OTA is the activity that plans, develops and executes the OT Test Plans. The OTA will conduct or observe independent test events designed to measure performance of the asset in an operational environment. The OTA provides a report of all OT conducted. The OTA is responsible for completing the Operational Test and Evaluation Outline, Section 4, of the TEMP. OTA responsibilities include development of Critical Operational Issues based upon the overall information provided in the MNS, CONOPS and ORD. These are the operational effectiveness and operational suitability measures that will be examined during OT&E. The resources required to execute operational testing is included in the overall project budget and are the responsibility of the PM to fund and provide when appropriate.

Critical Operational Issues. The OTA refines the preliminary Critical Operational Issues (COI) from the ORD for use in evaluating the operational effectiveness and operational suitability of the asset or system. COI are the key concerns that must be examined in operational testing to determine a product's capability to perform its mission. COI are derived from the Key Performance Parameters and other mission performance attributes in the MNS and CONOPS and Operational Requirements defined in the ORD. COI are grouped in two areas: 1) technical requirements and parameters associated with operational effectiveness and 2) non-technical requirements associated with operational suitability. While the bulk of suitability issues are referred to as "non-technical" in this Manual, issues like Reliability, Maintainability, and Availability are of a technical nature; can be quantitatively measured; and have comparable importance to effectiveness issues. In support of the mission, both the materiel developer and the operational test agency need to know under what conditions the proposed system will be used. Does the system need to be waterproof or merely water resistant? Will it be used under extreme climatic conditions? Will its use in normal operations be different than that envisioned in heightened operations? The CONOPS sets general operating conditions for the asset; the ORD needs to ensure that those conditions are explained in enough detail for the requirements to be testable.

14.2.1 Developmental Test and Evaluation Plan

The Developmental Test and Evaluation (DT&E) Plan provides detailed information, guidance, scheduling, and tasking particular to the planned DT&E event (note: there may be multiple DT events). The DT&E Plan is prepared by the PM with the assistance of the TMOT. DT&E plans are reviewed by DHS (TSD).

14.2.1.1 Developmental Test and Evaluation Report

A DT&E Report provides the results of all developmental testing particular to the DT

event; the results are used to support the OTRR (the decision to conduct to IOT&E). For projects which include LRIP, a DT&E Report will also support the decision to enter LRIP. Upon receipt of all data and subordinate reports required by the TEMP and DT&E Plan, the PM will prepare a DT&E Report.

14.2.2 Early Operational Assessment Plan

An Early Operational Assessment (EOA) is normally accomplished before a production representative asset is available. Typically a tabletop event, EOA presents an appropriate cross section of users with the design to identify enhancements as well as risks to Operational Effectiveness and Suitability. For projects where the Sponsor has elected to conduct Early Operational Assessment (EOA), the EOA Plan is prepared by the Operational Test Agent with the assistance of the PM and the TMOT. The EOA Plan provides detailed information, guidance, scheduling, resources and tasking for planned EOA.

14.2.2.1 Early Operational Assessment Report

For projects electing to conduct EOA, the EOA Report is prepared by the Operational Test Agent and signed by the Sponsor. It summarizes the results and conclusions of the EOA process to assess how well the design is expected to meet the Critical Operational Issues. The EOA Report is used to support the decision to enter the Obtain Phase or commence LRIP, as appropriate.

14.2.3 Operational Assessment Plan

An Operational Assessment (OA) may be used to mitigate risk during development and system integration prior to IOT&E. If appropriate, it may be used to support an ADE-2C LRIP decision. It is normally accomplished with early, functionally representative assets; ranging from physical models and breadboard systems through completed hardware components and prototype systems. Examples include: using a scaled physical model to verify ice breaking capabilities in an Ice Tank; using a physical mock-up and surrogate electronics to verify human factors and operator actions; or using a test range and hardware to verify operation of a prototype C4I suite. Using a similar process as the EOA (assuming a much more mature product), OA identifies enhancements as well as risks to Operational Effectiveness and Suitability. OA may be integrated with DT to support some level of design evaluation while supporting OA test objectives. Nothing associated with the integrated or combined test event, however, shall preclude or diminish the independent nature of the assessment of OA objectives by the OTA.

The Operational Assessment Plan provides detailed information, guidance, scheduling, and tasking for all planned OA activities. The OA Plan is prepared by the OTA with the assistance of the Sponsor/Sponsor's Representative and the TMOT.

14.2.3.1 Operational Assessment Report

The OA Report supports ADE-2C for LRIP or may be presented during Annual

Reviews if used for Risk Mitigation prior to IOT&E. If supporting an LRIP decision, the report will include a recommendation on readiness to commence LRIP. If the OA is a risk mitigation event, then the OA results will be briefed during the next Annual Review or other decision reviews.

14.2.4 Initial Operational Test and Evaluation Plan

The Initial Operational Test and Evaluation (IOT&E) Plan provides detailed information, guidance, scheduling, and tasking for all planned IOT&E. The IOT&E Plan is prepared by the OTA with the assistance of the Sponsor/Sponsor's Representative and the TMOT.

14.2.4.1 Initial Operational Test and Evaluation Report

The IOT&E Report supports the ADE-3 decision to enter the Produce/Deploy and Support Phase. After receipt of all data and subordinate reports, the OTA will prepare the IOT&E Report. The report will address all critical issues and provide an evaluation of the operational suitability and operational effectiveness of the system. The Sponsor will provide an accompanying recommendation regarding production based upon test results.

14.3 TEMP, Test Plans and Test Report Review and Approval

TEMP review and approval should follow the defined document review and approval procedures in Part 1, Documentation, Section 1.0 Document Review and Approval Process of this Appendix. The TEMP will be approved by Coast Guard CAO and submitted for DHS approval by DOT&E.

14.3.1 Developmental Test and Evaluation Plan

Following consensus of the TMOT and concurrent clearance, the DT&E Plan is to be forwarded to DHS APMD by Commandant (CG-924) for TSD review and comment. Recommended changes should be submitted through the PM for consideration by Commandant (CG-93). The DT&E plan shall be approved by the Program Manager.

14.3.1.1 Developmental Test and Evaluation Report

The DT&E report will be signed by the PM and approved by the Program Manager. Copies will be forwarded to DHS TSD and the Sponsor's Representative.

14.3.2 Early Operational Assessment Plan

The EOA Plan shall undergo a concurrent clearance review by the TMOT. The EOA Plan is forwarded to DHS APMD by Commandant (CG-924) for DOT&E review and comment. Following resolution of any concerns, the Sponsor shall submit the EOA Plan via the PM to Commandant (CG-93) for endorsement prior to Sponsor approval.

14.3.2.1 Early Operational Assessment Report

A draft copy will be sent to the PM for review and comment. The EOA report is

forwarded to DHS APMD by Commandant (CG-924) for DOT&E review. DOT&E will write a Letter of Assessment of the Operational Test and Evaluation (OT&E) report, as appropriate. The final report will be endorsed by the OTA and signed by the Sponsor and copies will be provided to CG ARB members for consideration.

14.3.3 Operational Assessment Plan

The OA Plan shall undergo a concurrent clearance review by the TMOT. The OA Plan is forwarded to DHS APMD by Commandant (CG-924) for DOT&E review and comment. Following resolution of any concerns, the Sponsor shall submit the OA Plan via the PM to Commandant (CG-93) for endorsement prior to Sponsor approval.

14.3.3.1 Operational Assessment Report

A draft copy will be sent to the PM for review and comment. The EOA and/or OA report is forwarded to DHS APMD by Commandant (CG-924) for DOT&E review. DOT&E will write a Letter of Assessment of the Operational Test and Evaluation (OT&E) report, as appropriate. The final report will be endorsed by the OTA and signed by the Sponsor and copies will be provided to CG ARB for consideration.

14.3.4 Initial Operational Test and Evaluation Plan

The IOT&E Plan shall undergo a concurrent clearance review by the TMOT. The IOT&E plan is forwarded to DHS by Commandant (CG-924) for DOT&E review and comment. Recommended changes should be submitted to the Sponsor/Sponsor's Representative for consideration by the Sponsor and Commandant (CG-93). Upon resolution of any concerns, the OT&E Plan shall be jointly endorsed by the Sponsor and Commandant (CG-93) and forwarded to DHS for approval by DOT&E.

14.3.4.1 Initial Operational Test and Evaluation Report

The IOT&E Report supports ADE-3 to enter the Produce/Deploy and Support Phase. After receipt of all data and subordinate reports, the OTA will prepare the IOT&E Report. The report should address the acceptability of testing and will describe all critical issues found during the test event(s). The IOT&E report will specifically provide an evaluation of the operational suitability and operational effectiveness of the system. The Sponsor will provide an accompanying recommendation regarding production based upon test results. DOT&E will write a Letter of Assessment of the Operational Test and Evaluation (OT&E) Report, as appropriate. The OTA and Sponsor/Sponsor's Representative should be prepared to brief the CG ARB and/or the ARB on the results of OT&E and the Sponsor's recommendation regarding production.

14.4 Test Readiness Reviews

A Test Readiness Review will be conducted prior to each major system asset DT or OT event. The reviews are intended to verify that prerequisite entrance criteria have been met and that the system is fully ready for the level of testing planned. The Test Readiness Review also confirms that test resources are in place and all testing

preparations are complete.

14.4.1 Developmental Test Readiness Review (DTRR)

Developmental Test Readiness Reviews are scheduled and conducted by the PM. In general, the DTRR focuses on the readiness to achieve the test objectives included in the DT Test Plan. Format and content should be similar to the Operational Test Readiness Review procedures listed below, but tailored to match the level of system or asset maturity and overall test objectives.

14.4.2 Operational Test Readiness Review (OTRR)

The Operational Test Readiness Review (OTRR) is chaired by Commandant (CG-926) and conducted in a manner that ensures the project asset or system is ready to start Initial Operational Test and Evaluation (IOT&E). Attendance at the OTRR includes the Project Manager, Sponsor, DHS TSD, DOT&E, APMD and OTA. Exit criteria for the OTRR will include:

- All Operational Test Entrance Criteria specified in the Test and Evaluation Master Plan are satisfied;
- Satisfactory performance in Developmental Test;
- Operational Test Plan approved
- Adequate numbers of systems are available for testing;
- Representative users are identified for test conduct;
- A Concept of Operations is established;
- Required training is available and planned;
- All resources required to execute the Operational Test are available including instrumentation, spare parts, manuals, etc.; and
- There are no outstanding critical deficiencies related to safety, security, or the inability to perform key mission functions that do not have an identified workaround approved by the CAE.

14.5 Waivers

An approved TEMP and associated test plans are required before any elements of test and evaluation can be initiated and conducted, unless a waiver by the Chief Acquisition Officer (CG-9) is granted in writing.

14.6 Template

TEST AND EVALUATION MASTER PLAN (TEMP)

for the

[PROJECT TITLE]

Submitted by: _____ Date _____
Project Manager (CG-93PM)

Endorsed by: _____ Date _____
Program Manager (CG-93PgM)

Endorsed by: _____ Date _____
Director of Acquisition Programs
(CG-93)

CG Approval: _____ Date _____
Chief Acquisition Officer (CG-9)

Endorsed by: _____ Date _____
Office of Research, Development,
Test & Evaluation (CG-926)

Endorsed by: _____ Date _____
Operational Test Agent

Endorsed by: _____ Date _____
Project Sponsor (CG-Y)

DHS Approval: _____ Date _____
Director, Operational Test and Evaluation
(DOT&E)

Version # _____ Date: _____

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TEST AND EVALUATION MASTER PLAN

CONTENT REQUIREMENTS

EXECUTIVE SUMMARY

Provide an Executive Summary of the Test and Evaluation Master Plan (TEMP). The Executive Summary should be a brief (one or two pages) discussion of the Plan, highlighting the salient points of each chapter in the Plan. Be sure to include the goals and objectives of the Plan and expected outcomes. Briefly discuss the roles and responsibilities of key participants and discuss reports expected to be prepared and how the reports will support project decisions.

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

SECTION 1: INTRODUCTION

1.1 Background

Briefly summarize the mission of the deployed asset or system. Briefly describe the design including key features and subsystems; describe unique characteristics of the system or unique support concepts which may result in special test and evaluation requirements. Do not repeat detailed background information included in the Project Management Plan (PMP); focus should be on test and evaluation issues. Provide a comprehensive discussion of the test program that clearly presents the plan for testing events, indicating the reason for the test, the entry and exit assumptions, criteria, and the desired results. Provide discussion of any risk mitigation expectations anticipated from the test events.

1.2 Operational Performance Requirements

List in matrix format (see below table) the minimum acceptable operational performance requirements as stated in the Operational Requirements Document (ORD). Include and

identify all Key Performance Parameters (KPP) listed in the ORD.

Thresholds, against which each of the effectiveness and suitability parameters will be measured, are normally quantitative. Thresholds should represent the level of system performance acceptable to the user to successfully execute the mission.

Examples of Operational Performance Requirements

Operational Effectiveness		
Requirement	Parameter	Threshold
Speed	Minimum Top Speed	25 Knots
	Continuous Speed (Sea State 2)	20 Knots
Interoperability	Communicate with RESCUE 21	99.5%
Operational Suitability		
Requirement	Parameter	Threshold
Reliability	Mean Time Between Maintenance Actions	1000 Hours
	Mean Time Between Failures	2000 Hours
	Mean Time Between Critical Failures	5000 Hours
Maintainability	Mean Time To Repair	2.5 Hours
Operational Availability (A _O)	Percentage Of Time Available To Start Mission	80%

1.3 Critical Technical Parameters

List in a matrix format (see below table) the critical technical parameters of the system that have been evaluated or will be evaluated during the remaining phases of Development, Test, and Evaluation (DT&E).

For each technical parameter, list the appropriate technical threshold.

Highlight critical technical issues that must be demonstrated before entering the next acquisition phase or before entering Operational Test and Evaluation (OT&E).

Sample Critical Technical Parameters Matrix< Project Title >					
Critical Technical Parameter	Test Event	Technical Threshold	Test Location	Test Schedule	Decision Supported
Stability	Model Test	Self-right through 360°	U.S. Naval Academy	DT	Preliminary Design Completion
Stability	Static Roll-over	Self-right through 360°	Contractor	DT	Preliminary Acceptance
Minimum Top Speed	Model Test	25 Knots	U.S. Naval Academy	DT	Preliminary Design Completion
Minimum Top Speed	Speed Trials	25 Knots	Contractor	PAT	Preliminary Acceptance

Additional examples of Critical Technical Parameters for various types of systems are

included in the following table.

Examples of Basic Asset Requirements

Cutters & Boats	Aircraft
Length Beam Draft Speed Maneuvering Endurance Range Damage Control Corrosion Control Design Life Ship Control Sea keeping Human Factors Safety/Environmental Health Armament Outfit Major Equipment Survivability Systems	Speed Maneuvering Overall Endurance On-scene Endurance Range Design Life Maximum Gross Weight Cargo Capacity Corrosion Control Personnel Capacity Navigation Communications Major Equipment Human Factors Safety/Environmental Health Survivability Systems Airworthiness
Information Technology	Radars
Enterprise Architecture Compliance Speed of Calculation Memory Utilization Throughput Capability Reliability Software Maintainability Information Management Security Controls Human Factors	Range Detection Limits Jamming Protection Reliability Error Rate/Signal Processing Human Factors

SECTION 2: PROJECT SUMMARY

2.1 Integrated Master Test Schedule.

Graphically display the integrated time sequencing of the critical T&E phases and events. This schedule should clearly represent the project acquisition events, and the phased test events that support acquisition decisions. The DT&E and OT&E events are to be depicted and explained herein to provide clarity to the plan, as well as efforts to resolve, or retire any project risks that can be mitigated during specific test events. The PM may use any graphical technique that clearly shows the key T&E events and their sequential relationship (see below for an example).

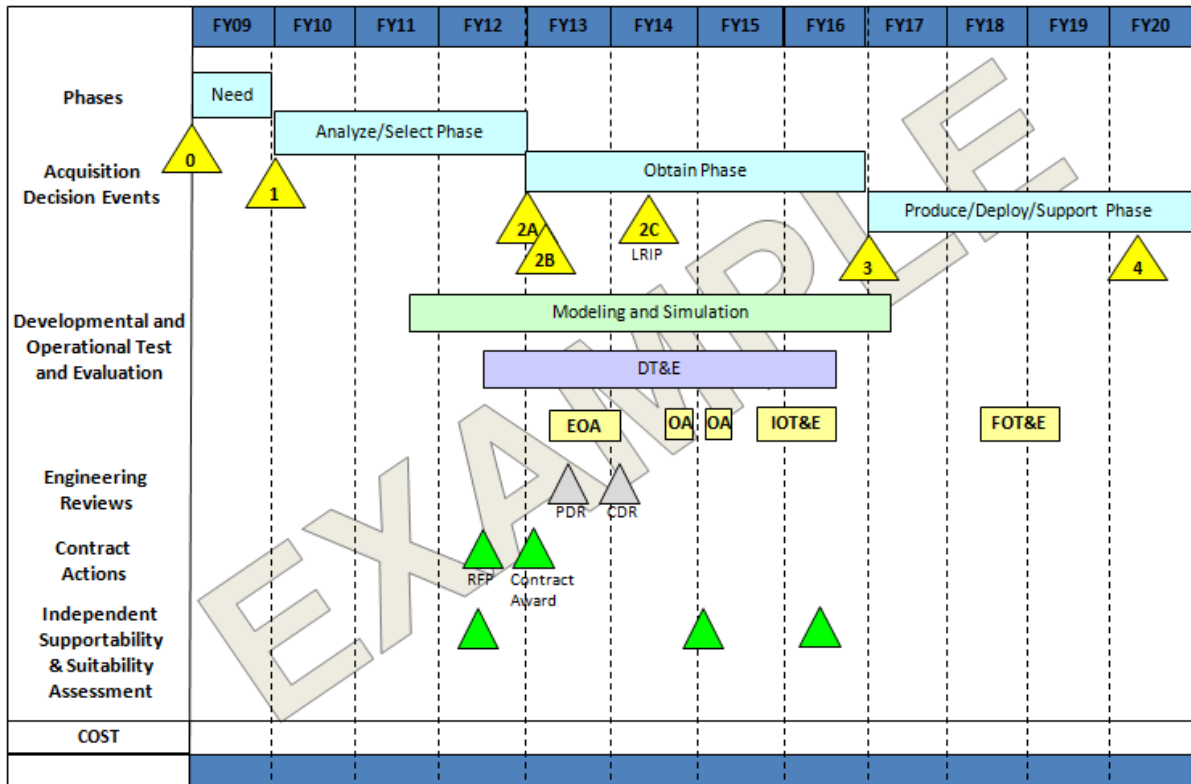


Figure A-5 Sample Integrated Master Test Schedule

Display on a second chart the specific T&E details for the current and the next acquisition phase. Include event dates related to the testing program, such as ADEs, test article availability, Engineering and Test Readiness Reviews, appropriate phases of DT&E, Early Operational Assessment (EOA), and OT&E, Initial Operational Capability (IOC), Full Operational Capability (FOC), and Low Rate Initial Production (LRIP), if applicable. Include all T&E planning documents (TEMP/TEMP Updates, DT&E Plan, EOA Plan, OA Plan, and OT&E Plan) and T&E reports (DT&E Report, EOA Report, OA Report and OT&E Report) required to support the acquisition decision.

2.2 Management

Identify all organizations that will be participating in the T&E program. Discuss in detail the roles and responsibilities of each of the identified organizations. Organizations which must be included in the T&E program include DHS (TSD/DOT&E), the Project Manager, the

Project Sponsor and Sponsor's Representative, the Test Management Oversight Team (TMOT), and any organization conducting actual testing, including contractors. Other organizations, which could be included, depending on the nature and extent of the testing program, include the Operational Test Agent (OTA), Support Project Managers, the Coast Guard Research and Development (R&D) Center, the Project Resident Office (PRO), and operational units.

SECTION 3: DEVELOPMENTAL TEST AND EVALUATION OUTLINE

3.1 Developmental Test and Evaluation Overview

Discuss the overall goals and objectives of the DT&E program. Clearly explain how the planned (or accomplished) DT&E will verify the status of the engineering design and development progress, indicating which design risks are intended to be minimized/mitigated, and the measure of success to substantiate the achievement of technical performance. This section should also address:

- Any technology which has not demonstrated its ability to contribute to system performance and ultimately fulfill mission requirements.
- The degree to which system hardware and software design has stabilized so as to reduce manufacturing and production decision uncertainties.

3.2 Developmental Test and Evaluation to Date

Describe all DT&E events that have been conducted to date. Include all DT&E conducted by both contractors and the government. Briefly note the results of the testing and reference all reports completed or under preparation. This section should provide all DT&E performance requirements satisfied, and risks resolved/mitigated, indicating results.

3.3 Planned Developmental Test and Evaluation

Discuss all remaining DT&E events that are planned, beginning with the date of the current TEMP revision and extending through completion of production. Place emphasis on the testing which will occur during the upcoming acquisition phase, clearly indicating the risks that may be mitigated, and the intended result, or measure of success. For each segment of testing (e.g., modeling, laboratory tests, in-plant tests, at-sea tests), the following topics should be discussed:

Configuration Description. Summarize the functional capability of the system configuration (model, mock-up, prototype, first article, etc.) and how it differs, if any, from the planned production model.

DT&E Objectives. State the test objectives for the phase in terms of the critical technical parameters to be confirmed. Identify any specific technical parameters which an Acquisition Decision Memorandum or legislative action has directed to be demonstrated during a particular phase of testing.

DT&E Events, Scope of Testing, and Basic Scenarios. Summarize the test events, test scenarios, and the test design concept. Quantify the testing in terms of the number of test events planned, and discuss the information which will be expanded upon in the DT&E Plan. Discuss the environment in which testing will be conducted and how realistic that environment is. Describe any models or simulations that will be used, justify their use and

state any accreditation requirements.

Limitations. Discuss any test limitations that may significantly affect the evaluator's ability to draw conclusions and make recommendations concerning the critical technical parameters. Discuss the impact of these limitations and resolution approaches.

3.4 Special Developmental Test and Evaluation Topics

Discuss any areas of special interest that have not been addressed previously. These areas will vary from project to project, but may include:

- Logistics Supportability;
- Reliability, Maintainability, and Availability (RMA);
- System Safety, Human Factors Engineering;
- Software Test and Evaluation;
- Manpower, Personnel, and Training (MPT);
- Survivability;
- Environmental and Habitability concerns (including noise, lighting, climate, vibration, etc.);
- Interoperability with Other Coast Guard or Component Systems;
- Certification & Accreditation (C&A), TEMPEST, and Common Operating Environment (COE) Compliance;
- Electromagnetic Effects;
- Spectrum Supportability and Compatibility Analysis; and
- Vulnerability.

3.5 Developmental Test and Evaluation Plans and Reports

Describe all required DT&E plans and reports. Include information on the scope of each plan or report, who prepares it, who reviews it, who approves it, and when it is to be submitted. Note: DHS TDS will be provided a copy DT&E plans and reports when complete.

SECTION 4: OPERATIONAL TEST AND EVALUATION OUTLINE

Section 4 is to be completed by the Operational Test Agent (OTA), previously identified by Commandant (CG-926), with concurrence of the Sponsor and approved by the Director of Operational Test and Evaluation.

4.1 Operational Test and Evaluation Overview

Discuss the overall goals and objectives of the OT&E program, including any combined DT/OT, EOA, OA, and all IOT&E test events. Discuss how OT&E is structured to assess operational effectiveness and operational suitability of the system delivered to the Sponsor. Provide information to show how OT&E will (or has) evaluated the system in an environment as operationally realistic as possible; i.e., using typical operators, expected

ranges of natural environmental conditions, and expected operational scenarios. Summarize the test event documentation required to support these test events.

4.2 Critical Operational Issues

COIs are the operational effectiveness and operational suitability issues (not characteristics, parameters, or thresholds) that must be examined in OT&E to evaluate/assess the system's capability to perform its mission.

A COI is typically phrased as a question that must be answered in order to properly evaluate the operational effectiveness (e.g., Will the system possess sufficient maneuverability [speed, power, and control] to operate in its intended open water environment?) and operational suitability (e.g., Will the system be maintainable within the planned funding base, rate structure, and expertise level at support facilities?).

The OTA will provide a list of COIs that should be thorough enough to ensure that, if every COI is resolved favorably, the system will be operationally effective and operationally suitable when employed in its intended environment by typical users. The list of COIs will normally consist of five to ten issues and should reflect only those that are truly "critical" in nature. Thus, if a COI cannot be favorably resolved, the decision to proceed to the Produce/Deploy and Support Phase should be carefully evaluated.

4.3 Early Operational Assessment and Operational Assessment Overview

For those projects electing to conduct EOA and OA, provide an overview of the EOA and OA efforts. Describe the objectives of EOA and OA and how they will be met. Describe any EOA and OA, which has been completed, and discuss all remaining EOA and OA events.

4.4 Early Operational Assessment and Operational Assessment Plans and Reports

For those projects electing to conduct EOA and OA, describe all required EOA and OA plans and reports. Include information on the scope of each plan or report, who prepares it, who reviews it, who approves it, and when it is to be prepared and submitted to support the test event.

4.5 Operational Test and Evaluation to Date

Briefly describe all OT&E that has been completed; if none has been conducted, so state. The descriptions should include the following:

- A description of the asset or system actually tested and how its configuration relates to the asset or system that will be fielded.
- A summary of the actual testing that occurred, including events, scenarios, resources used, test limitations, evaluations conducted, results achieved, and a reference to any test report detailing the results of such testing. Emphasis should be upon those Critical Operational Issues that were resolved, partially resolved, or unresolved at the completion of that portion of testing.

4.6 Planned Operational Test and Evaluation

Planned Operational Test and Evaluation may be required because of changes to the assets or system that occur after the initial operational testing. For all remaining Planned OT&E,

address the following:

Configuration Description. Identify the system to be tested, and describe any differences between the tested system and the system that will be fielded. Include, where applicable, the extent of integration with other systems with which it must be interoperable or compatible. Characterize the system (e.g., first article, production representative, or production configuration).

Operational Test and Evaluation Objectives. State the test objectives including the Critical Operational Issues to be addressed during remaining OT&E and the ADE(s) supported.

Operational Test and Evaluation Events, Scope of Testing, and Scenario. Summarize the scenarios and identify the events to be conducted. Indicate the type of resources to be used, the simulation(s) to be employed, the type of representative personnel who will operate and maintain the system, the status of logistic support, the operational and maintenance documentation that will be used, and the environment under which the system is to be employed and supported during testing. This section should also identify planned sources of information (e.g., developmental testing, modeling, and simulations) that may be used by the operational testers to supplement this phase of OT&E. Whenever models and simulations are to be used, explain the rationale for their credible use.

Logistics Test and Evaluation. Specifically discuss the planned logistics test, evaluation, and demonstrations that will be a part of the Planned OT&E.

Limitations. Discuss the test limitations including the mission realism, resource availability, limited operational environments, limited support environment, maturity of tested system, safety, etc., that may impact the resolution of affected COIs. Indicate the impact of the test and evaluation limitations on the ability to resolve critical operational issues and the ability to formulate conclusions regarding operational effectiveness and operational suitability. Indicate the COI(s) affected in parentheses after each limitation.

4.7 Operational Test and Evaluation Plans and Reports

Describe all required OT&E plans and reports. Include information on the scope of each plan or report, who prepares it, who reviews it, who approves it, and when it is to be prepared and submitted to support the test event.

SECTION 5: TEST AND EVALUATION RESOURCE SUMMARY

Provide a summary (preferably in a table or matrix format) of all key T&E resources, both government and contractor, which will be used during the course of the acquisition project. Specifically, the TEMP shall identify the following test resources:

Test Articles. Identify the actual number of and timing requirements for all test articles, including key support equipment and technical information required for testing in each phase of DT&E and OT&E. If key subsystems (components, assemblies, subassemblies, or software modules) are to be tested individually, before being tested in the final system configuration, identify each subsystem in the TEMP and the quantity required. Specify when prototypes, development pre-production, pre-faulted or production models will be used.

Test Sites and Instrumentation. Identify the specific test facilities/test ranges to be used for each type of testing. Compare the requirements for test facilities/test ranges dictated by the

scope and content of planned testing with existing and programmed facility/test range capability, and highlight any major shortfalls. Identify instrumentation that must be acquired specifically to conduct the planned test program.

Test Support Equipment. Identify test support equipment that must be acquired specifically to conduct the test program. Identify unique or special calibration requirements associated with any such equipment.

Threat Systems/Simulators. For those systems that have Defense Operations or Homeland Security missions, identify the type, number, and availability requirements for all threat systems/simulators. Compare the requirements for threat systems/simulators with available and projected assets and their capabilities. Highlight any major shortfalls.

Test Targets and Expendables. Identify the type, number, and availability requirements for all targets, flares, chaff, sonobouys, smoke generators, acoustic countermeasures, etc., that will be required for each phase of testing. Identify any major shortfalls.

Operational Program Test Support. For each T&E phase, identify the type and timing of aircraft flying hours, boat hours, and/or cutter underway days, and other critical operating program support required.

Simulations, Models, and Testbeds. For each T&E phase, identify the system simulations required, including computer-driven simulation models and hardware and human-in-the-loop testbeds (a system representation consisting partially of actual hardware and/or software, and partially of computer models or prototype hardware and/or software). The rationale for their credible usage or application must be explained and required accreditation plans must be included in the approved TEMP. Any required accreditation of models, simulations and testbeds must be complete before their use.

T&E Administrative Support. For each test phase, identify all administrative and facilities support required. Identify the organization responsible for providing such support and the source and type of funding required. Such items as office space and equipment, pier or hangar space, and maintenance services should be discussed.

Manpower and Training. Identify manpower and training requirements and limitations that affect test execution.

Technical Interfaces. Identify any technical interface areas, which need to be addressed during the T&E program.

Special Requirements. Discuss requirements for any significant non-instrumentation capabilities and resources, such as: special data processing or databases, unique mapping or charting products, extreme environmental conditions, or restricted or special use air/sea/landscapes.

T&E Funding Requirements. Estimate, by Fiscal Year and test type, the funding required for direct costs of planned testing, as shown in the following table. Identify any major shortfalls.

Sample Test and Evaluation Funding (\$K)

	FY06	FY07	FY08	FY09	FY10	FY11	TOTAL
DT&E	50	100	100	250	100		600

	FY06	FY07	FY08	FY09	FY10	FY11	TOTAL
OT&E					100	150	250
TOTAL	50	100	100	250	200	150	850

The initial TEMP should project the key resources necessary to accomplish DT&E and OT&E. As system acquisition progresses, test resource requirements shall be reassessed and subsequent TEMP updates shall reflect any changed system concepts or requirements.

Appendices

The following should be attached as appendices to the TEMP.

(A) Bibliography

Cite in this appendix all documents referred to in the TEMP. Also cite all reports documenting developmental and operational testing and evaluation of the system.

(B) Acronyms

List and define all acronyms used in the TEMP.

(C) Points of Contact

Provide a list of Points of Contact for all participating organizations (Project Manager, Sponsor, Support Program Managers, testers, evaluators, etc.) List TMOT members (by organization).

15.0 INTEGRATED LOGISTICS SUPPORT PLAN

15.1 Purpose

The Integrated Logistics Support Plan (ILSP) is the primary logistics document for Coast Guard systems and is required for all major systems. It identifies any logistics support constraints or requirements which must be satisfied; provides a description of the system/equipment that must be supported; identifies the applicable roles and responsibilities for planning and implementing an initial sustained support capability for the new system/equipment; identifies the support concepts and details on how the concepts are implemented for each ILS element; and provides information on other logistics related planning. The ILSP is a life cycle document that is initially prepared and updated during acquisition, and transitioned to the sustainment community for continued use and updating for the complete life of the system/equipment. Planning for logistics should include the precepts identified in the System Integrated Logistics Support (SILS) Policy Manual, COMDTINST M4105.8 (series).

15.2 ILSP Preparation

The ILS Manager shall prepare an initial ILSP, in accordance with the template provided in section 15.4 during the Analyze/Select Phase and submit it for approval prior to ADE-2A.

Once an ILSP has been properly endorsed and approved, any change in support concepts or other significant change in planning must be coordinated through a decision memo or updated ILSP with the applicable Technical Authority(ies), and the Sponsor's Representative for Commandant (CG-01) approval prior to implementation. The change will be incorporated into the next update to the ILSP if it was approved through a decision memo.

The template presents a sample ILSP Cover Page and Table of Contents, and ILSP content and format requirements. If a particular section is not applicable to the project, the preparer should so state and include a brief rationale to show how and why it is not applicable. Additional, tailored information should be incorporated with the "core" outline and content requirements.

The draft ILSP should be prepared in consultation with the project Integrated Logistics Support Management Team (ILSMT) to ensure all appropriate aspects of logistics support are addressed. ILS tailoring considerations for vessel, aircraft, and aviation electronics systems acquisitions are handled by Commandant (CG-41) and the technical and organizational specialties represented on the ILSMT. Surface and shore-based electronics systems are handled by Commandant (CG-64). Tailoring considerations for IT systems are provided by the Assistant Commandant for Command, Control, Communications, Computers, and Information Technology, Commandant (CG-6). The Commandant (CG-6) members involved with ILS tailoring should be members of the ILSMT.

The initial approved ILS should be a tailored product. The amount of detailed planning information that is included in the initial ILSP will be dependent on the type of acquisition being pursued. In a true developmental project, only the logistics support strategy and basic support concepts within each ILS element may be known. On the other hand, for a true commercial off-the-shelf (COTS)/Non-Developmental Item (NDI) system/equipment, many of the detailed support processes and procedures may be known very early in the acquisition. In cases where specific details are not yet known, the requirements should be identified along with the identity of the activity responsible for developing the details.

The ILSP is an iterative document and will require regular updating. Iterations of the ILSP should contain more of the detailed procedures and processes to be implemented. The ILSP must be reviewed at least annually and updated as needed to reflect significant changes due to project dynamics. At a minimum, the ILSP shall be updated prior to each DHS ADE. The ILSP shall be updated if significant changes in logistics support concepts or procedures, schedule, or resource requirements occur and prior to transfer of support responsibility to the Support Program Manager for sustainment at Project Transition. Prior to deployment of the system/equipment, the ILSP must contain all of the detailed information needed to be transitioned to the Support Program Manager for use as the initial operational support planning document.

15.3 Review

Each member of the ILS Management Team (ILSMT) should provide input to the ILSP sections applicable to their functional area. Once the draft ILSP (or ILSP update) is drafted, it should be reviewed by the PM who decides whether the draft document is acceptable for matrix-level concurrent clearance review. The ILSP should be distributed for review and comment to all activities having representation on the ILSMT, as a minimum. This would include, as appropriate:

- CG-1B3 Human Systems Integration: Manpower, Personnel, Training, Human Factors Engineering, System Safety, Personnel Survivability, and Habitability
- Sponsor Representative O-6/GS-15 representing the Sponsor organization
- CG-26 Office of Intelligence, Surveillance, and Reconnaissance Systems and Technology (as applicable)
- CG-41 Office of Aeronautical Engineering (logistics support of aviation assets)
- CG-43 Office of Civil Engineering (projects with facility requirements)
- CG-44 Office of Logistics (all projects)
- CG-45 Office of Naval Engineering (hull, mechanical, and electrical support of surface assets)
- CG-62 Office of Communication Systems (as applicable)
- CG-63 Office of Information Systems and Infrastructure (as applicable)
- CG-64 Office of C2 and Navigation Systems (cutter/boat and shore-based)

- Field Activity (electronics systems)
As needed

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15.4 Template

INTEGRATED LOGISTICS SUPPORT PLAN (ILSP)
for the
[PROJECT TITLE]

Submitted by: _____ Date _____
 Project Manager (CG-93PM)

Endorsed by: _____ Date _____
 Program Manager (CG-93PgM)

Endorsed by: _____ Date _____
 Assistant Commandant for Human Resources (CG-1)

Endorsed by: _____ Date _____
 Assistant Commandant for Intelligence and Criminal Investigations (CG-2)

Endorsed by: _____ Date _____
 Assistant Commandant for Engineering and Logistics (CG-4)

Endorsed by: _____ Date _____
 Assistant Commandant for C4IT (CG-6)

Endorsed by: _____ Date _____
 Assistant Commandant for Resources (CG-8)

Endorsed by: _____ Date _____
 Sponsor (CG-Y)

Endorsed by: _____ Date _____
 Chief Acquisition Officer (CG-9)

CG Approval: _____ Date _____
 Chief of Staff (CG-01)

DHS Approval:

_____ Date

Version #

Date:

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INTEGRATED LOGISTICS SUPPORT PLAN

CONTENT REQUIREMENTS

EXECUTIVE SUMMARY

The executive summary should be a brief (one or two pages) discussion of the plan, highlighting the goal, objective, projected outcome, and possible constraints/issues of the ILSP. Also discuss support concepts that are being used. Briefly discuss the roles and responsibilities of key participants and discuss reports expected to be prepared and how the reports will support project decisions.

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

SECTION A: INTRODUCTION AND PROGRAM SUMMARY

The introductory chapter of the ILSP should set the stage for ILS planning. In order to develop support for a system, it is essential to know what type of system it is, what it consists of in terms of subsystems and equipment, how and under what conditions it is to be used and the constraints or unique support considerations that must be observed.

1.0 General

Briefly describe the objective of the ILSP, list the important topics, and summarize the current project status. This paragraph should be very brief and should not attempt to identify the entire history of the project in step-by-step or milestone fashion. It should identify the particular acquisition stage and system/equipment development stage of the project. This sets the stage for determining how much detail should be included in the ILSP and the ILS planning efforts in order to achieve a logistically supported system/equipment when it is operationally fielded. It should also identify the type of system/equipment that is being acquired. This dictates the type of logistics support that will be required. For example, logistics support requirements for a cutter or aircraft are radically different from those for a

web-based software application.

2.0 Background

Briefly summarize the planned mission(s), environment, project service life and current design concept for the deployed system. Include any key features and subsystems. Identify and describe any support constraints or consideration affecting the design concept. Identify and describe any constraints or unique considerations affecting the support planning. Reference the appropriate project documentation, as applicable.

Mission Employment. Identify the planned missions and any known constraints or unique support considerations due to the system/platform mission role or performance requirements.

Operational Environment. Summarize the planned operational environments and identify any known constraints that affect human performance or the integration of the user with the system or unique support considerations generated by any operational environment.

Service Life. Identify the planned/projected service life of the system/platform, i.e., the expected time period that the system/platform will remain fully functional and operational.

Current Design Concept/System Description. Initially, there may be multiple design concepts that are considered. Each of them should be identified if this is the case. Identify any known constraints or unique support considerations that each concept presents. As the acquisition progresses, the single design concept to be followed will be finalized. As this occurs, the information in this paragraph needs to be revised accordingly. Once design of the system/platform commences, a system description should be provided. The system description needs to initially identify the major operating and design features of the system or platform (i.e., system characteristics). By the time the ILSP is updated for the ADE-3, (or at such time as a production or fielding approval is provided), the system description should identify major assemblies and sub-assemblies (i.e., engines/propulsion components, weapons, electronics/avionics systems, etc.) by nomenclature, manufacturer, and part number (when applicable) and describe their application to the end item. Identify any software or firmware embedded within the system. For software applications that are being developed for acquisition, the system description should identify the version and any modular breakout by identity and function, and any required interface provisions (hardware and/or software), as well as the hardware in which it resides and its operating language. Depending on the complexity and scope of the system/equipment description, the detailed description may need to be incorporated as an appendix or by reference to a completely separate document (or several documents). For any document that is referenced, information must be provided on how a copy can be obtained (preferably electronically).

3.0 Integrated ILS Schedule

Graphically display the integrated time sequencing of the critical supportability and sustainment timelines and events. A Notional Integrated ILS Schedule, Figure A-6, is provided in the ILSP Template for illustrative purposes only. The PM may use any graphical technique that clearly shows the key Supportability and Sustainment events and their sequential relationship. Include event dates related to supportability and sustainment, such as ADEs. Identify key logistics events completed and those schedules/planned to be completed during the next acquisition phase.

Each major acquisition project is required to develop and maintain an Integrated Master

Schedule as an appendix to the Project Management Plan. Ideally, the Integrated Master Schedule is developed as a Microsoft Project (or similar) product which shows the time-phasing of acquisition information to major programmatic events and any interdependencies. Logistics events should be included in the Integrated Master Schedule. Logistics events or milestones should clearly show the major logistic events supporting the initial, sustained support capability for each cutter, boat station, aircraft station, or shore installation that is applicable. As part of the ILSP, a more detailed subset of the master schedule is identified in this appendix as the Integrated ILS Schedule. The Integrated ILS Schedule should include events related to:

- Manpower and personnel actions;
- Delivery of initial training equipment or curriculum;
- Schedule of initial training;
- Delivery of training equipment or materials required for sustained training capability;
- Delivery of provisioning data and initial spares;
- Delivery of drawings;
- Delivery of new support equipment;
- Development, verification, validation and delivery of technical manuals (operator and maintenance) and Maintenance Procedure Cards (MPCs);
- Delivery of items required for computer resource support;
- Construction of new or modified facilities;
- Start and duration of any required interim logistics support;
- Materiel Support Date (i.e., the date when a complete supply support capability is achieved);
- Coast Guard Support Date (i.e., the date when the complete logistics support capability is achieved and no interim support is required); and
- Other logistics related events or milestones.

4.0 Management

This section includes the objectives and scope of the ILSP as well as a description of the program management organization and responsibilities. Include specific explanations of quantitative and qualitative goals for supportability and sustainment as developed in conjunction with the user and stakeholder communities. This may include goals for any of the supportability and sustainment elements; for example, overarching goals for reliability, availability, and maintainability that will translate into specific supportability and sustainment element objectives. It should clearly show the relationship between the supportability and sustainment organization and other program management entities as well as key supporting organizations. If a contractor has been selected, it should show the corresponding contractor organizations and relationships.

4.1 Integrated Logistics Support Manager

Identify the roles and responsibilities of the Integrated Logistics Support Manager (ILSM). Specifically identify the responsibility of the ILSM to chair the integrated Logistics Support Management Team.

4.2 Integrated Logistics Support Management Team

Describe the Integrated Logistics Support Management Team (ILSMT), its function, and how often it meets (at least annually). Identify the ILSMT members/participants. Identification should be by activity/office code rather than by individual name, to reduce the frequency of change required. To better associate the ILSMT membership with the logistics elements addressed by the project, identify the functional, technical or ILS element area(s) that each member represents. (The use of tables or figures is encouraged to depict the ILSMT organization and membership.)

4.3 Integrated Logistics Support Management Team Duties

Since the ILSMT is primarily responsible for the development of the ILSP and support planning details, indicate that each version of the ILSP will be reviewed by the ILSMT for the accuracy and completeness of data. The ILSM will also solicit data inputs from field units. Indicate that these consolidated inputs and review comments will form the basis for validating the accuracy and appropriateness of the data in the ILSP. Identify the applicable duties and responsibilities of the ILSMT Chairperson and member participants. (This information may be depicted in a consolidated table or figure along with the identification of ILSMT membership.)

SECTION B: SUPPORTABILITY AND SUSTAINMENT PLANNING MANAGEMENT

1.0 Design for Supportability

This section describes how system supportability considerations and decisions will be integrated into the overall systems engineering process. It should describe appropriate supportability and sustainment participation on systems engineering and design related Integrated Process Teams (IPT) as well as various system technical reviews such as the system readiness review, preliminary design review (PDR) and critical design review (CDR). It should also describe the interfaces and data flows between other technical analyses and the Systems Engineering Life Cycle (SELC) process with a direct impact on supportability and sustainment such as those conducted in the reliability, maintainability, availability, personnel survivability, and safety areas.

Concept/Approach.

Identify Human Systems Integration (i.e., human to machine) integration criteria and limitations that are applicable to the project and any resultant impacts (positive or negative) on supportability.

Identify how the ILS community will participate in, or review the results of both Developmental Test and Evaluation (DT&E) and Operational Test and Evaluation (OT&E). Since a critical assessment of Operational Suitability includes how well the item under test is logistically supported, what support requirements/parameters will be evaluated during OT&E? Are operation and maintenance technical manuals evaluated for adequacy and suitability during OT&E? Will an Independent Logistics Assessment or a Logistics

Readiness Assessment be run concurrently with OT events? The specific things to be discussed in this section of the ILSP must be tailored to the individual acquisition project and the applicable logistics support requirements that are identified.

2.0 Sustainment Concept

Include a description of how a capability will be sustained. Describe the “who, what, when, how” of sustainment (e.g. who will maintain it?, what facilities are required?, how and when will training be provided?, how will supply support be provided?, etc). Identify the overall logistics support concept, logistics acquisition strategy and support objectives planned for the system/equipment/platform. Identify whether the system/equipment being acquired is a totally new capability being introduced or a replacement for an existing capability. Identify whether the new system/equipment will be logistically supported by an existing support infrastructure, a modified existing support infrastructure, or a totally new support infrastructure that must be developed.

Identify those existent support infrastructure activities that are anticipated to be used. Identify known areas where new infrastructure assets will be required. Identify any areas where contractor support is anticipated to be used in lieu of developing new infrastructure. Performance Based Logistics (PBL) shall be considered. If PBL is used, it will include clearly identified metrics that are tied to the performance parameters that must be achieved by the support organization(s). If Contractor Logistics Support is used, the applicable performance metrics must be identified in the support contract.

Summarize how logistics support will be addressed in the configuration management/configuration control process. This section of the ILSP should address how the ILS community maintains awareness of the system/equipment configuration; proposed and implemented configuration changes; and how the logistics support impact of changes (i.e., impacts to provisioning data, technical manuals, etc.) is identified and considered. Highlight details from the Configuration Management Plan (Section 18 in this appendix).

3.0 Programming and Budgeting

This section shows the funding for the supportability and sustainment effort. It should include a top-level summary of the LCCE showing the development, procurement, deployment and sustainment funding requirements for logistics support, the funding allocation for delivering the logistics support capability during the acquisition, and projected funding for sustained support (when that information is available).

4.0 Contracting for Supportability and Sustainment

Provide an overview of the contracting approach to achieve the supportability and sustainment goals. Include details of contract process and methods during each phase of the life cycle. Identify logistics supportability related tasks that are/will be included in the contract. This should include the supportability analyses performed by the contractor and the resulting data products required for logistics planning. It should also include any initial training that is to be performed by the contractor, any contractor logistics support, either interim or permanent, included as part of the contract, etc.

5.0 Retirement and Disposal

Provide a description conditions that will drive the capability to be retired from service and

planned methods for disposal. Include any unique environmental and security requirements that must be considered for retiring or disposing of the capability after its useful life. For example, this would include identification of known hazardous materials; classified/cryptographic hardware or software; environmental considerations; demilitarization requirements; sensitive technology protection; recoverable materials, etc.

SECTION C: SUPPORTABILITY ELEMENTS

This part of the ILSP identifies the top level tailoring of the project (concepts, approach, supporting analysis or basis, and detailed element planning requirements, responsibilities).

1.0 Maintenance Planning

This section describes the activities and events to be conducted to achieve the maintainability goals. It includes a detailed description of the maintenance concept, the collection of maintenance data, use of Level of Repair Analysis (LORA) or other analytical tools, maintainability demonstrations, depot capability development, etc. It also includes description of any warranties to be acquired and the use of any Contractor Logistics Support (CLS), Third Party Logistics provider (3PL), or Performance Based Logistics (PBL) type contracts for maintenance.

Concept/Approach. Describe the process conducted to analyze, evolve, and establish the maintenance concept or philosophy for the project; include the alternatives considered, and the maintenance considerations for the life of the system. The new standard Coast Guard business model calls for supportability analyses (Reliability/Maintainability/Availability analyses, Failure Modes, Effect and Criticality Analyses, Reliability Centered Maintenance Analyses, Task Analyses, Level of Repair Analyses, etc.) to develop the required maintenance documentation and the Maintenance Plan. Identify and describe the maintenance concept(s) for the particular acquisition project. Include and describe any interim, special, or unique support procedures and program constraints or requirements identified at this time.

Equipment Categories. Provide a brief description of each equipment category applicable to the system. Identify the major system hardware or software components, subsystems, equipment or parts for each of the following categories:

- HM&E or Airframe
- Electronics (ships) or Avionics (aircraft)
- Electronic HM&E (ships)
- Propulsion (aircraft)
- Electric and Hydraulic/Pneumatic
- Ordnance
- Information Technology (IT) Equipment and System Software

Maintenance Types. There are three general types of maintenance on Coast Guard systems; Preventive Maintenance, Facility Maintenance and Corrective Maintenance. All three types are normally associated with maintaining a cutter. However, maintenance of aircraft or other type systems may require only two types. Computer hardware and some other types of

systems may only require one type. Pure software systems (without the associated hardware) may not require any of the three types of maintenance. The ILSP should provide information concerning the maintenance requirements in each of the maintenance types that are applicable. This information should be provided in increasing detail as the acquisition progresses to production and/or deployment. At the time a production/deployment decision is made, the maintenance requirements should be known in complete detail. The specific tasks that are required should be listed or specific references provided concerning where the requirements and accomplishment procedures for the tasks can be found. The three types of maintenance are:

- Preventive Maintenance. Preventive maintenance consists of inspection, servicing, and time change tasks that are routinely and systematically scheduled for the purpose of preventing equipment and system failures that might diminish the operation and safety of the system/platform. Painting or the application of other coatings, to superstructure or fittings on surface assets and equivalent tasks on land-based systems is also considered preventive maintenance. Preventive maintenance tasks may be accomplished by crew members or other personnel assigned in direct support of the operating unit, or may be heavy maintenance tasks requiring assistance from a depot maintenance level capability (for example an aircraft programmed depot maintenance inspection or shipyard/ dry dock maintenance for a cutter). The intent of preventive maintenance is to take maintenance action to minimize conditions that cause unacceptable degradation of functions prior to the occurrence of actual failure.
- Facility Maintenance. Facility Maintenance consists of those actions such as routine cleaning and touch-up painting of decorative coatings on cutters and equivalent actions on land-based systems. The equivalent maintenance tasks for aircraft are normally identified as either preventive or corrective maintenance.
- Corrective Maintenance. Corrective maintenance consists of actions that repair equipment, systems, hull, and structure to restore lost functionality or restore failure resistance following a functional failure. It is basically random in both time and severity. Corrective maintenance is applicable to all hardware items. The amount and severity of corrective maintenance required may be moderated considerably by preventive maintenance.

Maintenance Levels. The term “maintenance levels” refers to the different levels of capability established within the organizational structure for performing maintenance on, or in support of, the end item system/equipment. Maintenance capability is determined by the tools and equipment, and personnel training provided. The goal of maintenance planning is to provide maintenance capability for the end item system/equipment at the lowest level possible within the constraints of economics and technical feasibility, subject to any overriding operational considerations. Maintenance actions that are more time consuming, require complex expensive equipment, require a lot of training, or can be accomplished off-equipment may be accomplished at a higher level of maintenance. A bi-level (organizational and depot) maintenance concept is the accepted Coast Guard practice. Maintenance tasks which formerly would be identified as intermediate level is accomplished at organizational or depot level based on economic criteria or overriding operational constraints. Identify and describe the applicable maintenance levels for the acquisition project, in the terms indicated below.

- Organizational Level. Maintenance performed by the owner or user of the end item system/equipment is categorized as Organizational Level (O-level) maintenance. O-level maintenance capabilities are normally limited to periodic servicing, troubleshooting to isolate and identify failures, and removing/replacing components or major assemblies. O-level maintenance is performed on the end item system/equipment and is designed to accomplish those maintenance actions that can be accomplished in the shortest amount of time to maximize operational availability of the system/equipment. Describe the types of maintenance which will be conducted at the organizational level, and by whom it will be accomplished.
- Depot Level. Depot level (D-level) is the highest level of maintenance capability which provides maintenance on materiel requiring major overhaul or a complete rebuild/remanufacture of parts, subassemblies or end item components. Depot level maintenance also includes manufacture of parts, modification, testing and reclamation. D-level maintenance also supports lower levels of maintenance by providing technical assistance and performing complex or heavy maintenance tasks that are beyond their technical capabilities or for which extensive repair facilities and equipment are required. Identify Coast Guard, other government agency (OGA) and contractor depot level support facilities that are required. If interim contractor depot support is used, briefly describe the planned transition to Coast Guard or OGA support, as applicable.

Miscellaneous. Identify any unique maintenance issues or planning problems (e.g., issues or planning problems new to the Coast Guard or requiring new support infrastructure establishment).

Element Detail Planning. Identify and briefly describe the detailed maintenance planning documentation that will be used to support the project. Note that these details are not part of the ILSP, but will be provided separately. Identify what details will be provided, who will provide them and when, who will approve them, who will review them, who will update them for the life cycle of the project, how often the documentation will be reviewed, and how this information will be distributed. The following list is not all inclusive, but should be considered in providing maintenance planning element details, as appropriate.

Maintenance Support Outline (MSO), Maintenance Support Guide (MSG), or Maintenance Plans (MP) for installed equipments of each applicable equipment category.

Bi-Level Support Matrix and Coast Guard Planned Maintenance System (electronics).

Applicable support analysis results and support system reports/documentation.

2.0 Manpower Personnel and Training (MPT)

Describe, quantitatively and qualitatively, manpower requirements to support the capability. Identify any manpower constraints. If a predecessor system exists, describe differences in manpower requirements.

Describe the approach for obtaining timely and effective training for operators and maintainers. Include the development of training aids, devices, and curricula. Describe who will conduct training and where it will be provided.

Concept/Approach. Identify and describe any supporting analyses, crewing studies, constraints or other administrative or mission considerations for determining the system

manning/crewing concept and requirements. Identify the type and number of personnel required to safely and effectively operate, maintain, and support the system. Provide an initial estimate of manpower and workload requirements. If applicable, identify the type and quantity of billets/personnel that will transition from the system/equipment being replaced versus new billets/personnel that are required, or any anticipated manpower savings to be achieved. Give a brief description of the overall training concept for the system, platform, or equipment. Describe the front-end analyses or rationale for determining training and training support requirements. Identify any needs analysis or task analysis required or already performed. Identify and briefly describe any special requirements or constraints based upon the particular maintenance, support, and manpower concepts or philosophies identified at this time. Include any training constraints that may have an adverse effect on the system, platform, or equipment during its operational missions. Identify who will approve or validate training materials and who will maintain training materials and equipment.

Identify any initial contractor training courses to be provided for operator and maintenance personnel, a schedule for these courses to be conducted, and how many students will be trained in each course. If applicable, identify any contractor technical representatives to be provided, where they will be located, when they will be in place, and the duration of service to be provided. Identify any training equipment/aids/routines that are embedded in the system/equipment, and any interactive courseware to be used. Ensure training requirements for other organizational elements directly linked to the system, platform, or equipment are identified (e.g., Maintenance Augmentation Team (MAT) requirements for gas turbine class). Make a preliminary determination on whether pipeline, mandatory pre-arrival, or unit training is required. Determine if billet specific training is necessary. Identify areas where cross-utilization of personnel could reduce training costs. Make a preliminary determination of the personnel and resource costs associated with the required training. Provide an estimate of life cycle training costs. Include results from cost trade-off analysis of Coast Guard provided versus contractor provided training. Specify funding for post hand-off training tuition and travel by Office.

Element Detail Planning. Identify and briefly describe the detailed manpower and personnel planning documentation that will be used to support the project. Note that these details are not part of the ILSP, but will be provided separately. Identify what details will be provided, who will provide them and when, who will approve them, who will review them, who will update them for the life cycle of the project, how often the documentation will be reviewed, and how this information will be distributed. The following list is not all inclusive, but should be considered in providing manpower and personnel element details, as appropriate.

Manpower requirements study, crewing study or staffing standards analysis report per Staffing Standards Manual, COMDTINST M5312.11 (series); other documented planning requirements per Naval Engineering Manual, COMDTINST M9000.6 (series); System Integrated Logistics Support (SILS) Policy Manual, COMDTINST M4105.8 (series); Coast Guard Air Operations Manual, COMDTINST M3710.1 (series); Aeronautical Engineering Maintenance Management Manual COMDTINST M13020.1 (series); Electronic Manual, COMDTINST M10550.25 (series), etc.

Identify and briefly describe the detailed training and training support planning documentation that will be used to support the project. Note that these details are not part of the ILSP, but will be provided separately. Identify what details will be provided, who will

provide them and when, who will approve them, who will review them, who will maintain and update them for the life cycle of the project, how often the documentation will be reviewed, and how this information will be distributed. Identify any requirements for new/additional training equipment that is required, and how these items will be acquired. The following list is not all inclusive, but should be considered in providing training and training support element details, as appropriate.

Master Training List(s) and Training Plan(s) identifying plans for all required pipeline, resident, exportable, On-The-Job, dockside, Computer-Based Training/Interactive Course, correspondence, factory, familiarization, initial and follow-on types of training, schedules, class locations, and ranks/ratings required to attend. This should include all required/desired training equipment, its current/intended location, and describe how this equipment will be made available for the project

3.0 Product and Technical Data

Concept/Approach. Describe the approach for development and acquisition of all required technical publications, drawings and other technical data. Describe applicable standards used in developing Provisioning Technical Documentation (e.g.: XML, SD1000, ISO, etc.).

Identify and briefly describe the requirements for scientific or technical information recorded in any form or medium (such as manuals and drawings, provisioning technical data, software documentation, etc.) to support the system, and the format (electronic, hard copy, searchable text, drawings, etc.) in which the information is to be provided, and the activity that is to develop and provide the information.

Also identify who is responsible for approving technical data, the approval procedure, and who will maintain the data for the life cycle of the project. Specifically identify what, if any, participation by using activities is included. Each item of technical data should be enumerated. Computer programs and related software are not considered technical data, whereas documentation of computer programs and related software are. Identify all software documentation to be delivered. Excluded under this element are financial data or other information related to contract administration. If a performance type specification is used in the contract, all detailed system/segment specifications that are to be developed should be identified. Identify the types of Technical Manuals (TM) and drawings required to support the system or equipment installed aboard the vessel, aircraft or ashore and whether these will be developed as part of the design effort or will consist of only contractor manuals primarily for Commercial and Non-Developmental Item (CANDI) items.

Identify whether TMs will be provided prior to or concurrently with the delivery of first production article. For any TMs not delivered by the time of first production article delivery, identify specific interim measures for overcoming this lack of data. Will preliminary TMs be available for use during OT&E? Identify how, and by whom, TMs will be validated and verified prior to final publication.

Element Detail Planning. Identify and briefly describe the detailed technical data planning documentation that will be used to support the project. Note that these details are not part of the ILSP, but will be provided separately. However, the ILSP should identify what details will be provided, who will provide them and when, who will approve them, who will review them and update them for the life cycle of the project, how often the documentation will be

reviewed, and how this information will be distributed.

Product Support Managers shall provide Program Managers with applicable provisioning data requirements. Provisioning requirements are various lists and data elements that when complete allow identification, selection, initial requirements and cataloging of supply items to be procured through the provisioning process. Provisioning data requirements are defined as Provisioning Technical Documentation (PTD). PTD will be used for identifying, selecting, provisioning coding, determining initial requirements, and cataloging of items to be procured or supported through the provisioning process. PTD consists of various types of Data Product Deliverables. The following are examples of PTD. This list is not all inclusive, but should be considered in providing supply support elements details, as appropriate. Engineering Data for Provisioning (EDFP), Long Lead Time Items List (LLTIL), Tools and Test Equipment (TTEL), Provisioning Parts List (PPL), Preliminary Allowance List (PAL), Allowance Shortage List (ASL), Baselined Asset File-Storeroom (BSF-SRI), Reconciliation Report, Master Equipment Configuration List (MECL), Logistics Management Information Summaries, Interim Support Items List (ISIL).

4.0 Facilities/Infrastructure

Describe, quantitatively and qualitatively, facilities/infrastructure requirements to support the capability. Identify any funding, environmental, and space allocation constraints. If existing assets exists, describe differences in requirements or upgrades/additions needed.

Concept/Approach. Identify and briefly describe the process conducted to determine and develop requirements for the permanent, semi-permanent, or temporary real property assets required to support the system. Include any studies, needs analyses, or site surveys conducted to define facilities or facility improvements, construction requirements, locations, space needs, utilities, environmental requirements or considerations, real estate requirements, and equipment requirements for the system being acquired. Identify any constraints or special facilities requirements. Address only areas which pertain to the particular platform or system being supported, as applicable. Briefly describe the types of support facilities required for the system being acquired. If any required facilities will not be completed and available for use when the first production item is fielded, identify how long the facilities will not be available and any interim measures that are planned.

Element Detail Planning. The sponsor's representative and project office should coordinate with the Office of Civil Engineering Commandant (CG-43) early in the acquisition process concerning facilities requirements. Identify and briefly describe the detailed facilities planning documentation that will be used to support the project. Note that these details are not part of the ILSP, but will be provided separately. Identify what details will be provided, who will provide them and when, who will approve them, who will review them and update them for the life cycle of the project, how often the documentation will be reviewed, and how this information will be distributed. The following list is not all inclusive, but should be considered in providing facilities element details, as appropriate.

- Shore and afloat (or embarked) personnel berthing area requirements summary.
- Hangar, ramp (including aircraft tie-down requirements), taxiway and runway facilities.
- Facilities connections requirements summary (including service requirements for

sewage, fuel, grey water, bilge water, potable water, telephone, electrical, fuel dispensing, compressed air, air conditioning, heat, etc.).

- Mooring devices, fendering system, and deck fitting requirements summary.
- Shore-side support services summary (including lighting, parking, refuse removal, hazardous waste disposal, replenishment of consumable materiel, and fire protection).
- C4IT related assets (e.g., communications towers, real property leases, etc.)

Work space and storage facilities requirements summary (including classified areas, archive storage, hazardous material and waste storage, etc.) and any special requirements for electrical power, compressed air, etc within these facilities.

5.0 Obsolescence Management

This section describes the activities and events to be conducted to achieve availability and maintainability goals related to anticipated technology changes. It includes a detailed description of the technology refreshment plans and risk mitigation associated with Diminishing Manufacturing Sources and Materiel Shortages (DMSMS).

Diminishing Manufacturing Sources and Materiel Shortages (referred to as Obsolescence) impacts are experienced when the last known manufacturer of an item stops producing that item or a materiel shortage precludes continued availability of an item. Diminishing Manufacturing Sources and Materiel Shortages (DMSMS), COMDTINST 4105.12, provides Coast Guard policy and guidance, and assigns responsibilities for the Coast Guard obsolescence program. Identify the management approach and strategy, and proactive planning actions being taken to ensure systems, subsystems, and components which are part of the platform/end-item system that is being acquired will have a continued support posture and will not be subject to obsolescence within the foreseeable future. Identify the indenture level at which DMSMS management will be provided. Identify what actions are to be taken by the prime contractor for the acquisition relative to DMSMS and what notification will be provided to the Coast Guard should DMSMS be encountered or forecast.

If any instance(s) of DMSMS are identified/forecast during the acquisition phases (prior to formal transition of the new platform/system to sustainment), a separate DMSMS Management Plan shall be prepared to identify the specific DMSMS issues, impacts to logistic supportability of fielded assets, and specific actions being implemented to preclude or mitigate these impacts. This plan shall be appended to the ILSP and updated in the same manner as the ILSP.

SECTION D: SUSTAINMENT ELEMENTS

1.0 Supply Support

Fully describe the supply support concept. Include the provisioning process, organic or Contractor Logistics Support (CLS), Third Party Logistics provider (3PL), or Performance Based Logistics (PBL) type contracts, and any use of interim contractor supply support, testing support, etc.

Concept/Approach. Briefly describe the supply support concept for the project. Identify and describe the applicable analyses, management actions, procedures, and techniques used to develop the supply support concept and determine requirements to acquire, catalog, receive,

store, transfer, issue, and dispose of secondary items. Include the basis or rationale used to determine provisioning for both initial support and replenishment supply support, including the acquisition of logistics support for support and test equipment. Identify who will be responsible for providing supply support for the fielded/deployed system/equipment, and each applicable inventory control point. Include any planning actions being taken to provide interim contractor supply support or warranty support.

Element Detail Planning. Describe the detailed supply support planning documentation that will be used to support the project and how the information is to be derived. Note that these details are not part of the ILSP, but will be provided separately. Identify the type of details to be provided, who will provide them and when, who will approve them, who will review and update them, how often the documentation will be reviewed, and how this information will be distributed. The information should identify what items/components/parts are to be stocked at unit level, which ones are to be stocked centrally at each applicable inventory control point, and any items/components/parts for which spares assets will not be stocked. Parts lists shall include the unit price and the total price by line item for the individual parts. The following list is not all inclusive, but should be considered in providing supply support element details, as appropriate.

- Combined Allowance for Logistics and Maintenance Support.
- Allowance Equipage List. (AEL)
- General Use Consumables List.
- Ordnance List and Stocking List (aviation only).
- Consolidated Shipboard Allowance List for Navy owned ordnance installed on Coast Guard vessels.
- Reparable Management Summaries or Source, Maintenance and Recoverability Code Listings.
- Unit Supply Support Summaries, Unit, and Depot Allowance Parts Lists (APL) (electronics and aviation).

2.0 Support Equipment

Describe the approach for the identification, selection, development, testing, and acquisition of all required support equipment

Concept/Approach. Identify and briefly describe the supporting analyses for developing the support and test equipment requirements for the project. Include the supporting analyses to identify all mobile or fixed equipment required to support the operation and maintenance of the system and the associated training equipment. Also include the basis for determining requirements for associated multi-use end items, handling and maintenance equipment, tools, metrology and calibration equipment, test equipment, and automatic test equipment. Briefly discuss the support equipment (SE) initial outfitting and replenishment concept and responsibilities. List pertinent points of contact and telephone numbers.

Element Detail Planning. Describe the detailed support and test equipment planning documentation that will be used to support the project. Note that these details are not part of the ILSP, but will be provided separately. Identify what details will be provided, who will

provide them and when, who will approve them, who will review and update them for the life cycle of the project, how often the documentation will be reviewed, and how this information will be distributed. The following list is not all inclusive, but should be considered in providing support and test equipment element details, as appropriate.

- Built-in Test and Built-in Test Equipment lists.
- General and Special Purpose Electronics Test Equipment allowance lists.
- Special Tools
- Ship Portable Electrical/Electronic Test Equipment Requirements List, and Automated Test Equipment and associated Test Program Sets index or lists.
- Support Equipment (SE) exchange pool items lists.
- SE support provisions and procedures (including SE maintenance and support planning) documentation.
- Calibration requirements documentation, including who will provide support and test equipment maintenance and calibration support for the life cycle of the project.
- Electronics Equipment Information System documentation and Electronics Installation Record.

3.0 Environment, Safety and Occupational Health (ESOH)

Describe, quantitatively and qualitatively, ESOH requirements to support the capability.

Concept/Approach. Identify any funding or regulatory constraints.

- Environmental. Provide a summary of requirements and actions taken/planned relative to environmental issues applicable to the acquisition and the National Environment Policy Act (NEPA) requirements/process. Refer to National Environment Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series).
- Occupational Health and Safety. Provide a summary of requirements and actions taken/planned relative to safety issues applicable to the acquisition. Refer to the following references:
 - Safety and Environmental Health Manual, COMDTINST M5100.47 (series)
 - Environment, Energy and Water Efficiency, Renewable Energy Technologies, Occupational Safety, and Drug-Free Workplace, FAR Part 23
 - Environment, Conservation, Occupational Safety and Drug-Free Workplace, HSAR Part 3023

Identify any other safety criteria or limitations that are specific to the asset or system (i.e. weapons system or explosive safety requirements).

Identify any human systems (i.e., human to machine) integration criteria and limitations that are applicable to the project and any resultant impacts (positive or negative) on supportability, safety or occupational health.

Element Detail Planning. Identify and briefly describe the detailed ESOH planning documentation that will be used to support the project. Note that these details are not part of the ILSP, but will be provided separately. Identify what details will be provided, who will provide them and when, who will approve them, who will review them, who will update them for the life cycle of the project, how often the documentation will be reviewed, and how this information will be distributed.

4.0 Packaging, Handling, Storage and Transportation (PHS&T)

Describe, quantitatively and qualitatively, PHS&T requirements to support the maintenance and sustainment of the capability.

Concept/Approach. Identify and describe the supporting analyses, design considerations, constraints, and methods used to determine Packaging, Handling, Storage, and Transportation (PHS&T) requirements. Identify the resources, processes, and procedures to ensure that all system, equipment, and support items are preserved, packaged, handled, and transported properly. Include any applicable constraints (such as reusable containers, Electro-Static Discharge/Electro-Magnetic Interference requirements) identified at this time. Include any applicable environmental considerations, hazardous materiel identification, equipment preservation requirements for short and long term storage, and transportability requirements. Reference any documentation that contains prescribed guidelines for packaging, handling, storage, and transportation of support items. Identify whether standard containers will be used or if special purpose containers are being procured. If reusable containers are to be used, identify what activity is responsible for storing them when not in use.

Element Detail Planning. Identify and briefly describe the detailed PHS&T planning documentation that will be used to support the project. Note that these details are not part of the ILSP, but will be provided separately. Identify what details will be provided, who will provide them and when, who will approve them, who will review and update them for the life cycle of the project, how often the documentation will be reviewed, and how this information will be distributed. The following list is not all inclusive, but should be considered in providing PHS&T element details, as appropriate.

- Standard procedures document for transportation modes by equipment type.
- Storage considerations, to include environmental constraints and shelf life information.
- Special packaging, handling, storage, and transportation requirements summaries (including requirements for reusable containers and cases).
- Summaries of security marking, possible deterioration, electrostatic discharge, and other considerations for transport, handling, and storage of electronic items.
- Weight, cube, overall dimensions, and special shape summaries for large, heavy items requiring special handling procedures and equipment.
- Other documented planning requirements per Transportation of Freight: Hazardous Materiel Code of Federal Regulations 49CFR Part 100-177; and environmental considerations of 40 CFR Parts 1-800, Transportation of Freight, COMDTINST M4610.5 (series).

5.0 Information Technology Resources

Describe, quantitatively and qualitatively, IT requirements to support the sustainment of the capability.

Concept/Approach. Identify systems and sub-systems which have embedded software/firmware. For these embedded computer resources identify and describe the user requirements, facilities, hardware, system software, software development and support tools, documentation, and personnel needed to support these systems. Identify any supporting analysis or studies for determining the computer resource support requirements. Include any constraints or special considerations identified at this time. Identify the activity assigned responsibility for managing the software and any changes thereto after the system/equipment is fielded. Identify any interim support, warranty, or other special support to be provided. Identify the requirements included in the contract concerning Rights in Data. On an exception basis, identify any software application or software segment for which the government will have less than full data rights. Specifically identify all instances where the government will have limited data rights, and identify what rights will and will not be owned. Specifically identify any software that is proprietary. In each instance where the government will have less than full data rights, specific planning actions being taken for life cycle support must be identified under Element Detail Planning (next paragraph). For software acquisitions, maintenance planning and other support activities may be discussed under the respective ILS elements. Anything involving computer resources support that is discussed under another logistics element need not be repeated in this section of the ILSP, but appropriate cross references need to be provided.

Element Detail Planning. Identify and briefly describe the detailed computer resources support planning documentation that will be used to support the project. Note that these details are not part of the ILSP, but will be provided separately. Identify what details will be provided, who will provide them and when, who will approve them, who will review and update them for the life cycle of the project, how often the documentation will be reviewed, and how this information will be distributed. Identify who will provide life cycle support for updating/maintaining system software. Identify if system software code is being procured or if the software will be procured as “version controlled.” The following list is not all inclusive, but should be considered in providing computer resources support element details, as appropriate.

- Software Development Plan.
- Software schedule.
- Software management organization and responsibilities index.
- Information Assurance Plan.
- Enterprise Architecture Documentation
- Documentation required by Executive Order 12845, Requiring Agencies to Purchase Energy Efficient Computer Equipment.

6.0 Automatic Identification Technology (AIT)

Describe, quantitatively and qualitatively, AIT requirements to support the maintenance,

logistics support and sustainment of the capability. Include a description of the planned usage for and type of AIT (e.g.: Radio Frequency Identification (RFID), Unique Identifier (UID)) to be employed.

7.0 Deployment and Fielding

Describe any requirements unique to deploying and fielding a capability. For example, describe interim logistics support, interim maintenance, training, site preparation, and manpower requirements for activities designed to place a capability into operation.

8.0 Post Production Support

Describe sustaining engineering requirements and activities necessary to support ongoing sustainment of the capability after production of the original acquisition has ended. The focus of this activity is to provide a plan for support once the production lines have closed and sources of supply for repair parts, spares, technical data, etc. have become either scarce or unavailable due to any number of factors such as technological obsolescence and business closures. This is especially critical in the acquisition of low-density items or items where the technology is rapidly changing, e.g. IT systems. Examples of mitigation actions may include acquisition of detailed technical data and engineering drawings that would facilitate second sourcing if required.

Appendices:

- (A) Integrated ILS Schedule
- (B) Acronyms

ILSP Appendix A:

ILS Integrated Schedule

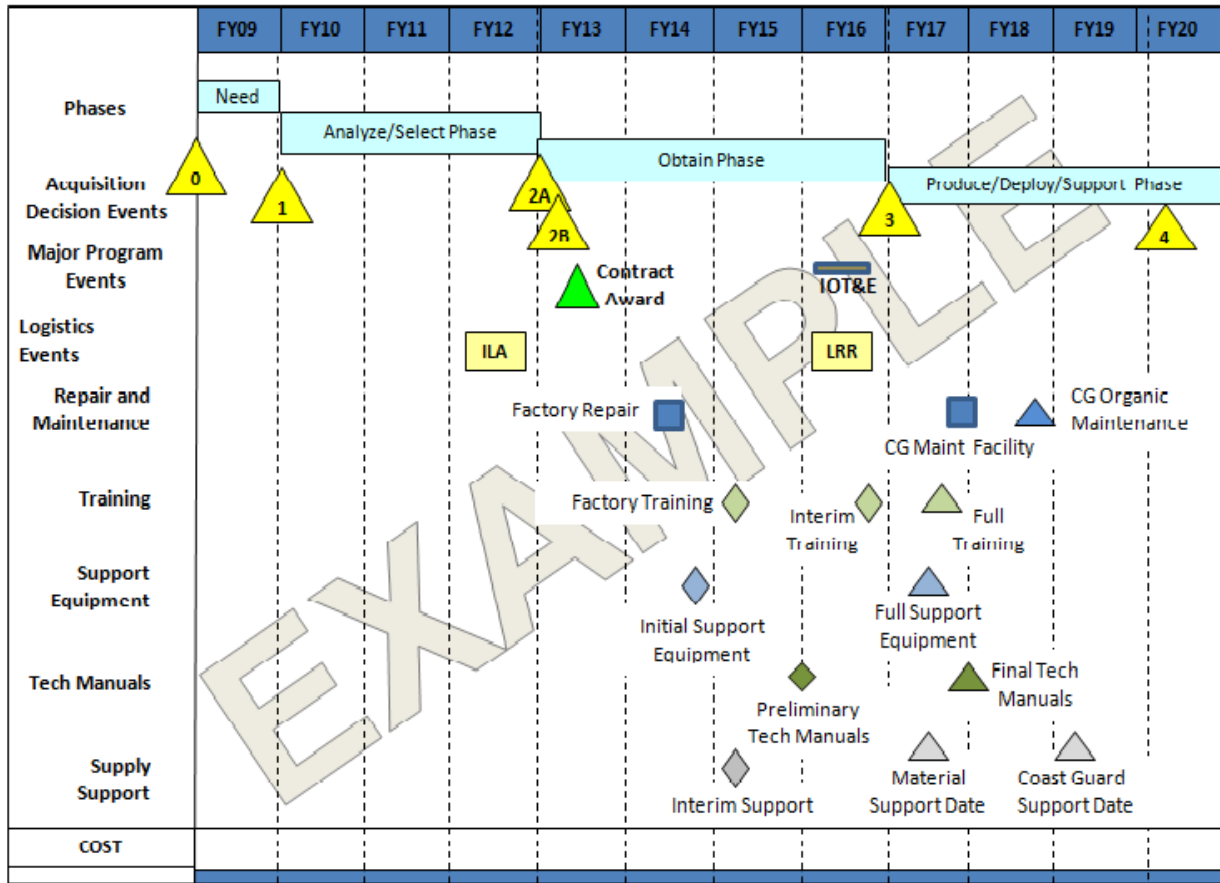


Figure A-6 Sample Integrated ILS Schedule (Fiscal Year)

ILSP Appendix (B)

Supportability and Sustainment Acronyms and Glossary

ADA	Acquisition Decision Authority
ADE	Acquisition Decision Event
AIT	Automatic identification Technology
PM	Acquisition Manager
APB	Acquisition Program Baseline
APMD	Acquisition Program Management Division
ARP	Acquisition Review Process
CAE	Component Acquisition Executive
CDR	Critical Design Review
CLS	Contractor Logistics Support
DMSMS	Diminishing Manufacturing Sources and Materiel Shortages
ESOH	Environmental, Safety and Occupational Health
IPT	Integrated Process Team
ILS	Integrated Logistics Support
ILSP	Integrated Logistics Support Plan
IMS	Integrated Master Schedule
ISSA	Independent Supportability and Sustainment Assessment
IT	Information Technology
KPP	Key Performance parameter
LCCE	Life Cycle Cost Estimate
LRR	Logistics Readiness Review
MNS	Mission Need Statement
MPT	Manpower, Personnel and Training
MR	Mission Reliability
MTBCF	Mean Time Between Critical Failures
MTBF	Mean Time Between Failures
MTBMA	Mean Time Between Maintenance Action
MTTR	Mean Time To Repair
O&M	Operations and Maintenance
O&S	Operations and Support
ORD	Operational Readiness Document
PBL	Performance Based Logistics

PDR	Preliminary Design Review
PDT	Product and Technical Data
PHS&T	Packaging, Handling, Storage and Transportation
RAM	Reliability, Availability and Maintainability
RFID	Radio Frequency Identification
SELC	Systems Engineering Life Cycle
SEMP	Systems Engineering Master Plan
3PL	Third Party Logistics
UID	Unique Identifier
XML	Extensible Markup Language

16.0 INDEPENDENT LOGISTICS ASSESSMENT

16.1 Purpose

The purpose of an Independent Logistics Assessment (ILA) is to ascertain the status of logistics support planning in support of a project. The ILA is typically conducted four months prior to ADE-2.

An ILA will assess the project's logistics support planning to ensure the Coast Guard has properly defined the logistics planning requirements, the plans appear to be executable, and the project is budgeting appropriately for logistics.

16.2 Initiation and Preparation

The Project Manager will initiate the ILA process in accordance with Independent Logistics Assessment, COMDTINST 4081.19. Commandant (CG-44) will work with Commandant (CG-93AL) to coordinate conduct of ILAs with Commandant (CG-93) projects. Commandant (CG-44) will ensure that members of the ILA team are provided for the assessment effort.

The ILA Team leader is responsible for coordinating the implementation of the ILA. The PM is responsible for funding and supporting the assessment. The ILA Team Leader will conduct the ILA, prepare the ILA Report, and route the report for approval. The ILA report is to be approved prior to convening the CG ARB in accordance with Independent Logistics Assessment, COMDTINST 4081.19.

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17.0 LOGISTICS READINESS REVIEW

17.1 Purpose

The purpose of a Logistics Readiness Review (LRR) is to assess the project's logistics readiness for production and deployment. The LRR is typically conducted six months prior to delivery of the first LRIP system (if applicable) and six months prior to deployment of the first full rate production system.

The LRR will focus on logistics execution and delivery and examine whether the project is properly budgeting and funding the planned logistics support. The LRR will also evaluate policies and procedures to ensure they provide proper guidance.

17.2 Initiation and Preparation

The Project Manager will request assistance and guidance from Commandant (CG-44) for initiation of the LRR process. Refer to Logistics Readiness Reviews, COMDTINST 4081.3 for more information.

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18.0 CONFIGURATION MANAGEMENT PLAN

18.1 CMP Purpose

The purpose of Configuration Management (CM) is to enable the orderly development of a system, subsystem, or configuration item. The CMP identifies the tailored (CM) program that is to be implemented by the PM. It identifies the configuration items (CIs) for which CM shall be effected; the CM organization applicable to the project; how the configuration of the system/equipment will be identified in terms of configuration baselines; how the configuration and any configuration changes will be controlled by a Configuration Control Board (CCB); how the configuration and changes will be documented in a Configuration Status Accounting System; and how the configuration of the system/equipment will be verified against the configuration documentation through configuration audits. The CMP also includes schedule information for CM activities, and applicable metrics that will be used to assess the effectiveness of the CM program.

18.2 Preparation

Prior to DHS ADE-2A, the PM shall prepare a comprehensive CMP, tailored appropriately for the individual acquisition. The CMP shall be prepared following the template provided in Section 18.3 which incorporates the requirements for a Government CM Plan contained in Military Handbook, Configuration Guidance, MIL-HDBK-61.

The CCB Charter must be prepared prior to the CMP to enable a reference inclusion in the CMP. A template for the CCB Charter is provided in Section 18.4.

The PM should prepare both the CMP and CCB Charter in consultation with all Program and Support Managers involved in the project to ensure the project CM program addresses all concerns and CCB members are appropriately designated.

The CMP may be provided to the CG ARB, CAE, and ADA as a supporting document for each ADE decision. A copy of the approved CMP will be provided to Commandant (CG-444). In addition, the CMP shall be updated any time significant changes are made to the project CM program or scheduled CM events.

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18.3 Template

CONFIGURATION MANAGEMENT PLAN (CMP)

for the

[PROJECT TITLE]

Submitted by:

Project Manager (CG-9PM)

Date

Endorsed by:

Program Manager (CG-93PgM)

Date

Approved:

Director of Acquisition Programs
(CG-93)

Date

Version #

Date:

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CONFIGURATION MANAGEMENT PLAN (CMP)

CONTENT REQUIREMENTS

EXECUTIVE SUMMARY

The executive summary should be a brief (one or two pages) discussion of the plan, highlighting the purpose, scope, and any CM constraints/issues. Include discussion of CM concepts and acquisition strategy. Briefly discuss the CM organization and the roles and responsibilities of key participants, and discuss the processes to be followed for Configuration Identification, Configuration Control, Configuration Status Accounting, and Configuration Audits.

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

SECTION 1: INTRODUCTION

1.1 Purpose.

Identify the purpose of the CMP. (*Sample in italics*)

This Configuration Management Plan (CM Plan) for the (Project Name) fulfills the current acquisition phase CM documentation and planning requirements set forth in , the Major Systems Acquisition Manual (MSAM), COMDTINST M5000.10 (series) and Coast Guard Configuration Management Policy, COMDTINST 4130.6 (series). A “configuration” is a documented set of functional and physical attributes that are ultimately realized in a product. Configuration is fundamental to design, procurement, manufacture, testing, acceptance, logistics support, and upgrading/modernization of hardware and software products. Configuration Management (CM) is a business process embodied in rules, procedures, processes, techniques, and resources to assure that (1) the product’s attributes are documented accurately; (2) changes in the product are beneficial, i.e. affordable, prioritized, acceptable risk, technically sound, and installable without unacceptable impact on cost,

schedule, or performance; and (3) changes are managed until incorporated into all the affected product units.

(Project Name) CM will be initiated during the Analyze/Select (A/S) Acquisition Phase by identifying top-level Configuration Items (CIs) whose functional characteristics, together with their interfaces, will comprise the government-controlled baselines used for contracting, design, testing, and acceptance beginning with the Obtain Acquisition Phase. These CIs are reflected in the Contract Work Breakdown Structure (CWBS), and are defined by documents and/or data developed during the A/S Phase using a systems engineering process to deconstruct requirements into functions and allocate them among the CIs.

The (Project Name) Project Manager coordinates the design and CM authority for the (Project Name) platform. Other authorities ...

All stake-holding CM authorities are responsible to ensure that interface issues and technical impacts of configuration changes are identified and visible to the other stakeholders and are mutually agreed to as a business decision. Toward the end of the A/S Phase, an Interface Control Working Group (ICWG) will be chartered to review and endorse all engineering change proposals with potential to impact cost, schedule, or performance across the platform/system interfaces.

Systems engineering is the process that produces the technical information for which the CM process provides technical control. The design focus during the A/S Phase is on application of a disciplined systems engineering process to expand the Operational Requirements Document (ORD) into performance requirements that can be applied toward the detail design, manufacture, and testing of hardware and software products. Market research, alternatives identification and analysis, trade-off studies, and establishment of Concepts of Operations (CONOPS) are all part of systems engineering in this phase.

This plan identifies necessary levels of resources and development actions to be applied to all four pillars of CM: Identification, Audit, Control, and Status Accounting. Under this plan, Configuration Control Board (CCB) decisions are business decisions that assess risk and viability and that balance benefits against costs. Design issues are worked out, and technical risk is assessed, in forums such as the Technical Advisory Group (TAG) and/or IPT(s) before an Engineering Change Proposal (ECP) is brought before the CCB for a business decision. The CCB will manage and approve changes to functional, allocated and product baselines unless specifically reserved for higher authority.

The roles and responsibilities of the key participants and responsible stakeholders in CM are provided in Section 3 – CM Organizations. Those individuals are: the PM, XXX, Technical Director (TD), Lead Systems Engineer, Contracting Officer, Configuration Manager, CCB Secretariat, Logistics Manager, and the (Project Name) Contractor(s). All of these stakeholder leaders are responsible to know and understand the (Project Name) CM Plan and to ensure that (Project Name) A/S Phase participants under their direction comply with and implement the CM Plan's requirements.

1.2 Scope.

Identify the scope of the CMP and the acquisition phase to which it applies. (Sample in italics)

This Plan initiates the standup of CM for the remainder of the A/S Phase and provides for advanced planning and issue identification for the “Obtain” Phase, the next acquisition phase. The CM Plan provides guidelines, objectives, responsibilities, definitions, references, and processes for CM specific to the (Project Name) project. It describes the project office’s relationship with the contractor(s) and with the internal acquisition technical, operational, and contracting authorities. This plan outlines the CM-related interaction among the (Project Name) project elements and matrix teams / Integrated Product Teams (IPTs). This document does not contain classified material. Any classified information required to define CM support for the (Project Name) program shall be provided by direct reference to the appropriate documents.

The (Project Name) Project Manager (PM) is responsible for coordinating the planning and implementing of CM policy and practice during A/S and the subsequent acquisition phases. This responsibility passes to the (Project Name) Platform Manager upon completion of production.

1.3 System Description.

Provide a brief description of the system or top-level configuration items.

SECTION 2: CM CONCEPT OF OPERATIONS AND ACQUISITION STRATEGY

2.1 CM Concept of Operations

Identify the context and environment for a system to which CM is to be applied to determine specific CM application methods and levels of emphasis. Provide a description of the CM objectives to include the rationale for each objective, the relationship to project objectives, risks associated with not meeting the CM objectives, and the measurement/criteria for assessing accomplishment of the CM objectives. Include the information needed to support the achievement of objectives in the current and future acquisition phases. Define any Other Government Agency or contractor CM processes that will impact the project’s CM, such as Navy-type Navy-owned CM requirements.

2.2 CM Acquisition Strategy

Discuss the acquisition strategy for the system/configuration items (CIs). Identify whether the CIs are identified by the Government or the contractor(s). How will CIs proposed by the contractor(s) be approved? Will the system/CIs be supported organically or by the contractor(s)? How will CM baselines be established and how will configuration control be exercised? What life cycle operational and maintenance needs must be satisfied by the CM approach?

Define performance measures to assess the CM plan in terms of implementation and the effective performance of CM functions.

Define the appropriate CM requirements delegated to suppliers and how they will be monitored for CM functional performance.

To what level of indenture are performance specifications required? Are the specifications prepared by the Government or contractor(s)? Are the specifications approved by the Government or contractor(s)?

To what level of indenture is configuration identification required by the Government? To

what level is it required by the contractor(s)?

To what level of indenture is Government configuration control necessary in the current acquisition phase?

What configuration baselines will be established? What documentation needs to be included in each baseline? What activity/organization will control each baseline?

What configuration status accounting tasks are required? Will the Government or contractor(s) perform the configuration status accounting tasks? What type of digital data format will be used for the configuration status accounting data? How will the information be accessible by the Government and the contractor(s)?

SECTION 3: CM ORGANIZATION

Identify resources required to implement the CM functions and ensure they are applied throughout the system's life cycle. Provide a description and graphic portraying the project CM organization. Include information identifying:

Relationships of the project CM organization, IPT/matrix structure, other functional organizations, contractor(s).

The PM's responsibilities concerning CM as outlined in the PM Charter. Provide a specific reference to the CCB Charter establishing the PM as the Chair of the CCB and the organizational structure of the CCB. Include identification of the project Configuration Manager.

Any applicable relationships with organizations outside the Coast Guard, and how these relationships are established and defined.

Responsibility and authority for CM of all participating organizations including their roles in configuration control board activities; the integration of CM functions with other activities; and, the interface with the project Configuration Manager.

Define training requirements, such that individuals understand their responsibility, authority, accountability, and the procedures for performing specified CM tasks. Examples include:

- Configuration Manager certification
- CCB members – Defense Acquisition University (DAU) class LOG 204 - Configuration Management, or CLE 036 ECPs for Engineers
- IT Tool training such as MEARS, DOORS, ALMIS, CDMD-OA

SECTION 4: DATA MANAGEMENT

Provide a discussion of the technical data concept of operation including such elements as:

- S1000D business rules.
- Data control standards such as STINFO and copyright protection.
- Applicable data transfer and format standards and protocols being implemented.
- Specific information needs.

- Access requirements.
- Formats supported.
- Network interface parameters applicable.
- Data base model that is being employed.

Note: This is not a discussion of how data deliverables provided by the contractor in response to contract data requirements list (CDRL) requirements in the contract will be managed.

- Define the plan for long-term data preservation by addressing the information technologies used to store, retrieve, and interpret data.

SECTION 5: CM PROCESS

5.1 CM Management and Planning

Document how the program will implement CM functions to provide consistency among the system's requirements, the system's configuration information, and the system throughout the applicable phases of the system's life cycle. Establish procedures to define how each CM function will be accomplished. Specifically include:

- Applicable Government and Government/Contractor CM actions.
- Selected decision criteria, and evaluation factors, where applicable.
- Metrics and their relation to CM objectives identified in Section 2.

Additionally, provide a description and graphics portraying CM phasing and milestones, i.e., milestones for implementation of the Government CM process in phase with major project ADEs, and include the following, as a minimum:

- CM activities for the current phase
- CM activities and selected actions for future phases
- Establishment of interface agreements and MOUs, if applicable
- Establishment of the Project CCB (append a copy of the approved CCB Charter)
- Approval of configuration documentation establishing the Functional, Allocated, and (when applicable) Product Baselines
- Implementing the Coast Guard CM Automated Information System (AIS)
- Conducting major configuration audits
- Define the events that require updates to the CM plan, including changes to the CSA system, ECP routing, transition to sustainment, the sustainment concept and at each ADP phase.

Upon update of the CM plan, record completion of actions and document lessons learned.

5.2 Configuration Identification

The purpose of configuration identification is to incrementally establish and maintain a definitive basis, i.e., configuration baseline(s) and the supporting documented technical

descriptions that collectively define a Configuration Item (CI). Provide a description of the project's CM process to effectively establish and manage the configuration baselines. Define any standards to be used, such as S1000D, ESWS, HSC, etc. Include discussions of government versus contractor actions (including when each has configuration control of the item or system); processes used to document decisions; and metrics to be used.

5.3 Configuration Control

Configuration control is the systematic proposal, justification, evaluation, coordination, and approval or disapproval of changes in configuration after configuration baseline establishment; and the implementation of all approved changes.

Discuss the process that will be used to manage configuration control, including configuration change management (i.e., Engineering Change Proposals (ECPs), Request for Deviation (RFD), Specification Change Notice (SCN), and Notice of Revision (NOR). Include discussions of government versus contractor actions (including when each has configuration control of the item or system); processes used to document decisions; and metrics to be used. Define or refer to the business rules for evaluating proposed changes. For example – will the CCB consider ECPs that provide no benefit to the government? List any change control forms such as DD1692. Define any IT tools to be used for managing configuration change control.

5.4 Configuration Status Accounting

Configuration Status Accounting (CSA) systems record and report the information needed to manage configuration items effectively. Describe how CSA will be made available to all organizations in the project matrix/IPT to ensure all project personnel are working from a common reference point. Include discussions of government versus contractor actions; processes used to document decisions; and metrics to be used. Define the CSA system to be used, and plans for any transfer of control of CSA system/data.

5.5 Configuration Verification and Audits

Configuration audits validate and verify that system design and development requirements are achieved and that CIs and their identification are accurate, complete, and satisfy the approved requirements. Describe the plan for conducting the Functional Configuration Audit and Physical Configuration Audit. Include discussions of government versus contractor actions; processes used to document decisions; and metrics to be used. Define interactions with key milestones that must precede or follow audits, such as production readiness review or commencing a second production line.

Appendices:

(A) Acronyms and Definitions

Include a glossary of acronyms and definitions that are used in the CMP.

(B) References

List any specifications, standards, manuals and other documents referenced in the CM Plan by title, document number, issuing authority, revision, and any change notice or amendment and issue date.

18.4 Template

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

2100 2nd Street, SW, Stop xxxx
Washington, DC 20593-xxxx
Staff Symbol: **(CG-YYY)**
Phone: **(202) 475-**
Fax: **(202) 475-**
Email: **(address)**

4130

MEMORANDUM

From **First Name MI. Last Name**, RDML
Commandant (CG-93)

Reply to: **Code**
Attn of: **FI. Last Name**
(202) 475-xxxx

To: Distribution

Subj: **(PROJECT NAME)** CONFIGURATION CONTROL BOARD CHARTER

Ref: (a) U.S. Coast Guard Configuration Control Boards, COMDTINST M4130.10 (series)
(b) Configuration Management Policy, COMDTINST 4130.6 (series)
(c) Major Systems Acquisition Manual (MSAM), COMDTINST M5000.10 (series)
(d) (PM Charter, Commandant (CG-01) Memorandum dated XX XXX XXXX)

1. Purpose. To publish the charter by which the Configuration Control Board (CCB) for the **(Project Name)** will function as required by references (a) through (c). This designation is effective immediately and shall remain in effect until modified or canceled.

2. Background. The **(Project Name)** CCB shall provide technical and administrative direction and oversight to control the functional and physical configuration characteristics of **(the asset/system name)**, control changes to those characteristics, and report/record change processing and implementation.

3. Charter.

a. Scope. The **(Project Name)** CCB is the decision making authority for configuration baseline approval, and final review and disposition of all Class I (affecting safety, form, fit, function, or logistics support structure) ECPs (except changes affecting Mission Need Statement or Operational Requirements Document) and all critical and major deviations. The **(Project Name)** CCB applies only to the **(Project Name)** Project. The **(Project Name)** PM shall establish and conduct a CM program in accordance with the requirements outlined in reference (a) through (c), tailored appropriately for the acquisition project.

b. Background. A CCB is critical to the **(Project Name)** acquisition to provide an orderly process for the review of potential changes which can have a significant impact to the **(Project Name)** in terms of cost, schedule, and performance. The CCB serves as the capstone to the configuration control process, and ensures that only necessary changes are instituted.

c. Authority. The **(Project Name)** PM is designated as the CCB Chairperson and granted the authority to approve/disapprove configuration changes in accordance with reference (d) with the exception of those changes affected by or potentially affected by functional requirements, which fall under the responsibility of the Sponsor. As such and in accordance with reference (b) the sponsor shall chair the CCB. Since the **(Project Name)** is a Coast Guard major acquisition, the CCB Chairperson shall refer any proposed configuration changes affecting the **(Project Name)** Operational Requirements Document (ORD) or Mission Need Statement (MNS) to higher authority per reference (b). Configuration changes to any system/equipment under configuration management/control by another activity shall not be approved without first obtaining approval of the applicable configuration management/controlling activity. The Deputy PM shall be appropriately designated by the PM as the alternate CCB Chairperson.

d. CCB Membership. The CCB shall consist of **(but not limited to)**:

<u>FUNCTIONAL AREA</u>	<u>CODE</u>	<u>RESPONSIBILITY</u>
Project Manager	CG-9YY	Chairperson
Deputy PM	CG-9YY	Permanent Member
Technical Manager	CG-9YY	Permanent Member
Logistics Manager	CG-9YY	Permanent Member
Human Systems Integration (Technical Authority)	CG-1B3	Permanent Member
Sponsor Representative	as applicable	Permanent Member
Engineering (HM&E, Elex Aviation, other)	all applicable	Permanent Member
Platform/Support Manager	as applicable	Permanent Member
Contracting Officer	CG-912	Permanent Member
Asset Project Office (APO)	DCMS-5	Permanent Member
Configuration Manager	CG-9YY	Recorder
Safety, Security, and Environmental Health	CG-113	Ad Hoc Member
Legal	CG-094	Ad Hoc Member
Training and Performance	FC-51	Ad Hoc Member
Acquisition Support	CG-924	Ad Hoc Member
Other areas, as appropriate	as applicable	Ad Hoc Member

4. Duties and Responsibilities. The CCB shall carry out the duties and responsibilities identified in references (a) through (c). The main CCB function is to ensure the **(Project Name)** addresses, as appropriate, all aspects of configuration management in accordance with reference (a).

5. Action. Offices represented on the **(Project Name)** CCB shall designate one primary and one alternate representative. The designations shall be provided in writing to the **(Project Name)** PM **(Code)** no later than 30 days after this charter's effective date. All designated **(Project Name)** CCB members shall comply with this charter.

#

DISTRIBUTION: (to include all offices/activities identified for CCB membership)

Dist:											
Copy:											

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19.0 PROJECT SYSTEMS ENGINEERING LIFE CYCLE TAILORING PLAN

19.1 Purpose

The purpose of the Project Systems Engineering Life Cycle Tailoring Plan (PSTP) is to define the specific life cycle stages and artifacts that the project will complete. Tailoring promotes flexibility in the process to address unique project variations based on programmatic requirements, application domains, solution approaches, and tradeoffs in cost, schedule, and quality. However, the flexibility must be balanced by a need to support standards, objectives, and strategies so that process lessons learned can be used by all projects to improve productivity and quality by improving the process.

19.2 Preparation

The PSTP shall be prepared in accordance with the template provided in section 19.3. It should be applied in a manner relative to project size, scope, complexity, risk, and security categorization. Tailoring is a technique that facilitates the flexibility in the design and application of an appropriate development life cycle to fit project characteristics, while ensuring compliance with requirements of the DHS SELC Guide. Specific SELC requirements may be waived as part of an approved SELC Tailoring Plan.

The DHS System Engineering Life Cycle (SELC) Guide (DHS Instruction/Guidebook 102-01-001 Appendix B) specifies the DHS System Engineering process to be used. The Guide recognizes that there are multiple ways to approach and accomplish the required work. Project managers should tailor the DHS SELC to guide the project to successful implementation of sound System Engineering Principles.

The Coast Guard has instructions for implementing a Systems Development Life Cycle (SDLC) to manage non-major C4IT acquisitions. All C4IT major acquisitions should follow this Manual and DHS Directive 102-01-001 Appendix B. Refer to Chapter 5 Section 13 of this Manual for additional guidance.

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19.3 Template

*PROJECT SYSTEMS ENGINEERING
LIFE CYCLE (SELC) TAILORING PLAN (PSTP)
for the
[PROJECT TITLE]*

Submitted by: _____ Date _____
Project Manager (CG-93PM)

Endorsed by: _____ Date _____
Program Manager (CG-93PgM)

Endorsed by: _____ Date _____
Assistant Commandant for Human
Resources (CG-1)

Endorsed by: _____ Date _____
Assistant Commandant for Engineering
and Logistics (CG-4)

Endorsed by: _____ Date _____
Assistant Commandant for C4IT
(CG-6)

Endorsed by: _____ Date _____
Lead Operational Authority
(CG-7)

CG Approval: _____ Date _____
Director of Acquisition Programs
(CG-93)

DHS approval: _____ Date _____
DHS Office of the Chief Information
Officer

Director, DHS Acquisition Program
Management Division

Date

Version #

Date:

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EXECUTIVE SUMMARY

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

1.0 Project Overview

This section describes the key information of the project that influences the project tailoring. The following elements should be addressed in summary detail so that a decision approval on the SELC Tailoring Plan can be made without reference to any additional document. At the discretion of the Project Manager, other SE related planning documents may be developed to document other aspects of the planned systems engineering approach. For example, other planning documents such as the Project Management Plans (PMP) may be submitted with the SELC Tailoring Plan.

1. Include a project summary from the PMP, Agency Periodic Management Reviews, or from the Portfolio Reviews. The summary should include the scope of the project and whether it is classified as IT or non-IT. State in chronological order what the project will deliver, and include any important interfaces, program or policy agreements.
2. Include a summary of the mission need and/or the operational requirement(s) that the program/project is trying to satisfy.
3. Include any project specific constraints that will significantly impact execution of CM.
4. Describe the system(s) being developed to meet the mission need and/or operational requirements. Include the detail for Work Breakdown Structure (WBS) and system architecture in sufficient detail for key system components/subsystems to support the tailoring approach in next sections. Non-IT projects should clearly describe any IT subsystems/components.
5. Describe the Project's Systems Engineering Organization. Identify the Lead Technical Authority and the position's responsibilities for the program / project, and include the critical elements of the SE team (e.g., T&E and logistics). Comment on the roles of the government and development contractor in the systems engineering processes.

6. Describe the SE resources required (e.g. SE software tools for requirements and configuration management, special development facilities/equipment, funding allocated for SE, etc.). Identify the SE resources by Government or contracted, in both Full Time Equivalent (FTEs), as well as funding levels.
7. Describe the proposed development strategy (e.g., incremental, waterfall, spiral) and a summary of the proposed acquisition plan with discussion on its advantages and risks.
8. With a level of detail commensurate with discussions in subsequent sections, provide and discuss the Master Development Schedule including external dependencies; Acquisition Decision Events, project stages; SELC Reviews; testing; key documents; and other key events such as test events, contract events, Initial and Full Operational Capability.
9. Describe the plan and process for requirements management (e.g., requirements, development, flow down, tracking and change management).

2.0 Project SELC Tailoring Detail

Projects are to assess the SELC stages and determine the stages that it intends to complete. This is part of the tailoring process. Use the DHS SELC Guide (DHS Directive 102-01-001, Appendix B) in developing the PSTP strategy.

Tailoring Considerations for In-Process Programs/Projects: Tailoring for in-process programs/projects is similar to new programs/projects, with the following key differences

- Prior to a Program/Project approaching an Acquisition Decision Event, the entrance conference conducted with APMD (Major program) or Component Acquisition Executive (Non-major) will discuss the specific acquisition documents necessary for the decision and to set up the SELC Tailoring Plan if not yet developed.
- For Programs/Projects entering the lifecycle already in the Analyze/Select Phase of acquisition, tailoring will be conducted the same way as a new project since the tailoring plans would normally be reviewed as part of this phase regardless of new-start or legacy project status.
- For Programs/Projects entering the lifecycle already in the Obtain Phase of acquisition, tailoring should focus on the key acquisition documents not already produced from the Analyze/Select Phase, as well as the future documents required for the ADE-3 decision to enter the Produce/Deploy and Support phase of acquisition.
- For Programs/Projects entering the lifecycle already in the Produce/Deploy and Support phase, tailoring will focus on identifying and documenting the supportability and sustainment knowledge required for the remainder of the lifecycle.
- Specific guidance for in-process programs/projects is best determined through an early dialogue with the Acquisition Program Management Division and the DHS Chief Information Office, which will work with projects to identify the specific strategies and considerations based on the unique conditions of each program/project.

Projects that have multiple segments should tailor paragraphs 2.1 and 2.2 as separate appendices to the overall project-level SELC Tailoring Plan, but each increment's tailoring must be approved before the start of the increment. **SELC Table 1 Examples of Tailoring** provides some examples of tailoring.

SELC Table 1 Examples of Tailoring

Document	Stage(s)	Tailoring Justification / Comments
Operational Requirements Document (ORD)	Solution Engineering Planning	In addition to overarching requirements, the ORD will have separate appendices for each increment
AA	Solution Engineering Planning	AA was authorized per SPR of mm/dd/yyyy
Functional Requirements Document	Requirements	FRD will be replaced by requirements report generated by PMO requirements management tool. Justification: Information is the same, costly to generate and manage a separately formatted document
System Design Document	Design	Will provide in modified Use Case format. Justification: Program is managing using Use Cases, which contain similar information as the System Design Document (mapping enclosed); would be costly/inefficient to develop / manage a separate formatted SDD.
Program Alignment Spreadsheet	All	DHS CIO concurrence of non-IT / no embedded IT - Spreadsheet not required.
Privacy Impact Assessment	N/A	DHS Privacy Office determination of no PII.

2.1 Project Reviews and Exit Criteria

Use **SELC Table 2 Project Stages and SELC Reviews** to identify the stages the project intends to complete (by segment, if the project consists of segments). Identify the first (or current) SELC stage the project is in with the label of “first” or “current” in the second column (Project Stage Tailoring). Then list the subsequent stages the project intends to use with the word “yes.” If stages are combined, also annotate such in the same column.

Document the planned SELC reviews with fiscal year and quarter each is to occur in the fourth column (Date of SELC Review).

The Program/Project Manager is responsible for arranging, coordinating, and leading stage reviews while the Approval Authority is responsible for sign-off that the project has satisfied all the exit criteria and is ready to proceed to the next stage. A signed stage review completion letter must be provided to DHS (through Commandant (CG-924)) following conclusion of each stage review.

Note: **SELC Table 2 Project Stages and SELC Reviews** may be adjusted depending on the work pattern. For example, if a spiral approach is used, the table should depict the spirals and the stage reviews for each spiral.

SPR and SER criteria are included in the tables below for completeness. These tables should be tailored and included in the CDP and can also be included in the Project’s SELC Tailoring Plan, along with any relevant results from the SPR and SER if completed.

SELC Table 2 Project Stages and SELC Reviews

SELC Stage	Project Stage Tailoring	SELC Reviews	Date of SELC Review (QFY)	Lead Technical Authority
Solution Engineering		Study Plan Review		CG-9 or CIO (for IT)
		Solution Engineering Review		CG-9 EOC or CIO (for IT)
Planning		Project Planning Review		CG-93 PM or CIO (for IT)
Requirements Definition		System Definition Review		CG-93 PM or CIO (for IT)
Design		Preliminary Design Review		CG-93 PM or CIO (for IT)
		Critical Design Review		CG-9 or CIO (for IT)
Development		Integration Readiness Review		CG-93 or CIO (for IT)
Integration & Test		Production Readiness Review		CG-9 EOC or CIO (for IT)
Implementation		Operational Test Readiness Review		CG-926 or CIO (for IT)
		Operational Readiness Review		CG-9 O or CIO (for IT)
Operations & Maintenance		Post Implementation Review		Sponsor or CIO and Sponsor (for IT)
Disposition		None		None

2.2 Project Deliverables and Work Products

SELC Tables 3-21 detail SELC Deliverables, Work Products and Exit Criteria for the project (or each segment of the project) that will be developed in a specific stage. Modify the tables below to reflect the tailoring of the stages from paragraph 2.1. The tables below do not include required acquisition documents already shown in Chapter 2 of this Manual.

The Exit Criteria for each Stage Review should be tailored to match the conditions and specific aspects of the project. Once approved as part of the Project SELC Tailoring Plan, the Exit Criteria represent the baseline measures and serve as the basis for the Project Manager's, Lead Technical Authority's, and Lead Operational Authority's assessments during the SELC reviews. Exit Criteria for each SELC Stage Review are shown in SELC Tables below.

Chapter 5, Section 13 in this Manual contains specific instruction related to Major and Non-Major C4IT projects. The Coast Guard currently has instructions for implementing a System

Development Life Cycle (SDLC) to manage non-major C4IT projects that are roughly equivalent to the DHS SELC. Coast Guard SDLC deliverables and products contain a majority of the deliverables and work products of the DHS SELC. In the justification column of the tables below, the applicable Coast Guard SDLC Key Product, that contains the required DHS SELC Work Product, is shown in parentheses under justification.

**SELC Table 3 SELC Solution Engineering Stage Deliverables and Work Products
(xQFYzz – xQFYzz)**

Deliverable/Work Product	Tailored Out	If yes, justification for tailoring out
Service Reuse Plan (IT Only)	Yes/No	<i>(Part of USCG Enterprise Architecture Document)</i>
Program Alignment Decision Request Package	Yes/No	
Study Plan Review Completion Letter	Yes/No	
Alternatives Analysis Study Plan	Yes/No	
Section 508 National Security Exception Request and Authorization (DHS Form 4015)	Yes/No	
FIPS 199 Security Categorization (IT Only)	Yes/No	<i>(Part of USCG Information Assurance Plan provided in the Requirements Definition Stage)</i>
Section 508 EIT Accessibility Plan	Yes/No	<i>(Part of USCG C4IT Functional Requirements Document)</i>
Solution Engineering Review (SER) Completion Letter	Yes/No	
DHS Periodic reporting (nPRS)	Yes/No	

SELC Table 4 Study Plan Review Exit Criteria

Study Plan Review Exit Criteria

- Does the study plan address the needs in the approved Mission Need?
- Is the basis and justification for an AA adequate? (and linked to CDP?)
- Is the scope of AA clearly defined? (what is included and what is not)
- Is the study team director identified?
- Do the participating organizations have documented roles and responsibilities?
- Are the assumptions and constraints reasonable and adequate?
- Is the schedule realistic given the required resources, including SMEs?
- Are the deliverables identified?
- What level of engagement of users/operators is planned?
- How the AA team will interface with the CONOPS team and the ORD effort?
- What are the criteria for the selection of alternatives?
- How many alternatives will be examined? (minimum of three)
- What are the analysis methodology(ies) including Modeling and Simulation and Technology Demonstrators?
- Is the review and approval process identified for the AA, including an AA report and brief to seniors?

SELC Table 5 Solution Engineering Review/Solution Engineering Stage Exit Criteria

Domain	Solution Engineering Review / Solution Engineering Stage Exit Criteria
Program Management	<ul style="list-style-type: none"> • Has a CONOPS for the proposed system been developed and validated by users that show how the preferred solutions would work in the real world environment, and fill existing gaps and meet new challenges? • Does the AA address the full spectrum of DOTMLPF+R/G/S alternatives? • Does the AA address all possible options, and is it unbiased toward one or another (type) of solution? • Have the feasible options been traded-off in the AA to arrive at an optimized materiel solution that balances mission effectiveness, suitability performance, cost, schedule and risk within realistic constraints? • Has the use of COTS and reusable software (e.g., GOTS) been considered in the AA? • Has an ORD been developed that captures testable Key Performance Parameters (including interoperability if applicable) and testable derived technical parameters, as well as IOC and FOC requirements? • Have non-materiel solutions been identified to provide holistic solutions to gaps? • Have the total lifecycle costs, including support/sustainment been captured within sensitivity ranges in a PLCCE consistent with results? • Have all changes to policies and/or regulations or business practices that require long lead times and impact on systems engineering solutions been identified and included in the plans, and is the likelihood of such changes been included in the risk analysis? • Has an APB been developed that is aligned to the SE approach and project formulation/tailoring, includes an integration segment if applicable (e.g., for SoS) and provides realistic and pertinent performance, cost and schedule parameters for each project (useful segment) being produced given the SE approach to be taken (e.g., piloting, prototyping, M&S), and it is consistent with the ORD, AA, CONOPs and with other projects (e.g., with interdependencies on their schedules)? • Does the PLCCE take into account and accurately reflect the SE activities in the Work Breakdown Structure (WBS). • Does the integrated master schedule include project resourcing, discrete work packages, internal and external dependencies, and critical paths, to the extent program formulation has identified projects? • Does the Acquisition approach / planning adequately address the most effective mechanisms for each project and is it aligned with the SE approach? Have the SE risks been reviewed and are they deemed acceptable to move to the next stage? • Is the Service Reuse Plan still accurate and complete? • Does the cost estimate in the APB and PLCCE fit within the existing budget?

Domain	Solution Engineering Review / Solution Engineering Stage Exit Criteria
Requirements	<ul style="list-style-type: none"> • Have users and operators been fully engaged in developing and validating the needs and requirements as reflected in the MNS, ORD and CONOPS? • Have operational scenarios and use cases been defined and analyzed in the CONOPS? • Have the threats and conditions that the solution must meet been well-defined in the MNS, ORD and CONOPS? • Have the operational requirements collected to date been specified in clear, meaningful, and testable formats using “shall” statements? • Have all the operational requirements been reviewed by the acceptance test team to ensure that the requirements are clear, meaningful, and testable? • Have all relevant specialty engineering considerations been included (e.g. Human Systems Integration)
Information Security	<ul style="list-style-type: none"> • Has the security categorization been completed? • Have information security risks (if any) been considered in the AA and assessed for the preferred alternative? Have preliminary mitigation approaches been identified?
Risk	<ul style="list-style-type: none"> • Has the preliminary risk assessment been completed?
System/Software Engineering	<ul style="list-style-type: none"> • Does the documentation and validation of requirements support development of systems and software to meet requirements? (see Requirements exit criteria above) • Have all major interfaces and interdependencies of the Program on external programs and capabilities been identified in the MNS, ORD, CONOPS and AA? • Have potential technologies been considered and assessed in the AA? • Have System/Software Engineering approaches been considered that align to the needs of the Project, technology readiness and other factors (e.g., piloting, prototyping, modeling and simulation, evolutionary/incremental approaches)?
Data Management	<ul style="list-style-type: none"> • If appropriate (if performing inter-component or inter-agency information exchanges), has information exchange scenario planning been completed (e.g., in the CONOPS)?

**SELC Table 6 SELC Planning Stage Deliverables and Work Products
(xQFYzz – xQFYzz)**

Deliverable/Work Product	Tailored Out	If yes, justification for tailoring out
Quality Assurance Plan	Yes/No	
Training Plan	Yes/No	
Privacy Threshold Analysis (PTA) (As applicable)	Yes/No	<i>(Part of USCG C4IT Business Case Analysis)</i>
Data Management Plan	Yes/No	
Intelligence Support Plan (as Designated by DHS)	Yes/No	
Project Planning Review (PPR)	Yes/No	

Deliverable/Work Product	Tailored Out	If yes, justification for tailoring out
Completion Letter		

SELC Table 7 Project Planning Review/Planning Stage Exit Criteria

Domain	Project Planning Review / Planning Stage Exit Criteria
Project Management	<ul style="list-style-type: none"> • Have the risks been reviewed and are they deemed acceptable to move to the next stage? • Do the plans accurately reflect the type of development methodology (e.g., spiral, waterfall, iterative) identified in the Project SELC Tailoring Plan? • Have all products defined in the approved Project SELC Tailoring Plan been completed and reviewed for completeness? • Has a CONOPS for the proposed system been developed? • Have all changes to policies and/or regulations that require lead times been identified and included in the schedule? • Has access to the Risk Management Database been granted to appropriate project team members? • Has a WBS been fully developed? • Is the project schedule executable (technical, cost,)? • Does the schedule include time for staff to acquire security clearances? • Does the integrated master schedule include project resourcing, discrete work packages, internal and external dependencies, and critical path? • Has a Project Management Plan (PMP), including documentation of project scope, tasks, schedule, allocated resources, and interrelationships with other projects, been developed? • Is the Service Reuse Plan still accurate and complete? • Does the updated cost estimate fit within the existing budget? • If the project does not qualify for a National Security Exception, has a Section 508 EIT Accessibility Plan been prepared?
Requirements	<ul style="list-style-type: none"> • Have operational scenarios been analyzed and defined? • Have the requirements collected to date been specified in clear, meaningful, and testable format using “shall” statements? • Have all the requirements been reviewed by the acceptance test team to ensure that the requirements are clear, meaningful, and testable? • Have all applicable human factors integration activities and deliverables been completed?
Information Security	<ul style="list-style-type: none"> • Has the security categorization been completed? • Has the preliminary risk assessment been completed?
Privacy Compliance	<ul style="list-style-type: none"> • Has a Privacy Threshold Analysis (PTA) been completed and approved by the Privacy Office?
Configuration Management	<ul style="list-style-type: none"> • Has an initial CM Plan been defined? • Have CM tools and processes been specified, and has tool access been granted to appropriate project team members?
Software Engineering	<ul style="list-style-type: none"> • Have requirements been validated by end users?
Data Management	<ul style="list-style-type: none"> • If appropriate (if performing inter-component or inter-agency information exchanges), has information exchange scenario planning been completed?

Domain	Project Planning Review / Planning Stage Exit Criteria
Testing	<ul style="list-style-type: none"> • Does the Test and Evaluation Master Plan (TEMP) identify those responsible for developing the test procedures, running the test, and identifying which reports will be provided? • Does the TEMP identify Critical Operational Issues developed by the testers with the sponsor and other stakeholders? • Does the schedule include enough time to conduct integration testing, performance testing, Section 508 Accessibility testing, and acceptance testing while the developers are re-working the code?

**SELC Table 8 Requirements Definition Stage Deliverables and Work Products
(xQFYzz – xQFYzz)**

Deliverable/Work Product	Tailored Out	If yes, justification for tailoring out
Functional Requirements Document	Yes/No	
Requirements Traceability Matrix (RTM)	Yes/No	
Developmental Test Plan	Yes/No	
Security Requirements Traceability Matrix (SRTM) (IT Only)	Yes/No	<i>(Part of USCG C4IT Information Assurance Plan)</i>
Plan of Action & Milestone (POA&M) (IT Only)	Yes/No	<i>(Part of USCG C4IT Program Management Plan)</i>
System Security Plan (SSP) (IT Only)	Yes/No	<i>(Part of USCG C4IT Information Assurance Plan)</i>
Disaster Recovery Plan (IT Only)	Yes/No	<i>(Part of USCG C4IT Information Assurance Plan)</i>
Security Risk Assessment (SRA) (IT Only)	Yes/No	<i>(Part of USCG C4IT Information Assurance Plan)</i>
Environmental Impact Statement	Yes/No	
Security Test & Evaluation (ST&E) Plan (IT Only)	Yes/No	<i>(Part of USCG C4IT Information Assurance Plan and/or Implementation Plan provided in the Design Stage)</i>
System Definition Review (SDR) Completion Letter.	Yes/No	

SELC Table 9 System Definition Review/Requirements Definition Stage Exit Criteria

Domain	System Definition Review / Requirements Definition Stage Exit Criteria
Project Management	<ul style="list-style-type: none"> • Have the risks been reviewed and are they deemed acceptable to move to the next stage? • Is the project on schedule or have remediation plans been developed to correct for schedule loss? • Have all Action Items from the PPR been resolved? • Have all products defined in the approved Project SELC Tailoring Plan been completed and reviewed for completeness?
Requirements	<ul style="list-style-type: none"> • Are the performance metrics defined? • Can the requirements for this project support any other organizations? • Have the requirements collected to date been specified in clear, meaningful, and testable format using "shall" statements? • Have all the requirements been reviewed by the acceptance test team to ensure that the requirements are clear, meaningful, and testable? • Has requirements interdependency been considered and/or analyzed? • Have scalability, availability, and reliability been addressed? • Have interface requirements for both external and internal system interfaces been identified and defined? • Do the user interface requirements clearly define all the human interface needs? • Do the training requirements accurately account for the users and administrators of the system? • Have the Section 508 EIT Accessibility requirements been documented? • Do the reporting requirements ensure that the users get the information they need? • Have "as-is" and "to-be" processes been defined and reflected in the ORD? • Have all applicable human factors integration activities and deliverables been completed?
Information Security	<ul style="list-style-type: none"> • Has an Information Systems Security Officer (ISSO) been assigned? • Has the boundary and inventory information been validated by the Chief Information Security Officer (CISO)? • Has the e-authentication analysis been completed? • Has the preliminary risk assessment been completed? • Has the C&A package been generated in the CISO-approved C&A tool? • Has the SRTM been developed? • Has the SSP been drafted? • If appropriate, has an ISA been developed? • Has the Security Test and Evaluation (ST&E) Plan been developed? • Has the Contingency Plan been completed?

Domain	System Definition Review / Requirements Definition Stage Exit Criteria
Performance	<ul style="list-style-type: none"> • Do the existing SLAs of any service providers to be used satisfy the project's needs? • Has the initial Capacity and Performance analysis included capability and performance requirements? • Has the preliminary workload characterization for the project been documented based on the volumetrics? • Have system's life cycle costs been updated based on the updated capacity and performance analysis? • Have the performance requirements been specified completely in clear, meaningful, and testable "shall" statements?
Data Management	<ul style="list-style-type: none"> • Have the data supporting the processes been specified to a conceptual level? • Have data management requirements been defined? • Do data retention requirements meet the need? • Does the data conversion plan (documented in the data management plan) account for possible cleansing and data quality issues as well as performance impacts to the existing Data Architecture? • Are modifications to the Data Architecture necessary to accommodate the proposed system? • Has alignment to the HLS Data Architecture been provided? • Have data architecture alternatives been categorized, prioritized, and cost-justified?
Configuration Management	<ul style="list-style-type: none"> • Are all documents, especially requirements, under CM control? • Have Configuration Items (CIs) for the project been identified and submitted to the CM team?
Testing	<ul style="list-style-type: none"> • Is the Developmental Test Plan (DTP) adequate and linked with the TEMP? • Does the DTP describe the independent role of the acceptance test team? • Has the test lead for acceptance testing been appointed? • Does the DTP specify defect severity level definitions? • Are all functional requirements stated such that they are testable?
Enterprise Architecture	<ul style="list-style-type: none"> • Are the technologies identified in the solution consistent with the target Technical Reference Model (TRM)? • Does the technical approach embrace re-usability? • Will the outcome result in new Service Components that can be registered in DHS Service Registries? • Is the data required by this project already available or will it be made available to others? • Are modifications to the EA necessary to accommodate the proposed system and have they been through the Technology Insertion (TI) Decision Request Process? • Are the technologies identified in the solution consistent with the technology patterns and IT components? • Does the solution conform to DHS data standards? • Are the IT components identified in the Application Architecture? • Does the project provide an enterprise-wide solution? • Have elements been identified for re-use, enhancement, or creation of new services for the SOA? • Is the project aligned with a DHS IT Portfolio?

Domain	System Definition Review / Requirements Definition Stage Exit Criteria
Software Engineering	<ul style="list-style-type: none"> • Have processes been specified to a logical level? • Have processes been documented (e.g., use cases, flow diagrams)? • Do the priorities listed for each requirement accurately represent the capability needs? • Are sources documented for each requirement? • Have requirements been validated by end users? • Do the SLAs address the needs of all parties by defining the expectations of each? • Does the design include processes and capabilities to monitor and review all aspects of the SLAs?
Infrastructure	<ul style="list-style-type: none"> • Has an illustration depicting the conceptual network been developed and documented? • Has the technical infrastructure been specified to a conceptual level? • Have locations and types of infrastructure components been identified and documented? • Have all infrastructure requirements (e.g., heating, ventilating, and air conditioning, power, fail-over, communications, redundancy, facility space) been defined? • Have critical infrastructure designations as defined in HSPD-7 been analyzed and completed?
Operations and Maintenance	<ul style="list-style-type: none"> • Have system management and support processes (e.g., call center, help desk) for the system been identified? • Has an initial Disaster Recovery Plan been developed?

SELC Table 10 Design Stage Deliverables and Work Products
(xQFYzz – xQFYzz)

Deliverable/Work Product	Tailored Out	If yes, justification for tailoring out
System Requirements Document	Yes/No	
System Design Document	Yes/No	
Contingency Plan	Yes/No	<i>(Part of USCG C4IT Information Assurance Plan provided in the Design Stage)</i>
Logical Design Document	Yes/No	
Data Insertion Package (DIP)	Yes/No	
System of Records Notice (IT Only)	Yes/No	
Privacy Impact Statement (IT Only)	Yes/No	
Service Level Agreements	Yes/No	
Site Preparation Plan	Yes/No	

Deliverable/Work Product	Tailored Out	If yes, justification for tailoring out
Interconnection Security Agreement (ISA) (IT Only)	Yes/No	<i>(Part of USCG C4IT Information Assurance Plan)</i>
Data Architecture Document	Yes/No	
Technology Insertion Package (IT Only)	Yes/No	<i>(Part of USCG C4IT Development and Support Plan)</i>
Preliminary Design Review (PDR) Completion Letter	Yes/No	
Critical Design Review (CDR) Completion Letter	Yes/No	

SELC Table 11 Preliminary Design Review Exit Criteria

Domain	Preliminary Design Review Exit Criteria
Program Management	<ul style="list-style-type: none"> • Have the risks been reviewed and are they deemed acceptable to move to the next design review? • Is the project on schedule or have remediation plans been developed to correct for schedule loss? • Have all Action Items from prior design reviews been resolved? • Have all artifacts defined in the approved IT Project SELC Tailoring Plan been completed and reviewed for completeness? • Has the development organization been identified and is it ready (possibly under contract) to begin development? • Has the development manager approved the design allocation as sufficient enough to continue the detailed development of the solution? • Have all documents from previous stages been updated as necessary to reflect new information and decisions from the current stage? • Has the Cost Benefit Analysis been updated to reflect the preliminary system design? • Has the Concept of Operations for the proposed system been updated in accordance with the preliminary system design?
Requirements	<ul style="list-style-type: none"> • Have the functional requirements been logically decomposed to an acceptable level of detail (at least to the major subsystems or software components) in the system requirements? • Do the requirements represent the needs of the system to perform successfully while in production? • Have Section 508 Accessibility requirements been addressed in the design? • Are the infrastructure requirements defined? • Have the decomposed system requirements been reviewed by the acceptance test team to ensure the requirements are clear, meaningful, and testable? • Do users agree that the user functionality design meets the need? • Have all applicable human factors integration activities and deliverables been completed?
Information Security (IT programs)	<ul style="list-style-type: none"> • Has security been designed-in as an integral component of the preliminary system design? • Has a contractor been identified to conduct ST&E in support of the C&A

Domain	Preliminary Design Review Exit Criteria
	<p>process?</p> <ul style="list-style-type: none"> • Does the security test and evaluation plan provide for the testing of all security controls? • Does the security design satisfy the specified security categorization (FIPS 199)? • Does the system design provide the security reports needed to audit and monitor the system in production? • Does the design include sufficient auditing to re-create user/administrator activities?
Privacy	<ul style="list-style-type: none"> • Does the design appropriately protect and limit the use of personal data?
Performance	<ul style="list-style-type: none"> • Do the system performance requirements meet the need? • Has the model/simulation of the concept system design been refined to the level of detail sufficient to assign performance budgets to subsystems? • Have performance budgets been assigned to subsystems for the amount of time allowed to complete a task and the resources available for that task? • Has the model/simulation of the final system design been refined to the level of detail sufficient to guide the detailed development of the solution?
Data Management	<ul style="list-style-type: none"> • Have all major functions performed by the application been defined to a level sufficient to account for transformation of all data elements processed by the function? • Have data capacities been analyzed and incorporated into the design? • Has test data been identified for unit testing, integration testing, and acceptance testing? • Has the design demonstrated that the data architecture will provide the capacity to meet functional and performance requirements? • Are the requisite Information Sharing Agreements in place? • Has the Data Management Plan been updated? • Has the Data Reference Model (DRM) been updated and Logical Data Module (LDM) aligned with Enterprise models?
Configuration Management	<ul style="list-style-type: none"> • Is the system design under configuration management control?
Testing	<ul style="list-style-type: none"> • Has an Independent Verification and Validation strategy been developed? • Are all system requirements stated such that they are testable? • Has the source for development and test data been identified? • Have technical plans been made to conduct testing with legacy systems (either using their test environment or production environment)? • Have specific Section 508 compliance testing requirements been identified?
Enterprise Architecture	<ul style="list-style-type: none"> • Is the preliminary system design aligned with the Homeland Security EA?
System and Software Engineering	<ul style="list-style-type: none"> • Have requirements been updated based on the user review of the proof-of-concept, or technology demonstrations? • Is the requirements baseline stable and configuration controlled? • Has the logical design of all operational processes been specified? • Does the logical design address known interface requirements? • Is each logical design element traceable to its source requirement? • Have interface designs for the major subsystems been assessed for their ability to work with external supporting/interfacing systems? • Have all system and software development tools (e.g., IDE, CM) been

Domain	Preliminary Design Review Exit Criteria
	<p>installed and configured?</p> <ul style="list-style-type: none"> • Do software vendors acknowledge that all proposed software products have been previously integrated? • Have human integration design factors been reviewed and included, where needed, in the overall design? • Have Section 508 technical standards been selected so that functional performance criteria are fulfilled? • Has the software system design been specified in sufficient detail that a different contractor could continue development without any additional information from the design team? • Has the development manager reviewed the system design and concur that the design is sufficiently detailed to advance to detailed development? • Has the development manager reviewed the system design and concur that the design is sufficiently detailed to develop subcomponents and identify the interfaces of major subsystems? • Have all functions in the logical design been allocated to the system design? • Are all system and functional requirements accounted for in the design? • Will the system design meet the specified performance requirements? • Are all interfaces between major subsystem software components and infrastructure defined? • Is the structure of each to-be-built major subsystem component and its interfaces defined? • Are the installation and configuration parameters of all COTS products identified?
Infrastructure	<ul style="list-style-type: none"> • Has the logical architecture specified all infrastructure components (new and existing) by type and capability? • Have impacts to existing equipment (e.g., routers, servers, mainframes, network circuits) been analyzed? • Is the infrastructure design specified in sufficient detail that a new contractor could continue the detailed development of the design without any additional information from the design team? • Is the development environment ready for use?
Operations and Maintenance	<ul style="list-style-type: none"> • Has an initial Disaster Recovery Plan been updated?
Transition	<ul style="list-style-type: none"> • Has a communications strategy been identified? • Have changes to organizational structure (e.g., help desk, O&M staff) been identified? • Have strategies been developed for retiring system(s) that this system replaces? (I.e., removing h/w, s/w, closing out unneeded interfaces, archiving/subsuming documentation.)

SELC Table 12 Critical Design Review/ Design Stage Exit Criteria

Domain	Critical Design Review/ Design Stage Exit Criteria
Program Management	<ul style="list-style-type: none"> • Have the risks been reviewed and are they deemed acceptable to move to the next stage? • Is the project on schedule or have remediation plans been developed to correct for schedule loss?

Domain	Critical Design Review/ Design Stage Exit Criteria
	<ul style="list-style-type: none"> • Have all Action Items from prior design reviews been resolved? • Have all artifacts defined in the approved Project SELC Tailoring Plan/been completed and reviewed for completeness? • Has the development organization been identified and is it ready (possibly under contract) to begin development? • Has the development manager approved the design as sufficient to develop the solution? • Have all documents from previous stages been updated as necessary to reflect new information and decisions from the current stage? • Has the Cost Benefit Analysis been updated to reflect the final system design? • Has the Concept of Operations for the proposed system been updated in accordance with the final system design?
Requirements	<ul style="list-style-type: none"> • Have the functional requirements been logically decomposed to an acceptable level of detail in the system requirements? • Do the requirements represent the needs of the system to perform successfully while in production? • Have Section 508 Accessibility requirements been addressed in the design? • Are the system requirements allocated to software components? • Are the infrastructure requirements defined? • Have all the system requirements been reviewed by the acceptance test team to ensure the requirements are clear, meaningful, and testable? • Do users agree that the user interface design meets the need? • Have all applicable human factors integration activities and deliverables been completed?
Information Security	<ul style="list-style-type: none"> • Has security been designed-in as an integral component of the preliminary system design? • Has a contractor been identified to conduct ST&E? • Does the security test and evaluation plan provide for the testing of all security controls? • Does the security design satisfy the specified security categorization (FIPS 199)? • Does the system design provide the security reports needed to audit and monitor the system in production? • Does the design include sufficient auditing to re-create user/administrator activities?
Privacy	<ul style="list-style-type: none"> • Does the design appropriately protect and limit the use of personal data?
Performance	<ul style="list-style-type: none"> • Do the system performance requirements meet the need? • Has the model/simulation of the preliminary system design been refined to the level of detail sufficient to assign performance budgets to subsystems? • Have performance budgets been assigned to subsystems for the amount of time allowed to complete a task and the resources available for that task? • Has the model/simulation of the final system design been refined to the level of detail sufficient to predict system component performance in the development, test and production environments?
Data Management	<ul style="list-style-type: none"> • Have all major functions performed by the application been defined to a level sufficient to account for transformation of all data elements processed by the function? • Have data capacities been analyzed and incorporated into the design?

Domain	Critical Design Review/ Design Stage Exit Criteria
	<ul style="list-style-type: none"> • Has test data been identified for unit testing, integration testing, and acceptance testing? • Has the design demonstrated that the data architecture will provide the capacity to meet functional and performance requirements? • Are the requisite Information Sharing Agreements in place? • Has the Data Management Plan been updated? • Has the DRM been updated and LDM aligned with Enterprise models?
Configuration Management	<ul style="list-style-type: none"> • Is the system design under configuration management control?
Testing	<ul style="list-style-type: none"> • Has a contractor been identified for Independent Verification and Validation? • Are all system requirements stated such that they are testable? • Has the source for development and test data been identified? • Have technical plans been made to conduct testing with legacy systems (either using their test environment or production environment)? • Have specific Section 508 compliance testing requirements been identified?
Enterprise Architecture	<ul style="list-style-type: none"> • Is the final system design aligned with the Homeland Security EA?
System and Software Engineering	<ul style="list-style-type: none"> • Have requirements been updated based on the user review of the proof-of-concept, pilot, and/or prototype? • Do the system requirements represent a final decomposition of the functional requirements? • Is the requirements baseline stable and configuration controlled? • Has the logical design of all operational processes been specified? • Does the logical design address all interface requirements? • Is each logical design element traceable to its source requirement? • Have all interface designs been assessed for their ability to work with external supporting/interfacing systems? • Have all system and software development tools (e.g., IDE, CM) been installed and configured? • Do software vendors acknowledge that all proposed software products have been previously integrated? • Have human integration design factors been reviewed and included, where needed, in the overall design? • Have Section 508 technical standards been selected so that functional performance criteria are fulfilled? • Has the software system design been specified in sufficient detail that a different contractor could perform all coding without any additional information from the design team? • Has the development manager reviewed the system design and concur that the design is sufficiently detailed to develop code? • Has the development manager reviewed the system design and concur that the design is sufficiently detailed to develop components and integrate components where they interface? • Have all functions in the logical design been allocated to the system design? • Are all system and functional requirements accounted for in the design? • Will the system design meet the specified performance requirements? • Are all interfaces between software components and infrastructure defined? • Does the bill of materials for acquisition of equipment and software represent

Domain	Critical Design Review/ Design Stage Exit Criteria
	<p>the entire list for equipment and software?</p> <ul style="list-style-type: none"> • Is the structure of each to-be-built component and its interfaces defined? • Are the installation and configuration parameters of all COTS products specified?
Infrastructure	<ul style="list-style-type: none"> • Has the logical architecture specified all infrastructure components (new and existing) by type and capability? • Have impacts to existing equipment (e.g., routers, servers, mainframes, network circuits) been analyzed? • Has the physical design specified all infrastructure components by vendor, model, and version? • Is the infrastructure design specified in sufficient detail that a new contractor could build out the design without any additional information from the design team? • Is the development environment ready for use?
Operations and Maintenance	<ul style="list-style-type: none"> • Has an initial Disaster Recovery Plan been updated?
Transition	<ul style="list-style-type: none"> • Have communications been developed notifying users of transition to the new system? • Have changes to organizational structure (e.g., help desk, O&M staff) been developed? • Have plans been developed for retiring system(s) that this system replaces? (I.e., removing h/w, s/w, closing out unneeded interfaces, archiving/subsuming documentation.)

**SELC Table 13 Development Stage Deliverables and Work Products
(xQFYzz – xQFYzz)**

Deliverable/Work Product	Tailored Out	If yes, justification for tailoring out
Training Materials	Yes/No	
Test Case Specification	Yes/No	
System Acceptance Test Procedures	Yes/No	
Operators Manuals	Yes/No	
Maintenance Manuals	Yes/No	
User Manuals	Yes/No	
Integration Readiness Review Completion Letter	Yes/No	

SELC Table 14 Integration Readiness Review/Development Stage Exit Criteria

Domain	Integration Readiness Review / Development Stage Exit Criteria
Program Management	<ul style="list-style-type: none"> • Have the risks been reviewed and are they deemed acceptable to move to the next stage? • Is the project on schedule or have remediation plans been developed to correct for schedule loss? • Have all products defined in the approved Project SELC Tailoring Plan have been completed and reviewed for completeness? • Have all Action Items from the CDR been resolved? • Has the independent test team been identified and is it prepared to begin testing? • Have all documents from previous stages been updated as necessary to reflect new information and decisions from the current stage? • Has the Cost Benefit Analysis been updated to incorporate the built-out System Design? • Have all applicable human factors integration activities and deliverables been completed?
Information Security	<ul style="list-style-type: none"> • Have all security controls been unit tested?
Privacy	<ul style="list-style-type: none"> • Have all obligations and limitations identified in the privacy compliance documentation been met?
Performance	<ul style="list-style-type: none"> • Has the model/simulation of the developed system been calibrated using the results of unit/development performance tests?
Data Management	<ul style="list-style-type: none"> • Have all changes to the Data Architecture design been recorded in the corresponding documents?
Configuration Management	<ul style="list-style-type: none"> • Is all development code under CM control? • Are all COTS product configurations under CM control?
Testing	<ul style="list-style-type: none"> • Do the test cases (integration and acceptance) appropriately test all the requirements? • Are all the planned test scenarios traceable to the requirements? • Have all development test issues been resolved? • Has the test team lead (integration and acceptance) reviewed the code summary metrics and deemed the system ready for testing? • Have the integration and acceptance test schedules been approved by the appropriate test leads? • Do unit test results for components, subsystems, and systems form a satisfactory basis for proceeding into integration and acceptance testing? • Has the test plan been reviewed and does it provide an actionable plan that completely validates that the system satisfies all the requirements? • Have test cases for testing Section 508 technical standards and functional performance requirements been developed?
Software Engineering	<ul style="list-style-type: none"> • Has the software been documented sufficiently so that a different contracting team could understand the coding? • If applicable, have independent code reviews been passed successfully?
Infrastructure	<ul style="list-style-type: none"> • Is the test environment (integration and acceptance) ready for use? • Have upgrades to existing equipment (e.g., routers, servers, mainframes, network circuits) been contracted for?

Domain	Integration Readiness Review / Development Stage Exit Criteria
Operations and Maintenance	<ul style="list-style-type: none"> • Have all user, operator, and maintenance manuals and procedures been developed? • Has the final Disaster Recovery Plan been developed?
Transition	<ul style="list-style-type: none"> • Have a Training Plan and all training manuals been developed and documented?

SELC Table 15 Integration & Test Stage Deliverables and Work Products (xQFYzz – xQFYzz)

Deliverable/Work Product	Tailored Out	If yes, justification for tailoring out
System Test Report	Yes/No	
Acceptance Test Report	Yes/No	
Service Insertion Package (SIP) (IT Only)	Yes/No	<i>(Part of USCG C4IT Enterprise Architecture Document)</i>
System of Record Notice (SORN) (IT Only)	Yes/No	
Security Assessment Report (SAR) (IT Only)	Yes/No	<i>(Part of USCG C4IT Information Assurance Plan)</i>
Security Accreditation Package (IT Only)	Yes/No	<i>(Part of USCG C4IT Information Assurance Plan)</i>
Privacy Impact Assessment (PIA) (IT Only)	Yes/No	<i>(Part of USCG C4IT Business Case provided in the Planning Stage)</i>
Production Readiness Review (PRR) Completion Letter	Yes/No	

SELC Table 16 Production Readiness Review/Integration and Test Stage Exit Criteria

Domain	Production Readiness Review / Integration and Test Stage Exit Criteria
Project Management	<ul style="list-style-type: none"> • Have the risks been reviewed and are they deemed acceptable for moving to the next stage? • Is the project on schedule or have remediation plans been developed to correct for schedule loss? • Have all products defined in the approved Project SELC Tailoring Plan been completed and reviewed for completeness? • Have all Action Items from the IRR been resolved? • Have all documents from previous stages been updated as necessary to reflect new information and decisions from the current stage? • Have all applicable human factors integration activities and deliverables been completed?
Requirements	<ul style="list-style-type: none"> • Has the system been user-tested by individuals with the knowledge, tools, and ability to use assistive technologies commonly used by people with disabilities and applicable to Section 508 requirements?

Domain	Production Readiness Review / Integration and Test Stage Exit Criteria
Information Security	<ul style="list-style-type: none"> • Has the ST&E been completed? • Has the Contingency Plan been tested? • Has the SSP been updated? • Has the SAR been completed? • Have POA&Ms been completed as required? • Has the Security Accreditation Package been assembled?
Privacy	<ul style="list-style-type: none"> • If appropriate, has a SORN been published? • Have all system functionalities been tested against requirements and limitations in privacy compliance documentation?
Performance	<ul style="list-style-type: none"> • Have all performance problems identified in system integration tests been resolved and documented? • Has a range of performance scenarios been tested, considering possible peak workloads and competition for resources? • Have all end-to-end performance tests been passed? • Have all scalability issues been resolved?
Data Management	<ul style="list-style-type: none"> • Has the data load been successfully tested? • Has the Data Insertion Package been updated and submitted?
Configuration Management	<ul style="list-style-type: none"> • Is the production system under CM control and ready to be pushed to the production environment?
Testing	<ul style="list-style-type: none"> • Have all integration tests been completed successfully? • Did end users successfully complete acceptance testing? • Does the test report identify the number of defects, their severity level, and their expected resolution date? • Do all defects have resolution plans? • Have all defects, variations, problems, and known errors been recorded in a defect repository? • Is Section 508 acceptance testing complete?
Enterprise Architecture	<ul style="list-style-type: none"> • Has user acceptance testing identified any gaps in required capabilities? • Will the system provide all of the capability as planned? • Are there gaps in capability? • Is the data required by this system already available or will it be made available? • Does the system include all components assigned to it for each release? • Does the system include all technology assigned to it for each release? • Is the EA Alignment Template complete through Section 5b? • Are all changes required for EA Alignment Template completed for this stage?
Software Engineering	<ul style="list-style-type: none"> • Have all SLAs have been negotiated, agreed to, and signed by all parties?

Domain	Production Readiness Review / Integration and Test Stage Exit Criteria
Infrastructure	<ul style="list-style-type: none"> • Do systems and facilities affected by the release have a current Authority to Operate (ATO)? • Has equipment installation been coordinated with site-specific personnel? • Has the appropriate Help Desk been notified of impending changes? • Have end user workstations been tested to ensure software interoperability?
Operations and Maintenance	<ul style="list-style-type: none"> • Have all user, operator, and maintenance manuals and procedures been reviewed, tested, and accepted by the operations team? • Have all operational and failover conditions been tested, if appropriate? • Have all operations and batch processing schedules been defined in an SLA?
Transition	<ul style="list-style-type: none"> • Have all training manuals been reviewed and accepted by the operations team?

**SELC Table 17 Implementation Stage Deliverables and Work Products
(xQFYzz – xQFYzz)**

Deliverable/Work Product	Tailored Out	If yes, justification for tailoring out
Technology Demonstration Report (If Applicable)	Yes/No	
Operational Test Readiness Review (OTRR) Completion Letter	Yes/No	
OT&E Report	Yes/No	
Transition to Support Document (IT Only)	Yes/No	
Authority To Operate (ATO) Letter (IT Only)	Yes/No	
Version Description Document (IT Only)	Yes/No	
Operational Test and Evaluation (OT&E) Plan	Yes/No	
Operational Readiness Review (ORR) Completion Letter	Yes/No	

SELC Table 18 Operational Test Readiness Review Exit Criteria

Operational Test Readiness Review Exit Criteria	
	<ul style="list-style-type: none"> • All OT Entrance Criteria specified in the TEMP are satisfied • Satisfactory performance in Developmental Test • Operational Test Plan is approved by DOT&E • Adequate numbers of systems are available for testing • Representative users are identified for test conduct • An approved CONOPs exists • Required training is available and planned • All resources required to execute OT including instrumentation, spare parts, manuals, etc. • There are no outstanding critical deficiencies related to safety, security, or the inability to perform key mission functions that do not have an identified workaround approved by the CAE.

SELC Table 19 Operational Readiness Review/Implementation Stage Exit Criteria

Domain	Exit Criteria
Program Management	<ul style="list-style-type: none"> • Have the risks been reviewed and are they deemed acceptable to move to the next stage? • Is the project on schedule or have remediation plans been developed to correct for schedule loss? • Have all products defined in the approved Project SELC Tailoring Plan been completed and reviewed for completeness? • Have all Action Items from the PRR been resolved? • Have all documents from previous stages been updated as necessary to reflect new information and decisions from the current stage? • Have all applicable human factors integration activities and deliverables been completed?
Information Security	<ul style="list-style-type: none"> • Has the C&A package been signed by the Designated Accreditation Authority (DAA)? • Have all users, administrators, and operators successfully completed security awareness training? • Has the ATO Letter been signed by the DAA?
Performance	<ul style="list-style-type: none"> • Have all performance problems identified in the production environment tests been resolved? • Has the model/simulation of the system been archived for possible future use during operations?
Data Management	<ul style="list-style-type: none"> • Have all data been loaded into the system and are they ready for use? • Are all external data sources ready and available for the deployment of this system?
Configuration Management	<ul style="list-style-type: none"> • Has this system been properly placed under CM control? • Does a CCB exist to evaluate and approve proposed changes to the system baseline?
Testing	<ul style="list-style-type: none"> • Have all tests in the production environment been completed satisfactorily? • Are all continuity and recovery processes and procedures complete and tested?

Domain	Exit Criteria
Enterprise Architecture	<ul style="list-style-type: none"> • When deployed, will the system provide all of the capability as originally planned? • Have any new capabilities been identified? • Has user acceptance testing identified any gaps in required capabilities? • Is it known who will be utilizing the data created by this system? • Are the requisite Information Sharing Agreements in place? • Are the application components being deployed as planned? • Is the technology interoperable with the infrastructure? • Is the technology being deployed still in alignment with the DHS TRM? • Are all changes required for EA Alignment Template completed for this stage?
Software Engineering	<ul style="list-style-type: none"> • Have all created services been added to the DHS Service Catalogue and submitted to the EA PMO for registry in the service component reference model? • Are all the availability calculations (algorithms) agreed upon and documented in an SLA?
Infrastructure	<ul style="list-style-type: none"> • Is the production environment ready for use? • Can this system/enhancement be deployed into the production environment given the current threat level or security posture (e.g., system lock-down)?
Operations and Maintenance	<ul style="list-style-type: none"> • Are all O&M staff ready to begin operations? • Is all scheduled downtime documented in a SLA and agreed-upon by all affected stakeholders?
Transition	<ul style="list-style-type: none"> • Have all users, operators, and maintenance personnel been adequately trained on the new system?

**SELC Table 20 Operations & Maintenance Stage Deliverables and Work Products
(xQFYzz – xQFYzz)**

Deliverable/Work Product	Tailored Out	If yes, justification for tailoring out
Post Implementation Review (PIR) Results	Yes/No	
Operational Analyses	Yes/No	
Lessons Learned report	Yes/No	
Security Incident reports (IT Only)	Yes/No	
C&A Updates (every 3 years or when major change is made) (IT Only)	Yes/No	
FISMA metrics report	Yes/No	
Privacy Documentation (updated for systems decommissioned)	Yes/No	

¹The Coast Guard follows DoD policy for SIPRNET (sponsored by the Navy). DoD uses DIACAP, DoDI 8510.01, with current information found on DISA’s site: <http://iase.disa.mil/diacap/>.

SELC Table 21 Disposition Stage Deliverables and Work Products (xQFYzz – xQFYzz)

Deliverable/Work Product	Tailored Out	If yes, justification for tailoring out
Disposition Approval Request	Y/N	
Disposition Plan	Y/N	(Provided in the O&M Stage)
Archived Data	Y/N	
Archived System	Y/N	

SELC Table 22 Document Matrix provides complete listing of SELC documents and when to Create, Finalize, and Update each document. Updates to documents created in any of the SELC Stages should be performed according to the matrix below and documented in the PSTP.

SELC Table 22 Document Matrix

PRODUCT	Governing Authority	ARP Phases								
		NEED	ANALYZE/SELECT	OBTAIN					PRODUCE/DEPLOY/SUPPORT	
		SELC Stages								
		Solution Engineering	Planning	Requirements Definition	Design	Development	Integration and Test	Implementation	Operations & Maintenance	Disposition
Mission Need Statement	ARP (DIR 102-01)	C/F								
Capability Development Plan (CDP)	ARP (DIR 102-01)	C/F								
Acquisition Plan	ARP (DIR 102-01)	C	U	U				U	F	
CONOPS	ARP (DIR 102-01)		C/F							
Study Plan Review Completion Letter	DHS SELC		C/F							
Analysis of Alternatives Study Plan (AoASP)	ARP (DIR 102-01)		C/F							
Analysis of Alternatives / Alternatives Analysis	ARP (DIR 102-01)		C/F							
Cost Estimating Baseline Document (CEBD)/ Preliminary Lifecycle Cost Estimate (PLCCE)	ARP (DIR 102-01)		C	U				U	U	U
Operational Requirements Document (ORD)	ARP (DIR 102-01)		C/F							
Integrated Logistics Support Plan (ILSP)	ARP (DIR 102-01)		C		U			U	F	
Acquisition Program Baseline	ARP (DIR 102-01)		C/F	U				U	U	

PRODUCT	Governing Authority	ARP Phases									
		NEED	ANALYZE/SELECT	OBTAIN						PRODUCE/DEPLOY/SUPPORT	
		SELC Stages									
			Solution Engineering	Planning	Requirements Definition	Design	Development	Integration and Test	Implementation	Operations & Maintenance	Disposition
C = Create U = Update F = Final											
Service Reuse Plan	DHS SELC				C	U	U	U	U	F	
Section 508 National Security Exception Request and Authorization (DHS Form 4105)	DHS OAST		C/F								
Section 508 EIT Accessibility Plan	DHS OAST		C		U		U	U		F	
FIPS 199 Security Categorization	DHS CISO		C		U						
Solutions Engineering Review Completion Letter	DHS SELC		C/F								
DHS Periodic Reporting (nPRS)	CPIC		C	U	U	U	U	U	U	U	U
Project Management Plan (Includes Integrated Master Schedule) (PMP)	DHS SELC			C	U	U	U	U	U	F	
Project SELC Tailoring Plan	DHS SELC			C/F							
Test and Evaluation Master Plan (TEMP)	D026-6 and DIR 102-01			C/F							
Configuration Management Plan	DHS SELC			C		F					
Privacy Threshold Analysis (PTA)	Privacy Office			C/F							
Risk Management Plan	DHS SELC			C/F							
Quality Assurance Plan	DHS SELC			C/F							
Data Management Plan	DHS SELC			C		F					
Training Plan	DHS SELC			C/F							
Intelligence Support Plan	DHS I&A			C/F							
Project Planning Review Completion Letter	DHS SELC			C/F							
Functional Requirements Document (FRD)	DHS SELC				C	U	U	U	U	F	
Requirements Traceability Matrix (RTM)	DHS SELC				C	U	U	U	U	F	
Developmental Test Plan (DTP)	DHS SELC				C	F					
Security Requirements Traceability Matrix (SRTM)	DHS CISO				C	U	F				
Plan of Action & Milestone (POA&M)	DHS CISO				C	U		U	U	U	
System Security Plan (SSP)	DHS CISO				C	U	U	U	F		
Disaster Recovery Plan	DHS SELC				C	U		F			
Security Risk Assessment (SRA)	DHS CISO				C	U		F			
Environmental Impact Assessment	DHS SELC				C/F						
Security Test & Evaluation (ST&E) Plan	DHS CISO				C		F				
System Definition Review Completion Letter	DHS SELC				C/F						
Contingency Plan	DHS CISO					C		F			
Service Level Agreements	DHS SELC					C			U	F	
System Requirements Document	DHS SELC					C	U	U	U	F	

Appendix A to COMDTINST M5000.10B

PRODUCT	Governing Authority	ARP Phases									
		NEED	ANALYZE/ SELECT	OBTAIN						PRODUCE/ DEPLOY/ SUPPORT	
		SELC Stages									
			Solution Engineering	Planning	Requirements Definition	Design	Development	Integration and Test	Implementation	Operations & Maintenance	Disposition
C = Create U = Update F = Final											
Interconnection Security Agreement (ISA)	DHS CISO					C/F					
Logical Design Document	DHS SELC					C/F					
Data Architecture Document	DHS SELC					C/F					
System Design Document	DHS SELC					C	U	U	F		
Technology Insertion Package	DHS EAB					C/F					
Data Insertion Package (DIP)	DHS EAB					C/F					
Site Prep Plan	DHS SELC					C/F					
Deployment Plan	DHS SELC					C		U			
Preliminary Design Review Completion Letter	DHS SELC					C/F					
Critical Design Review Completion Letter	DHS SELC					C/F					
Training Materials	DHS SELC						C/F				
Test Case Specification	DHS SELC						C/F				
System Acceptance Test Procedures	DHS SELC						C/F				
Operators Manuals	DHS SELC					C	U	F			
Maintenance Manuals	DHS SELC					C	U	F			
User Manuals	DHS SELC					C	U	F			
Integration Readiness Review Completion Letter	DHS SELC						C/F				
System Test Report	DHS SELC							C/F			
Acceptance Test Report	DHS SELC							C/F			
Service Insertion Package (SIP)	DHS EAB					C		U	U	U	F
Security Assessment Report (SAR)	DHS CISO							C/F			
Security Accreditation package	DHS CISO							C/F			
Privacy Impact Assessment (PIA)	Privacy Office					C		F			
Production Readiness Review Completion Letter	DHS SELC							C/F			
System of Record Notice (SORN)	DHS Privacy					C		F			
Technology Demonstrator Results Report	ARP (DIR 102-01)								C/F		
Version Description Document	DHS SELC								C/F		
Transition to Support Document (IT Only)	DHS SELC								C/F		
Authority To Operate (ATO) Letter	DHS CISO								C/F		
Operational Test Readiness Review Completion Letter	DHS SELC								C/F		

PRODUCT	Governing Authority	ARP Phases									
		NEED	ANALYZE/ SELECT	OBTAIN					PRODUCE/ DEPLOY/ SUPPORT		
		SELC Stages									
			Solution Engineering	Planning	Requirements Definition	Design	Development	Integration and Test	Implementation	Operations & Maintenance	Disposition
Operational Readiness Review Completion Letter	DHS SELC								C/F		
Operational Test and Evaluation (OT&E) Plan	D026-6								C/F		
Operational Test and Evaluation (OT&E) Report	D026-6								C/F		
Post Implementation Review (PIR) Results	CPIC								C/F		
Operational Analyses	CPIC								C/U		
Lessons Learned	CPIC								C/U		
FISMA metrics reports	DHS CISO								U		
Security Incident reports	DHS CISO								U		
C&A Updates (every 3 years or when major change is made)	DHS CISO								C/U		
Privacy Documentation (updated for systems decommissioned)	Privacy Office								U		
Disposition Approval Request	DHS SELC									C/F	
Archived Data	DHS SELC									C/F	
Archived System	DHS SELC									C/F	
Disposition Plan	DHS SELC									C/F	

C = Create
U = Update
F = Final

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20.0 DEPLOYMENT PLAN

20.1 Purpose

The purpose of a Deployment Plan (DP) is to identify how, when, and where new platforms/systems being acquired will be deployed for operational use. It identifies roles and responsibilities associated with the deployment process, and a deployment/installation schedule consistent with the scheduled delivery of the new assets. It also identifies any costs that will be incurred as part of asset deployment, new or modified facilities requirements and staffing issues to be incurred as part of the deployment process, and (if applicable) plans for disposal of the assets to be replaced.

Deployment planning considerations include the timing of deliveries, the order in which new products will be delivered, homeport or site selection (including environmental impact analysis), and the replacement and disposal of any legacy assets. The deployment planning process is designed to provide the new assets to users who are equipped and capable of operating and maintaining them. Thus, the earlier deployment planning can be accomplished, the better chance there will be of having the required capabilities in place when the assets are deployed. The need for deployment planning is especially critical for new vessels, aircraft, or other type systems where facilities may require upgrades, leasing or construction. It is also important to plan for the deployment of new Information Technology (IT) software and software products. (Deployment of IT assets is often referred to as migration; i.e., the process may be known as Migration Planning.)

20.2 Preparation

As a major acquisition project approaches the mid-Obtain Phase, consideration must be given to the deployment of new assets to the users. The Sponsor is responsible for the preparation of a formal Deployment Plan. If Low Rate Initial Production (LRIP) units are to be fielded, planning must be accomplished early enough to cover the deployment of the LRIP assets. If LRIP assets are not included as part of the acquisition project, deployment planning must be completed prior to ADE-3 and entry into the Produce/Deploy and Support Phase. If applicable, the deployment or redeployment of assets used during Operational Test and Evaluation (OT&E) activities must also be considered.

The Sponsor has the overall responsibility to ensure the new assets are deployed appropriately to provide effective mission accomplishment. The Sponsor approves the DP after it is developed. The Sponsor's Representative is responsible for managing the deployment planning process and developing the DP for approval by the Sponsor. Existing acquisition project management team resources such as the Project Matrix/IPT Team, Test Management Oversight Team (TMOT), and Integrated Logistics Support Management Team (ILSMT) should be used to address, develop, review and maintain deployment planning and execution. The planned deployment of new assets must also be consistent with their scheduled contract delivery.

The PM is responsible for assisting the Sponsor's Representative in developing the DP. The PM must provide information concerning the asset delivery schedule and any issues

regarding new infrastructure and the establishment of user capability to operate and maintain the assets.

20.3 Template

DEPLOYMENT PLAN (DP)

for the

[PROJECT TITLE]

Submitted by: _____
Sponsor's Representative (CG-YYY) Date _____

Endorsed by: _____
Project Manager (CG-93PM) Date _____

Endorsed by: _____
Program Manager (CG-93PgM) Date _____

Endorsed by: _____
Director for Acquisition Programs (CG-93) Date _____

Approved: _____
Project Sponsor (CG-7) Date _____

Version #

Date:

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<u>Title /Paragraph</u>	<u>Page Number</u>
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Section 3: Deployment/Installation Schedule	3-1
Section 4: Costs	4-1
Section 5: Facilities	5-1
Section 6: Staffing Issues	6-1
Section 7: Disposal	7-1
Appendices: (as applicable)	

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DEPLOYMENT PLAN (DP)***CONTENT REQUIREMENTS*****EXECUTIVE SUMMARY**

Provide a brief (one or two pages) Executive Summary of the Deployment Plan.

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

SECTION 1: BACKGROUND

Briefly describe any deployment planning activities that have already occurred. Provide an assessment of readiness for deployment of the new asset/capability and identify the upcoming events affecting deployment that must be completed prior to deployment of the asset/capability being initiated.

SECTION 2: ROLES AND RESPONSIBILITIES

Identify all organizations that will be participating, including their roles and responsibilities. Organizations that would normally be included are: the Project Sponsor and Sponsor's Representative, the PM, and operational units. Other organizations that could be included, depending on the specific asset/capability to be deployed, are: the Support Project Managers (including System Safety, Human Factors Engineering, Logistics, and Support Facilities), the Surface Forces Logistics Center (SFLC), the Aviation Logistics Center (ALC), the Command, Control, Communications, Computers and Information Technology (C4IT) Service Center (SC), the Project Resident Office (PRO), Asset Project Office (APO), and contractors.

SECTION 3: DEPLOYMENT/INSTALLATION SCHEDULE

Provide a schedule showing the priority order for delivery/installation to the operational command. Be as specific as possible with regard to dates and locations.

Identify whether the required environmental impact assessments have been completed and any significant environmental issues that remain.

Include any training associated with deployment/installation.

SECTION 4: COSTS

Identify all costs associated with deployment identified by fiscal year, source, and type of funding (AC&I, OE, etc.). Typical costs would include construction of buildings, piers, or hangars; dredging of channels and harbors; installation costs, including travel costs for installation teams; and cabling costs for computer installations.

SECTION 5: FACILITIES

Identify all facilities that must be constructed, upgraded, or replaced in order for effective deployment to occur (ensure identified facilities are accounted for in the ILSP). Include piers, hangars, administrative/office buildings, storage and maintenance buildings, radio or radar towers, and associated utilities such as water, gas, and electrical connections. For cutter projects, a Primary Crew Assembly Facility and one or more Maintenance Augmentation Team or Shore Support Team facilities may be required.

SECTION 6: STAFFING ISSUES

Identify all additional staff positions required to accomplish deployment of the new assets/capability. For example, a “Tiger Team” may be required to perform installations at operating facilities. Address all tasks for which additional personnel are required. Identify the number and rank/grade of personnel required and when they must be available.

SECTION 7: DISPOSAL

If new assets are replacing existing ones, address the method of disposal for the old assets. For cutters that are being decommissioned, a decommissioning schedule should be provided. Include information pertaining to any applicable environmental issues.

Appendices: (as applicable)

21.0 POST IMPLEMENTATION REVIEW

21.1 Purpose

The purpose of a Post Implementation Review (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. A PIR is typically conducted by the Sponsor 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 actual results; and to help improve future acquisition projects management practices. Per OMB A-11 and the DHS Capital Planning and Investment Control Guide, a PIR is required to evaluate the impact of the acquisition deployment on customers, the mission and program, and technical and/or mission capabilities. The PIR also provides a baseline for subsequent comparison during follow-on Operational Analysis (consult the DHS Operational Analysis Guidance for format of an Operational Analysis).

21.2 Preparation

The Sponsor, in consultation with the PM, prepares the draft PIR in accordance with the template provided in section 21.3, approximately 12 months after IOC.

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21.3 Template

POST IMPLEMENTATION REVIEW (PIR)

for the

{PROJECT TITLE}

Submitted by: _____ Date _____
Sponsors Representative (CG-YYY)

Reviewed by: _____ Date _____
Project Manager (CG-93PM)

Reviewed by: _____ Date _____
Program Manager (CG-93PgM)

Reviewed by: _____ Date _____
Director of Acquisition Programs
(CG-93)

Reviewed by: _____ Date _____
Chief Acquisition Officer (CG-9)

Reviewed by: _____ Date _____
Applicable Support Program Manager
(CG-4 or CG-6)

Approved: _____ Date _____
Sponsor (CG-7)

Version #: _____ Date: _____

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1.2 Background	
1.3 Review Process Overview	
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2.1 Strategic & Mission Results	
2.2 Customer, User and Stakeholder Assessment	
2.3 Operations & Support Results	
2.4 Risk Assessment	
2.5 Performance Results	
2.6 Cost Results	
2.7 Schedule Results	
Section 3: Conclusions/Recommendations	3-1
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POST IMPLEMENTATION REVIEW (PIR)

CONTENT REQUIREMENTS

EXECUTIVE SUMMARY

The Executive Summary should be a brief one or two page discussion of the Post Implementation Review (PIR).

SECTION 1: INTRODUCTION

The introduction provides a project summary and should include a brief discussion to each of the following points:

1.1 Purpose

Define the purpose of the PIR. Include in this section: “A PIR is required by DHS and is accomplished on deployed assets 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 future acquisition project management practices. The PIR also provides a baseline for subsequent comparison during follow on Operational Analysis.”

1.2 Background

Provide a brief discussion of the acquisition. Briefly describe the system in general terms, without describing specific requirements. Briefly describe project history (include a graphical narrative) and how it provided the intended capability. Include original deployment date, service life expectancy, and plans for future replacement. Briefly describe the current status of the project.

1.3 Review Process Overview

Briefly describe how the review was conducted. Give an overview of the types of data collected and how they were analyzed. Specify how/when the report was developed and how consensus was reached/ who was interviewed on findings and recommendations.

SECTION 2: AREAS OF ASSESSMENT

2.1 Strategic & Mission Results

Show how this acquisition project is aligned and contributes to DHS Strategic Goals and Objectives and USCG Mission Programs. Include instances of exceeding mission goals and missions as well as failures to meet them. Describe if the asset is meeting mission requirements and if this acquisition project has or could be combined with others to better meet goals and missions. Describe the causes and impacts of positive or negative results.

Acquisition name Project alignment – the ✓ shows specific alignments of the delivered acquisition as an operational asset supports the USCG Missions-Programs and DHS Missions-Goals. Note: (Shaded area shows CG alignment to QHSR- Check with Commandant (CG-821) to verify specific project alignments)

USCG Mission-Programs – per HSA (Homeland Security Act of 2002), §888

?	?	?	?	?	?	?	?	?	?	?
Search & Rescue	Marine Safety	Aids to Navigation	Ice Operations	Marine Environmental Protection	Living Marine Resources	Illegal Drug Interdiction	Undocumented Migrant Interdiction	Other Law Enforcement (Protect EEZ)	Ports, Waterways, and Coastal Security	Defense Readiness

DHS Mission-Goals – per QHSR (Quadrennial Homeland Security Review of 2010)

Mission	Goal		
1 Preventing Terrorism & Enhancing Security	1.1	Prevent Terrorist Attacks	?
	1.2	Prevent Unauthorized Acquisition/Use of CBRN Materials/Capabilities	?
	1.3	Manage Risks to Critical Infrastructure, Key Leadership/Events	?
2 Securing & Managing Our Borders	2.1	Effectively Control U.S. Air, Land, and Sea Borders	?
	2.2	Safeguard Lawful Trade and Travel	?
	2.3	Disrupt and Dismantle Transnational Criminal Organizations	?
3 Enforcing & Administering Our Immigration Laws	3.1	Strengthen and Effectively Administer the Immigration System	
	3.2	Prevent Unlawful Immigration	?
4 Safeguarding & Securing Cyberspace	4.1	Create a Safe, Secure, Resilient Cyber Environment	
	4.2	Promote Cyber security Knowledge and Innovation	
5 Ensuring Resilience to Disasters	5.1	Mitigate Hazards	?
	5.2	Enhance Preparedness	?
	5.3	Ensure Effective Emergency Response	?
	5.4	Rapidly Recover	?
6 Complementary Departmental Responsibilities & Hybrid Capabilities	A	TBD	
	B	TBD	
	C	TBD	
	D	TBD	
DHS Maturing & Strengthening the Homeland Security Enterprise	A	Enhance Shared Awareness of Risks and Threats	
	B	Build Capable Communities	
	C	Foster Unity of Effort	
	D	Foster Innovative Approaches and Solutions through Leading Edge S&T	

2.2 Customer, User, and Stakeholders Assessment Results

Identify the primary customers, users, and stakeholders of this acquisition project. State if the asset is meeting needs or requirements, if the requirements have changed and/or if any capability gap exists. Synopsize the OT&E report results and findings. Identify any needs for additional

functions/ performance enhancements. Identify if an innovative or alternative solution would result in increased efficiency and/or cost savings. For IT systems, describe how this project aligns with the Enterprise Architecture. Include in this section results of customer, user & stakeholder surveys, interviews & feedback.

2.3 Operations and Support Results

Summarize in this section Measures of Effectiveness and Measures of Suitability results of the asset. Include in this section any operational and engineering metrics (charts/ tables/ graphs) showing performance and maintainability of the asset (i.e.: average operational hours vs. target, maintenance metrics). Address the following support indicators and any others as appropriate.

- Reliability
- Maintainability
- Availability
- Staffing
- Training

2.4 Risk Assessment

Summarize the significant risks and mitigations currently being tracked and monitored for this acquisition. Include their impacts and probabilities, and how they were managed or mitigated.

2.5 Performance Results

Summarize if the asset is meeting mission performance. Include Key Performance Parameters from the APB. Include a table such as the following to list Key Performance Parameters (include all baseline changes), actual results and variances.

Key Performance Parameter	APB Baseline		Actual (Date)	Variance
	Original (Date)	Rev 1 (Date)		
Operational Availability (A _o)	97.0%	95.0%	93.6%	-1.4%

2.6 Cost Results

Explain whether this acquisition project is meeting its cost goals. Discuss actual cost to date relative to baseline cost values and any expected changes. Include total acquisition costs, lifecycle cost estimate and O&M cost estimate vs. actual annual O&M cost. Explain the reasons for any cost variance, including cost drivers. Identify whether the acquisition project is within its cost baseline. Include a table such as the following to list key costs (include all baseline changes), actual results to date, and variances.

Cost Type	APB Baseline		Actual (Date)	Variance
	Original (Date)	Rev 1 (Date)		
Asset Quantities	12	14	14	0
Total Acquisition Cost	\$350M	\$375M	\$360M	-\$15M
Life Cycle Cost Estimate (30 Year Life)	\$1350M			
O&M Cost	\$1000M			

2.7 Schedule Results

Briefly describe any impact of the schedule variance on this and other acquisitions projects. Use a table such as the following to identify key project events, (include all baseline changes), actual event dates, and variances.

Key Event	APB Baseline		Actual (Date)	Variance
	Original (Date)	Rev 1 (Date)		
ADE-2 Decision	3QFY07	2QFY08	6 Mar 08	-24 Days

SECTION 3 CONCLUSIONS/RECOMMENDATIONS

Identify any action that should be taken to optimize the effectiveness and efficiency of the acquisition project including requirements for redesign or modifications. Summarize any strategic and mission gaps with a recommended action plan to mitigate gaps. State whether current cost, schedule, and performance results justify continuation of the project or whether it should be modified, enhanced, or terminated.

SECTION 4 LESSONS LEARNED

Address lessons learned (what worked well and what went wrong). Include acquisition policies or processes that proved helpful in the implementation of this project or that could be made more efficient or effective. As key events produce insights for enhancing the acquisition process, coordinate with Commandant (CG-924) for adding Lessons Learned to the Commandant (CG-9) database.

22.0 PROJECT TRANSITION PLAN

22.1 Purpose

The Project Transition Plan (PTP) sets the requirements and establishes procedures for handoff of the acquired capability to the sustainment community for operations and support. The PTP is considered the primary project-transitioning document and will tie in with the final ILSP/CMP documents. The PM and the operational and support organizations work together to identify remaining tasks and accomplish successful acquisition project closure. On the handoff date, the operational and support organizations will assume responsibility for the delivered products/capabilities throughout the Support Phase of the lifecycle. The PTP will identify the operational and support organizations that will assume management responsibility for controlling and maintaining the configuration of the products/capabilities.

The PTP is co-briefed to VCG, the Sponsor, and all Support Program Directors by the PM and the Sponsor's Representative at a Transition Briefing held to coincide with the handoff date occurring early in the Support Phase. This briefing will set the official handoff of responsibilities for the acquired capability to the sustainment community.

22.2 Preparation

The PM should prepare the draft PTP, in accordance with the template provided in section 22.3, approximately 12 to 18 months prior to either the delivery of the last unit of the project's production or the planned project closeout date. The PTP will be updated as needed prior to the handoff of the capability to the sustainment community to reflect significant changes in transition activities, tasks and responsibilities, and the timing of events should reflect the latest schedule and indicate events that have been completed.

Commandant (CG-924) is responsible for the drafting of the Project Responsibilities Transfer Letter (PRTL) for the ADE-4 event. The template for the PRTL is provided in section 22.4.

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22.3 Template

PROJECT TRANSITION PLAN (PTP)

for the

[PROJECT TITLE]

Submitted by: _____
Project Manager (CG-93PM) Date

Endorsed by: _____
Program Manager (CG-93PgM) Date

Endorsed by: _____
Project Sponsor (CG-Y) Date

Endorsed by: _____
Applicable Support Program Manager Date
(CG-4 or CG-6)

Approved: _____
Director of Acquisition Programs Date
(CG-93)

Version #

Date:

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4.2 Project Resident Office	
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5.1 Post-Implementation Review	
5.2 Operational Analysis	
Appendices: (as applicable)	

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PROJECT TRANSITION PLAN (PTP)

CONTENT REQUIREMENTS

EXECUTIVE SUMMARY

The Executive Summary should be a brief one to two page discussion of the PTP. Include a brief description of the goals and objectives of the plan and briefly discuss the roles and responsibilities of key participants.

VERSION SUMMARY (IF APPLICABLE)

The Version Summary should provide a bulletized high-level description of major changes followed by a Table of Changes that describes specific changes, including references to the changed section/paragraph. See example below:

Version	Change	Effective Date
Version 1.0	Initial Version	

Table of Changes

Version #	Date	Section	Paragraph	Description

SECTION 1: PROJECT SUMMARY

1.1 Project Status

Describe the current status of the Project, e.g., the number of units delivered, the number remaining to be delivered, coordination responsibility for remaining deliveries, problems, etc.

1.2 Assumptions

Describe any assumptions that have been made in preparing the PTP and in preparing to close out the project. For example, interim support for maintenance activities or operational support that will be provided subsequent to the project closeout.

1.3 Risks

Describe remaining risks associated with the successful completion of the acquisition development cycle of the project and the effective and efficient transition to sustainment.

1.4 Schedule

Provide a schedule for the events required for completing the project. The schedule will identify remaining tasks, current status, completion/ projected completion dates, assigned responsibility, and any other remaining major project milestones.

1.5 Financial Status

State the financial status of the project, including the adequacy of current funding, and the disposition of any remaining funds. Address funds existing/ required for follow on sustainment operations and maintenance.

SECTION 2: DOCUMENTATION

2.1 Integrated Logistics Support

Describe the ILSP or other ILS documents that will be provided to the responsible operational and support organizations prior to the handoff of the first operational system or product. State the date of the handoff, provide additional guidance, and identify any remaining logistics and support issues. Summarize status of supply support, technical data, support equipment, facilities, training and maintenance. Any supportability requirements that will not be satisfied prior to project transition must be identified along with the interim support provisions implemented or expected to be implemented. Coordinate with Coast Guard sustainment organizations to develop a plan for funding and completing any necessary asset retrofit work prior to project termination.

2.2 Configuration Management

The responsibility for CM transfers to the responsible operational or support organization no later than the project termination date. This handoff date should be negotiated between the PM and the applicable operational and support organization and should occur at the point when production and deployment are complete and the project transitions. When this handoff occurs, all CCB records and the status of any pending or in-process changes should be transferred. State the planned handoff date; provide any additional guidance; and identify any remaining configuration control issues.

2.3 Operating Facility Change Orders

In accordance with Operating Facility Change Orders (OFCO) Procedures, COMDTINST M5440.3 (series) the PM will prepare the appropriate Operating Facility Change Orders (OFCO)(s) for disestablishment of the Project Resident Office (PRO)(s) and/or contract administration organization. State the project's plans for executing any required OFCO(s); provide any additional guidance; and identify any remaining operating facility issues.

SECTION 3: CONTRACTING STATUS

3.1 Outstanding Claims or Requests for Equitable Adjustment

List any Outstanding Claims or Requests for Equitable Adjustment and summarize any open issues.

3.2 Records Management

Explain what records management need to be done and by whom.

3.3 Warranty

Discuss any outstanding warranty issues and describe oversight and management of any remaining warranties.

3.4 Outstanding Contracts

Provide status of any outstanding contracts and their expected schedule, cost and closure. Include status of any applicable follow on sustainment contracts.

3.5 Closeout Procedures

Address the procedures for closing the project's contract administration organization and any remaining contracting responsibilities.

SECTION 4: PROJECT PERSONNEL PHASEDOWN PLANNING

4.1 Project Staff

Describe changes in staff assignments and physical space allocations after the project has transitioned to the Operations and Support stage of the Produce/Deploy and Support Phase. The PM will state when dedicated staff, dedicated operational and support staff, and any other dedicated staff can be made available for reprogramming. Additionally, the PM will coordinate personnel transfer and reassignment issues with assistance from Commandant (CG-928) and the Coast Guard Personnel Command.

4.2 Project Resident Office

The PM will describe the planned assignment of PRO and contract administration organization staff responsibilities, recommend organizations to assume these responsibilities, and indicate when the current individuals are scheduled to transfer. The PM will provide anticipated dates for the availability of the project's physical space at the PRO and any other project site. If necessary, the PM will address the reassignment of any pending personnel tasks for project completion.

SECTION 5: REPORTS AND REVIEWS

5.1 Post Implementation Review

Address results of the Post Implementation Review including when it was conducted and by whom.

5.2 Operational Analysis

Address requirements for the Operational Analysis (OA) including when the first OA was/will be conducted and history of any OAs.

Appendices

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22.4 Project Responsibility Transfer Letter (PRTL) Template

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

2100 2nd Street, SW, Stop 7000
Washington, DC 20593-7000
Staff Symbol: CG-VCG
Phone: (202) 475-4400
Fax: (202) 475-4960
Email: Name@uscg.mil

5000

MEMORANDUM

From: *Name*, VADM
VCG/CAE

Reply to: CG-924
Attn of: *FI Last Name*
202-475-xxxx

To: CG-7
CG-4 (or CG-6 for all C4ISR projects)

Subj: PROGRAM RESPONSIBILITY TRANSFER LETTER (PRTL) FOR THE PROJECT
NAME

Ref: (a) Acquisition Decision Memorandum for the *Project Name*
(b) CG Configuration Management Policy, COMDTINST 4130.6A

1. The *Project Name* project has transitioned to sustainment as documented in Reference (a). Full Operating Capability (FOC) was achieved with the final *Asset Nomenclature or Asset Name* delivery on *Date*. All AC&I funding appropriations (\$xxxK) have been expended.
2. In accordance with Reference (b), during sustainment, the *Platform Manager or Title* will control changes to the functional baseline and the *Product Line Manager or Title* will control all changes to the physical baseline. The *Product Line Manager or Title* has also assumed Integrated Logistics Support (ILS) responsibility for the *Asset Nomenclature*.
3. The *Asset Nomenclature* is no longer considered a Major Acquisition Program and a copy of this PRTL will be forwarded to Department of Homeland Security (DHS/APMD) to remove the *Asset Nomenclature* from the DHS Major Acquisition Oversight List.

#

Copy: DHS APMD, CG-01, CG-9, CG-93, CG-924

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23.0 TASK COMMITMENT MEMORANDA

23.1 Purpose

The Task Commitment Memoranda are used to document the level of required support for personnel who are not directly assigned to the Project Manager's staff. Task Commitment Memoranda are to be used for all AC&I billets supporting the project but that are not directly assigned under the Project Manager's supervision.

23.2 Preparation

Section 23.3 provides the basic template for the Task Commitment Memoranda. The content of the memoranda may be adjusted as needed to meet the unique requirements associated with each project.

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23.3 Template

Task Commitment Memorandum			
Task Name:	Project:	Category:	PWBS:
Task Definition:			
Action:		ESWBS:	
Schedule Need Date: _____ Est. Start Date _____ Est. Comp Date: _____ Task Milestones:			
Reporting Requirements:			
Priority:			
Funding by FY:			
Resource Estimate: Manpower:		Other:	
Key Individuals:			
Task Group Leader _____		Task Leader _____	
Attachments:			
Approvals: Project Manager:		Support/Matrix Div. Chief:	
_____ Date		_____ Date	

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PART 3. BRIEFINGS

Briefings are an integral part of the Project Manager's (PM) life and provide a key opportunity for the PM to communicate project issues effectively. The guidance provided in the following section is to be followed to the maximum extent practicable. Deviations are authorized when in the PM's judgment, a deviation is needed to better explain and present key issues.

Slide Labeling Requirements: (for all "acquisition/business sensitive" briefs)

- Cover Page: "This brief contains Acquisition Sensitive material and should not be disclosed or released except as stipulated in FAR 3.104-4."
- Subsequent Pages: "ACQUISITION SENSITIVE MATERIAL -- SEE FAR 3.104-4"

1.0 COAST GUARD ANNUAL REVIEWS AND DHS ANNUAL PORTFOLIO REVIEWS

- a. Coast Guard Annual Reviews. Each project is required to brief senior Coast Guard acquisition leadership at least annually to provide a status of the project.
 - b. DHS Annual Portfolio Reviews. DHS instituted annual Acquisition Portfolio Reviews for each DHS Component or Headquarters (HQ) contingent that owns an acquisition portfolio in order to execute Department-level governance across the entire acquisition portfolio.
- Title Slide. Use the Commandant (CG-9) "brand" slide (as discussed in paragraph 6.0 below).
 - Agenda. A list of the topics presented.
 - Overview. The mission of the project should be clearly described and the acquisition strategy presented. The PM, Contracting Officer, Sponsor and Commandant (CG-6) Asset Manager (if assigned) should be identified. PM and Contracting Officer certifications should be identified. The system assets and capabilities being acquired should be described. The acquisition level and current phase of the acquisition project should be shown, and the status of all discrete segments defined via a Program Structure Chart. The Program Structure Chart (also known as a Star Chart) identifies all of the project's constituent discrete segments and the current status of each discrete segment in the acquisition process. The Program Structure Chart must correspond to the project's APB.

Note: Include a picture or graphic that reflects the project.

- Achievements Since Last Briefing. Highlight significant progress since the last Annual Review Briefing and identify the status of any action items at that time. Indicate date of last briefing and elapsed time between briefings. Achievements should include progress against approved Exit Criteria.
- APB Status. Compare the actual cost, schedule and performance parameters versus the currently approved APB and address how the project is performing towards achieving the cost, schedule and performance parameters contained in the APB. Include the Program Acquisition Unit Cost (PAUC) value. Any anticipated revisions

to the baseline should be discussed. Indicate the current Quarterly Project Report (QPR) for each area.

- Acquisition Plan Status. Provide status and update of AP to reflect the annual validation of the AP required by the FAR.
- Budget and Funding Status. Provide the funding history and future projections for the project including acquisition, construction, and improvement (AC&I) and operating expense (OE) funds. Provide a comparison of the budgeted amounts to the current estimate; identify actual or anticipated funding surplus or shortfall for each fiscal year and its impact on the project. A current status of budgeted funds, obligations, and expenditures should be provided. Funding data needs to reference and be consistent with the Capital Investment Plan (CIP) and approved Future Years Homeland Security Program (FYHSP). Totals should reflect the LCCE.
- Schedule. Provide the planned and actual project schedule with all ADEs and key project events identified. Highlight important events in the next twelve months. Note: Include a graphic showing the schedule.
- Documentation Status. Provide the approval dates and current status for all required documents. Indicate documents under development and focus comments on new documentation being developed as part of current acquisition phase.
- Risk Assessment. Provide a summary assessment of overall programmatic risks for technical, schedule, and cost. Individual risk assessments should focus on the Risk Register and include an explanation of each assessment and ongoing risk mitigation actions. Include a graphic showing the probability and consequence of risk and where on the graph the project stands for performance risk, cost risk and schedule risk. Use the standard set in the Project Annual Review template.
- Contract Status. Identify all funding information for each active contract. Include a status of all undefinitized contract actions, requests for equitable adjustments, claims, and include key contract options dates and amounts. Performance metrics should be shown for major contracts using earned value (EV). Earned value metrics should include cumulative Planned Value (PV), Actual Cost (AC), EV, Cost Variance (CV), Schedule Variance (SV), Budget At Completion (BAC), Estimate At Completion (EAC), Cost Performance Index (CPI), and Schedule Performance Index (SPI). Use the standard set in the Project Annual Review template.
- PoPS. Provide the Probability of Project Success (PoPS) information from the latest quarterly scoring. The PoPS slide should include information as to the PM, certification level, project acquisition level, Total Acquisition Cost (TAC), Life Cycle Cost Estimate (LCCE), # units, and acquisition phase.
- IT Dashboard. For IT projects only, this slide contains information on Exhibit 300 scoring. Information is found at the following Web site: <http://it.usaspending.gov/>.
- Issues/Concerns. Identify and describe each important technical, cost, schedule, or project concern that has surfaced in the project and remains unresolved. Discuss the impact each concern has, or might have, on project execution and future funding.

- **Project Summary.** Provide a top level project summary, highlighting any key issues that may require senior management attention. Address the status of any ongoing external reviews/audits.

Note: PMs are expected to tailor the above format as needed to get their message across to the audience and any specific agenda.

Quarterly Project Report (QPR). The latest approved QPR is included as part of the Project Annual Review briefing package. The QPR will be printed and provided to attendees at the Project Annual Review.

2.0 ACQUISITION DECISION EVENT REVIEWS

ADE reviews are intended to provide the Acquisition Decision Authority (ADA) with an appropriate level of information from which a decision can be reached concerning project progress and subsequent entry into the next acquisition phase. The following paragraphs provide standard formats for the briefs to the ADA. While the formats are 'standard', the PM can deviate where needed in order to adequately present the information needed to support an ADE decision.

2.1 ADE-1 Validate the Need

This brief is given to formally initiate the project with DHS and to gain entry into the Analyze/Select Phase. Sponsor's Representatives should use this format when developing a presentation for approval at ADE-1. Commandant (CG-93) PgMs will support the Sponsor as needed until a Commandant (CG-93) PM is chartered. The brief will be provided to the CG ARB and DHS ARB.

- **Decision Requested.** State the decision(s) requested such as: designation as a DHS Level 1 acquisition; approval of the Project's Strategic Direction and/or Mission Need Statement (MNS); approval of the Capability Development Plan (CDP); approval of the Acquisition Strategy; and authorization to proceed to the Analyze/Select Phase (one slide).
- **Mission Need.** Provide a short Program/Project description. Identify the legislative mandates or operational goals. Address mission deficiency in broad functional terms (one slide).
- **Current Capability.** Explain how current capability is not meeting the mission need. Address mission deficiency in broad functional terms.
- **Planned Capability.** Discuss planned capability in functional terms.
- **Funding Profile.** High level view of project funding received, current funding requirements, and out-year requirements, by fiscal year. Show total acquisition cost estimate and life cycle cost estimate. Identify sources and types of funds (a one slide chart is the preferred layout).
- **Milestone Chart.** High level timeline of major project milestones (with greater detail in this year and next year). Show dates of major activities/events (e.g., Initial Operating Capability (IOC) and decision points (ADEs). (One slide).

- Capability Development Plan. Provide an overview of the CDP with specific focus on the Plan of Action and Milestones (POA&M) for the Alternatives Analysis (AA) that will be performed to identify the preferred alternative.
- Acquisition Strategy. Describe the acquisition strategy (i.e., high-level Statement of Need, Cost, Capability or Performance, and Risk). An Acquisition Strategy should convey the overall purpose and need for the asset or system, how and where it will be used, the overall plan and schedule for the acquisition, competition and contracting considerations, and the overall business and technical management approach.
- Key Issues. Describe the projects key areas of concern (one page).
- Recommended Project Level. Recommend the Acquisition Level for the project (Level 1 or 2).
- Proposed Exit Criteria. Provide the proposed exit criteria for the Analyze/Select Phase (see Section 4.0 for instructions on Exit Criteria).

2.2 ADE-2A/2B Approve the Acquisition; ADE-2B Approve Segment and ADE-3 Approve Production

Project Staffs should use this format when developing presentations for ADE-2A, ADE-2B and ADE-3.

- Decision Requested. State the decision(s) requested such as: approval to enter the next acquisition phase; request reassessment of program designation (one slide). For ADE-2A: Identify the number of LRIP articles to be approved (if applicable).
- Overview. The mission of the project should be clearly described. The PM, Contracting Officer and the Sponsor should be identified. PM and Contracting Officer certifications should be identified. The system assets and capabilities being acquired should be described. The acquisition level and current phase of the acquisition project should be shown.

Note: Include a picture or graphic that reflects the project.

- Entrance Criteria. Provide a summary of documentation required for the decision event and the status of each.
- Achievements. Highlight significant progress. Achievements should include project deliveries and progress against approved Exit Criteria.
- Current Project Status. Discuss where the project stands relative to the Exit Criteria established at the previous CG ARB and DHS ARB review. Describe the status of all project discrete segments via a Program Structure Chart (see Figure A-7).
- Results of Previous Phase Activities. Discuss the results of the previous phase activities including: achievement of exit criteria established at the previous ARB, technical capabilities, technical risk, schedule, project life cycle cost estimate, cost benefit analyses, testing, etc. Include the results of DT&E and OT&E conducted as well as results from the ILA and LRR.
- Acquisition Strategy Goals and Objectives. Address overall project planning, including

logistics support, configuration management, training, and test and evaluation.

- Acquisition Plan (AP) Approval. Address proposed contracting strategy; competition, contract type, and contractor performance measurement.
- Contract Status. Identify all funding information for each active contract. Include a status of all undefinitized contract actions, requests for equitable adjustments, claims, and include key contract options dates and amounts. Performance metrics should be shown for major contracts using earned value (EV). Earned value metrics should include cumulative PV, AC, EV, CV, SV, BAC, EAC, CPI, and SPI. Use the standard set in the Project Annual Review template.
- Acquisition Program Baseline (APB). Identify the key parameters to be included in the baseline for cost, schedule, and performance (if applicable).
- Milestone Chart. High level time line of major project milestones, with greater detail on current and next year. Show dates of major milestones (i.e., IOC) and decision points, such as future ADEs and major contract award decisions (one slide).
- Schedule. Provide the planned and actual project schedule with all ADEs and key project events identified. Highlight important events in the next twelve months. Note: Include a graphic showing the schedule.
- Project Risk. Explain what the project risks are (cost, schedule and technical) and how they are being addressed.
- Budget and Funding Profile. High level view of project funding received, current funding requirements, and out-year requirements, by fiscal year. Show total acquisition cost estimate and life cycle cost estimate. Identify sources and types of funds (a one slide chart is the preferred layout).
- Resource Requirements. Explain the relationship to alternatives and the Future Years Homeland Security Plan (FYHSP), and what is included in the estimate.
- Affordability. Discuss supportability, cost drivers, and major trade-offs.
- Next Acquisition Decision Event. Discuss where the project is going and what events, including testing activities, will occur prior to the next ADE.
- Proposed Exit Criteria. Provide the proposed exit criteria for the next acquisition phase.
- Key Issues. Describe the project's key areas of concern.

Note. If a project contains discrete segments of capability, following ADE-2A/2B for the overall project, each segment will then typically have separate and specific ADE reviews for subsequent ADEs (e.g. an ADE-2B, ADE-2C ADE-3 and ADE-4 review for each individual discrete segment). When briefing a segment, include an introductory slide(s) to describe the entire project and its status, and where that particular segment is within the total project.

2.3 ADE-2C Approval of LRIP

- Decision Requested. Approval to execute (or award) LRIP quantities previously approved at ADE-2A and, if applicable, approval of the specific performance, schedule

and cost APB parameters for each of the project's discrete segments.

- Critical Design Review Results. Provide the results of the CDR. Include Technical Authorities assessments of the CDR.
- Production Readiness Review. Provide the results of the PRR. Include Technical Authorities assessment of design stability and readiness for production.
- Project Schedule. Highlight the remaining key activities and events (e.g., OTRR, ORR, ADE- 3, deliveries). Include IOC and how it is defined.
- Test & Evaluation Overview. Provide an overview and schedule of the planned T&E.
- Programmatic Changes. Highlight any changes that have occurred to the project since ADE-1 (if applicable). Examples would include changes in Total Acquisition Cost, project life cycle cost, schedule, etc.
- Project Risk. Explain what the project risks are (cost, schedule and technical) and how they are being addressed.
- Key Issues. Describe the project's key areas of concern.

2.4 ADE-4 Project Transition

ADE-4 is a Coast Guard unique decision event and intended to provide a clear turn-over between the acquisition project and the sustainment Program Manager before senior Coast Guard acquisition management. The transition brief is the last briefing to be presented by the acquisition project prior to transfer of responsibility for sustained operation and support and termination of the project, as outlined in the approved Project Transition Plan.

- Agenda. A list of the slides (by topic) contained in the briefing presentation.
- Achievements Since Last Annual Briefing. Highlight significant progress since the last Annual Review Briefing and identify the status of any action items from the previous briefing. Indicate date of last briefing and elapsed time since it was presented. Achievements should include progress against approved Exit Criteria (if applicable).
- Funding. Identify the expenditure/obligation status of project funding and for what any remaining funds will be used. Identify whether OE funding is in place or projected to be in place to provide a sustained support capability for the assets/systems that are delivered. Provide effective dates (FY budget) for OE funding. Identify any payments being withheld (amount, reason, and actions in progress), if applicable.
- Logistics Assessment. Address the logistics posture – current and final. *(The Operating Program Manager (Sponsor's Representative) and Support Program Manager(s) should be prepared to assist in briefing the logistics support assessment and answer any questions concerning readiness for logistics support responsibility transfer.)* As a minimum, the following should be addressed:
 - Significant actions accomplished to provide a full logistics support capability for sustained operational use. If a full support capability has not yet been fielded, identify what support capabilities remain to be fielded, status of actions in progress, and when

- each remaining capability will be provided. Identify what (if any) interim support provisions are in place pending complete support capability fielding, and how each interim capability is being funded. If contractor logistics support is to be used for sustained support, identify the status of each required OE funded contract and when each must be (or has been) in place to provide sustained support capability.
- If another LRR has been done or updated during the Produce/Deploy and Support Phase, address the findings.
 - Identify key logistics dates (including Coast Guard Support Date (CGSD)). CGSD is that date when all planned support capabilities for sustained operation and support have been fielded and implemented.
 - Identify the Integrated Logistics Support Plan (ILSP) status. When was (or will) the ILSP update for transfer to the sustained logistics support manager completed. Identify when and to what activity responsibility for chairing the Integrated Logistics Support Management Team (ILSMT) was/will be transferred.
 - Identify funding required for sustained logistics support. Identify whether OE funding has been included within the Coast Guard budget, and any Resource Proposals that are needed or pending approval.
 - Configuration Management. Identify what activity will have overall configuration management responsibility for the asset/system during the operation and support life cycle phase. Identify what activity will be responsible for chairing the Configuration Control Board (CCB), and status of the sustainment CCB Charter. Identify the activity that will be responsible for maintaining and updating the configuration baseline documentation. Identify when the configuration documentation was/will be transferred from the acquisition project to what activity, and the method of this transfer (i.e., electronic, paper, etc.).
 - Contract Status. Identify any contractual actions still pending, outstanding warranty claims, request for equitable adjustment that has not been resolved, etc. Identify when the contract close out is anticipated.
 - Future Action Items. Identify all actions that remain outstanding. Ensure responsibilities are assigned for the actions and completion dates are identified. Include the Post Implementation Review (PIR) and the first Operational Analysis (OA) requirements, when required to be accomplished, and the activity responsible for accomplishment.

3.0 ACQUISITION PHASE EXIT CRITERIA

Exit Criteria are project-specific accomplishments or performance parameters that must be satisfactorily demonstrated before a project can transition to the next acquisition phase. At each ADE, the PM will develop and propose Exit Criteria appropriate to the next acquisition phase. The ADA will normally approve Exit Criteria in the Acquisition Decision Memorandum.

Project-specific Exit Criteria normally track progress in important technical, schedule, or management risk areas. Exit Criteria must be substantially satisfied for the project to proceed into the next acquisition phase.

Exit Criteria typically include the below listed factors
Alignment with DHS Strategic Goals and the President's Management Agenda
Links with acquisition strategy and Acquisition Plan objectives
Required test reports
Achievement of specific project risk reduction tasks or activities
Completion of specific studies
Completion of specific key events/activities

As shown in sample Exit Criteria table below, the Exit Criteria are normally related to and supplement the objectives, required accomplishments, and documents to be produced for the upcoming acquisition phase.

Sample Exit Criteria

Proposed at Project Authorization for Analyze/Select Phase Exit Criteria
Demonstrate initial project affordability
Document feasibility and tradeoff analyses (if applicable)
Demonstrate technology maturity

Proposed at Project Alternative Selection for Obtain Phase Exit Criteria
Satisfactory DT&E
Satisfactory Operational Test and Evaluation (OT&E)
Acceptable interoperability
Acceptable supportability
Validate production quantity
Demonstrate system is affordable throughout the lifecycle
Identify technology refresh strategy

ACRONYMS

AA	Alternatives Analysis
AAS	Affordability Assessment
AC&I	Acquisition Construction and Improvement
AC	Actual Cost
ADA	Acquisition Decision Authority
ADE	Acquisition Decision Event
ADE-0	Acquisition Decision Event 0: Project 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
AEL	Allowance Equipage List
AIS	Automated Information System
ALC	Aviation Logistics Center
A _o	Operational Availability
AP	Acquisition Plan
APB	Acquisition Project Baseline/Acquisition Program Baseline
APL	Allowance Parts List
APMD	Acquisition Program Management Division (within DHS)
APMS	Acquisition Project Management System
APO	Asset Project Office
ARB	Acquisition Review Board
ARP	Acquisition Review Process
ART	Acquisition Review Team (within DHS)

A/S	Analyze Select
AStr	Acquisition Strategy
AT	Acceptance Trial
AT&L	Acquisition Technology and Logistics
AWCB	Acquisition Workforce Certification Board
BAC	Budget At Completion
BUR	Bottoms Up Review
C4IT	Command, Control, Communications, Computers and Information Technology
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
CAD	Cost Analysis Division
CAE	Component Acquisition Executive
CAO	Chief Acquisition Officer
CAQO	Chief Acquisition Officer (DHS)
CANDI	Commercially Available Non-Developmental Item
CBA	Cost-Benefit Analysis
CBNRE	Chemical, Biological, Nuclear, Radiation and High-Yield Explosives
CCA	Clinger Cohen Act
CCB	Configuration Control Board
CDR	Critical Design Review
CEBD	Cost Estimating Baseline Document
CFR	Code of Federal Regulations
CDP	Capability Development Plan
CFO	Chief Financial Officer
CGSD	Coast Guard Support Date
CG ARB	Coast Guard Acquisition Review Board
CICA	Competition in Contracting Act
CIM	Commandant Instruction Manual
CIO	Chief Information Officer
CIP	Capital Investment Plan

CISO	Chief Information Security Officer
CM	Configuration Management
CMP	Configuration Management Plan
COE	Common Operating Environment
COI	Critical Operational Issue
CONOPS	Concept of Operations
CPI	Cost Performance Index
CPIC	Capital Planning & Investment Control
CPO	Chief Procurement Officer
CV	Cost Variance
D-Level	Depot-Level
DAA	Designated Accreditation Authority
DART	DHS Accessibility Requirements Tool
DAU	Defense Acquisition University
DCMA	Defense Contract Management Agency
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
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
DRM	Data Reference Model
DT	Developmental Test
DTP	Developmental Test Plan
DTRR	Developmental Test Readiness Review
DT&E	Developmental Test and Evaluation
DUSM	Deputy Undersecretary for Management (DHS)

EA	Enterprise Architecture
EAB	Enterprise Architecture Board
EAC	Estimate At Completion
EC	Engineering Change
ECP	Engineering Change Proposal
EIT	Electronic and Information Technology
EOA	Early Operational Assessment
EOC	Executive Oversight Council
ES	Executive Summary
EV	Earned Value
EVM	Earned Value Management
EVMS	Earned Value Management System
FAR	Federal Acquisition Regulations
FASA	Federal Acquisition Streamlining Act
FAT	Factory Acceptance Test
FCA	Functional Configuration Audit
FOC	Full Operational Capability
FoS	Family of Systems
FOT&E	Follow-On Test and Evaluation
FY	Fiscal Year
FYHSP	Future Years Homeland Security Program
HCA	Head of Contracting Activity
HFE	Human Factors Engineering
HFEP	Human Factors Engineering Plan
HQ	Headquarters
HSAM	Homeland Security Acquisition Manual
HSI	Human Systems Integration
I-Level	Intermediate-Level
IBR	Integrated Baseline Review

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
IOC	Initial Operational Capability
IOT&E	Initial Operational Test and Evaluation
IPG	Integrated Planning Guidance
IPT	Integrated Product Team
IRR	Integration Readiness Review
ISA	Interconnection Security Agreement
ISSO	Information Systems Security Officer
IT	Information Technology
ITAR	Information Technology Acquisition Review
KPP	Key Performance Parameter
LCC	Life Cycle Cost
LCCE	Life Cycle Cost Estimate
LDM	Logical Data Model
LRIP	Low Rate Initial Production
LRR	Logistics Readiness Review
M&S	Modeling and Simulation
MA	Mission Analysis
MAR	Mission Analysis Report
MAT	Maintenance Augmentation Team
MD	Management Directive (DHS)
MNS	Mission Need Statement
MOA	Memorandum of Agreement
MOE	Measures of Effectiveness

MOP	Measures of Performance
MOU	Memorandum of Understanding
MP	Maintenance Plan
MPR	Monthly Project Report
MPT	Manpower, Personnel and Training
MRA	Manpower Requirements Analysis
MSAM	Major Systems Acquisition Manual
MSG	Maintenance Support Guide
MSO	Maintenance Support Outline
MTBF	Mean Time Between Failure
MTTR	Mean Time to Repair
NEPA	National Environmental Policy Act
NDI	Non-Developmental Item
NOR	Notice of Revision
O&S	Operations and Support
OA	Operational Analysis
O-Level	Operational Level
OCIO	Office of the Chief Information Officer
OCFO	Office of the Chief Financial Officer
OCPO	Office of the Chief Procurement Officer
OE	Operating Expense
OFCO	Operating Facility Change Order
OGA	Other Government Agency
OJT	On-the-Job Training
O&M	Operations and Maintenance
OMB	Office of Management and Budget
ORD	Operational Requirements Document
ORR	Operational Readiness Review
OT	Operational Test

OTA	Operational Test Agent
OT&E	Operational Test and Evaluation
OTRR	Operational Test Readiness Review
OV	Operational View
P/D	Produce/Deploy
PA&E	Program Analysis and Evaluation
PAUC	Program Acquisition Unit Cost
PBL	Performance Based Logistics
PCA	Physical Configuration Audit
PDR	Preliminary Design Review
PEO	Program Executive Officer
PgM	Program Manager
PHS&T	Packaging, Handling, Storage, and Transportation
PII	Personally Identifiable Information
PIR	Post Implementation Reviews
PLCCE	Project Life Cycle Cost Estimate
PM	Project Manager
PMDS	Project Management Data Sheet
PMO	Program Management Office
PMP	Project Management Plan
POC	Point of Contact
POE	Projected Operational Environment
PoPS	Probability of Project Success
PORD	Preliminary Operational Requirements Document
PPBE	Planning, Programming, Budgeting and Execution
PPR	Project Planning Review
PRO	Project Resident Office
PRR	Production Readiness Review
PRTL	Project Responsibility Transfer Letter

PS&T	Performance Support and Training
PSSA	Preliminary Spectrum Supportability Assessment
PSTP	Project SELC Tailoring Plan
PTP	Project Transition Plan
PTR	Project Transition Review
PV	Planned Value
PWBS	Project Work Breakdown Structure
Q	Quarter
QHSR	Quadrennial Homeland Security Review
QPR	Quarterly Project Report
R&D	Research and Development
RAD	Resource Allocation Decision
RAP	Resource Allocation Plan
RDT&E	Research, Development, Test & Evaluation
RFI	Request for Information
RFP	Request For Proposal
RMA	Reliability, Maintainability and Availability
RMP	Risk Management Plan
ROC	Required Operational Capability
ROI	Return on Investment
ROM	Rough Order of Magnitude
RP	Resource Proposal
RS	Revision Summary
RTM	Requirements Traceability Matrix
S2	Deputy Secretary of Homeland Security
SAR	Search and Rescue
SCN	Specification Change Notice
SDLC	System Development Life Cycle
SDR	System Definition Review

SE	Systems Engineering
SELC	System Engineering Life Cycle
SER	Solutions Engineering Review
SFLC	Surface Forces Logistics Center
SLA	Security Level Agreements
SME	Subject Matter Expert
SOP	Standard Operating Procedures
SoS	System of Systems
SOW	Statement of Work
SOW/PS	Statement of Work/Performance Specification
SPI	Schedule Performance Index
SPR	Study Plan Review
SPRDE	System Planning, Research, Development and Engineering
SRR	System Requirements Review
SRTM	Security Requirements Traceability Matrix
SSMP	System Safety Management Plan
SS/OH	System Safety & Occupational Health
SSP	System Security Plan
ST&E	Security Test and Evaluation
SV	Schedule Variance
TA	Technical Authority
TAC	Total Acquisition Cost
T&E	Test and Evaluation
TEMP	Test and Evaluation Master Plan
TMOT	Test Management Oversight Team
TRM	Technical Reference Model
USM	Under Secretary for Management (DHS)
VV&A	Verification, Validation and Accreditation
WBS	Work Breakdown Structure

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COMDTINST 5000.10B LIST OF CHANGES

Significant Changes			
	Chapter/Section	Description of Change	Reason for Change
	Chapter 1		
1	Para 4, Page 1-5	Adds the Chief of Staff (CG-01) Mission Support and the Deputy Commandant for Operations to the Coast Guard Acquisition Team. Figure 1 added to depict current Coast Guard Acquisition Review organization.	Updated to reflect the CG reorganization. Figure 1 includes CG ARB (replaces CGARC) and the EOC.
2	Para 5, Page 1-6	Significant staffing change: Identifies Project Manager certification requirements and eliminates the option to meet certification requirements within 12 months.	Reflects DHS Guidance
3	Para 6, Page 1-7	Added expanded listing of PM responsibilities and includes coordination with Asset Project Office, where appropriate.	Accuracy and completeness
4	Para 7, Page 1-9	Relocated Contracting Officer Authority and Responsibilities information from Chapter 2	Better fit to include Contracting Officer with Project Team
5	Para 8, Page 1-9	Included expanded listing of Program Manager Authority and Responsibilities	Accuracy and completeness
6	Para 9, Page 1-12	Included expanded listing of PEO duties and responsibilities	Accuracy and completeness
7	Para 10, Page 1-13	Inserted new paragraph listing roles and responsibilities for Sponsor and Sponsor’s Representative	Completeness
8	Para 11, Page 1-14	Expanded section on Technical Authorities and added references to charters	Completeness
9	Para 11, Page 1-15	Add “Commandant (CG-2) is designated as the Technical Authority for the design, development, deployment, security, protection, and maintenance of Ships Signals Exploitation Equipment, Carry-On Program (COP) systems, intelligence sensor systems, Sensitive Compartmented Information (SCI) networks, and SCI communications. COMDTINST 3880.1 (in draft) applies.	Completeness
10	Para 12, Page 1-15	Inserted new paragraph listing roles and responsibilities of Executive Oversight Council (EOC)	Completeness

Significant Changes			
	Chapter/Section	Description of Change	Reason for Change
11	Para 13, Page 1-16	Inserted new paragraph listing roles and responsibilities of Component Acquisition Executive (CAE)	Completeness
	Chapter 2		
12	Table 2, Page 2-3	Table 2 added to list CG ARB Chair for each acquisition level	Completeness and clarity
13	Para 1c, Page 2-3 through 2-6	Added ADE-2C as an LRIP decision review. Completion of CDR to support an LRIP decision is now aligned with ADE-2C vice ADE-2B. Graphics throughout acquisition phases have been modified to include ADE-2C.	Reflects change in DHS Directive 102-01 Rev1.
14	Para 1c1, Page 2-4	Project Identification Phase (line 6), add “Commandant (CG-2)” to list of Technical Authorities.	Updated to reflect new organizational roles.
15	Para 2d, Page 2-10	Table 3 assigns MAR preparation to DCO-81 or Program/Mission Manager and Review to DCG-5 and Sponsor with DCO approval. Also assigns Preliminary Affordability Assessment responsibility to CG-82 for approval.	Updated to reflect new organizational roles.
16	Para 3a, Page 2-12	Adds requirement to provide a high-level acquisition strategy brief to CG-9 prior to ADE-1. This new requirement allows early engagement by leadership and helps align resources with strategy.	Best practice. The intent of this change is to provide an early review of possible acquisition strategies the project has available to senior leadership and then provide an opportunity to realign the project’s budget to support the strategy of choice. Alignment with HSAM
17	Para 3a, Page 2-12	Adds preparation of Project Management Data Sheet (PMDS) in accordance with Financial Resource Management Manual (FRMM), if information is available	Compliance with FRMM
18	Table 4, Page 2-14	Concept of Operations Approval identified as “Sponsor”	Was DCO - align with Sponsor roles and responsibilities
19	Para 3e, Page 2-14	Expanded CG ARB direction at ADE-1 to assign a Project Manager and <u>core project team</u> upon approving the supporting acquisition	Change aligns with Project Management Staff Construct originally identified in Blueprint for Acquisition Reform (Also noted in CG ARA- CG

Significant Changes			
	Chapter/Section	Description of Change	Reason for Change
			FY-11 Authorization Bill)
20	Table 4 and Para 3e, Page 2-14	Added a requirement for an Acquisition Strategy at ADE-1.	Best practice.
21	Para 4a, Page 2-15	Adds discussion of Acquisition Strategy and its evolution into the Acquisition Plan. Added a paragraph on the Alternative Analysis requirement during the Analyze/Select Phase. Deleted discussions of LRIP and ADE-2A and 2B	AStr discussion added for alignment with HASM, Alternative Analysis information added for completeness. Discussions of LRIP and ADE-2A and 2B deleted as redundant to later sections.
22	Table 5, Page 2-18	Concept of Operations Approval changed to Sponsor to align with Sponsor roles and responsibilities. ILSP approval to CG-01. TEMP approval to DHS DOT&E. Task column refined to more clearly identify required action.	ILSP approval delegated to CG-01 by CAE. TEMP approval changed to reflect DHS Directive 102-01-001
23	Para 4b, Page 2-18, 2-19, Para 5b, Page 2-24	Included discussion throughout Chapter 2 and Project Management Activity in Analyze/Select and Obtain Phases to develop Human Systems Integration Plan (with CG-1B3 Assistance)	Completeness – HSI Plan to include many of the technical detailed requirements for HSI
24	Para 4e, Page 2-20	Revamped the explanation of the ADE-2A/2B paragraph to provide better clarity	Clarity
25	Page 2-20, 2-27	Deleted the IT documents from the Phase Documentation Tables and moved them to the SELC Tailoring Plan.	The IT documents previously listed in the Phase Documentation Table better fit in the SELC Tailoring Plan.
26	Para 5a, Page 2-21	Expanded explanation of ADE-2C to include prerequisites of CDR and PRR and suggests combined ECO briefing of CDR, PRR and ADE-2C preps for efficiency.	Best practice and efficiency
27	Para 5b, Page 2-21	Adds a requirement for the sponsor to develop a Deployment Plan during the Obtain Phase	Supports Sponsor’s Rep planning for the Deployment phase
28	Para 5b, Page 2-24	In the T&E Activities Table, changed Test Readiness Review to Operational Test Readiness Review	Modified to reflect latest DHS guidance and alignment with CG Pub 7-7
29	Table 6, Page 2-	Task column refined to more clearly identify required action.	Clarity

Significant Changes			
	Chapter/Section	Description of Change	Reason for Change
	25		
30	Para 6, Page 2-27, 2-30	In the discussion about ADE-4 Project Transition Review, added language about the requirement for CG-924 to draft a Project Responsibilities Transfer Letter (PRTL) in support of and to document decision to transfer responsibility for the assets from the acquisition to sustainment communities. Change/addition also reflected in table 7 on page 2-30.	To have clear documentation and acknowledgement of transfer of responsibilities for the project assets.
31	Para 6, Page 2-28	Clarified and expanded explanation on CG unique ADE-4 and Support phase activities	Accuracy and better clarity
32	Table 7, Page 2-30	Task column refined to more clearly identify required action.	Clarity
33	End of Chapter 2, Page 2-32	Deleted Modeling and Simulation figure, moved discussion to Chapter 3 with SELC information. Added paragraph and figure to summarize Acquisition Lifecycle	Better alignment of topic, completeness
	Chapter 3		
34	Para 2, Page 3-2	Updated Figure 10 to include ADE-2C and expanded discussion of SELC tailoring. Provides references for PM use.	Clarity and accuracy
35	Para 3, pages 3-3 through 3-5	Added a new Paragraph 3 SELC REVIEWS, to better address SELC Review background and process. Included two new figures, Figure 6 to identify the SELC Stages, and Figure 7 to provide the approval authority for each stage. Figure 8 includes listing of SELC stage activities.	Provide better guidance to projects on the management of stage reviews.
36	Para 4, Page 3-7	Added a new Paragraph 4, PROJECT SELC TAILORING PLAN to provide better guidance.	Completeness and clarity
37	Para 5, page 3-7	Added a new Paragraph 5 to highlight the support available for the Coast Guard RDT&E Program	Completeness
38	Para 6, page 3-8	Relocated Modeling and Simulation to precede Technology Demonstrator descriptions	Alignment of discussion and flow
39	Para 7, page 3-9	Line 5, chg "The RDT&E will assist in identifying the most appropriate technology demonstrators that fit the need." to read "The RDT&E Program will assist in analysis of available	Completeness and clarity. RDT&E is resource for assistance.

Significant Changes			
	Chapter/Section	Description of Change	Reason for Change
		technology and competitive evaluation of demonstrators."	
40	Para 7, Page 3-10	Added new Paragraph 7 to define and standardize use of Technology Demonstrators as defined in draft DHS Directive 102-01-001 Rev1 tied to the appropriate acquisition phase	Consistency and alignment with DHS 102-01-001 Rev 1 (draft)
	Chapter 4		
41	Figure 14, Page 4-1	Figure 9 modified to include Post Implementation Review	Completeness
42	Para 1, Page 4-3	Added paragraph bullet on Post Implementation Review	Completeness
43	Para 2, Page 4-4	Expanded discussion of non-materiel solutions and modified DOTMLPF to DOTMLPF+R/G/S for consistency with DHS Directive 102-01 guidance. (DOTMLPF+R/G/S is Doctrine, Organization, Training, Materiel, Leadership, Personnel, and Facilities plus Regulations, Grants and Standards)	Accuracy and alignment with DHS
44	Para 2, Page 4-4	Inserted discussion of DHS Strategic Plans and Quadrennial Homeland Security Review	Align DHS and Coast Guard process
45	Para 2, Page 4-6	VCG (as CAE) inserted to initiate RAP, MNS, CONOPS and CDP as part of initiating an acquisition project at ADE-0.	Update to align with CAE responsibilities
46	Para 4, Page 4-7	MNS paragraph includes linkage to CG Pub 7-7 for more information. Linkage to CG Pub 7-7 included for all requirements documents.	Alignment with Requirements Development Pub 7-7
47	Para 6, Page 4-9	Refines information and guidance on PORD requirements priority to support Trade-Off Analysis.	Better explain the concept of trade-offs and its applicability in the requirements development process.
49	Para 6, Page 4-9	Critical Operational Issues refinement now included in TEMP development to support better coordination during development with Operational Test Agent	Better fit with TEMP – DHS and CG-771 concurred.
49	Para 6, Page 4-10	Operational Requirements Document: Adds the following, "...represents a formal agreement between the Project Manager and the Sponsor where the PM is expected to build an asset or system that will satisfy all requirements in the ORD"	Clarify the intent of the term "contract".
50	Para 6, Page 4-11	Clarifies the KPP discussion, states normal limit of eight KPPs to	To clarify the requirement for KPPs

Significant Changes			
	Chapter/Section	Description of Change	Reason for Change
		avoid excessive key requirements and adds guidance for addressing Information Systems Interoperability in the ORD. Specifies the requirement for interoperability KPP if interoperability with other systems is a critical factor in mission accomplishment.	and their selection.
51	Para 6, Page 4-12 Appendix A, page A-78	Added note limiting number of objectives in an ORD to five unless there is agreement for more between Sponsor and CG-9.	Keeping the number of objectives to a manageable and executable number is often overlooked. Each objective level must be funded. This change includes a limit to the number of objectives without prior approval.
52	Para 6, page 4-13	Add “Commandant (CG-2) (SSEE, COP systems, intelligence sensors, SCI networks, SCI communications)	Clarity of responsibilities and completeness of information.
53	Para 4, page 4-13	Included that ORD IPT will receive training from Commandant CG-771 and provides reference to USCG Pub 7-7 for further guidance on Requirements development	Clarity of responsibilities and completeness of information. Alignment with USCG Pub 7-7
	Chapter 5		
54	Para 2 (AStr & AP), Page 5-2	Paragraph 2, ACQUISITION STRATEGY/ACQUISITION PLAN has been re-written to include a requirement for a written Acquisition Strategy (AStr) early in the acquisitions process. An Acquisition Strategy is now required at ADE-1. The Acquisition Strategy evolves into an Acquisition Plan for ADE-2A/2B.	Align with HSAM
55	Para 3 (HSI), Page 5-3, 5-4	Added new paragraph on Human System Integration and provides background on seven factors of HSI Planning	Completeness
56	Para 4 (AA), Page 5-5	Expanded information on Alternatives Analysis to include improved definition of process and better definition of independent party to conduct AA. RDT&E Program may conduct analysis.	Completeness
57	Para 5 (LCCE), Page 5-7	Expanded and clarified discussion on developing a Life Cycle Cost Estimate including development of the Project Life Cycle Cost Estimate.	Improve clarity and align with DHS guidance
58	Para 6 (APB), Page 5-9	Updated APB Breach process – new template for APB Breach Memorandum and Remediation Plan provided in Appendix A	Improve process and align with latest DHS guidance

Significant Changes			
	Chapter/Section	Description of Change	Reason for Change
59	Para 7 (PMP), Page 5-11	Requires PM to update PMP annually	Best Practice
60	Para 8 (Source Selection), Page 5-12	Includes the comment that Requests for Proposals (RFPs) for the primary element of the project are not to be released unless the Operational Requirements Document is approved. A waiver has to be approved by CG-9 to release the RFP earlier. Includes new information on Source Selection Planning with additional references provided for guidance.	Best practice Congressional Guidance
61	Para 9 (RMP), Page 5-13	Provides expanded discussion of Risk Management Roles and Responsibilities.	Best Practice and greater clarity
62	Para 10 (TEMP), Page 5-15, 5-16	Updated Paragraph 10 to align with DHS directive 026-02 on Test and Evaluation (dtd 22 May 2009). Requires DHS approval of the Operational Test Agent (OTA). Establishes CG-926 role in coordinating recommendation and approval of the OTA with DHS for approval. Included discussion of Critical Operational Issues (COIs)	Compliance with DHS Directive 026-06.
63	Para 10, Page 5-17	Inserted responsibility listings for Operational Test Agent and DOT&E.	Align with DHS Directive 026-06.
64	Para 11 (ILSP), Page 5-16 through 5-20	Updated the discussion portion of paragraph 10 to align with DHS 102. Includes a requirement for projects to budget for the ILA and LRR. Provides new guidance for ILA and LRR.	Alignment with DHS Directive 102-01-001, improved clarity, alignment with CI 4081.3 (series) and CI 4081.19 (series)
65	Para 12,(CMP) Page 5-20	Modified paragraph/section in Configuration Management Plan to reflect inclusion of Acquisition Directorate Policy Statement #1 on Program and Project Cost Management. Responsibilities added for CG-93 and EOC	Update to reflect cost management in SOP #1 CMP section updated with CG 44 input and to align with CI 4130.6 (series)
66	Para 13 (PSTP), Page 5-23	Expanded discussion of process, includes discussion of NEPA and discussion of responsibilities for Asset Manager.	Improve clarity of process
67	Para 14, (DP) Page 5-24	Added information to support requirement for DP for LRIP articles.	Improve clarity of process
	Chapter 6		

Significant Changes			
	Chapter/Section	Description of Change	Reason for Change
68	Programming Paragraph, Page 6-2	Expanded discussion of DHS fiscal guidance.	Process update
69	Execution Paragraph, Page 6-3	Included requirement for Program Management Data Sheets to report asset delivery, etc.	Process update and completeness
70	Table 6-1, Page 6-5	Updates OMB Exhibit 300 table. Adjusted table to add ADE-2C “Approve LRIP” column and ADE4 column. Maps sources of project information to Exhibit 300 information requirements.	Clarity and currency
71	Para 4, Page 6-6	DHS Acquisition Review Process updated with latest process information	Clarity and currency
72	Previous Chapter 7 C4&IT	Deleted Chapter 7. Included section in Chapter 5 as part of Project SELC Tailoring Plan. Added requirement for an Asset Manager to be assigned to each C4IT projects (or project that has been determined to have a significant C4IT element). The Asset Manager is the assist the PM in planning and executing the C4IT requirements and to ensure PMs are connected to the appropriate functional experts within CG-6. The roles and responsibilities of the Asset Manager are included. The Asset Manager is to be designated in writing by CG-6 (or designee) within 3 months of ADE-1. Inserted in Chapter 3 a requirement to refer to SDLC process to tailor the SELC process for C4&IT related projects or those major projects with significant C4&IT content. SELC process is required, but can include much of SDLC process to support C4&IT specific needs.	Best practice. After removal of long list of references in Chapter 7, there was little substance that would not be captured in PSTP.
	New Chapter 7 Reports and Reviews		
73	Para 2 Reports, Page 7-1, 7-2	Deleted discussion on weekly reports and added short discussion of Monthly Project Report. Expands explanation and detail of QPR.	Currency

Significant Changes			
	Chapter/Section	Description of Change	Reason for Change
		Adds POPS report description and purpose. Deletes Operational Analysis report. Adds Quarterly Acquisition Report to Congress.	
74	Para 3a Reviews, Page 7-4, 7-5	Describes CG ARB and EOC membership and responsibilities.	Update to reflect the reorganization.
75	Table 12, Page 7.5	Add “CG-2” as EOC member	Clarity of responsibilities and completeness of information.
76	Para 3b DHS Reviews Page 7-7	Updated DHS review section and provides expanded explanation of process	Align to DHS Directive 102-01 Rev 1, currency
77	Para 4, Page 7-8	Records Management paragraph updated	Currency
	MSAM Handbook		
	Part 1, Para 1.1 Page A-9, A-10	Separated DHS, Coast Guard approval and those items that did not need specific or formal CG approval	Clarity
78	Fig A-1, Page A-12	Add “X” for CG-21/22/25/26 for TEMP, ILSP, & DT Plan. Add additional footnote that reads “Provide if project involves an intelligence system/capability.” Deleted OT Plan from Concurrent Clearance matrix – although developed in cooperation with sponsor and TMOT, the OT plan is developed by independent OTA and approved by DHS DOT&E.	Clarity of responsibilities and completeness of information.
79	Part 1, Para 1.2 Page A-10 through A-18	Updated Part 1: Concurrent Clearance explanation; added a concurrent clearance process flow diagram; updated the concurrent clearance matrix table that identifies the offices that are to receive copies of the documents for review; added a requirement for the originating office to retain a copy of the approved document. Highlighted on signature sheets where a concurrent signature process would be appropriate to streamline final approval process.	To clarify the concurrent clearance process.
80	Part 2, Entire Section	Modified Templates and instructions to allow concurrent signature routing when appropriate. Concurrent routing indicated by light grey shading of signature blocks in each template.	Improvement in routing process to reduce delays
81	MAR Template,	Updated signatures to reflect new organization and DCO approval	Currency

Significant Changes			
	Chapter/Section	Description of Change	Reason for Change
	Page A-26	of MAR	
82	MNS, CONOPS, ORD Page A-34, A-44, A-80, A-83	Added a requirement for a relational database to be initiated at the MNS and to be continued throughout the development of the CONOPS and ORD to provide clear traceability of requirements. Added the same statement in the CONOPS and ORD sections.	Improve development and management of requirements.
83	MNS Template, Page A-36	MNS Signatures expanded to reflect new organization and to align with DHS Directive 102-01	Currency and accuracy of signature process.
84	CONOPS Template, Page A-46	Added CG-1 signature as TA for Human Resources Add “Assistant Commandant for Intelligence and Criminal Investigations (CG-2)” signature	Completeness in reflecting all technical authorities
85	CONOPS Template, Page A-57	Expanded Logistics Elements to match the thirteen provided in DHS Directive 102-01-001	Alignment with DHS Directive 102-01-001
86	CDP Template, Page A-64	Inserted explanation that CDP serves as the planning document and should indicate level of documentation for the Solution Engineering Stage until the PSTP is developed in the Planning Stage of SELC.	Alignment with draft DHS SELC guidance; improved clarity on application of PSTP.
87	AStr/AP, Page A-74 through A-76	Changes reflect new HSAM guidance and approval authorities. Establishes Acquisition Strategy for major project at ADE-1 evolving to Acquisition Plan for ADE-2. Included requirement for an Acquisition Strategy Brief 4-6 months prior to ADE-1 for CG leadership and presentation at ADE-1.	HSAM guidance Best practice
88	ORD Template, Page A-81	Added a note to limit objectives in the ORD to five unless more are approved by CG-9 and sponsor.	Best Practice. Objectives drive total cost and should be limited in number unless there is an approved need for more.
89	ORD IPT, Page A-83	Add “Commandant (CG-2) (SSEE, COP systems, intelligence sensors, SCI networks, SCI communications)”	Completeness in reflecting all technical authorities
90	ORD Template, Page A-88	Add “Assistant Commandant for Intelligence and Criminal Investigations (CG-2)”	Completeness and assignment of TA to CG-2
91	ORD Template, page A-88	Shifted requirement for refinement of COI from ORD to TEMP per discussions with CG-771 and DHS. COI development better	Process improvement

Significant Changes			
	Chapter/Section	Description of Change	Reason for Change
	through A-98	aligned to TEMP development and OTA involvement. Updated Suitability Requirements.	
92	Para 3.2, ORD Page A-95	Added a requirement for an interoperability KPP if interoperability with other systems or agencies is a critical factor in mission accomplishment.	Best practice.
93	AA Study Plan Template, Page A-102	Inserted template for AA Study Plan Signature page	Improved guidance and best practice
94	Project Life Cycle Cost Estimate, Page A-114	Updated guidance for PLCCE development	Alignment with DHS Directive 102-01-001 and update on GAO Cost Estimating Guide
95	Affordability Assessment, Pages A-118 through A-123	Updated Affordability Assessment content and indicated review by Commandant (CG-928) and Commandant (CG-82). Commandant (CG-82) will approve the Affordability Assessment via a cover memorandum.	Provide improved coordination and establish common assumptions of affordability between CG-928, CG-82 and Project Office, PEO and CAO. Comply with DHS Directive 102-01
96	APB Page A-124	Included guidance if multiple segments are included in the acquisition. Also provided direction to PM to follow CAO Policy Statement #1 on Program and Project Cost Management for project trade-offs, changes and modifications.	
97	APB Signature Page Template, Page A-128	Chg “Sponsor (CG-4, 6, or 7)” to read “Sponsor (CG-Y)”	Consistency throughout document, also allows for CG-2 sponsorship.
98	APB Signature Page Template, Page A-128	Added CG-8 Signature as TA for resources	Inclusion of applicable TA review
99	APB Breach Memorandum, Pages A-138 through A-141	Added APB Breach Memorandum and Remediation Plan Templates	Improved guidance and process, consistency

Significant Changes			
	Chapter/Section	Description of Change	Reason for Change
100	PMP Template, Pages A-142 through A-152	Deleted CG-82 signature from PMP signature page. PMP Template para 1.1: Adds requirement to address project critical path, assumptions and risks. PMP Template para 2.2.1: Adds a requirement for the PM to develop and document their plan to acquire and/or train necessary personnel with appropriate acquisition skills. Para 2.2.2 expands description of resource needs. Para 3.2 Added requirement for annual update of PMP PMP Template Section 5(A): Changes schedule reference from Project Master Schedule to Integrated Master Schedule. PMP Template Section 5(C): Adds description of Work Breakdown Structure (WBS).	Not needed. PMP is based on APB values that were reviewed by CG-82. Best practice
101	Section 4 Page A-167	Risk Management Approach clarified and updated. Added paragraph on risk mitigation. Updated risk tracking and reporting information	Clarification and Best Practice
102	TEMP Pages A-171, A-172	Adds requirement for CG-926 working with PM to recommend an Operational Test Authority (OTA) to DHS DOT&E for approval. Clarifies resources required to execute the operational tests come from the project budget. Budgeting for the resources is the responsibility of the PM.	
103	TEMP Pages A-172 through A-183	Includes explanation and requirement for Critical Operational Issues (COI). Expands and clarifies role of OTA. Expands on TEMP purpose and explanation of EOA and OA. Identifies DHS Director, Operational Test and Evaluation Division (DOT&E) as approval authority. Specifies development test and evaluation plans will be reviewed by DHS (TSD). Adds DHS DOT&E will write a Letter of Assessment of Operational Test and Evaluation (OT&E) reports, as appropriate. (This applies to all OT&E)	DHS Directive 026-06 requirement Best practice

Significant Changes			
	Chapter/Section	Description of Change	Reason for Change
		<p>Updates the review and approval authorities for test plans. Establishes the Program Managers as approval authority for DT Plans. Elevates approval of Initial Operational Test and Evaluation Plans to DHS DOT&E. Explains Test Readiness Reviews and provides guidance Added specific requirements in the conduct of Operational Test Readiness Reviews. TEMP Template: Expands information to be covered in background. Adds, "Provide a comprehensive discussion of the test program that clearly presents the plan for testing events, indicating the reason for the test, the entry and exit assumptions, criteria, and the desired results. Clearly provide discussion of any risk mitigation expectations anticipated from the test events." TEMP Template para 2.1: Adds guidance on information to be included in Integrated Master Schedule. Figure A-5 updated.</p>	
104	ILSP Review, Para 15.3, Page A-191	Add "CG-26 Office of Intelligence, Surveillance, and Reconnaissance Systems and Technology (as applicable)"	Completeness
105	ILSP Template, Page A-194	Add "Assistant Commandant for Intelligence and Criminal Investigations (CG-2)" as Endorser.	Includes all Tech Authorities
106	ILSP Template Page A-199 through A-202	<p>Provided expanded instruction on items to be included in ILS Schedule Expanded discussion of Contracting for Supportability Examples provided for items of concern during disposal</p>	Improved clarity
107	ILSP Template, Page A-211	Updated ESOH requirements	Align with latest guidance
108	ILA, Page A-218	Revised the ILA section to reflect CI 4081.19 guidance	Update the assessment guidance.
109	LRR Page A-220	Revised the LRR section to reflect updated CI 4081.3 guidance	Update the LRR guidance
110	Para 18.3 CMP Template, Pages	Example content provided for Purpose and Scope. Training considerations included. Expanded discussion of Configuration	Improve clarity with examples

Significant Changes			
	Chapter/Section	Description of Change	Reason for Change
	A-228 through A-233	Control and provided examples. Aligned with CI 4130.6 (series)	
111	Para 22.2 and 22.4, Page A-287 and A-297	In the discussion about developing the Project Transition Plan (PTP) in handbook, added template and associated language concerning the CG-924 drafted Project Responsibilities Transfer Letter (PRTL) in support of the ADE-4. This documents the decision to transfer responsibility for the assets from the acquisition to sustainment communities.	To have clear documentation and acknowledgement of transfer of responsibilities for the project assets.
112	Para 19.3 Project SELC Tailoring Plan Template, Pages A-242 through A-268	Expanded explanation of content in Project Overview. Expanded SELC Table 2, Project Stages and SELC Reviews to include technical authority involvement. Inserted SELC Tables 3 through 22	Better clarity and alignment with latest draft DHS SELC guidance
113	Part 3 Briefings Page A-304 through A-307	Moved Annual Review and DHS Annual Portfolio Review into Briefing Section. Added POPs and IT Dashboard information to Annual brief format	Annual Reviews for Completeness