Major Systems Acquisition Manual (MSAM)

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COMDTINST M5000.10

Nov 29 2006

COMMANDANT INSTRUCTION MANUAL 5000.10

Subj: MAJOR SYSTEMS ACQUISITION MANUAL

Ref: (a) Investment Review Process, Department of Homeland Security Management Directive #1400 (Series)

1. <u>PURPOSE</u>. To establish procedures and provide guidance for the implementation of the Department of Homeland Security Investment Review Process in reference (a).

2. <u>ACTION</u>. Area and district commanders, commanders of maintenance and logistics commands, commanding officers of Headquarters units, assistant commandants for directorates, Judge Advocate General, and special staff offices at Headquarters shall ensure compliance with the provisions of this Manual. Internet Release Authorized.

3. <u>DIRECTIVES AFFECTED</u>. The Major Systems Acquisition Manual, COMDTINST M4150.2F is cancelled.

4. <u>COAST GUARD MAJOR SYSTEMS ACQUISITION MANAGEMENT</u>. This Major Systems Acquisition Manual (MSAM) is a guide for major systems acquisition projects. Procedures and guidance are provided for applying a uniform approach to acquisition planning and project management from mission analysis and requirements generation through design, development, production and deployment.

5. <u>ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS</u>. Environmental considerations were examined in the development of this directive and have been determined to be not applicable.

6. <u>WAIVERS</u>. Requests for exceptions to this Manual shall be submitted through the Coast Guard Acquisition Review Council (CGARC) Executive Secretary, Commandant (G-A-2). Requests shall contain sufficient detail to clearly explain the basis of the request, procedures to be waived, and the recommended alternative action.

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7. <u>RESPONSIBILITY</u>. This Manual is under continual review and will be updated as necessary.   Recommendations for improvement or corrections shall be submitted directly to Commandant (G-A-2).

8. <u>FORMS/REPORTS</u>. Chapter 6, Reports and Reviews, of this manual addresses the knowledge-based management processes for keeping senior management informed of the progress being made on major systems acquisition projects. All acquisition documents, plans, and briefing templates are provided in Appendix A of this manual.

                                      J.P. CURRIER /s/
                                      Assistant Commandant for Acquisitions

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Chapter 1: Introduction

1.   COAST GUARD ACQUISITION DIRECTORATE

The Coast Guard Acquisition Directorate (G-A) was established in January 1986. The
Acquisition Directorate was formed to obtain capable, supportable, affordable, and
sustainable systems, products, and services. In support of this objective, the Assistant
Commandant for Acquisitions has defined the Directorate's Vision, Mission, and Guiding
Principles as follows:

Vision

The Coast Guard Acquisition Directorate will be the model of acquisition excellence. We will be
recognized for innovation, sound business practices, and sustained technical excellence.   We will
provide the best value to our customers the first time, every time!

Mission

We will deliver systems, products, and services that provide our customers with the best
means to accomplish their missions in service of our Nation as the lead federal agency for
maritime homeland security.

Guiding Principles

WORKFORCE – We will develop and maintain
a certified acquisition workforce by providing
the training, resources and opportunities
necessary to help our people succeed and
maximize their individual potential.

INTEGRITY – We will conduct our business
practices in accordance with acquisition
regulations and the highest standards of
ethics, integrity and professionalism.

EXCELLENCE - We will dedicate ourselves to
technical excellence, supportability, cost
consciousness, quality, innovation, and
continuous improvement.

EMPOWERMENT - We will provide
opportunities for our personnel to develop and
use their leadership and decision making
skills at all levels of the organization.

CUSTOMER FOCUS – We will provide the
highest level of customer service possible,
making it easy for our customers to work with
us, anticipating and responding promptly to
their needs.

TEAMWORK – We will partner with our
customers, industry and each other, leading
the way to open and productive
communications.

LESSONS LEARNED – We will learn from our
mistakes, and apply the collective knowledge,
experience and abilities of our workforce to
improve the way we do business.

BUSINESS PRACTICES – We will standardize
and continuously improve our core business
processes to increase their effectiveness.

a. Major Systems Acquisition Manual Objectives

Lack of acquisition guidance is a major concern for government organizations involved in the acquisition and sustainment of major systems. At the same time, system complexity and the software's contribution to the overall system's functionality have risen to unprecedented levels. Coast Guard major systems will be acquired using a disciplined project management approach and structured methodology. The processes and procedures detailed in this Major Systems Acquisition Manual (MSAM) and MSAM Handbook, Appendix A will be employed from mission analysis and requirements generation through design, development, production and deployment.

The goal of the MSAM is to serve as a point of departure for Project Managers (PMs) and their staffs to help plan, coordinate, and execute major systems acquisition projects.

Objectives
Reduce acquisition cycle time to field useable, affordable, sustainable, and technically mature increments in capability
Manage investment projects using a systems engineering approach that optimizes total system performance and minimizes total ownership costs
Develop cost estimates that document realistic total ownership costs with sufficient accuracy and rigor to enhance our credibility with the Department, Congress and the American taxpayer
Develop major systems acquisition processes and procedures that are flexible, responsive, and allow Project Managers to exercise innovation and creativity to deliver systems, products, and services to our customers in a timely manner

b. Acquisition Knowledge

Several websites provide up-to-date acquisition information useful to the acquisition workforce. The G-A CG Central website has links to major acquisition resources and information including:

- Department of Defense (DoD) Acquisition, Technology and Logistics (AT&L) Knowledge Sharing System (http://akss.dau.mil)

- DoD Acquisition Community Connection (http://acc.dau.mil)

- Defense Acquisition Guidebook (http://akss.dau.mil/dag)

- Defense Acquisition University (DAU) Program Manager's Tool Kit (www.dau.mil/pubs/misc/toolkit.asp)

The above websites offer access to acquisition resources that provide the latest available acquisition knowledge, which can save time and increase productivity.

G-A has also included on its G-A-2 CG Central web site a repository for sample plans that have been used by past projects for the review and use as examples for future projects.

2. ACQUISITION WORKFORCE TRAINING AND CERTIFICATION

The professionalism of the acquisition workforce is a major priority for the Acquisition Directorate. Members of the Coast Guard acquisition workforce include:

- 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 acquisitions),

- Individuals who manage the process after business arrangements have been made to ensure that the government's needs are met (e.g., 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., project council, training, finance, or other subject matter experts), and

- Individuals who directly manage those involved in any of the above activities.

An Acquisition Workforce Certification Board (AWCB) has been established to certify that individuals 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:

- Business, Cost Estimating and Financial

- Life Cycle Logistics

- Information Technology

- Production, Quality and Manufacturing

- Systems Engineering - Systems Planning, Research, Development and Engineering

- Test and Evaluation

The Acquisition Directorate's Standard Operating Procedure (SOP) #3C, *Acquisition Workforce Certification* provides the process, procedures, and requirements for certification.

3. PROJECT MANAGER CERTIFICATION

Project/Program Managers assigned to manage any DHS Level 1, 2, or 3 investments (as defined below) shall be certified or eligible for certification within 18 months of designation at a level commensurate with the responsibilities of the acquisition being managed. The Acquisition Directorate's SOP #3C has been updated to include the

requirements in DHS Management Directive (MD) #0782, Acquisition Certification Requirements for Program Manager, for PM certification as shown in **Table 1-1: Project Manager Certification Levels.**

Table 1-1: Project Manager Certification Levels

DHS Investment Level	Total Acquisition Cost[1]	Life-cycle Cost[2] (IT Only)	PM Certification Level
1	>$100M	$200M +	III
2	$50M - $100M	$100M - $200M	II
3	$20M - $50M	$50M-$100M	I

[1] Total Acquisition Cost includes procurement costs, system costs, and flyaway (sailaway, rollaway) costs.

[2] Life-Cycle Cost includes Total Acquisition Cost plus operation and support costs.

4.   MANUAL ORGANIZATION

The Major Systems Acquisition Manual (MSAM), COMDTINST M5000.10 documents the process and identifies the procedures for implementing Department of Homeland Security Investment Review Process, Management Directive # 1400. This MSAM consists of Chapters 1 through 6, and Appendix A as detailed below.

Chapter 1: Introduction

This chapter includes the vision, mission, and guiding principles of the Coast Guard Acquisition Directorate, plus Project Manager and acquisition workforce training and certification requirements, and the organization of this Manual.

Chapter 2: 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. It includes the roles and responsibilities of the key members of the acquisition management process.

Chapter 3: Requirements Generation Process

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 4: Project Management Documentation

This chapter discusses the documents that are needed as a part of the major systems acquisition management process.

Chapter 5: Capital Investment Planning and Review

This chapter provides an overview of the Coast Guard Planning, Programming, Budgeting, and Execution process; the Office of Management and Budget Exhibit-300; and the Department of Homeland Security Investment Review Process.

Chapter 6: 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: U.S. Coast Guard Major Systems Acquisition Management Handbook

Appendix A provides additional guidance and templates for developing acquisition planning documents and providing required project reviews and briefings.

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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 Department of Homeland Security (DHS) Management Directive, Investment Review Process (MD) # 1400.

a. Major Systems Acquisition Management
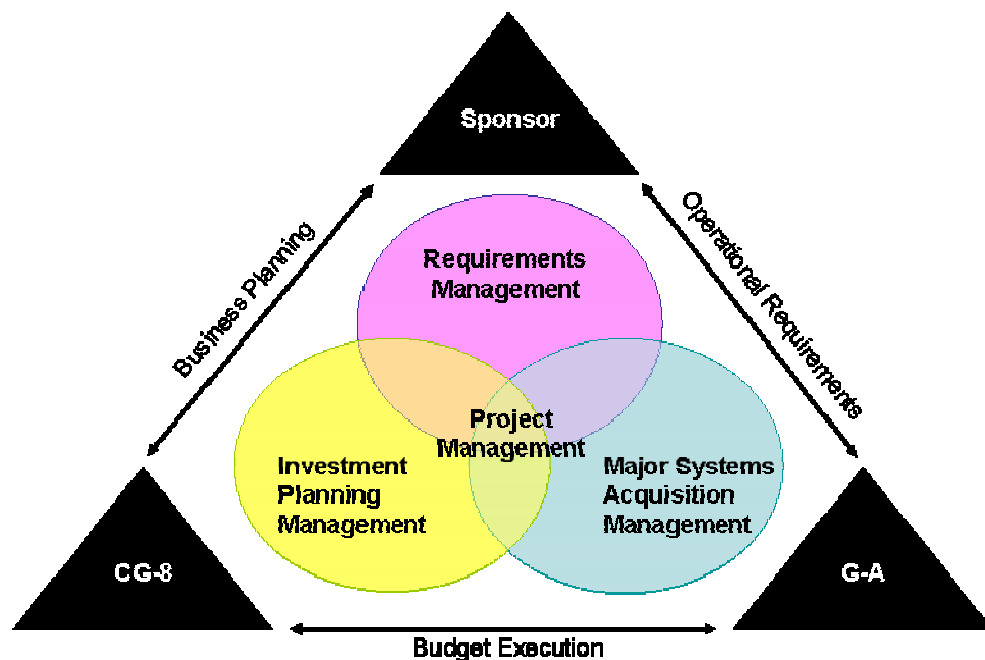
Figure 2-1: Management Interfaces

Project Managers (PMs) are required to integrate the three primary management areas shown in **Figure 2-1: Management Interfaces** into a coherent strategy to achieve specific cost, schedule, and performance parameters for their assigned projects.

- Requirements Management is the "Sponsor-owned" process of defining mission needs and translating them into user requirements. Business planning will identify the deficiencies (gaps) that exist between current Coast Guard functional capabilities and the required capabilities of current or projected missions.   A Mission Need Statement (MNS), derived from business planning activities, describes specific functional capabilities required to accomplish Coast Guard missions that can only be met with material solutions. Requirements are then identified and captured in the Operational Requirements Document (ORD).

- Major Systems 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.

- Investment Planning Management is the planning, programming, budgeting, and execution process that is a calendar-driven budgetary process and is owned by the Assistant Commandant for Resources and Procurement (CG-8). Investment planning and management 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 and the CG-8 staff.

b.   Major Systems Acquisitions

Major systems 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.

DHS Management Directive, Investment Review Process MD #1400 provides governing guidance and knowledge-based management requirements for oversight of DHS investments. Based on total acquisition cost and life cycle cost estimates, acquisitions are categorized into Investment Levels with differing levels of oversight. The Coast Guard designates DHS Level 1 and 2 Investments as Major Systems Acquisitions and Level 3 and 4 as Non-Major Acquisitions. DHS Investment Thresholds for acquisitions are provided in **Table 2-1: DHS Investment Thresholds**.

Table 2-1: DHS Investment Thresholds

CG Acquisition Category*	Level	Review/Approval	Total Acquisition Cost (including planning)	Life-cycle Cost (IT Only)
Major	1	IRB Approves	> $100M	> $200M
Major	2	JRC Approves	$50M-$100M	$100M-$200M
Non-Major	3	Component Head approves with EAB/ASMB review	$20M< $50M	$50M-$100M
Non-Major	4	Component Head approves with DHS IPRT limited review	< $20M	< $50M

IRB: Investment Review Board   JRC: Joint Requirements Council   EAB: Enterprise Architecture Board

IT: Information Technology   ASMB: Asset and Services Management Board

IPRT: Integrated Project Review Team

* DHS Level 1 and 2 investments are equivalent to Coast Guard Major Systems Acquisitions.

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

o It has importance to DHS's strategic and performance plans or has high executive visibility;

o It has high development, operating, or maintenance costs;

o It is high-risk or has a potentially high return;

o It impacts more than one DHS Component or has significant program or policy implications;

o It was a major investment in the DHS budget submission and/or is continuing,

o It is identified as critical infrastructure (Project Matrix) or key resource or is significant in resource administration; or,

o Other reasons determined by the IRB, based on recommendations from the JRC, EAB, ASMB, or IPRT.

c.   Major Systems Acquisition Process Structure

The major systems acquisition process, for the Coast Guard, is divided into three distinct activities (Pre-Acquisition, Acquisition, and Sustainment). The three activities are further subdivided into six phases: Project Identification (CG Only); Project Initiation; Concept and Technology Demonstration; Capability Development and Demonstration; Production and Deployment; and Operations and Support.

The phases described in this MSAM are aligned with DHS MD #1400 (series) starting with the Project Authorization Milestone (MS1) Decision Milestones are indicated by the diamond symbol (◇) representing critical junctures throughout the process that require assessment of risk before authorization to proceed to subsequent phases.
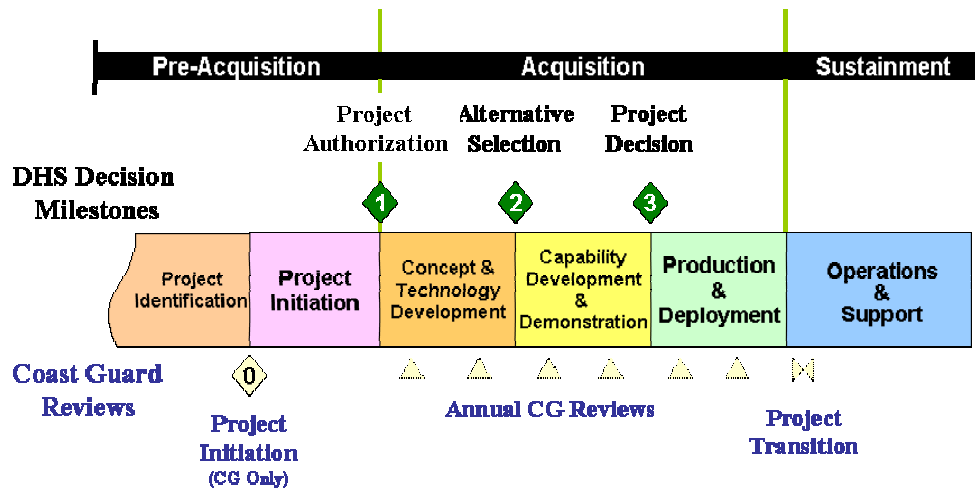

Figure 2-2: Major Systems Acquisition Process

Before a major systems acquisition formally begins, a capability gap must be identified, reviewed internally at Project Initiation, further resolved into a clear mission need, and approved by the Coast Guard Acquisition Executive (CGAE) prior to proceeding to DHS for formal project approval at the DHS Project Authorization Decision Milestone (MS1).

Pre-Acquisition Activity

The Pre-Acquisition Activity contains the internal Coast Guard phases that precede formal designation by DHS as a major acquisition (investment) project.

▪ Project Identification Phase (CG only): Coast Guard Mission Analyses and Operational Analyses are performed by Assistant Commandant for Policy and Planning (G-X) and the operating program Sponsor during this phase. The result of this ongoing mission analysis is a Mission Analysis Report (MAR). The MAR is endorsed at the Project Initiation review with direction to proceed with the development of a Mission Need Statement (MNS), a preliminary OMB Exhibit-300 business case, and a DHS Investment Review Request (IRR), for the material solutions accepted during the review.

▪ Project Initiation Phase: Captures the results of ongoing mission analyses by describing the specific functional capabilities required to address the capability gaps in Coast Guard mission performance. It culminates in the approval of the MNS, submittal of preliminary Exhibit-300 business case, and formal project approval to begin a major acquisition at the DHS Project Authorization Decision Milestone (MS1).

Acquisition Activity

The Acquisition Activity includes three phases needed to develop, demonstrate, produce and deploy a system, product, or service into the operational community. After the project has been initiated at the end of the Pre-Acquisition activity and Project Authorization is approved, the newly authorized project becomes a major acquisition.

▪ C&TD Phase: Focuses on setting technical requirements and exploring alternative solutions for meeting mission and operational needs. Evaluates the feasibility of alternatives (Alternatives Analysis) and provides a basis for assessing the relative merits (e.g., advantages and disadvantages, degree of risk, life-cycle cost, and cost-benefit) of the alternatives to determine a preferred solution. Alternative Selection (MS2) approval authorizes entry into the next phase.

▪ CD&D Phase: The transitional 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, integrated logistics support is planned for and developed as the project design evolves. Project Decision (MS3) approval authorizes entry into the next phase.

▪ P&D Phase: The execution phase with the objective to deliver production units in increments of capability with established logistics support.

Sustainment Activity

Sustainment includes the post-acquisition phase to operate and execute the support program to meet operational performance requirements and sustain the system in the

most cost effective manner over its life cycle. Sustainment is typically a phased transition and is not initiated by a formal Decision Milestone, but instead begins with the deployment of the first system to the field. Sustainment is fully implemented when the last system is deployed and all logistics requirements are delivered (or the plan for delivery is accepted by the support managers). Once sustainment is fully implemented, complete responsibility for operation and support is transferred from the acquisition PM to the operations and support managers.

- O&S Phase: Occurs after the project acquisition has transitioned full support to the sustainment community. During this phase, the operating program continues operational analysis to ensure the asset is meeting performance, supportability, and cost goals.

DHS Decision Milestones

- The Coast Guard Acquisition Review Council (CGARC) reviews major acquisition projects prior to all DHS Decision Milestones. At each milestone 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 Investment Review Process is explained in Section 5.4 of this manual.

- DHS Decision Milestones come at the end of the specified phases of the acquisition process and mark the logical completion of the phase and the beginning of the next phase in the acquisition development cycle.

  Note: Special Circumstances (Rapid Acquisition). The DHS Investment Review Process provides for an alternative process when mission needs require Project Managers to obtain acquisition approvals quickly and will consider requests for an expedited review when unforeseen circumstances will have significant adverse impacts on cost, schedule, or performance (refer to DHS Investment Review Process, MD #1400).

2. PROJECT IDENTIFICATION PHASE
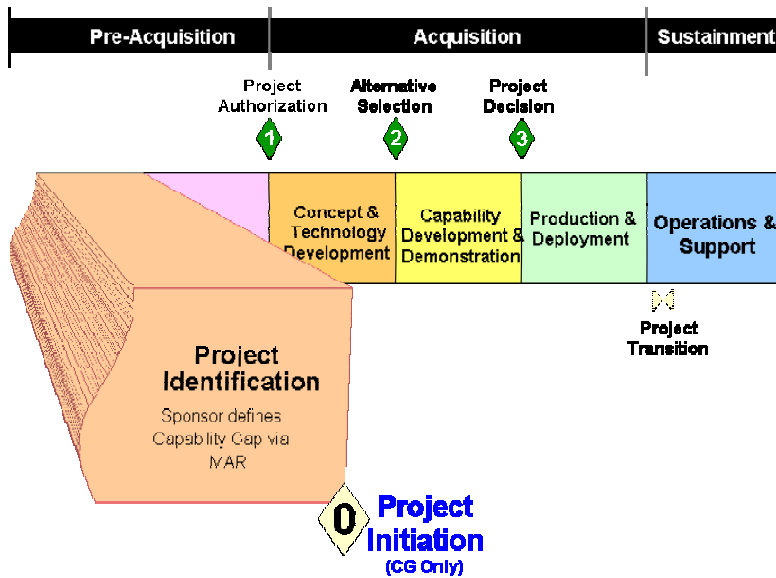
During the Project Identification Phase, a MAR is developed by the Sponsor to identify capability gaps in Coast Guard mission performance. Evaluation of doctrine, organization, training, material, leadership and education, personnel, and facilities (DOTMLPF) assists in determining whether a material solution is needed to resolve the capability gap(s). Material alternatives to close the capability gap are identified and prioritized at Project Initiation.

a. Project Identification Objectives

The Coast Guard Sponsor(s) and G-X are responsible for conducting mission analyses on an ongoing basis to identify capability gaps in Coast Guard missions that support National, DHS, and Coast Guard strategic goals and objectives.

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

b.   Project Identification Phase Activities

The Sponsor has to ensure that the following activities are accomplished.

Sponsor's Project Management Activities
Coordinate mission analysis to identify capability gaps
Develop initial investment forecast for each alternative
Work with CG-821 to develop a preliminary affordability assessment

Systems Engineering Activities
Perform mission analysis
Identify the operational tasks, conditions and standards needed to achieve Coast Guard objectives
Describe the capability gap, overlap, or problem in operational and/or broad effects-based terms
Describe what additional functional areas may be involved in the problem or solution
Describe the key attributes of a capability or capabilities that would resolve the issue in terms of purpose, task, and conditions
Develop the project's Technology Strategy
Receive early stage spectrum supportability determination for spectrum dependent systems in the Technology Strategy
Identify potential solutions to address the needs
Determine if an integrated doctrine, organization, training and education, material, leadership, personnel, and facilities (DOTMLPF) approach can fill the capability gaps. If the sponsor determines that the capability can be partially or completely addressed by an integrated DOTMLPF approach, the sponsor will coordinate an appropriate implementation recommendation

c.   Significant Accomplishments

Accomplishments
Completed Mission Analysis Report
Prioritized list of capability gaps
Identified non-material solutions
Prioritized list of recommended material alternatives
High-level investment forecast for each material alternative
Development of a preliminary cost estimate and early affordability assessment
Receive early stage spectrum supportability determination

d.   Documentation

Documentation required for Project Initiation is presented in

Table 2-2: Project Identification Phase Documentation.

Table 2-2: Project Identification Phase Documentation

Document	Preparation	Review	Approval
Mission Analysis Report	Sponsor/G-X	Ex. Sec	N/A
Preliminary Affordability Assessment	Project Manager	CG-82	N/A

e.   Phase Reviews and Expected Outcomes

Project Initiation Review
Early review for affordability and identification of resources needed for next phase
Direction to prepare a Resource Proposal , preliminary Exhibit-300 business case, and a Mission Need Statement
If appropriate, approval to proceed with advanced concept technology demonstration(s)
Direction to assign a Project Manager prior to Project Authorization recognizing priority and need for project management discipline for success
Direction to develop and forward to DHS an Investment Review Request (IRR) to the DHS Integrated Project Review Team four months prior to Project Authorization.

3.   PROJECT INITIATION PHASE
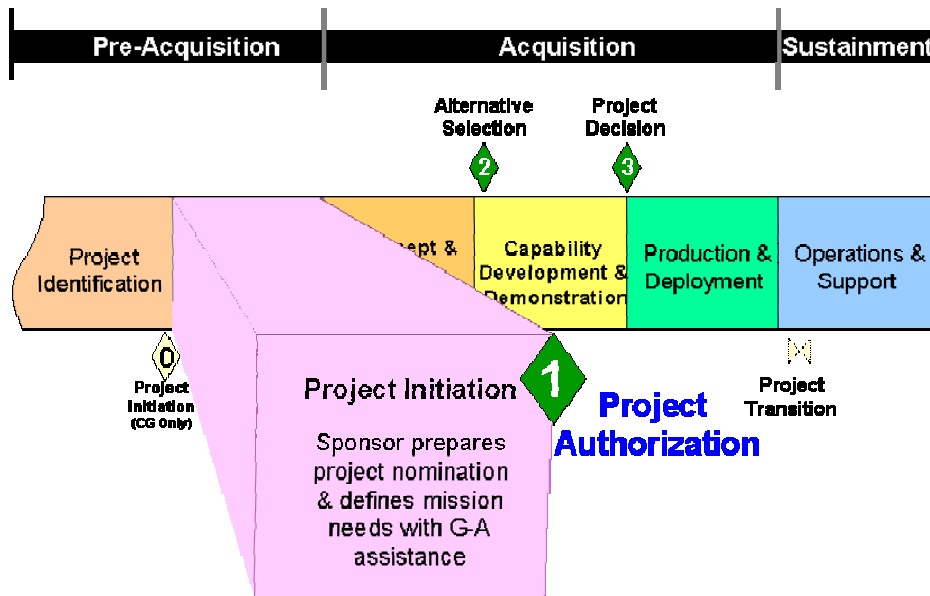
The Project Initiation Phase includes activities to describe the specific fundamental capabilities required to address the capability gap in Coast Guard mission performance and culminates with a MNS, an initial OMB Exhibit-300, and inclusion in the Capital Investment Plan. At Project Authorization, the MNS is approved by the DHS Acquisition Executive (HAE) as part of the Acquisition Decision Memorandum. The completion of this phase signifies the start of the acquisition activities by entering the C&TD Phase.

a.   Project Initiation Objectives

The Coast Guard Sponsor is responsible for preparing a MNS. The MNS describes the mission(s) and capabilities, justifies the project, sets the boundaries of the project, and provides a rough-order-of-magnitude estimate of the total acquisition costs for the proposed project.

During this phase, the initial OMB Exhibit-300 will be submitted, documenting the business case for the investment, and defining proposed cost, schedule, and performance goals. The phase will culminate with a DHS Joint Requirements Council review and Investment Review Board Decision Milestone.

b. Project Initiation Phase Activities

The Sponsor is responsible for definition and maturation of the required mission need capability. This is best accomplished when it includes input from the acquisition community, the logistics community, and industry representatives. The Sponsor's Representative is responsible for Project Initiation Phase activities.

Project Management Activities
Prepare the Mission Need Statement
Prepare initial OMB Exhibit-300
Prepare a Resource Proposal for the initial project funding and staffing
Ensure the project is included in the Capital Investment Plan
Prepare DHS Investment Review Request

Enterprise Architecture Activities (if applicable)
Complete Part II (IT projects) of the Exhibit-300 in addition to the Non-IT sections
Coordinate review with the CG-6 IT* Investment Management Review Board for review prior to implementation
Complete Enterprise Architecture Board Review

*CG-6: Assistant Commandant for Command, Control, Communications, Computers, and Information Technology

c. Significant Accomplishments

Accomplishments
Describe the mission need
Develop OMB Exhibit-300 to justify entry into the budget
Obtain CGAE authorization to proceed to DHS Project Authorization Decision Milestone (MS1) to obtain HAE authorization to enter the C&TD Phase
Submit DHS Investment Review Request (4 months prior to IRB)
Obtain HAE approval at Project Authorization to enter the C&TD Phase

d. Documentation

Documentation required for the DHS Project Authorization Decision Milestone (MS1) approval is presented in **Table 2-3: Project Initiation Phase Documentation**.

Table 2-3: Project Initiation Phase Documentation

Document	Task	Preparation	Approval
MNS	Prepare	Sponsor's Representative	CGAE/HAE
OMB Exhibit-300 Business Case	Prepare	Sponsor's Representative	N/A
C&TD Phase Exit Criteria	Prepare	Sponsor's Representative	CGAE/HAE

e. Phase Reviews and Expected Outcomes

CGARC Project Authorization Review
CGAE authorize project to proceed to DHS for Project Authorization approval to enter into the C&TD Phase
Approve the MNS and forward to DHS for final approval

DHS JRC Project Authorization
Review cross-functional needs, requirements, and initial affordability
Make programmatic recommendations to the IRB on new investments
Review Project Authorization milestone decision package

DHS IRB Project Authorization
HAE approve Project Authorization for Level 1 and Level 2 investments and authorize entry into the C&TD Phase
HAE approve Mission Need Statement
HAE approve proposed C&TD Phase Exit Criteria
HAE issues an Acquisition Decision Memorandum

4. CONCEPT AND TECHNOLOGY DEVELOPMENT PHASE
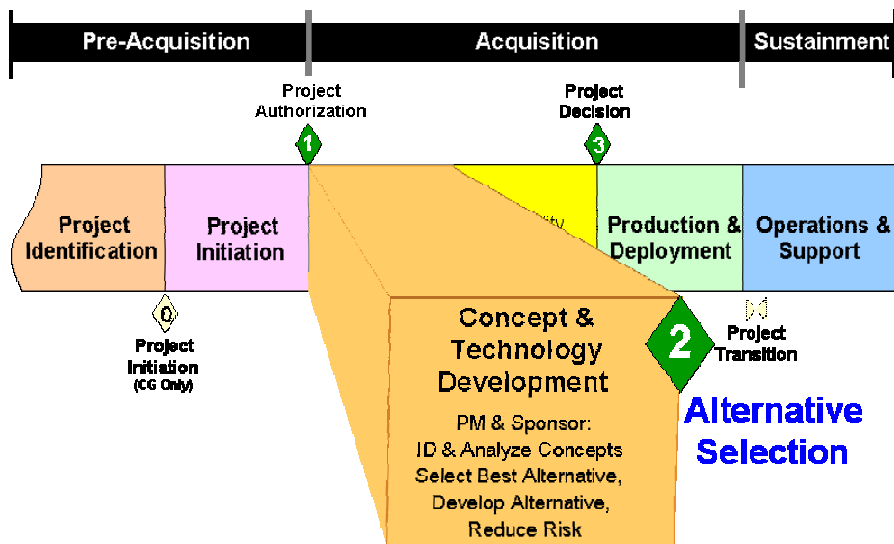
The Concept and Technology Development (C&TD) Phase is the initial acquisition activity following Project Authorization approval by the DHS Acquisition Executive. The C&TD activities focus on setting or refining operational requirements and exploring alternative options for meeting the capability needs described in the MNS.

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 in terms of satisfying cost, schedule, performance, and supportability goals. Opportunities for tradeoffs are explored and an initial acquisition strategy and a test and evaluation strategy are developed during this phase.

a. Concept and Technology Development Objectives

The objectives of the C&TD Phase are to evaluate the feasibility of alternatives 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. For acquisitions that involve technology development, the C&TD Phase can be viewed as two distinct activities to include Concept Development and Technology Development as indicated below.

Concept Development

The purpose of Concept Development is to refine the initial concept provided in the Mission Need Statement, identify alternatives, and develop a technology development strategy (if the preferred solution involves technology that is still under development).

Technology Development

The purpose of Technology Development (normally for advanced development only) is to (1) reduce technology risk and determine the appropriate technologies to be integrated into the proposed system solution; (2) determine that critical product technologies are

mature enough to enter the CD&D Phase and to commence Low Rate Initial Production (as appropriate); and (3) reduce risk and mature the system design in preparation for the CD&D Phase. A technology plan will be developed to identify the specific technologies the project will pursue for incorporation.

b.   **Concept and Technology Development Phase Activities**

Project Management Activities
Acquisition Planning – Develop an acquisition strategy
Establish a project matrix/IPT team
Prepare Project Management Plan
Prepare Acquisition Plan
Prepare the Configuration Control Board Charter
Organize the Configuration Control Board
Prepare Affordability Assessment
Develop Acquisition Program Baseline
Develop CD&D Phase Exit Criteria
Prepare DHS Investment Review Request

Systems Engineering Activities
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 materials and manufacturing sources for each alternative to ensure long term supportability
Receive spectrum supportability determination for spectrum dependent systems
Develop Technology Plan
Conduct Technology Readiness Assessments as part of systems engineering management reviews
Conduct System Requirements Review
Prepare Alternatives Analysis
Develop Life Cycle Cost Estimates
Prepare Cost Benefit Analysis
Initiate the National Environmental Policy Act process
Prepare system specification
Initiate configuration management planning
Prepare Configuration Management Plan
Perform necessary research and testing to address technology maturity and identify integration and interoperability requirements to address and mitigate known risks

Logistics Activities
Initiate logistics support planning
Organize the Integrated Logistics Support Management Team
Prepare the Integrated Logistics Support Plan
Implement initial support plans
Initiate the supportability analysis
Establish maintenance concept
Establish support concept
Initiate Human Systems Integration (HSI) planning
Initiate Diminishing Manufacturing Sources and Material Shortages (DMSMS) planning.
Initiate manpower studies and analyses

Test and Evaluation Activities
Initiate Developmental Test and Evaluation and Operational Test and Evaluation planning
Prepare the Test and Evaluation Master Plan
Establish the Test Management Oversight Team

Enterprise Architecture Activities
Develop DHS Enterprise Architecture requirements in compliance with OMB Federal Enterprise Architecture guidance and meet DHS EAB requirements as well as Commandant (CG-6) Software Development Life Cycle (SDLC) requirements*
Complete DHS Enterprise Architecture Board Review

* Note: For systems with DoD interoperability requirements or other DoD mandates, the DoD architectural views OV-2, Operational Node Connectivity Description; OV-3, Operational Information Exchange Matrix; SV-1, System Interface Description; SV-8, System Evolution Description; and TV-1, Technical Architecture Profile may be substituted.

c.   Significant Accomplishments

The results of the C&TD Phase provide the basis for selecting the optimal alternative at the Alternative Selection milestone (MS2) decision. At the end of this phase an affordable increment of useful capability will be identified with the associated technology demonstrated in a relevant environment for a system that can be developed. The following accomplishments are essential to obtaining DHS Alternative Selection approval to enter the CD&D Phase:

Accomplishments
Satisfy C&TD Phase Exit Criteria
Obtain CGAE authorization to proceed to DHS Alternative Selection Decision Milestone (MS2)
Submit DHS Investment Review Request (47 days prior to IRB)
Obtain HAE approval of Alternative Selection

d.   Documentation

Documentation required for the DHS Alternative Selection Milestone (MS2) Decision approval is presented in **Table 2-4: C&TD Phase Documentation**.

Table 2-4: C&TD Phase Documentation

Document	Task	Preparation	Approval
Mission Need Statement	Revalidate	Sponsor's Rep	CGAE/HAE
Exhibit-300 Business Case	Update	PM	N/A
Affordability Assessment	Prepare	PM/CG-821	N/A
Alternatives Analysis	Prepare	PM	G-A
Project Management Plan	Prepare	PM	G-A
Acquisition Plan	Prepare	PM	HCA*
Operational Requirements Document	Prepare	Sponsor's Rep	G-CCS
Acquisition Program Baseline	Prepare	PM	CGAE/HAE
Integrated Logistics Support Plan	Prepare	PM	G-A
Configuration Management Plan	Prepare	PM	G-A
Configuration Control Board Charter	Prepare	PM	G-A
Test and Evaluation Master Plan	Prepare	PM	G-A
Proposed CD&D Phase Exit Criteria	Prepare	PM	CGAE/HAE

*HCA: Head, Contracting Authority

e.   Phase Reviews and Expected Outcomes

CGARC Alternative Selection Review
Approve recommended alternative
Endorse proposed CD&D Phase Exit Criteria
Endorse Low Rate Initial Production quantities (if applicable)
Authorize to proceed to DHS for Alternative Selection milestone (MS2) approval

| DHS JRC Alternative Selection |
|---|
| Validate requirements |
| Assess affordability |
| Approve CD&D Phase Exit Criteria and Acquisition Program Baseline (APB) for Level 2 investments |
| Approve Alternative Selection for Level 2 investments and authorize entry into the CD&D Phase |

DHS IRB Alternative Selection
HAE approve Alternative Selection for Level 1 investments and authorize entry into the CD&D Phase
HAE approve Low Rate Initial Production quantities (if applicable)
HAE approve proposed CD&D Phase Exit Criteria and Acquisition Program Baseline for Level 1 investments
HAE issues Acquisition Decision Memorandum

5. CAPABILITY DEVELOPMENT AND DEMONSTRATION PHASE
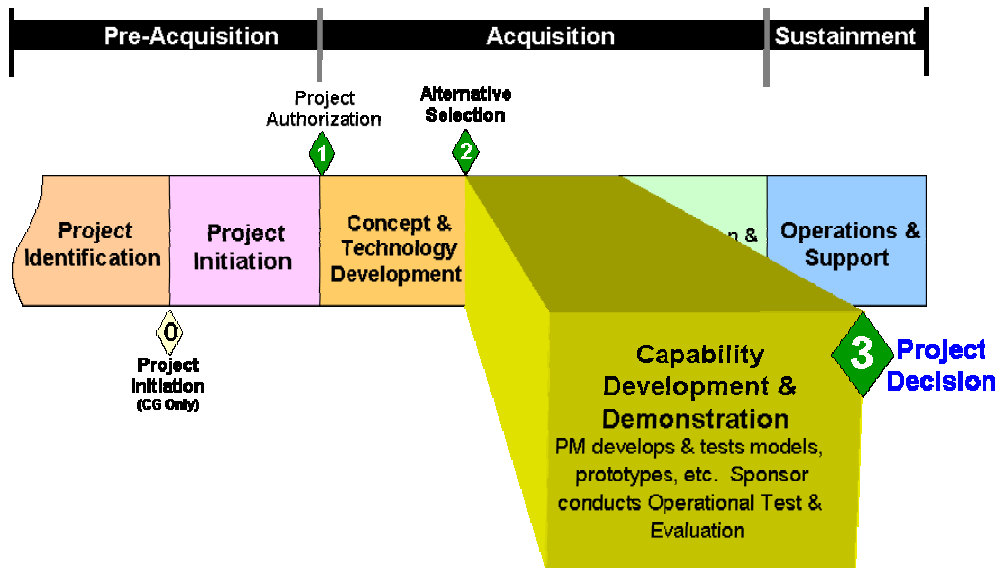
The CD&D Phase is focused on demonstrating feasibility of the preferred alternative and refining the solution prior to a full production commitment. The purpose of the CD&D Phase is to expand the high-level requirements of the C&TD Phase into specific detailed requirements producing a complete detailed 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 produces the concept of operations and other important elements of the overall capability. A developmental prototype of the capability, when needed, may be developed to test that the design meets the capability specifications and requirements.

a. Capability Development and Demonstration Objectives

CD&D activities include developing the first article for the completion of Developmental Test and Evaluation (DT&E). Operational Test & Evaluation (OT&E) is conducted on production representative units to confirm that the system meets requirements as described in the MNS and the ORD. Any Low Rate Initial Production (LRIP) units required for OT&E or to maintain a minimum production capability are engineered and produced during this phase. Multiple objectives must be attained during this phase, including:

- Translating the most promising design approach developed in the C&TD 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, and satisfy the mission need

- Determining whether the product design is mature enough to commit to full production and deployment

b. Capability Development and Demonstration Phase Activities

Project Management Activities
Determine production quantity
Establish contract administration procedures and organization
Update Alternatives Analysis to reflect details of the production design and support requirements and to account for any changes in product performance and its associated benefits
Revalidate the MNS, ORD, APB, and Affordability Assessment to ensure that the mission need remains current, the project performance measures are being met, and the planned P&D Phase structure of increments of capability remains affordable within the Coast Guard capital investment portfolio
Coordinate with the Sponsor to initiate deployment planning and assist in the preparation of the Deployment Plan by the Sponsor
Prepare the Resource Proposal and the necessary budget documentation including updated OMB Business Case Exhibit-300s to support the project as a line item in Coast Guard budget requests
Prepare DHS Investment Review Request

Systems Engineering Activities
Closely monitor performance measures to ensure that functional requirements of the capability are being met
Conduct evaluations, assessments, and analyses of the performance characteristics and recommend solutions to performance problems
Evaluate whether the capability is effectively meeting the functional requirements, is operating efficiently, and is effectively managed
Finalize planned technology insertions
Analyze capability design documentation, user manuals, capability specifications, and other documentation to determine the degree the capability performs its intended purpose
Determine the design maturity of the new capability
Refine and mature preliminary design and conduct Preliminary Design Review
Conduct Critical Design Review
Conduct Production Readiness Review
Complete production design specifications
Evaluate the benefits being attained to actual costs for the investment
Implement project configuration management program through the CCB*
Review and recommend for approval or disapproval, all configuration changes and proposed alterations that will modify a system's functional characteristics or operational requirements
Monitor the CM* 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
Review engineering change proposals and requests for deviations to ensure that they are

Systems Engineering Activities
consistent with the operational requirements and that they are properly analyzed and documented
Monitor implementation of approved configuration changes
Accomplish Functional Configuration Audit

*CCB: Configuration Control Board   *CM: Configuration Management

Logistics Management Activities
Update the logistics support requirements in the ILSP for the selected alternative
Design the logistics support system
Continue the supportability analysis
Perform trade-off analyses to balance hardware, software, support and resource requirements, including Human Systems Integration
Perform assessments of sub systems and components to be included to ensure long term supportability and availability of materials and manufacturing sources
Determine maintenance levels
Finalize supply support requirements (provisioning)
Ensure Diminishing Manufacturing Sources and Material Shortages (DMSMS) is addressed
Perform fitting out activities
Update and finalize supportability requirements
Provide logistics support for Operational Test & Evaluation
Identify contractor logistics support required for initial deployment of system
Design/contract training and other human performance interventions
Train initial crew, maintenance personnel, and future instructors

Test and Evaluation Activities
Determine if the capability meets established performance thresholds
Deliver engineering development model(s), prototype(s), first article and/or LRIP units
Deliver test units
Conduct a Preliminary Acceptance Trial or First Article Test, if applicable
Complete Developmental Test & Evaluation and subsequent Report
Conduct Test Readiness Review to confirm readiness for OT&E
Conduct Operational Test & Evaluation, including testing, evaluating, and verifying the support system
Provide Developmental Test & Evaluation and Operational Test & Evaluation test results to the CGAE and to DHS JRC/IRB to support the decision to enter the P&D Phase at Project Decision

Enterprise Architecture (if applicable)
Complete Part II of the Exhibit-300 in addition to the Non-IT sections
Ensure compliance with all internal CG IT requirements, in collaboration with CG-6
Meet Security and Privacy requirements
Meet Government Paperwork Elimination Act requirements
Conform with established DHS EAB strategic planning and IT guidance
For IT projects with interoperability requirements, update of the Enterprise Architecture with the following architecture framework products:
- Operational Node Connectivity Description (OV-2)   - Operational Information Exchange Matrix (OV-3)   - System Interface Description (SV-1)   - System Evolution Description (SV-8)   - Technical Architecture Profile (TV-1)
Complete EAB Review

c. Significant Accomplishments

Accomplishments
Satisfy CD&D Phase Exit Criteria
Logistics system design is identified
Verify the adequacy of the manufacturing or production process
Confirm the stability and producibility of the product
Complete satisfactory DT&E
Complete satisfactory OT&E
Establish required production quantity
Structure the project in fully-funded increments
Submit DHS Investment Review Request (47 days prior to IRB)
Obtain HAE Project Decision approval to enter P&D Phase

d. Documentation

Documentation required for the DHS Project Decision Milestone (MS3) approval is presented in **Table 2-5: CD&D Phase Documentation**.

<p align="center">Table 2-5: CD&D Phase Documentation</p>

Document	Task	Preparation	Approval
Mission Need Statement	Revalidate	Sponsor's Rep	CGAE/HAE
Exhibit-300 Business Case	Update	PM	N/A
Affordability Assessment	Update	PM/CG-82	N/A
Alternatives Analysis	Update	PM	G-A
Project Management Plan	Update	PM	G-A
Acquisition Plan	Update	PM	HCA
Operational Requirements Document	Revalidate	Sponsor's Rep	G-CCS
Acquisition Program Baseline	Update	PM	CGAE/HAE
Integrated Logistics Support Plan	Update	PM	G-A
Configuration Management Plan	Update	PM	G-A
Test and Evaluation Master Plan	Update	PM	G-A
Developmental Test Report	Prepare	PM	G-A
Operational Test Report	Prepare	Sponsor's Rep	Sponsor
Deployment Plan	Prepare	Sponsor's Rep	Sponsor
Proposed P&D Phase Exit Criteria (if applicable)	Prepare	PM	CGAE/HAE

e. Phase Reviews and Expected Outcomes

CGARC Project Decision
CGAE endorses the revalidated/updated APB and approves the revalidated MNS

DHS JRC Project Decision
Review Project Milestone Decision Package
Approve Project Decision for Level 2 Investments and authorize entry into P&D Phase

DHS IRB Project Decision
HAE approve Project Decision for Level 1 Investments and authorize entry into the P&D Phase
HAE issues Acquisition Decision Memorandum

6. PRODUCTION AND DEPLOYMENT PHASE
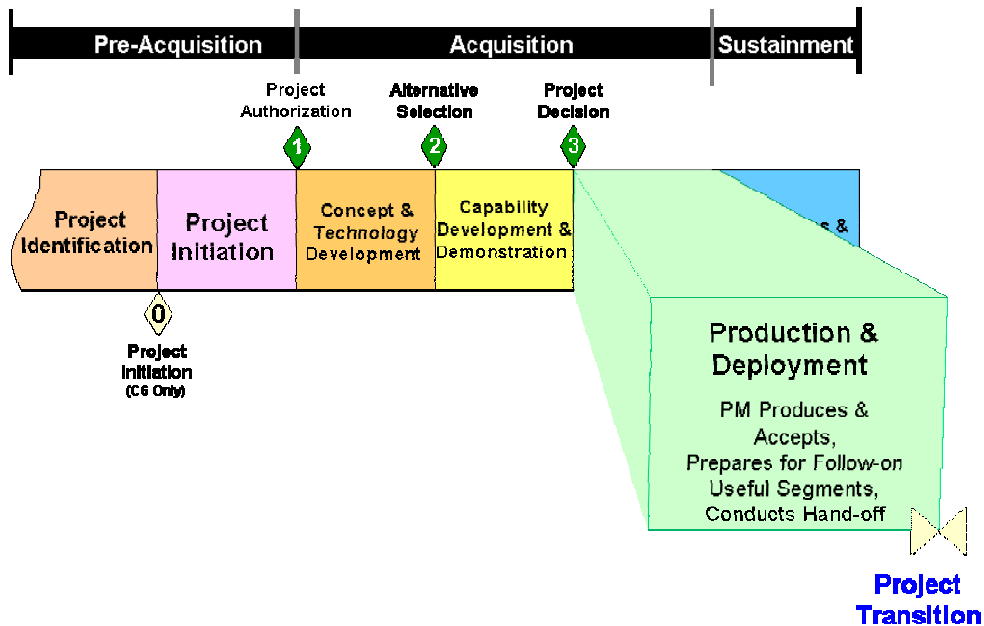
The Production & Deployment (P&D) Phase activities produce systems and equipment for deployment into operational use. The system should achieve operational capability that satisfies mission needs.

a. Production and Deployment Phase Objectives

The primary objective of the P&D Phase is to deliver production units. Additional objectives of the P&D Phase are to:

- Establish a stable and efficient production and support base

- Achieve an operational capability or increment of operational capability that satisfies the mission need

- 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 system is ready for unrestricted operations and complete the hand-off to the operational commander

b. Production and Deployment Phase Activities

Project Management Activities
Execute the production contract(s)
Ensure the delivered product meets operational requirements and meets cost and schedule baselines in APB
Prepare the Project Transition Plan
Assist and support the development of the sustainment Resource Proposal (RP)

Sponsor's Project Management Activities
Develop the requirements for sustainment resources, both money and personnel
Develop the sustainment Resource Proposal (RP)

Systems Engineering 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
Ensure that the proper personnel, all training facilities and all logistic support material and facilities are in place
Monitor continued availability of materials and manufacturing sources
Establish interim logistics support, if required
Package and distribute all technical data to each unit and logistic support organization
Prepare for the hand-off of the operational system

Test and Evaluation Activities
Conduct acceptance tests and trials upon delivery of each asset
Conduct Follow-on Operational Test and Evaluation, as necessary

Enterprise Architecture Activities (if applicable)
Complete Part II (IT projects) of the Exhibit-300 in addition to the Non-IT sections

c. Significant Accomplishments

Significant Accomplishments
Deliver production assets in useful segments or increments of capability
Achieve Initial Operational Capability
Execute maintenance and support plans
Achieve Final Operational Capability

d.   Documentation

Documentation required to be developed and updated during this phase are presented in **Table 2-6: P&D Phase Documentation**.

Table 2-6: P&D Phase Documentation

Document	Task	Preparation	Approval
Integrated Logistics Support Plan	Update	PM	G-A
Deployment Plan	Update	Sponsor's Rep	Sponsor
Project Transition Plan	Prepare	PM	G-A

e.   Phase Reviews and Expected Outcomes

A Coast Guard Project Transition Review will be accomplished to coincide with the last annual Coast Guard review.

7.   OPERATIONS AND SUPPORT PHASE
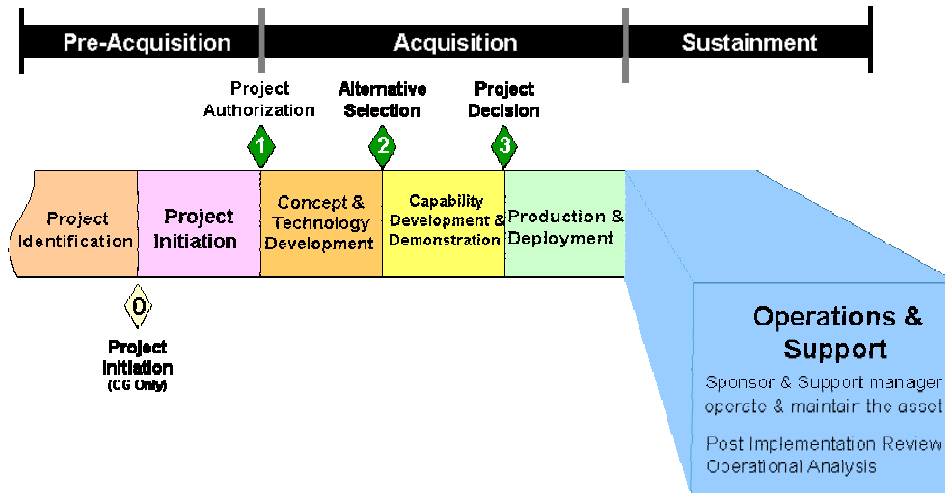
The new system/equipment/platform has been delivered to the field and Full Operational Capability (FOC) has been achieved. During the Operations and Support (O&S) Phase, the new assets are used for their intended purposes to conduct operational missions. The acquisition project is completed and all responsibilities for operation and support are transitioned to the sustainment community. 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. The last annual Coast Guard Review will be used as the Project Transition brief to mark the closure of the major acquisition project. 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 Project Transition brief coincides with the change in leadership of the project matrix/IPT team.

DHS requires a Post Implementation Review (PIR), to be conducted by the Project (or Sponsor if the Project has completed full transition to the Support Program Manager) approximately 6-12 months after asset deployment to verify that the delivered capability met the project's performance and cost goals. The 6-12 months is a guideline with the intent that the asset/system 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 assessments.

Operational Analysis (as described and required in the DHS *Operational Analysis Guidance Manual*) is the performance measurement system that will be used to measure the performance and cost of steady-state assets against an established baseline. The objectives of Operational Analysis are to:

- Examine whether an asset or initiative continues to provide desired results, as defined at project initiation

- Determine if the program is still delivering the goods and services that it intended to deliver

- Determine if capabilities could be more effectively provided through other existing internal or external initiatives

- Determine if improvement or replacement of an asset is needed

As such, Operational Analysis 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.

Future assessments, in the form of annual Operational Analyses, will be required. Once the PIR has been completed, Sponsors are required to perform the annual Operational Analysis on each major investment. Operational Analysis results for major IT programs (Level 1, Level 2, and Level 3) are to be reported in the Exhibit 300 and will be reviewed by DHS. Non-IT programs' Operational Analyses are reviewable at the Coast Guard level.

a. Operations and Support Phase Objectives

The objectives of the O&S Phase are the effective and efficient operation of the new system to perform the applicable operational mission(s), to include the execution of a support program that meets operational support performance requirements and sustains the system in the most cost-effective manner over its total life cycle. The Sponsor continues operational analysis to measure asset performance against assigned goals. When the system is no longer needed by the operating program, it is removed from the operational inventory and disposed of in accordance with applicable guidance.

b. Operations and 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
G-CCS terminates the PM Charter
Operating Expense (OE) funding for operations and maintenance is updated
Contract closeout is accomplished by the contracting activity

Sponsor Activities
Conduct Post Implementation Review
Conduct annual Operational Analysis

Systems Engineering Activities
Support in-service reviews, trade studies, and decision making on modifications, upgrades, and future increments of the system. Interoperability or technology improvements, parts or manufacturing obsolescence, aging systems issues, premature failures, joint or service commonality, may all indicate the need for system upgrade(s)
Conduct Operational Analyses
The Platform/Facility Manager implements the CM program for sustainment

Logistics Planning Activities
The Support Program Director implements the planned Integrated Logistics Support (ILS) strategies and planning, maintains and improves the processes contained in the ILSP, implements DMSMS management, and applies and replenishes the ILS resources that have been acquired to support the new system in sustained operation

c.   Significant Accomplishments

Significant Accomplishments
Conduct Project Transition Review
Provide sustained support of operational system
Conduct Post Implementation Review
Conduct annual Operational Analyses on fielded system

d.   O&S Phase Documentation

Table 2-7: O&S Phase Documentation

Document	Task	Preparation	Review
Post Implementation Review	Conduct	Sponsor	DHS
Operational Analysis Review Report	Annual	Sponsor	DHS/CG

e.   Phase Reviews and Expected Outcomes

CGARC Project Transition Review
Project Manager and Support Program Manager brief the Project Transition Plan and Integrated Logistics Support Plan.
DHS Post Implementation Review
Sponsor briefs the results of the Post Implementation Review to DHS

8. C4 AND INFORMATION TECHNOLOGY PROJECTS

Commandant (CG-6) has promulgated C4&IT System Development Life Cycle (SDLC) Policy for IT acquisitions, COMDTINST 5230.66. Project Managers for IT acquisitions are to merge the SDLC process into their projects' Major Systems Acquisition Management process to ensure that the C4&IT SDLC is integrated within the project**.**
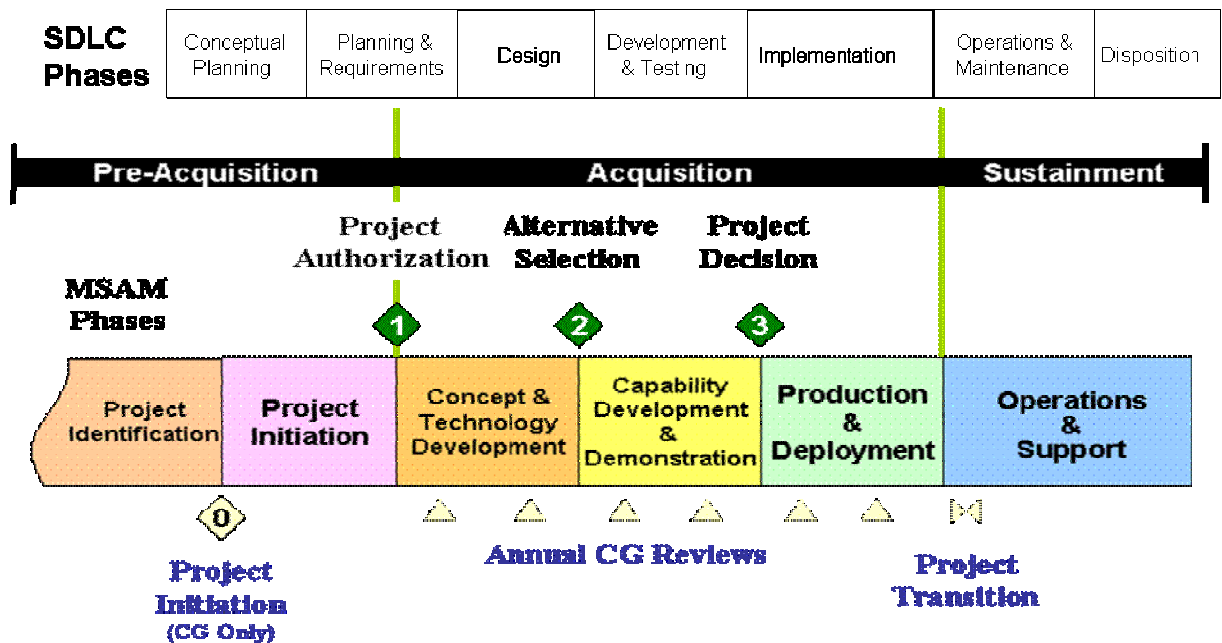

Figure 2-3: SDLC Overlap with Major Systems Acquisition Process

Chapter 3: Requirements Generation

1.   INTRODUCTION

Operational requirements drive the performance and capability of a Coast Guard system or asset over its respective service life. Requirements are to be traceable throughout design, test and development to ensure future Coast Guard users receive the desired capabilities.

The requirements generation process takes broad mission and capability needs and matures them to mission oriented capability statements and then to system specific capabilities. The sponsor, who owns the process and its products, uses the process to identify shortcomings in Coast Guard capabilities so they can develop courses of action to resolve them.
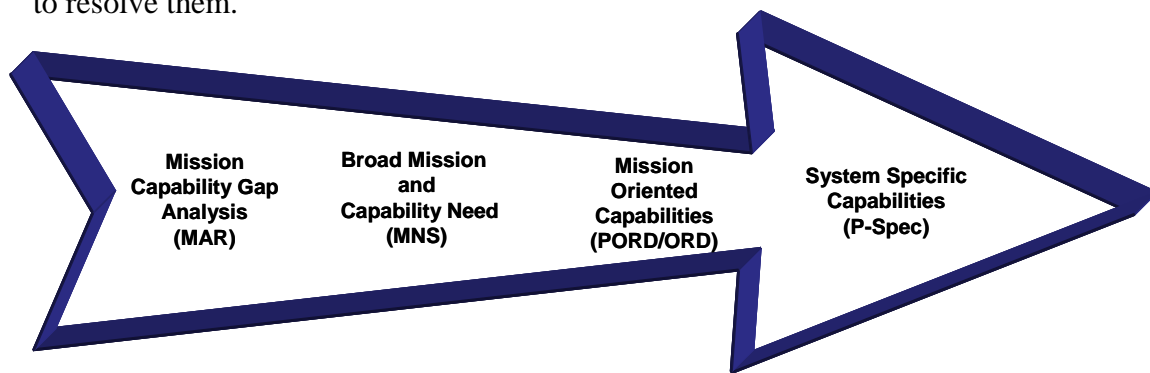
Figure 3-1: Requirements Flow

2.   MISSION AREA ANALYSIS

Purpose: The Mission Area Analysis (MAA) is a continuous, iterative analysis of assigned mission responsibilities to identify deficiencies 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 a specific mission in the future. Where a deficiency or gap in capability exists or is projected to exist, a mission analysis should identify additional functional capability or process changes necessary to meet the deficiency.

Discussion: Department of Homeland Security (DHS) and Coast Guard Strategic Goals and Coast Guard Mission Programs* are the starting points that are used to establish the Coast Guard sphere of responsibility for which the Coast Guard conducts ongoing MAAs. DHS annually issues its Integrated Planning Guidance (IPG) to provide a focused statement of DHS priorities given the current and projected view of world and national state of affairs.

* 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 Coast Guard uses the framework of its Mission Programs 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 Investment Review Process (IRP) in identifying, assessing, and prioritizing CG/DHS capability needs.

When capability gaps are identified, the sponsor conducts an analysis to determine if gaps can be closed without having to initiate a material solution. This *non-material analysis* is an internal review of the Coast Guard's doctrine, organization, training and education, materiel, leadership and education, personnel, and facilities (DOTMLPF). If changes can be made within the Coast Guard's current infrastructure to resolve capability gaps, it is the preferred solution. A non-material solution is typically faster and less expensive.

Changes related to DOTMLPF may not eliminate all gaps in capabilities. Remaining capability gaps should be prioritized and presented at a Coast Guard Project Initiation Review through the Mission Analysis Report (MAR) as candidates to proceed to a Coast Guard major systems acquisition if the preliminary total acquisition cost estimate exceeds DHS thresholds for Level 1 and 2 investments. A technology assessment is to be accomplished concurrent with the gap analysis. Promising technologies are to be identified that may support the material solutions of the MAR.

At the Coast Guard Project Initiation Milestone, the results of the mission analysis are to be presented (including the results of the DOTMLPF analysis and any ongoing Research and Development/Science and Technology (R&D/S&T) initiatives). Recommended projects are identified and presented (with the capability gaps they will close) by the Sponsor; and an initial affordability determination is presented. The Coast Guard Project Initiation milestone decision authority will authorize entry into the Project Initiation Phase and direct development of a MNS, initial Exhibit-300 business case, and DHS Investment Review Request (IRR).

The Project Identification Phase is used by the Sponsor to perform an ongoing mission or gap analysis to identify shortcomings in Coast Guard capabilities; **Figure 3-2: Mission Area Analysis Process.**
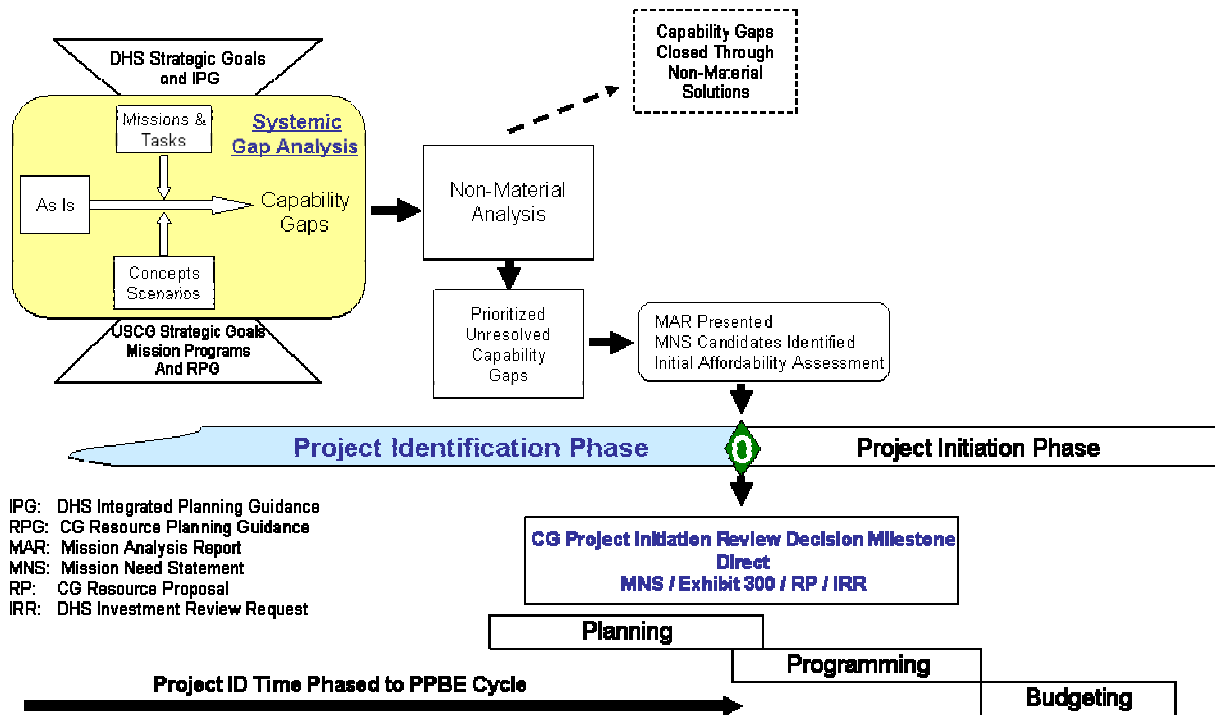
Figure 3-2: Mission Area Analysis Process

Roles and Responsibilities

G-X and Sponsor Responsibilities
The G-X and the Sponsor are responsible for conducting the Mission Area Analysis
Brief Chief of Staff (G-CCS) at Project Initiation Review
CG-8 Responsibilities
Provide early affordability assessment on the proposed material solution.
G-CCS Responsibilities
G-CCS authorize entry into the Project Initiation Phase
G-CCS direct initiation of a Mission Need Statement, submission of an initial Exhibit-300, initiation of a resource proposal, and submission a DHS Investment Review Request.

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. The MAR is divided into two parts. Part I encapsulates the Operating Program Director's assessment of a deficiency in functional capability which

will prevent the Coast Guard from adequately conducting mission(s) now or in the future. Part II provides justification and preliminary options for satisfying mission functional deficiencies to include, where appropriate, a change of doctrine or procedure.

Roles and Responsibilities: Mission analysis is the responsibility of the Operating Program. The Program Director briefs Part I to the Resource Group/Investment Board for initial concept approval and to identify resources (funding and personnel) required to complete Part II. Part II may, depending on mission complexity, require detailed studies, analysis and extensive commitment of staff resources. The Office of Mission Analysis (G-XAM) will coordinate submission and review of the MAR. G-CCS will approve or disapprove the MAR at the Project Initiation Review authorizing entry into the Project Initiation Phase.

4.   MISSION NEED STATEMENT

Purpose: A Mission Need Statement (MNS) is the formal description of the strategic need for an investment (both Information Technology (IT) and non-IT) and is a crucial part of the acquisition process. It is one of the earliest documents to formalize the investment and links the gap in mission capability first documented in the MAR and DHS Investment Review Request to the particular investment that will fill the gap. The MNS is a high level synopsis (two to five pages) of the required specific functional capabilities. Based on the deficiency derived from mission capability gap analysis, the Sponsor will prepare the MNS and then circulate it for concurrent clearance.

Discussion: Approval of a MNS provides formal DHS executive level acknowledgment of a justified and supported need to resolve a mission deficiency with a material solution. For Command, Control, Communications, Computers, Intelligence (C4I) and IT, the MNS describes specific architecturally-based functional capabilities required to satisfy DHS and Coast Guard Enterprise Architecture requirements.

Roles and Responsibilities

Sponsor's Representative Responsibilities
Drafts the MNS
Sponsor Responsibilities
Submits the MNS
Coast Guard Acquisition Executive (CGAE) Responsibilities
Provides Coast Guard approval for MNS
Homeland Security Acquisition Executive (HAE) Responsibilities
Approves MNS

5. OPERATIONAL REQUIREMENTS DOCUMENTS

Purpose: 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 Preliminary Operational Requirements Document (PORD) and the Operational Requirements Document (ORD) are formal documents which provide a bridge between the functional requirements spelled out in the MNS and the detailed technical requirements found in the performance specification which will ultimately govern development of the system. The ORD translates the MNS into system level performance capabilities.

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 the Sponsor's mission performance needs. The Sponsor establishes absolute minimums (thresholds) below which the mission can not 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. The PORD/ORD prioritizes the various requirements to guide future trade off analyses.

Preliminary Operational Requirements Document. The PORD is not required but has proven useful in the early identification of requirements in terms of the range of minimum thresholds and operationally effective objectives needed to develop and evaluate alternative design concepts. The PORD is derived from the MNS and early mission analysis and affordability tradeoffs. Developed early in the Concept and Technology Development (C&TD) Phase, the PORD describes the missions, operational capabilities, operating environment, and system constraints which competing system concepts must satisfy. 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.

Operational Requirements Document. The most promising capabilities resulting from the trade-off analyses are documented in the 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.

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.

Sponsor
Directs the Sponsor's Representative to prepare the PORD/ORD
Submits a PORD via the PM to the Acquisition Project Director (G-A) for acceptance
Submits an ORD to G-A for CGARC review and approval by G-CCS
Sponsor's Representative
Prepares a PORD/ORD

CGARC: Coast Guard Acquisition Review Council

Project Manager
Assists the Sponsor's Representative in defining the operational and support requirements for the system
Reviews and comments on PORD
Endorses PORD submitted by Sponsor and recommends acceptance by Commandant (G-A)
Reviews and comments on ORD
Endorses ORD submitted by Sponsor
Acquisition Project Director (G-A)
Accepts PORD submitted by the Sponsor
Reviews and comments on ORD
Endorses ORD and recommends approval by G-CCS
Chief of Staff (G-CCS)
Approves the ORD
DHS Joint Requirements Council (JRC)
Conducts reviews of operational requirements and capabilities to ensure they are consistent with DHS strategic goals and objectives
Identifies crosscutting opportunities, overlapping or common requirements, and determines how best to ensure that DHS utilizes its resources

Chapter 4: Project Management Documentation

1.   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/taskings, responsibilities, and the sequence of events, and is the Project Manager's (PM) blueprint for project management.

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

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.

As part of project management planning, PMs must continually assess project risks. To assess and manage risks, PMs can use a variety of techniques, including advanced concept technology demonstrations, prototyping, technical reviews, and test and evaluation. Effective risk management plays an all-encompassing role in the success of the project. Risks must be identified and effective risk mitigation strategies formulated by the PM and all involved to ensure that project objectives are met. Project-specific risks are initially identified and then risk mitigation strategies are formulated around the acquisition strategy to enhance the project's ability to develop or adjust as new risks are encountered. The risk management planning required by the Department of Homeland Security (DHS) can be contained within the PMP, or provided as a separate Risk Management Plan and attached to the PMP as an enclosure.

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 Structures (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.

Roles and Responsibilities

Project Manager Responsibilities
Prepare/update and submit PMP

2. ACQUISITION PLAN

Purpose: The Acquisition Plan (AP) establishes the framework within which detailed acquisition planning and project execution are accomplished. The AP describes the acquisition strategy resulting from extensive planning, preparation, and a thorough understanding of both the specific acquisition project and the general acquisition environment. It is a description of how the project will acquire a major system, (i.e., how we will buy it) and once approved, the AP reflects the approach for all major aspects of the acquisition strategy.

Discussion: The Federal Acquisition Regulations (FAR) and Chapter 3007 of the Homeland Security Acquisition Manual (HSAM) and the DHS Acquisition Planning Guide mandate an AP for all major systems acquisitions. Appendix A to HSAM Chapter 3007, DHS Acquisition Planning Guide, provides detailed guidance on AP development and preparation. All DHS Level 1 and Level 2 investments require an approved AP before executing any contractual action. The AP is competition sensitive and should be marked accordingly.

Roles and Responsibilities

Sponsor/Project Manager Responsibilities
Develop, sign, maintain, and execute the AP
Contracting Officer Responsibilities
Support PM in formulating the AP
Formally concur through signature that the AP is contractually sound and executable by endorsing the resulting AP
Head of Contracting Activity (HCA)
Review and approve AP
DHS Office of the Chief Procurement Officer
Reviews but does not sign APs prior to HCA approval for acquisitions greater than $50 million

3. ACQUISITION PROGRAM BASELINE

Purpose: The purpose of the Acquisition Program Baseline (APB) is to establish key cost, schedule, and performance (technical) parameters throughout the acquisition phases. The APB is a top-level management tool that provides a reference point for measuring project performance.

Discussion: The approved APB is a "contract" between the Milestone Decision Authority and the PM and serves as a control to prevent cost growth, schedule slip, and requirements creep. The key cost, schedule, and performance parameters in the APB

should be continuously monitored and assessed by the PM. The PM may allow trade-offs within the APB parameters, as long as baseline thresholds are met. Breaches may have many causes that may be legitimate for the project effort. APB cost, schedule, and performance parameters will be reported in accordance with the established DHS Periodic Report requirements. When an approved cost, schedule or performance parameter exceeds the values in the following table it must be immediately reported to the Coast Guard Acquisition Executive (CGAE) and the DHS Milestone Decision Authority.

The following table is used to determine if an APB breach has or may occur.

Table 4-1: Acquisition Program Baseline Breaches

Key Parameter	Breach
Performance	Doesn't satisfy key performance threshold/objective parameter (> +/– 8% performance)
Cost	Exceeds Total Acquisition Cost or LCCE (> 8% increase)
Schedule	Exceeds schedule parameters (> 180 day slip)

PMs will utilize available and appropriate performance measurement tools throughout the acquisition to anticipate potential problems in meeting the key performance, cost and schedule parameters.

Roles and Responsibilities

Project Manager Responsibilities
Prepare/update and submit APB
G-A-2 Responsibilities
Conduct an independent APB verification and validation
G-A and Chief of Staff (G-CCS) Responsibilities
Endorse APB
CGAE Responsibilities
Endorse APB indicating CG APB approval
Homeland Security Acquisition Executive (HAE) Responsibilities
APB approval via Acquisition Decision Memorandum

4. ALTERNATIVES ANALYSIS

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

Discussion: The Alternatives Analysis process requires an analysis of all the possible alternative ways to satisfy the mission need and operational performance requirements for the new capability. The analysis should assess critical technologies associated with each alternative, including associated technology maturity and technical risk. It is started during Pre-Acquisition activities to determine what is needed to satisfy an identified

capability gap. Once a determination has been made that a new material solution is needed, focus is narrowed to alternative material 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.

Alternatives Analysis involves the use of trade studies, identification of Life Cycle Cost Estimate (LCCE) for each viable alternative, and a Cost-Benefit Analysis (CBA) for each viable alternative to establish the return on investment (ROI) measure. Office of Management and Budget OMB Circular A-11, Exhibit-300, Capital Asset Plan and Business Case requires a minimum of three viable alternatives to be identified.

The initial Alternatives Analysis document is required at DHS Alternative Selection Milestone (MS2), and should be prepared in consultation with all Operating and Support Program Managers involved with the project to ensure all appropriate analysis criteria are addressed. It must be updated to support subsequent Decision Milestones and whenever changes to operational requirements are made, or significant changes to LCCE's or ROI parameters are experienced.

> Note: See COMDTINST M4140.1, *Total Ownership Cost Guiding Principles*, for definitions of the different categories of cost.

Roles and Responsibilities

Project Manager Responsibilities
Developing, maintaining, and updating the Alternatives Analysis
Conducts trade studies, Life-Cycle Cost Estimates, and Cost-Benefit Analyses to refine information for updating the Alternatives Analysis document.
Sponsor Responsibilities
Determining the need for a material solution to satisfy an identified capability gap
Participates in the Alternatives Analysis process to compare operational requirements to cost estimates and make refinements for affordability, as appropriate

5.   TEST AND EVALUATION MASTER PLAN

Purpose: The Test and Evaluation Master Plan (TEMP) is the "top-level" planning document for all Test and Evaluation (T&E) related to a particular major systems acquisition. The fundamental purpose of test and evaluation is to verify attainment of technical performance specifications, operational effectiveness and operational suitability.

Discussion: During the early phases of the project, test and evaluation is conducted to demonstrate the feasibility of conceptual approaches, minimize design risk, identify viable design alternatives, analyze tradeoffs, and estimate operational effectiveness and operational suitability. As a system evolves through design, development, and integration, the emphasis in testing moves from Developmental Test and Evaluation (DT&E), which is concerned chiefly with validating the contract requirements and the

attainment of engineering design goals and manufacturing processes, to Operational Test and Evaluation (OT&E), which focuses on Critical Operational Issues (COIs) that focus on operational effectiveness, operational suitability, and supportability.

Roles and Responsibilities:

Project Manager. The PM is responsible for coordinating the overall T&E program. The PM performs this task with the assistance of the Sponsor/Sponsor's Representative, Support Program Managers (including logistics and training), and testing organizations. The PM is responsible for conducting DT&E. The majority of DT&E is normally conducted by the contractor. Under the Sponsor's management of OT&E, the PM provides technical and funding support. The PM must coordinate project activities with the test community, especially the testing organization. The PM must also ensure that testing addresses the critical operational issues and that it provides feedback to the contractors.

PM Responsibilities
Prepares/Updates the Test And Evaluation Master Plan
Prepares the DT&E Plan
Prepares the DT&E Report(s)
Assists the Sponsor in preparing the Early Operational Assessment (EOA) Plan (optional) and the OT&E Plan
Reviews and comments on draft OT&E Report
Provides interface between the development contractor and the government testing community

Sponsor/Sponsor's Representative. Prior to DT&E, the Sponsor is responsible for defining the system's required operational characteristics in the ORD. The Sponsor is responsible for identifying Critical Operational Issues in the ORD which provide the focus and direction for operational effectiveness and suitability for OT&E. The Sponsor has the lead role in OT&E, while the PM takes on a technical monitoring role.

Sponsor/Sponsor's Representative Responsibilities
Reviews and comments on TEMP
Prepares Section 4 (OT&E Outline) of the TEMP
Reviews and comments on TEMP Updates
Assists PM in preparation of the DT&E Plan
Reviews and comments on the final DT&E Report
Determines Critical Operational Issues
Prepares the EOA Plan (optional) and the OT&E Plan
Prepares the EOA Report (if required)
Conducts/Manages OT&E
Prepares/Submits the OT&E Report

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

TMOT 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 Sponsor 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

Other Members of the Test and Evaluation Organization. Depending on the nature and complexity of a particular project, a number of other organizations may play a role in T&E, and should be considered as members of the TMOT.

6.   INTEGRATED LOGISTICS SUPPORT PLAN

Purpose: The Integrated Logistics Support Plan (ILSP) is the master logistic support planning document and is an integral part of the total project planning effort. Its primary purpose is to describe the necessary logistics support activities for each ILS element including assigning responsibility for those activities and establishing the schedule for completing those activities.

Discussion: Integrated Logistics Support (ILS) planning during the acquisition phase involves the application of a diverse set of technical disciplines to assure effective, suitable, and economical system/equipment life cycle support. It requires the active participation of functional area representatives across the spectrum of the ten ILS elements of: Design Interface; Maintenance Planning; Manpower and Personnel; Supply Support; Support Equipment; Technical Data; Training and Training Support; Facilities; Packaging, Handling, Storage and Transportation; and Computer Resources Support.

Acquisition Logistics requires careful planning early and throughout the process to ensure the new systems and equipment are optimally supportable and the necessary logistics resources are in place and acquired at an optimal cost.

The information contained in the ILSP must represent the actual ILS planning being accomplished by the project and must be consistent with the ILS information and requirements identified in the contract for design and procurement of the system/equipment and submittal of ILS related data deliverable products.

Acquisition Logistics Objectives
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
Transition a fully functioning logistics support capability to the Support Program Manager for use during the Operations and Support Phase

Roles and Responsibilities

PM Responsibilities
Establish and manage an effective ILS program
Relate support to project readiness objectives, system design, acquisition and operating costs, and the acquisition strategy
Preparation of the ILSP

ILS Manager Responsibilities
Formulate, coordinate and implement the ILS program
Draft 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

The Integrated Logistics Support Management Team (ILSMT) shall be established during the Concept and Technology Development (C&TD) phase. It should consist of members representing various logistics support elements at Headquarters, the Engineering Logistics Center (ELC) or Aircraft Repair and Supply Center (AR&SC), Training Centers, Maintenance and Logistics Commands (MLCs), Field units such as the Telecommunications & Information Systems Command (TISCOM) and/or the Operating Systems Center (OSC), other interested organizations, and contractor representatives, as appropriate for the project.

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

7. CONFIGURATION MANAGEMENT PLAN

Purpose: Configuration Management (CM) is an integral part of acquisition requirements and project management for both hardware and software systems. A system's configuration represents its functional (performance) and physical (form and fit) characteristics. These characteristics are described in technical documentation, assessed and approved/verified in a series of technical reviews and configuration audits, and achieved in the manufactured and accepted product.

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 system as more knowledge of the system design, operation and maintenance concepts is gained; and mission requirements change. These changes must be controlled to ensure they are first cost effective and safe, and second they are properly documented so all producers, users, and support personnel are aware of the current configuration status.

Discussion: Each major systems acquisition project shall implement a CM program to identify, document, audit, and control changes to the configuration of the new system/equipment being acquired. Coast Guard CM Policy requirements and responsibilities are outlined in the 4130 series Commandant Instructions and Manuals. Additional information is provided in MIL-HDBK-61 (series).

CM Objectives
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
Ensure that the complex aggregate of configuration items meets the system specified and operational requirements, and verify actual product configuration against required attributes

The CM planning information shall be tailored, as appropriate, for the specific acquisition. During the C&TD Phase, each major systems acquisition will develop and document the CM process that will be followed. A separate, stand-alone Configuration Management Plan (CMP) may be developed by the acquisition project or the required CM planning information may be provided as part of the Integrated Logistics Support Plan (ILSP). If the CMP is incorporated into the ILSP, it should be so stated in the Project Management Plan.

A Configuration Control Board (CCB) will be chartered and used by the PM as the primary working group to manage the product configuration.

Roles and Responsibilities:

PM Responsibilities
Overall conduct of CM and technical data management for the acquisition project
Establish a CM program
Identify how CM planning information will be documented
Draft the Configuration Control Board (CCB) charter not later than DHS Alternative Selection Decision Milestone (MS2)
Convene and chair the acquisition project CCB
As CCB Chairperson, receive CCB recommendations on the disposition of requested change proposals, and approve/disapprove change proposals

CCB Responsibilities
Review, recommend for approval or disapproval, and refer to a higher authority, as appropriate, all changes, and proposed configuration changes that will modify a system's functional characteristics or operational requirements
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

8. 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 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 Concept Development and Demonstration (CD&D) Phase, or start of Low Rate Initial Production (LRIP), planning actions must be completed for deployment of the new assets to the users. Planning considerations include the timing of deliveries, the order in which new assets or capabilities will be delivered, homeport or operating site selection and appropriate environmental impact analysis, 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.

The DP is prepared during the CD&D Phase. An approved DP should be in place no later than the DHS Project Decision Milestone (MS3). If a project includes Low Rate Initial Production (LRIP), a preliminary DP (at a minimum) addressing deployment of

the LRIP article(s) should be in place prior to first deployment.

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 Responsibilities
Endorse the DP subsequent to the PM's endorsement
Sponsor Responsibilities
Approve the DP

9. 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 Operations and Support Phase of the lifecycle.

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 approximately 12 to 18 months 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
Preparation and submission of the PTP

Chapter 5: 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. The Office of Management and Budget (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. In the context of major systems acquisitions, capital investment programming has two interdependent functions: (1) to provide capital asset acquisition resources (funding and personnel), and (2) to establish affordability constraints. Capital programming integrates the planning, acquisition and management of capital assets into the budget decision-making process.

2. PLANNING, PROGRAMMING, BUDGETING, AND EXECUTION

Planning, Programming, Budgeting, and Execution (PPBE) is the primary resource management system for the Department of Homeland Security (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 5-1: PPBE Process**.
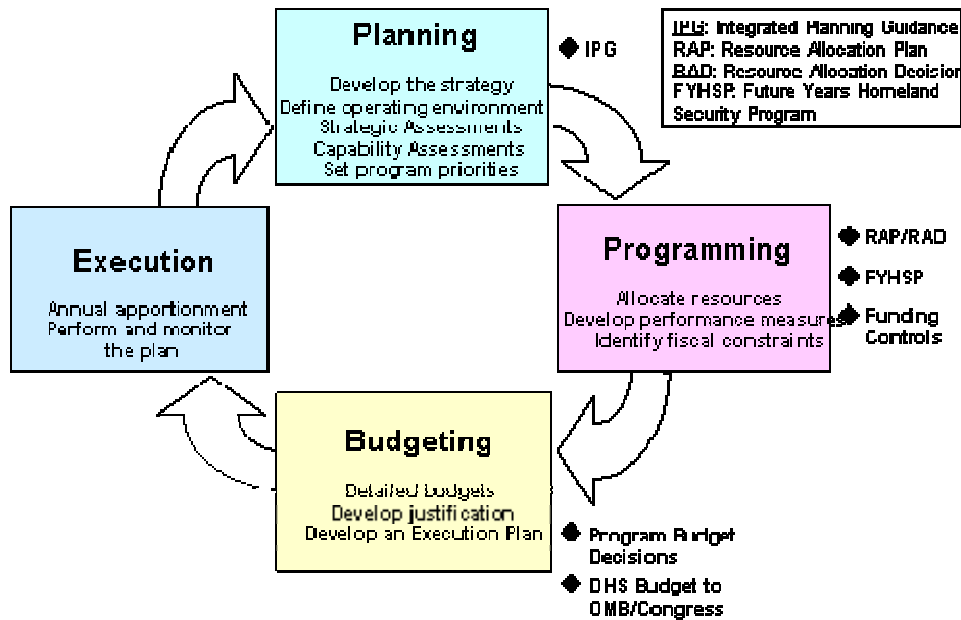
Figure 5-1: PPBE Process

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 strategic priorities, and capabilities required to achieve component 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 Integrated Planning Guidance (IPG) provides the direction and guidance for the Coast Guard to develop their five year Capital Investment Plan (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 strategic priorities (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. This phase is resource constrained and results in a Resource Allocation Plan (RAP) for submittal to DHS. RAP's 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. DHS reviews RAP submittals from each component and issues a Resource Allocation Decision (RAD). The RAD is the DHS passback 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.

- 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, and the final output is the DHS Budget and the Future Years Homeland Security Program (FYHSP) 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)07-FY11 FYHSP includes the FY07 budget with out-year targets to FY11 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.

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 Chief of Staff (G-CCS) Budget Guidance and the individual Resource Proposals (RPs). Within the Coast Guard, an Investment Board is chartered by G-CCS 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 portion of the DHS FYHSP (**Figure 5-2: PPBE Overlapping Cycles**). The CIP and FYHSP provide project funding allocations, performance, and milestones for the budget year plus four years in support of DHS goals and priorities as identified in the IPG.
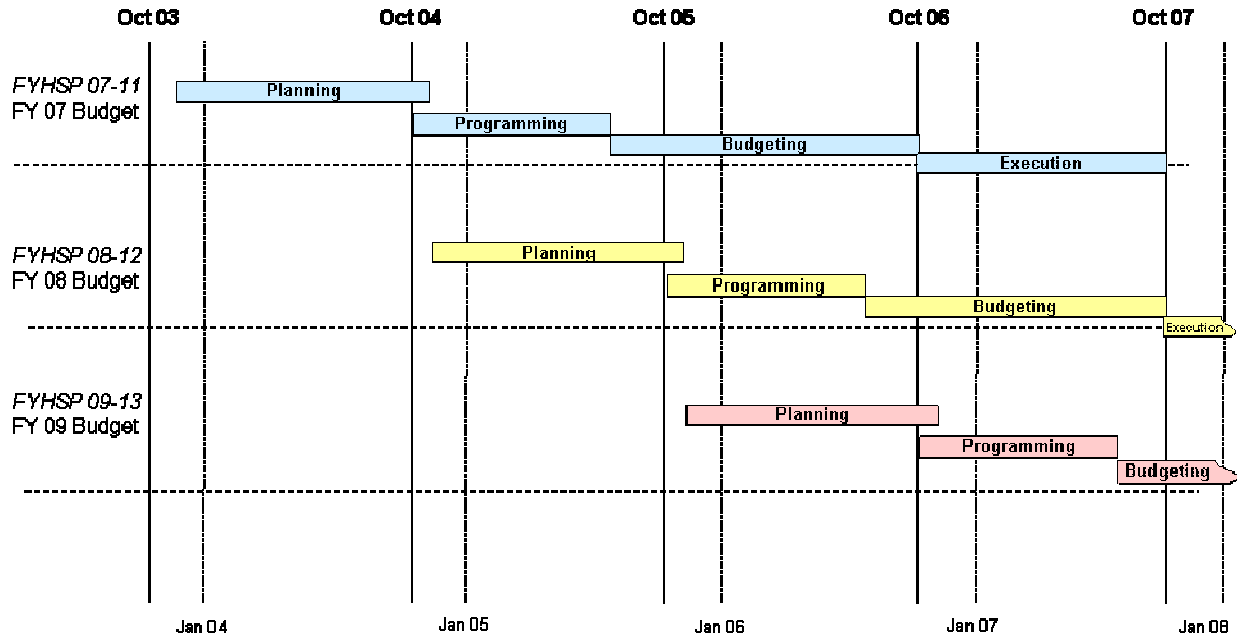
Figure 5-2: PPBE Overlapping Cycles

3.   EXHIBIT-300

An annual Exhibit-300 Business Case is required by OMB Circular A-11 and DHS to be submitted for all major investments.

The Exhibit-300 is submitted through CG-822, along with the Coast Guard budget submittals, to DHS and OMB. Exhibit-300s are reviewed and scored to ensure that spending on investments 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. 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. The use of Earned Value Management as a performance-based management process is critical in the scoring process, as is Project Manager certification. Assets that are in the Operations and Sustainment Phase must document how close actual annual operating and maintenance costs are to the original life-cycle cost estimates, and whether the level or quality of performance/capability meets original performance goals and continues to meet user needs. The Sponsor is responsible to conduct a Post Implementation Review following transition from the Production and Deployment Phase with subsequent Operational Analysis on an annual basis.

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); (2) to ensure that the business case for investments are made and tied to mission statements, long-term goals

and objectives, and annual performance plans that are developed pursuant to the Government Performance and Results Act of 1993 (GPRA); and (3) for Information Technology, to ensure that security, privacy, records management, and electronic transactions policies are fully implemented and compliant with DHS Enterprise Architecture.

4.   DHS INVESTMENT REVIEW PROCESS

DHS MD #1400 establishes an Investment Review Process to:

▪ Integrate capital planning and investment control, resource allocation, budgeting, acquisition, and management of investments.

▪ Ensure that spending on investments directly supports and furthers DHS' mission and provides optimal benefits and capabilities to stakeholders and customers.

▪ Identify poorly performing investments 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 investment management in support of the President's Management Agenda.

The management of Departmental investments is a key strategic function of DHS. The DHS Investment Review Process is shown in **Figure 5-3: DHS Investment Review Hierarchy**.
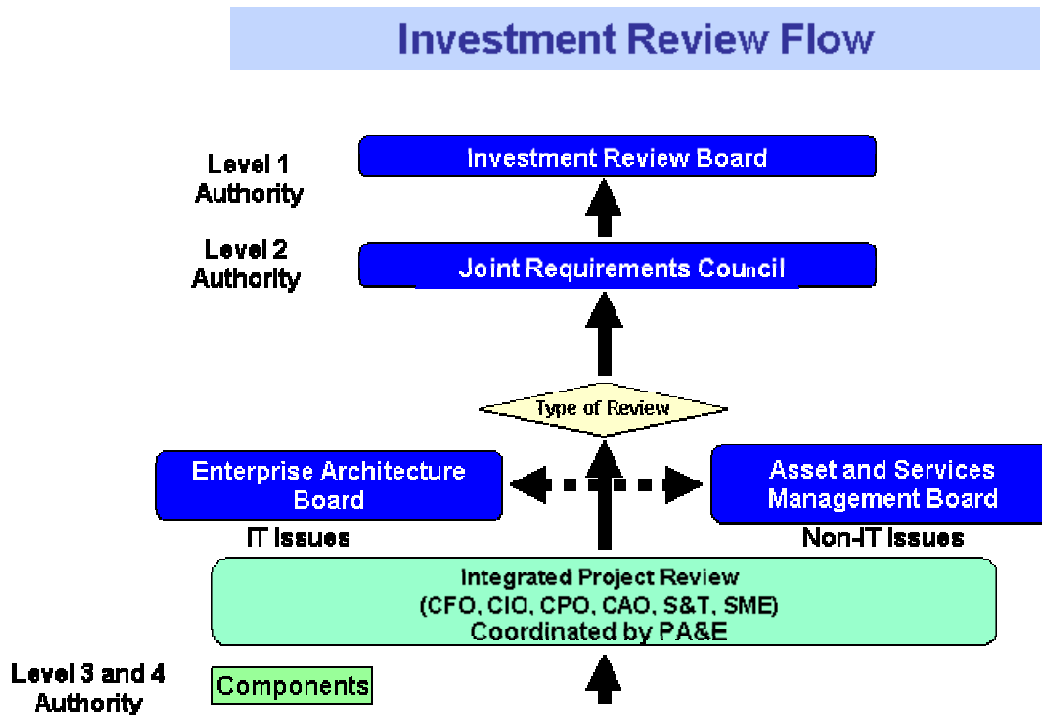

Figure 5-3: DHS Investment Review Hierarchy

The Investment Review Process (IRP) is a systematic process for review and approval, visibility, and accountability to senior management for acquisition oversight of major investments throughout their life-cycle; and for portfolio management to achieve budget goals and objectives. Interface between the IRP and the PPBE process occurs through DHS Program Analysis and Evaluation (PA&E) and the Budget Office. Coordination with the Investment Review Board (IRB), Joint Requirements Council (JRC), Enterprise Architecture Board (EAB), and the Asset and Services Management Board (ASMB) is essential to ensure success in a joint, integrated DHS architecture. **Figure 5-4: Capital Investment Planning** shows the inseparable link between the IRP and the PPBE process.
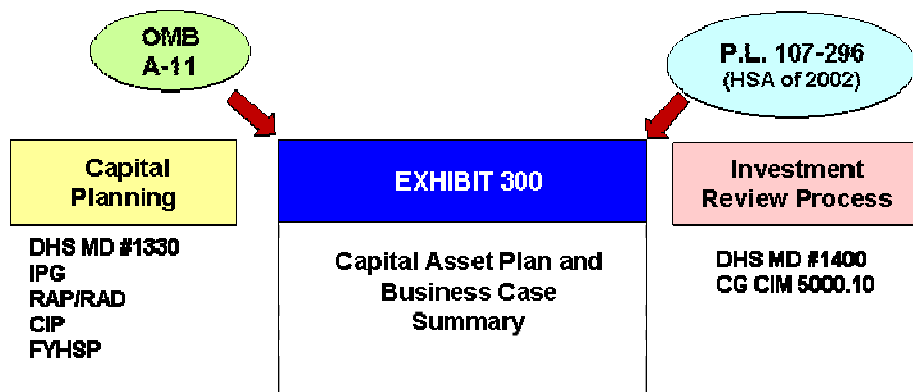
Figure 5-4: Capital Investment Planning

Investment Review Request. All investments enter the DHS IRP the same way – by submitting an Investment Review Request (IRR) to the DHS Integrated Project Review Team (IPRT). The purpose of the IRR is to ask specific questions early in the IRP so that DHS can develop an initial picture of the investment, its relationship with other investments, both within and outside the Coast Guard and Department, and its part in the DHS portfolio.

The initial IRR will be used to introduce an investment (during Pre-Acquisition and before entry into the Future Years Homeland Security Program). It is designed to begin a dialogue between the IPRT and the Coast Guard to guide the investment through the first stages of the investment review process. An IRR should be used to request all DHS Decision Milestone reviews. The amount of detail contained in the IRR should show a progression through the budget and investment cycles.

The initial IRR will be submitted at least four months prior to Project Authorization or the initial milestone decision. Subsequent IRRs will be submitted approximately 47 days prior to the planned DHS milestone decision. Format and instructions for the IRR are provided in the DHS *Investment Management Handbook*.

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 Decision Milestone 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 Rough Order of Magnitude (ROM) cost estimate and funding stream projection in the Mission Need Statement (MNS). The ROM cost estimate is successfully honed during the acquisition process through cost and performance trade-off analyses and feasibility studies. Project cost estimates should be relatively firm when the Operational Requirements Document (ORD) is finalized and approved. At the end of the Concept and Technology Development (C&TD) Phase, the Acquisition Program Baseline (APB) is established for all key cost parameters, to include at a minimum, Total Acquisition Cost, and Life-Cycle Cost.

The Project Manager is responsible for initiating the Affordability Assessment for each major systems acquisition at each Decision Milestone and to provide the Assessment to CG-82 early enough to allow CG-82 to review and comment on the Assessment prior to any upcoming decision milestone. The Office of Budget and Programs (CG-82) has the responsibility to review each Affordability Assessment, to validate the funding listed within the Assessment, and to provide an assessment to CG-8 concerning the project's cost as it relates to the expected Coast Guard budget. The Affordability Assessment includes consideration of support and personnel requirements, as well as the fiscal constraints of the organization. Homeland Security Acquisition Executive (HAE) 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 Affordability Assessment describes the acquisition project's programming and affordability impacts on the CIP, the FYHSP, and the annual budget cost and priorities.

Part I of the MSAM Handbook (Appendix A to this manual) provides additional information on Affordability Assessments along with an Affordability Assessment template.

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Chapter 6: Reports and Reviews

1.   INTRODUCTION

This section addresses the knowledge-based administrative processes that the Project Manager (PM) uses to keep senior management at the Coast Guard, the Department of Homeland Security (DHS), the Office of Management and Budget (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

The following information describes the required reports that the PM will use to carry out his/her administrative duties contained in the PM charter.

a.   Internal

One of the responsibilities of the PM is to provide various reports to upper management in the Coast Guard.

Weekly Report: The PM is responsible for reporting current project status to the Project Director (G-A) on a weekly basis. The format of this report is up to the discretion of G-A and this information is updated during the weekly staff meetings.

Acquisition Monthly Report: This report provides monthly project status information to senior management and is forwarded via the Chief of Staff (G-CCS) and the Vice Commandant (G-CV) to the Commandant (G-C). The Acquisition Monthly Report is a status report on all major systems acquisitions and selected non-major acquisitions. It is prepared every month by the Acquisition Resource Management Staff (G-A-1) based on information provided by the PMs. This report provides the current status of cost, schedule, performance (technical), and logistics performance. Projects using earned value also report contract status using earned value performance measures. Monthly Reports are available on the G-A intranet web site for review.

b.   External

Quarterly Acquisition Report to Congress: This report provides a quarterly assessment of project status to the respective Chairpersons of the Senate and House subcommittees that have oversight over DHS and the Coast Guard. The quarterly report includes abbreviated information on the status of each acquisition project with current data on obligations and outlays. The reporting requirement is coordinated by Commandant (G-A-1) several weeks prior to the end of each fiscal quarter and is based on information provided by the PMs and other cognizant Headquarters Office and Staff Chiefs. The Program Review Division (CG-821) and the Budget Execution Division

(CG-831) provide assistance with the review and coordination of the report.

Periodic Reports: The Periodic Report provides senior DHS management with accurate project performance and risk information in a standardized format. Project Managers are required to complete the Periodic Reporting template as directed by DHS *Periodic Reporting Instructions*. G-A-1 is the Coast Guard point of contact to obtain the latest policy and format for Periodic Reporting. Level 1, Level 2, and Level 3 (IT only) investments submit Periodic Reports during Acquisition. Level 3 (IT only) continue to submit Periodic Reports during Sustainment.

Operational Analysis Report: Operational Analysis is a method of examining the current performance of a steady-state operation (assets or service) and measuring that performance against an established set of cost, schedule, and performance parameters. Operational Analyses are to be conducted on an annual basis for all Level 1, 2, and 3 (IT) investments. Results of Operational Analyses are reported annually to DHS using the DHS *Operational Analysis Template* provided in the DHS *Operational Analysis Guidance*.

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 is needed to obtain approval to continue to the next stage of development or the next phase of the acquisition.

a. Internal

The Coast Guard Acquisition Review Council (CGARC) is the primary acquisition advisor to the Coast Guard Acquisition Executive (CGAE) and is kept apprised of the progress of major acquisitions' performance through a series of annual reviews.

Coast Guard Annual Reviews: Annual Reviews allow for the oversight and review of major systems acquisition projects and facilitate the flow of information across directorates and to senior management. Specifically, the PM conducts Annual Review briefings for CGARC members and invited DHS personnel and their staffs to provide a complete and current status of the project. G-A-1 is responsible for scheduling and coordinating Annual Review briefings.

CGARC Decision Milestone Reviews: The CGARC reviews major systems acquisition projects prior to each DHS Decision Milestone. CGARC briefings can also be scheduled to discuss project issues that require senior management attention. The Major Systems Acquisition Manual (MSAM) Handbook (Appendix A) provides format and content information for CGARC Reviews.

b. External

Submission of an Investment Review Request (IRR) will trigger DHS Decision Milestone briefings for the Joint Requirements Council (JRC) and Investment Review Board (IRB) as part of the DHS investment review process.

EAB Briefings. The Enterprise Architecture Board (EAB) has the responsibility for overseeing DHS Enterprise Architecture. It therefore reviews all projects and makes recommendations categorized as Acquisition Level 1 or 2 Information Technology (IT) investments to the Joint Requirements Council and Investment Review Board. For Acquisition Level 3 and 4 IT investments, the EAB reviews the investment at inception to determine appropriateness for re-categorization to a higher level, and subsequently, for Level 3 IT investments, it reviews documentation prior to the component head milestone decision review and final approval.

Decision Milestone Briefings: The format and template for JRC/IRB briefings are provided in the MSAM Handbook in Appendix A.

JRC Briefings. The Joint Requirements Council (JRC) has decision authority for Level 2 investments. In addition, the JRC validates requirements for Level 1 and 2 investments and reviews projects to identify joint requirements for consolidation and mission alignment to achieve operational and cost efficiencies.

IRB Briefings. The primary function of the Investment Review Board (IRB) is to review Level 1 investments for formal entry into the annual budget process and at Decision Milestones. The IRB conducts systematic reviews of investment preparations and approves key decisions as part of their knowledge-based investment review process. DHS CFO (PA&E) will normally schedule a Pre- and Post-IRB briefing to address concerns/issues prior to the IRB and to confirm IRB approval and direction immediately following the IRB.

Post Implementation Review. The purpose of a Post Implementation Review (PIR) is to track and measure the impact and outcomes of investments that are in 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 assets (or services) to evaluate the actual results compared to estimates 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.

The PIR 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 (or service) must be in place long enough to provide statistically meaningful information. PIRs should be completed within 6-12 months of deployment of an asset or service. Deployment is generally defined as Full Operational Capability (FOC). However, if statistically meaningful information is available earlier, the project's PIR should be adjusted accordingly. Once the PIR is completed, the Sponsor will be required to report its Operational Analysis results on an annual basis.

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Major Systems Acquisition Manual (MSAM) Handbook

Appendix A
to
COMDTINST M5000.10

Commandant
U. S. Coast Guard
2100 Second Street SW
Washington, DC 20593

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LIST OF TABLES

Introduction

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

- o Part I: Documentation
- o Part II: Briefings

This Handbook was developed for the Coast Guard acquisition workforce and associated Integrated Product Team/matrix members and supports staffs. The Handbook should be used as a quick, ready reference to identify the organization, format and suggested content for required documentation and briefings and best practices. This information should be used in concert with the Major Systems Acquisition Manual (MSAM), COMDTINST M5000.10

An overview of the Coast Guard major systems acquisition process can be obtained by attending the in-house acquisition training entitled *Major Acquisition Process Training (MAPT)*. This course is sponsored quarterly by Chief, Acquisition Technical Support Staff (G-A-2) and is required for all new personnel assigned to the Acquisition Directorate. Training is presented by G-A-2 staff and invited subject matter experts. The scope of training includes most of the information in the MSAM and this Handbook. Real-world scenario-based case studies have been developed to augment this training.

Constructive changes/recommendations to this Handbook are encouraged. The Chief, Acquisition Technical Support Staff (G-A-2) will manage all changes.

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PART I. DOCUMENTATION

1.0   DOCUMENT REVIEW AND APPROVAL PROCESS

1.1   Review and Approval Levels

Each draft document must undergo a Matrix-level concurrent clearance review. Concerns should be resolved with assistance from G-A-2. If the O-6 Matrix-level review results in a non-resolvable non-concur, or a significant change to the document, a Coast Guard Acquisition Review Council (CGARC)-level concurrent clearance may be required. The following table provides the project documentation approval authorities.

Table A-1: Acquisition Documents - Approval Authorities

Document	Prepared by	Coast Guard Approval Authority	DHS Approval Authority
Mission Need Statement	Sponsor's Rep	CGAE	HAE
Acquisition Plan	PM	HCA	N/A
Acquisition Program Baseline	PM	CGAE	HAE
C&TD Exit Criteria	Sponsor's Rep	CGAE	HAE
CD&D and P&D Exit Criteria	PM	CGAE	HAE

Document	Prepared by	Coast Guard Approval Authority	Submit to DHS
Exhibit-300 Business Case (initial)	Sponsor's Rep	N/A	Yes
Affordability Assessment	PM	N/A	N/A
Alternative Analysis	PM	G-A	Yes
Project Management Plan	PM	G-A	Yes
Preliminary Operational Requirements Document	Sponsor's Rep	G-A (accepts)	N/A
Operational Requirements Document	Sponsor's Rep	G-CCS	N/A
Integrated Logistics Support Plan	PM	G-A	N/A
Configuration Management Plan	PM	G-A	N/A
Test and Evaluation Master Plan	PM	G-A	N/A
Deployment Plan	Sponsor's Rep	Sponsor	N/A
Project Transition Plan	PM	G-A	N/A

C&TD: Concept and Technology Development   CGAE: Coast Guard Acquisition Executive PM: Project Manager

CD&D: Capability Development and Demonstration   HAE: Homeland Security Acquisition Executive

P&D: Production and Deployment   G-A: Assistant Commandant for Acquisition

HCA: Head of Contracting Authority   CPO: Chief Procurement Officer   G-CCS: Chief of Staff

1.2   Concurrent Clearance

A completed draft document will be distributed for Matrix-level concurrent clearance along with a Concurrent Clearance form that provides instructions and due date to the matrix reviewers. Instructions for filling out the Concurrent Clearance form are provided in **Table A-2:   Matrix-Level Concurrent Clearance Form Instructions**.

Table A-2:   Matrix-Level Concurrent Clearance Form Instructions

Concurrent Clearance Form (CG-4590) Item	Information Required
TO	"DISTRIBUTION"
IDENTITY OF MATERIAL	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 team members plus G-A-2, G-ACS, CG-82. Consider routing to CG-XPP, CG-85, G-A-1, G-LPL, CG-62, and CG-64; use routing symbols. 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

Matrix-Level Concurrent Clearance

To initiate a Matrix-level concurrent clearance, the originating office (Sponsor's Representative for the Mission Need Statement (MNS), Operational Requirements Document (ORD) and Deployment Plan (DP)); the Project Manager (PM) for the other acquisition documents) will complete the concurrent clearance form and attach it to the draft document to be reviewed. Distribution to the matrix should be done concurrently (electronic distribution is recommended).

Comments received from the matrix members are to be documented and responses adjudicated by the originating office and incorporated into an updated draft document.

CGARC-Level Concurrent Clearance

The MNS and ORD are required to go through a CGARC-level concurrent clearance. For all other documents, if a Matrix-level review results in an unresolvable non-concur response, receipt of substantive comments or a significant change to the draft document, a CGARC-level concurrent clearance may be required. The PM (or Sponsor's Representative for the MNS/ORD) will provide an adjudicated document package in a blue-pocketed file folder (see Table A-3 below) to the CGARC Executive Secretary to initiate a CGARC-level concurrent clearance.

Table A-3: CGARC 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	
Summary of comments and 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)	

The CGARC Executive Secretary will establish the due date based on the document's time sensitivity and other documents out for CGARC review and will distribute copies of the document package to appropriate CGARC-level offices for review. The originator's contact, as provided by the PM or Sponsor's Representative, will collect the CGARC responses. The originating office will be responsible for adjudicating responses to any CGARC-level review comments and making appropriate changes to the document.

1.3   Routing Documents for Signature

For documents that did not require a CGARC-level concurrent clearance, the contents of the package to be routed for signature is the same a shown in **Table A-3: CGARC Concurrent Clearance Package Contents** with the addition of a request for waiver of a CGARC concurrent clearance in the right side of the folder on top of the draft document. The package is to be reviewed by G-A-2 prior to routing for signature.

For documents that required a CGARC-level concurrent clearance, the PM or Sponsor's Representative (as appropriate) shall prepare and submit (after G-A-2 review) the final approval package for endorsements and signature with contents as described in

Table A-4: Document Signature Package after CGARC-Level Concurrent Clearance. The originating office is responsible for tracking the package through the signature process and providing a copy of the final signed document to G-A-2.

Table A-4: Document Signature Package after CGARC-Level Concurrent Clearance

Left Side of Folder (Back to Front)	Right Side of Folder (Back to Front)
Copy of the document package sent out for CGARC-level concurrent clearance Review	Revised draft document
Copy of each CGARC-level response	Any necessary transmittal letter or digest
Summary of CGARC-level comments and responses	
Original Concurrent Clearance form sent to the CGARC-Level with the bottom filled out as to who responded and their response (i.e., concur, concur with comments, non-concur)	

The originating office is responsible for tracking the approved package through the signature process and providing a copy of the final signed document to G-A-2.

1.4   Documentation Updates and Revisions

As the project progresses through the various acquisition phases, project management documents will require revisions to update the management strategy and acquisition planning for the remaining phases. At a minimum, they shall be reviewed and updated as required at each subsequent DHS Decision Milestone. 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 approved documents 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 and date is to be placed in the lower left-hand side of the document footer.

- A Revision Summary (with Table of Changes) will be included prior 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 Draft	15 Oct 06

Schedule Date Format within Documents and Plans. When referencing schedules in any of these documents, the date formats in **Table A-5: Date Formats** should be used.

Table A-5: Date Formats

Key Event To Occur:	Date Format Convention:
Past History	Use Month and Year, e.g., 10/06
Within 3 Years	Use Quarter and Fiscal Year, e.g., 1QFY08
Beyond 3 Years	Use Fiscal Year, e.g., FY10

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2.0   MISSION ANALYSIS REPORT

2.1   MAR 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 is 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 Concept and Technology Development (C&TD) Exit Criteria. The sponsoring organization will work closely with G-A to ensure a major acquisition is stood up to meet the needs of the new or updated Coast Guard mission.

2.2   MAR 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 2.3. The approved MAR will not usually be updated unless there are significant changes in Coast Guard mission requirements.

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2.3   MAR Template

[CAPABILITY NAME]

MISSION ANALYSIS REPORT

Submitted by: _____   _____
                       Sponsoring Organization (G-Y)   Date

Received by: _____   _____
                       Chief of Staff (G-CCS)   Date

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MISSION ANALYSIS REPORT

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 in determining the functional requirements and capabilities the Coast Guard will need in order to effective meet the strategic needs.

1.3.1   Current Mission Functional Requirements

Provide a general description of requirements for mission fulfillment. For example, 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 performance, customer response, costs, excess/deficient capabilities, etc.

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 statutes, regulations, policy, historical trends, technology, demographics, etc.

SECTION 2: PROBLEM STATEMENT

2.1   Mission Impact of Deficiencies

Incorporate the mission descriptions and projections, 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-material Alternatives Explored

Describe non-acquisition alternatives for addressing deficiencies which have been explored, e.g., changes in doctrine, organization, training and education, material, leadership, personnel, and facilities (DOTMLPF).

2.4   Acquisition Planning Resources

Describe the planning resources required by the Program Director for completing the major systems acquisition above and beyond current resources. Include an outline of assistance required from other programs. Estimate personnel and funding resources needed for the major systems acquisition.

SECTION 3: RANGE OF ALTERNATIVES

3.1   Alternatives Identification

Identify, in general terms, 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; 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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3.0   MISSION NEED STATEMENT

3.1   MNS Purpose

The purpose of the Mission Need Statement (MNS) is to synopsize 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 material solution. In the broader view of the investment lifecycle, it represents the initiation of formal acquisition program management and the beginning of the investment process.

The MNS is the formal description of the strategic need for an investment and is a crucial part of the acquisition process. It is one of the earliest documents to formalize the investment and links the gap in mission capability first documented in the DHS Investment Review Request (IRR) to the particular investments that will fill that gap.

3.2   MNS Preparation

The Sponsor's Representative shall prepare the MNS in accordance with the template provided in section 3.3. 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 investment within the context of the Coast Guard and DHS portfolio. It should provide critical insight into mission capabilities and serve as the basis to render an investment decision to proceed to the Concept and Technology Development Phase. Later documents, such as the Operational Requirements Document, will take the concepts outlined in the MNS and begin decomposing the gap requirements in detail. Commandant (G-A-2) shall support the Sponsor's Representative in coordinating the review of the MNS.

Mission Need Statement submissions that exceed five pages and/or include solution-based requirements will normally be rejected by DHS.

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3.3   MNS Template

MISSION NEED STATEMENT

for the

[PROJECT TITLE]

Submitted by: _____ _   _____
                     Sponsor (G-Y)   Date

Approved by: _____ __   _____
                     CG Acquisition Executive (G-CV)   Date

DHS Acquisition Decision Memorandum Approval Received: _____
                                                         Date

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MISSION NEED STATEMENT

CONTENT REQUIREMENTS

COVER PAGE

The MNS is submitted by the Sponsor and approved by the CGAE (G-CV). The Coast Guard approved MNS is forwarded to DHS as part of the Project Authorization Decision package. The HAE (DepSec) approves the MNS in the Project Authorization Decision Memorandum.

EXECUTIVE SUMMARY

The Executive Summary should be short (1-2 pages) and should include the salient points of the MNS and provide a synopsis of the investment requirements detailed in the body of the MNS.

REVISION SUMMARY (IF APPLICABLE)

Provide a bulletized high-level description of the major changes that have occurred in the current submission, along with the reason for the change. Provide the date of the revisions discussed at the beginning of the 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.

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 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 investments 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

Discuss what other existing and planned systems (IT or business) are conducting the same or similar missions.

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. Discuss how the investment fits into the EA Transition Strategy.

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.

1.4 Resource Availability

State how the resulting investments (1) will be staffed and (2) will provide other resources required for success.

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. (Guidance for tracing the mission to the Department goals and objectives can be found in the Integrated Planning Guidance (IPG).)

This link should be synopsized from the discussion in the Investment Review Request (IRR).

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 Coast Guard as opposed to another governmental source or private sector alternative.

2.3   Efficiency and Effectiveness

Discuss any dependency on other investments and how this need and its attendant investments 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.

Discuss the potential portfolio placement for this need.

Discuss how these investments will support work processes that have been or will be simplified or otherwise redesigned to reduce lifecycle costs and improve effectiveness.

Discuss how the investment will integrate with other systems (both IT and non-IT) to provide a capability that will fill the gap.

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.

4.0   PRELIMINARY OPERATIONAL REQUIREMENTS DOCUMENT and OPERATIONAL REQUIREMENTS DOCUMENT

4.1   PORD/ORD Purpose

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 the Sponsor's mission performance needs. The Sponsor establishes absolute minimums (thresholds) below which the mission can not 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. 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.

4.2   PORD/ORD 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 4.3. The PORD amplifies and derives from the MNS and early mission analysis and affordability trade-offs. Developed early in the Concept and Technology Development Phase, the PORD describes the Concept of Operations (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 following 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 Project Authorization milestone 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 (G-A).

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. Based upon the above studies, the Sponsor's Representative will also need to identify critical test and evaluation issues (i.e., Critical Operational Issues). The final iteration of ORD preparation should be a Matrix-level Concurrent Clearance review, followed by a CGARC-level Concurrent Clearance review. The approved ORD shall be in place not later than Alternative Selection.

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
Project Manager (PM)
Assists the Sponsor's Representative in defining the operational and support requirements for the system

4.3   PORD/ORD Template

PRELIMINARY OPERATIONAL REQUIREMENTS DOCUMENT

for the

[PROJECT TITLE]

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

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

Endorsed by: _____   _____
                      Project Manager (G-AYY)   Date

Accepted by: _____   _____
                      Project Director (G-A)   Date

OPERATIONAL REQUIREMENTS DOCUMENT

for the

[PROJECT TITLE]

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

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

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

Endorsed by: _____   _____
                                          Assistant Commandant for C4 & IT   Date
                                          (CG-6)

Endorsed by: _____   _____
                                          Project Manager (G-AYY)   Date

Endorsed by: _____   _____
                                          Project Director (G-A)   Date

Approved by: _____   _____
                                          Chief of Staff (G-CCS)   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, highlighting the salient points of each section.

REVISION SUMMARY (IF APPLICABLE)

The Revision 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.

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), 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 increments of capability, state the date each increment is required. Clearly specify the operational capability or level of performance necessary to achieve each increment 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 which is being developed in another project).

SECTION 2: MISSION REQUIREMENTS

Describe the mission requirements as contained in the MNS.

2.1   Operating Requirements

In specific terms, describe:

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

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.).

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 Concept of Operations.

2.2   Concept of Operations – Normal Operations

Describe operating scenarios envisioned during normal operations. Scenarios should describe each of the anticipated operating schemes in terms of the activities anticipated to be conducted in a typical mission; describe 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 a typical mission? [As an example, during a Search and Rescue (SAR) mission being conducted by a patrol boat, the operators would be notified of a case, proceed to the search area, conduct the search (possibly with the aid of a small boat which they have deployed), complete a rescue evolution, provide medical attention, and return to the nearest port or rendezvous with an aircraft.]

2.3 Concept of Operations – Heightened Operations

Describe operating scenarios envisioned during periods of heightened operations due to local or national situations (e.g., wartime, environmental crisis, natural disaster, terrorist threats [including High and Severe DHS threat levels and/or Coast Guard Maritime Security (MARSEC) 2 and 3 threat levels], migrant interdiction, etc.). Describe all operational scenarios envisioned which exceed the normal operations described above.

2.4 Critical Operational Issues

List the Critical Operational Issues (COI) for the system. COIs are the operational effectiveness and operational suitability issues (not characteristics, parameters, or thresholds) that must be examined during OT&E to evaluate/assess the system's capability to safely perform its mission.

A COI should be 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., Does the system have the reliability, maintainability, and availability characteristics sufficient to meet operational requirements?).

The list of COIs 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 should be divided into Effectiveness COIs and Suitability COIs and will normally consist of five to ten issues for each category; they should reflect only those issues that are truly "critical" in nature. Thus, if a COI cannot be favorably resolved, the acquisition should not proceed to production.

SECTION 3: CRITICAL TECHNICAL PARAMETERS

Identify and describe critical technical parameters, which must be part of, or met by, the system. Focus on "mission critical" 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 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
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	
Survivability Systems	

Basic Information Technology Requirements

Computers/IT SYSTEMS	Radars
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

Identify any special or unique requirements for communications or information technology. Address any interoperability issues involved. Identify radio spectrum requirements.

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: NON-TECHNICAL REQUIREMENTS

Address the following non-technical requirements:

4.1   Design

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

4.2   Integrated Logistics Support

Identify Integrated Logistics Support (ILS) requirements and constraints; identify the overall ILS 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 Failures (MTBF). This section of the ORD will serve as the basis for portions of the specification and the Integrated Logistics Support Plan (ILSP).

4.4   Availability

Identify availability requirements; specify the probability that an item is in an operable and committable state at the start of a mission when the mission is called for at unknown (random) times. Availability requirements are usually stated in terms of Operational Availability (Ao). This section of the ORD will serve as the basis for portions of the specification and the ILSP.

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). This section of the ORD will serve as the basis for portions of the specification and the ILSP.

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 designated 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.

- Identify any staffing goals or requirements for the system to be acquired.

- Describe, in general terms, the physical (habitability) requirements for personnel (including working, eating, living and sleeping areas, and mixed gender considerations, where appropriate).

- Describe any unique personnel or safety requirements such as medical or personal care requirements arising from extended deployment conditions, 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.

- Describe any environmental considerations identified in the environmental impact analysis.

4.8   Training Requirements

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. This section will serve as the basis for a portion of the Integrated Logistics Support Plan.

SECTION 5: KEY PERFORMANCE PARAMETERS

Key Performance Parameters (KPP) 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 (approximately six or fewer) that capture the parameters needed to reach the overall desired capabilities for the system. Failure to meet an ORD KPP threshold can be cause for the system selection to be reevaluated or the project to be reassessed or terminated. ORD KPPs should be presented in a tabular form and include both thresholds and objectives; they are then extracted from the ORD and 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 interoperability KPP shall be included.

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 look at canceling the project?

5.2   ORD KPP Development

Selection of valid KPPs is more than just identifying a requirement and providing a threshold/objective value. A KPP should be a roll-up of a number of supporting requirements listed in the ORD. The following is a suggested method for developing KPPs:

  o   List system required capabilities for each mission/function as described above.

  o   Prioritize these requirements.

  o   For each mission/function build one measurable performance parameter and link to Coast Guard and/or DHS goals.

  o   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 incremental capabilities and a timeline for achieving full capability.

SECTION 6: TRADE-OFFS

Provide a listing in priority order of requirements or critical technical parameters. Include cost 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. This section will be refined in ORD updates as a result of the feasibility and cost studies conducted to support the Decision Milestones.

APPENDICES

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.

5.0   PROJECT MANAGEMENT PLAN

5.1   PMP Purpose

The Project Management Plan (PMP) provides the framework to define the activities/tasking, responsibilities, risk management techniques, earned value management, and the timing of events, and is the Project Manager's (PM's) blueprint for project management. 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 functional areas such as test and evaluation, integrated logistics support, environment impact analysis, and enterprise architecture documentation must flow from and be consistent with the PMP.

5.2   PMP Preparation

The PM shall prepare an initial PMP, in accordance with the template provided in section 5.3, as early in the project as possible, but it must be submitted for approval within six months of the approval date of DHS Project Authorization.

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.

The PMP is a dynamic document and will require regular updating. As a minimum, the PMP shall be reviewed, updated and approved at the end of each fiscal year, as well as at each DHS Decision Milestone. In addition, the PMP shall be updated any time significant changes in project execution plans, schedule, or resource requirements occur.

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5.3   PMP Template

PROJECT MANAGEMENT PLAN

for the

[PROJECT TITLE]

Submitted by: _____   _____
                   Project Manager (G-AYY)   Date

Endorsed by: _____   _____
                   Project Sponsor (G-Y)   Date

Endorsed by: _____   _____
                   Office of Budget and Programs (CG-82) Date

Approved by: _____   _____
                   Project Director (G-A)   Date

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    (B) Organizational Charts
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    (C) Project Risk Watchlist

PROJECT MANAGEMENT PLAN

CONTENT REQUIREMENTS

EXECUTIVE SUMMARY

The Executive Summary should be a brief one or two page discussion of the Project Management Plan (PMP), highlighting the 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.

REVISION SUMMARY (IF APPLICABLE)

The Revision 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.

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.

1.2   Current Status

This section should briefly discuss the key activities of the project to date, with bullet highlights and references. This includes focusing on where the project is within the acquisition process (i.e., what was the last DHS Decision Milestone and when is the next Decision Milestone). 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 phase required to complete the acquisition strategy and the specific objectives and milestones to be met 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. The below following table provides a sample format.

Key Event Description

Key Event	Major Accomplishments	Success Criteria
1	List Major Accomplishments	List Success Criteria
2	List Major Accomplishments	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. 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 personnel and financial resources broken out by fiscal year, including prior years.

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 operational and support organizations chart that shows the relationships of the project within the Coast Guard as well as any relationships external to the Coast Guard. Provide in Appendix (B) and describe here the project's contract administration structure and its relationships within the Coast Guard and any external relationships.

3.2   Required Reports

Reports are used as tools to assist senior leadership in the oversight of acquisition projects.

3.2.1. Internal Reports

Establish and describe any anticipated reports which will be required within the project and prepared by the matrix/IPT team members and provided to the PM. These 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 these reports.

3.2.2. External Reports

Establish and describe the reports which will be required of the PM. External reports will include those provided to the Commandant of the Coast Guard (G-C), the Chief of Staff (G-CCS), the Project Director (G-A), the Department of Homeland Security (DHS) Joint Requirements Council (JRC), the DHS Investment Review Board (IRB), the DHS Acquisition Executive (HAE) and any interested Congressional staffs. These reports should update and report the status and completion of project tasks, and should identify any problems with the project. Reports external to the Coast Guard must be cleared through the Chief of Staff (G-CCS). Included in this section are weekly status reports to G-A, input to the Acquisition Monthly Report to G-A, input to the Quarterly Acquisition Report to Congress, the DHS Periodic Reports, and the Annual Briefs for senior Coast Guard and DHS management.

SECTION 4: PROJECT RISK MANAGEMENT

4.1   Risk Management Planning and Organization

This section describes the requirements and establishes policies and procedures for the conduct of Risk Management planning for the Coast Guard major acquisition project. This section should address the purpose and objective of the risk management strategy and include the approach being used to manage project risks and the acquisition strategy and include the status of the Risk Management effort to date. 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. Projects will use the Work-Breakdown Structure (WBS) to aid in assessing project risks. Provide a chart depicting the management structure of the risk management organization. PMs are expected to be knowledgeable of the *Risk Management Guide for DOD Acquisitions* and use it as a guide in establishing project risk management efforts.

4.2   Risk Management Summary

In this section the PM should summarize the current overall level of risk to the successful completion of the project.

SECTION 5: EARNED VALUE MANAGEMENT

Using Earned Value Management (EVM), the PM can readily compare how much work has actually been completed against the amount of work that was planned to be accomplished. EVM requires that the project plan, budget and schedule the work effort in a time-phased manner that serves as a performance measurement baseline. EVM is an integrating project management tool that facilitates improved planning and control of cost, schedule, and work scope. EVM:

- produces an aggregate picture of performance and provides the PM with the necessary information to ensure that day-to-day decisions keep project performance consistent with project cost and schedule objectives.

- provides an early warning system for deviations from the plan and quantifies technical and schedule problems in terms of cost.

- provides a sound and objective basis for considering corrective actions

- and, it can mitigate the risk of cost and schedule overruns, while providing a forecast of final cost and schedule outcomes.

Projects will use EVM against the 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. 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.

For all contracts that require compliance with the DHS EVM guidelines, the validity of the program's baseline costs will be substantiated through an Integrated Baseline Review (IBR), the first of which should normally occur within 90 days after contract award, but no later than 180 days after contract award. The intent of the IBR is to institutionalize a process that

facilitates the involvement of the project manager and the project technical staff in the management of the project using EVM. The IBR is a formal review conducted by Government project managers and technical staff jointly with their contractor counterparts following contract award to verify the technical content of the contract's baseline and the accuracy of the related resource budgets and schedules. The purpose of the IBR is to ensure that the baseline captures the entire technical scope of work, that it is consistent with contract schedule requirements, and that the appropriate mix and level of resources have been assigned to the project.

FAR Part 34, Major System Acquisition, contains guidance and prescribes solicitation provisions. FAR 52.234 provides a clause applicable to contracts with EVM requirements.

5.1   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.

5.2   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 investments (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. DHS EVM Guidance requires the following reports:

- **CPR Format 1** – WBS-oriented cost report. Costs are organized by WBS element at a level pre-determined by the Government.

- **CPR Format 3** – Baseline Report. This format provides information on the contract baseline; it tracks changes to it throughout the program's duration.

- **CPR Format 5** – Problem Analysis Report/Variance Narrative. This format provides explanations for cost and schedule variances that have exceeded established threshold. It provides an explanation as to why the variance occurred and descriptions on how the program plans to resolve the cause of the variance.

- **CFSR** – Contract Funds Status Report. This report provides the planned and actual costs against the contract WBS element and provides explanations for variations.

Note: In some instances, such as certain fixed-price contracts, the CFSR may not be a viable tool for insight into progress and therefore would not be required.

All major investments (Level 1, Level 2, and IT Level 3) EVM systems are required to have full compliance with the ANSI/EIA Standard guidelines. The below table provides a synopsis of contract levels for EVMS ANSI/EIA Compliance and Verification.

Contract Level	ANSI Standard-748 Compliance
≥$50M	• Full • Government-verified EVMS
≥$20M, <$50M	• Full • Self-verified EVMS
≥$5M, <$20M	• PM decision based on risk • Verification as necessary

DHS reserves the right to require an investment to utilize an EVMS on any particular contract based on its risk to the overall investment and its risk to the mission.

SECTION 6: DETAILED PLANNING DOCUMENTS

Specific plans to execute technical activities of the project are developed in detailed planning documents, and include the Test and Evaluation Master Plan (TEMP), Integrated Logistics Support Plan (ILSP), Configuration Management Plan (CMP), environmental documentation, and Enterprise Architecture application system perspective documentation. Note: specifically identify whether the project will have a separate CMP or if CM planning information will be provided in the ILSP. These plans are not a part of the PMP. The PMP should describe the basic objectives of these documents and how they relate overall to the planned project activities. For each of the detailed planning documents discussed above, describe the project goals and objectives for their respective functional areas, their management structure, and their development schedules.

Appendices

The following documents should be attached as enclosures to the PMP.

(A) Project Master Schedule

This enclosure is the project's Project Master Schedule which is an event-driven schedule that the project uses to delineate the key events of the work effort. Typically the Project 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 Project Master Schedule and to avoid the use of "point" dates, use the standard date formats in Section 1: Introduction to this Handbook. The Project Master Schedule will be reviewed and updated as needed.

(B) Organizational Charts

These enclosures depict the Project's current organizational structure and their relationships.

    (a) Project Staff

    (b) Project Operational and Support Organizations

    (c) Contract Administration

(C) Project Risk Watchlist

Identify and list critical areas to which top management should pay special attention during the current and upcoming phases/segments of the project. The project risk watchlist is developed based on the results of the risk assessment. The project watchlist items can be added or removed as the project progresses with periodic assessments being conducted during formal or informal meetings. This list can range in complexity from a simple list of the identified risks to ones that include such items as the priority of each risk, how long it has been on the list, the type and intent of handling actions and cost to mitigate, planned and actual completion dates for handling actions and explanations for any differences or discrepancies. The format taken must be tailored to the project considering the impact of each risk item listed for the upcoming phase or segment. The following two tables provide examples of risk items and formats that may be included in a project risk watchlist that warrant high-level management attention. If the project decides to do a separate risk management plan then the risk watchlist should be an enclosure to the PMP.

Risk Watchlist Sample 1

<PROJECT TITLE> RISK WATCHLIST Date: MM/DD/YYYY		
Event/Item	**Area of Impact**	**Handling Action**
Loss of Competition	Production Costs	Break Out Qualify 2nd Source Get Tech Data as a Deliverable
Incomplete Logistics Support Analysis	Support Costs	Contractor Support for 2-3 years Warranty on High Risk Items Emphasis in Contractor Reviews Logistics Reviews
Immature Tech Data Package with many Engineering Changes for Design Fixes	Production Cost with High First Unit Costs and many Engineering Change Proposals (ECPs)	Require Production Engineers on Contractor Design Team Fixed Price Contract Competition Producibility Engineering Planning Production Readiness Reviews
Long Lead Items Delayed	Production Schedule	Get Early Identification of Long Lead Items Contractor Emphasis on Early Delivery Transfer or Leveling from Less Urgent Projects

Risk Watchlist Sample 2

<Project Title>		RISK WATCHLIST		Date:_____
ID#	Risk Item Description	Mitigation Goal/ Success Measures:	Area(s) of Impact	Status/ Explanation
##	System Integration Issues	Define, document viable procedure to address each issue	Capability Development & Demonstration; Production & Deployment	Additional funding necessary for system integration. Schedule informational briefing for stakeholder discussions
##	Operational Test	Develop test scenarios with conditional information	Low Rate Initial Production (LRIP) Testing	Poor weather conditions for testing; possible schedule slippage
##	Incomplete Logistics Support Analysis	Ensure training provided to end-users/reduce help desk-calls	ILS Planning and Support	Acquire additional training tools for users

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6.0   ACQUISITION PLAN

6.1   AP Purpose

 The purpose of the Acquisition Plan (AP) is to discuss the acquisition process and document the decisions made prior to processing each contractual action. The AP serves as a mechanism to review, approve and document acquisition decisions, as well as creating a road map for implementation of the acquisition decisions. Once approved, an AP provides direction and approval for execution of each contractual action.

The format and content of APs is specified in the DHS Acquisition Planning Guide (DHS policies and procedures for Acquisition Planning are set forth in Chapter 3007 of the Homeland Security Acquisition Manual (HSAM)).   The 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 is a set of AP templates designed to assist with completing an AP for standard types of acquisitions.

6.2   AP Preparation

The PM is responsible for preparing the AP in accordance with the DHS Acquisition Planning Guide and the appropriate template. The Federal Acquisition Regulations (FAR) 7.102(a) and Homeland Security Acquisition Manual (HSAM) 3007.102 require planning for all acquisitions. The AP is prepared as the first step in any acquisition and should begin as early in the program life cycle as possible. Where the planned acquisition(s) meet or exceed the DHS thresholds in HSAM 3007.103(d)(2)(i) of $5 million, a formal written acquisition plan is required that can comply with the planning requirements of (FAR) 48 CFR part 7.1 including (FAR) 48 CFR 7.106, Additional Requirements for Major Systems.

The PM must develop the strategy in coordination with the Acquisition Strategy Integrated Product Team (AS IPT). Key members of the AS IPT should include the PM, the Deputy PM, and Commandant (G-Ad, G-ACS, G-A-2, CG-85, CG-82), senior PM representatives (as available), and members of the functional communities.

Develop an acquisition strategy as a prelude to preparing an AP. Acquisition strategy planning shall begin as early in the project life cycle as possible. Early acquisition planning, even planning during Pre-Acquisition, should be conducted and documented. It should be noted that the acquisition strategy will be a required element of the Project Authorization Decision Milestone briefing to DHS. The initial AP should be prepared as soon as possible after DHS Project Authorization approval, and submitted for approval as shown in the AP Template (cover page only) in Section 6.3.

The PM and the Contracting Officer (KO) review the AP at least annually and at each Decision Milestone. The AP is revised whenever there is a major program change, or whenever there is a significant change to an approved AP. An AP change is significant if what is being procured changes; how it is being procured (including method and contract type) changes; or funding changes. Revisions to APs shall be subject to the same

concurrences, endorsements and approvals as the original document.

If, during the AP annual review, or Decision Milestone AP 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 Coast Guard Head of Contracting Authority (HCA), via the CGARC Executive Secretary, and Commandant (G-A), for endorsement.

The Coast Guard shall assign a nine-digit identifier followed by the date of the AP for each formal written AP. The first four digits on Coast Guard APs 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 Acquisition Planning and Performance Measurement Division (CG-851). The AP date is the date the 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 I of this Handbook for specific instructions for revision marking).

AP Approval		
Contract Value	Approved By	Reviewed By
> $50M	HCA	DHS CPO
> 10M - $50M	HCA	N/A
< $10M	G-ACS	N/A

6.3   AP Template

ACQUISITION PLAN

for the

[PROJECT TITLE]

AP # HSCG06001 – MM/DD/YY

Submitted by: _____   _____
                     Project Manager (G-AYY)   Date

Endorsed by: _____   _____
                     Small Business Specialist (G-ACS-3)   Date

Endorsed by: _____   _____
                     Contracting Officer (KO)   Date

Endorsed by: _____   _____
                     Project Director (G-A)   Date

USCG Approving
Official: _____   _____
                     Head of Contracting Activity   Date

DHS Reviewing
Official: _____   _____
                     DHS Chief Procurement Officer (CPO)   Date

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7.0 ACQUISITION PROGRAM BASELINE

7.1 APB Purpose

The APB is a top management tool that provides insight and control to prevent cost growth, schedule slip, and requirements creep due to unnecessary changes or imposition of new, unapproved operational requirements. The approved APB is a "contract" between the Milestone Decision Authority and the PM. Level 1 and 2 investment APBs are approved by DHS.

The key cost, schedule, and performance parameters in the APB should be continuously monitored and assessed by the PM. The PM may allow trade-offs within the APB parameters, as long as baseline thresholds are met. When it becomes apparent that an approved cost, schedule or performance parameter will not be met, it must be reported to the Milestone Decision Authority.

- Within 30 days of initial notification of breach, a remediation plan and revised APB is required to be submitted to DHS CFO (PA&E). The below table is used to determine if an APB breach has or may occur.

APB Breaches

Key Parameter	Breach
Performance	Doesn't satisfy key performance threshold/objective parameter (> +/– 8% performance)
Cost	Exceeds Total Acquisition Cost or LCCE (> 8% increase)
Schedule	Exceeds schedule parameters (> 180 day slip)

A revised APB must also be submitted for a *change* to an APB parameter due to adjustments in funding, Congressional direction, or an approved requirement change. Notification of changes should follow the same process as a breach notification.

The remediation plan is to include:

- Current projected impact to cost, schedule and performance

- A root cause analysis that explains the change or APB breach

- Identification of corrective actions (include start/end dates) and a discussion of both the effect of the corrective action on program interdependencies and any resulting issues or risks

- How progress will be measured/monitored

- An updated Integrated Master Schedule

7.2   APB 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 Concept and Technology Development (C&TD) Phase for approval at the Alternative Selection Decision Milestone (MS2) in accordance with the template provided in section 7.3. Investments may have multiple discrete increments of capability. For each major investment with multiple discrete increments of capability, the APB will cover the total investment and provide additional baseline parameters for each discrete increment of capability. For all revisions, insert a column entitled, "Revision #n", showing "Date" of revision, and list the corresponding change(s) or breach(es) under the appropriate heading as shown in the sample tables within the Section 7.3 APB Template. A new column must be added each time the APB is revised. For all revisions caused by a breach, insert the word "Breach" inside the corresponding cell. All changes and breaches need to be annotated using footnotes below the applicable table with the corresponding reason(s) and the proposed corrective action(s). All items that remain unchanged in the revision are left blank. The latest revisions should be "boldfaced." All changes (breaches or otherwise) will require a subsequent approval by the Milestone Decision Authority.

7.3   APB Template

ACQUISITION PROGRAM BASELINE

for the

[PROJECT TITLE]

Submitted by: _____   _____

                       Project Manager (G-AYY)   Date

Validated by: _____   _____

                       Chief, Acquisition Technical Support   Date
                       Staff (G-A-2)

Endorsed by: _____   _____

                       Project Director (G-A)   Date

Endorsed by: _____   _____

                       Chief of Staff (G-CCS)   Date

Endorsed by: _____   _____

                       USCG Acquisition Executive (G-CV)   Date

DHS Acquisition Decision Memorandum Received: _____

                                                       Date

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ACQUISITION PROGRAM BASELINE

CONTENT REQUIREMENTS

SECTION A. REVISION SUMMARY

This section should be completed for all changes to the baseline. 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. Briefly describe any important update information if the baseline is being revised.

SECTION B. TOP LEVEL INVESTMENT BASELINE

Provide a descriptive paragraph that explains the linkage of investment capability to the FYHSP program measures (i.e., how this investment will support the strategic goal as defined in the FYHSP).

The below sections B. 1-3 will be repeated if an evolutionary acquisition is used providing separate performance data for each increment in capability or each discrete useful segment.

SECTION B.1: INVESTMENT PERFORMANCE

The APB investment performance parameters are the same as the Key Performance Parameters (KPPs) listed in the ORD. Include all parameters considered mission critical. All parameters listed shall contain a threshold and an objective. A performance parameter's threshold is the minimum value necessary to provide an operational capability that will satisfy the requirement. A performance parameter's objective is a value beyond the threshold that should reflect an operationally meaningful, measurable, cost-effective, affordable, impact on operations or support beyond that provided by the threshold value. In some cases the threshold and objective will have the same value. If the objective value is left blank, it is assumed that the threshold and objective values are the same. The number of critical parameters should be the minimum needed to characterize the program's operational and technical performance, and any other program characteristics that, if the thresholds are not met, would require reevaluation of whether to continue the program. A schedule beach occurs when key performance parameters range (threshold/objective) is not satisfied and varies by +/- 8%. The table below depicts sample key performance parameters and their threshold and objective values.

Key Performance Parameters

Performance	Baseline		Revision #1	
Phase: C&TD	25 Mar 2004		22 Jun 2005	
Key Parameter	Threshold	Objective	Threshold	Objective
Response Time	15 sec	5 sec		
Availability	99.8%	99.9%	**99.0%[1] Breach**	
Environmental Conditions	65 knots; gusts to 100 knots			

Performance Revision #n.

[1]Use superscript and describe the reason(s) for revision(s) 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.

SECTION B.2:   INVESTMENT COST

The APB cost parameters should be consistent with the costs found in the Acquisition Plan and PMP, and reported in Then Year dollars. The costs shall be supportable, consistent with, and easily reconciled to other cost estimates prepared for the project, (e.g., Office of Management and Budget (OMB) Exhibit-300, Alternatives Analysis, or Capital Investment Plan (CIP)). Any cost constraints (e.g., Cost As Independent Variable (CAIV), Design to Cost) should be identified. Note: A cost breach occurs when the Total Acquisition Cost increases by more than 8%. The Total Acquisition Cost should be the most probable cost. The below table depicts sample key cost parameters.

Key Cost Performance Parameters

Cost (Then Year $)		Baseline	Revision #1
Current Phase: C&TD		25 Mar 2004	22 Jun 2005
Total Acquisition Cost		$570.2M	**$601.6M[1]**
Quantities		12	12
	Life-Cycle Cost Estimate	$1.5B	
	Useful Life	30 Years	

Cost Revision #n.

[1]Use superscript and describe the reason(s) for revision(s) and the impact(s) on the project. Note: All costs are in Then Year dollars.

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.

SECTION B.3:   INVESTMENT SCHEDULE

The APB key schedule parameters are the significant schedule events and decision milestones from the AP and PMP. The Project Master Schedule in the PMP provides discrete milestones that measure progress and will roll up into the APB schedule parameters. At a minimum the key events will include all Decision Milestones, contract awards, major test and evaluation dates, IOC, FOC, and any other critical project events. All events listed under schedule should contain values. All dates should follow the format convention shown in the following table.

Date Formats

Key Event To Occur:	Date Format Convention:
Historical	Use Month and Year, e.g., 03/06
Within 3 Years	Use Quarter and Fiscal Year, e.g., 1QFY08
Beyond 3 Years	Use Fiscal Year, e.g., FY10

The following table depicts the parameters and their objective and threshold values.

Sample Key Schedule Parameters

Schedule	Baseline	Revision #1
Phase: C&TD	25 Mar 2004	22 Jun 2005
DHS Alternative Selection Milestone (MS2) Decision	03/06	
Contract Award	3QFY06	
Preliminary Design Review	1QFY07	
OT&E	3QFY07	**1QFY08[1]**
IOC	4QFY07	
DHS Project Decision Milestone (MS3) Decision	1QFY08	
FOC	FY10	

Schedule Revision #<n>.

[1]Use superscript notes and describe the reason(s) for revision(s) 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.

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8.0   ALTERNATIVES ANALYSIS

8.1   Alternatives Analysis Purpose.

The purpose of Alternatives Analysis is to provide a systematic decision making process to identify and document the most resource efficient method of satisfying an identified mission capability gap.

Alternatives Analysis involves the use of trade studies, identification of 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 ORD performance requirements. The OMB Circular A-11, Exhibit-300, Capital Asset Plan and Business Case requires a minimum of three viable alternatives to be identified. The Alternatives Analysis provides source information for the Exhibit-300.

8.2   Alternatives Analysis Preparation

The PM shall prepare an initial Alternatives Analysis document, in accordance with the template provided in section 8.3, and submit it for approval prior to DHS Alternative Selection Decision Milestone (MS2). The PM should prepare the draft Alternatives Analysis in consultation with all Program and Support Managers involved in the project to ensure all applicable issues and costs are addressed.

The Alternatives Analysis is a dynamic document and will require updating if significant changes to cost parameters are experienced or changes are made to operational requirements, and must be updated for the DHS Project Decision Milestone (MS3). The Alternatives Analysis should be reviewed each year in conjunction with Exhibit-300 updating.

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8.3   Alternatives Analysis Template

ALTERNATIVES ANALYSIS

for the

[PROJECT TITLE]

Submitted by: _____   _____
                     Project Manager (G-AYY)   Date

Endorsed by: _____   _____
                     CG-82   Date

Approved by: _____   _____
                     Project Director (G-A)   Date

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ALTERNATIVES ANALYSIS

CONTENT REQUIREMENTS

EXECUTIVE SUMMARY

Provide a brief (one or two pages) Executive Summary of the Alternatives Analysis. Highlight the salient points of each section in the document.

REVISION SUMMARY (IF APPLICABLE)

The Revision 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.

SECTION 1: INTRODUCTION

1.1   Background

Summarize the relevant studies/analyses that were accomplished prior to initiating the Alternatives Analysis process.   Reference the Acquisition Decision Memorandum and approved Exit Criteria. Identify any advanced concept technology demonstrations or related science and technology research projects or activities.

1.2   Purpose

The purpose of the Alternatives Analysis document is to document the results of Alternative Analyses and identify the most resource efficient method of satisfying an identified mission capability gap. Identify major acquisition issues and which Decision Milestone is being supported.

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 (MNS), and/or Operational Requirements Document (ORD).

SECTION 2: ALTERNATIVES

2.1   Description of Alternatives

Identify and provide a detailed description of each possible alternative that was analyzed. Provide a table with a side-by-side comparison of the alternatives, if possible. Identify the legacy baseline (current system and its funded improvements) that is being replaced, if applicable.

2.2.   Analysis Criteria

Identify and explain the common criteria used to evaluate each of the possible alternatives.

2.3   Non-viable Alternatives

Identify any major alternatives that were not included in this analysis and describe the rationale for non-selection.

SECTION 3:   LIFE CYCLE COST ANALYSIS

Provide a Life Cycle Cost Estimate (LCCE) for each viable alternative. Include the entire program as currently planned, rather than limiting costs to an arbitrary term of years. Include costs associated with planning, acquisition, management and use, modifications and overhaul, and disposal. Provide a summary comparison chart showing the LCCE for each alternative. The below factors should be included, as a minimum.

- Include all cost categories, appropriations, and budget accounts.

- Include total acquisition costs, regardless of funding source or management control.

- Identify any constraints and underlying assumptions.

   Note: See COMDTINST M4140.1, *Total Ownership Cost Guiding Principles*, for definitions of the different categories of cost

SECTION 4: COST-BENEFIT ANALYSIS

Provide a Cost-Benefit Analysis (CBA) for each alternative using the LCCE information. Consider possibility of doing equal cost and equal effectiveness analyses or provide effectiveness versus cost. A summary of all cost and benefit calculations must be provided, appropriately arrayed such that marginal differences of each alternative are clearly shown. Return on Investment (ROI) should be calculated for each viable alternative and the associated payback period should be indicated. Uncertainties and assumptions used in the analysis should be clearly indicated in this summary. A sensitivity analysis should also be conducted, as appropriate, to highlight the magnitude or impact of realistic uncertainties in key performance criteria, operational scenarios, or other baseline parameters.

SECTION 5: RECOMMENDED ALTERNATIVE AND RATIONALE

Identify the recommended alternative and provide the detailed rationale for this recommendation using the LCCE and CBA information, plus any other rationale which may be applicable. Identify key parameters and conditions that impact the investment decision. Documentation of the analyses shall include information as to how the LCCE estimates were developed as well as rational for all assumptions. This documentation should be appended to the Alternatives Analysis document.

9.0   AFFORDABILITY ASSESSMENT

9.1   Affordability Assessment Purpose

The Affordability Assessment is an evaluation of a project's estimated cost-to-complete versus anticipated Coast Guard budget ceilings.

9.2   Affordability Assessment Preparation

The Affordability Assessment is an internal document required for all Decision Milestones. Project Initiation provides the first opportunity for the 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 Project Manager (or sponsor's representative during pre-acquisition) and provided to CG-82 for their input and review. The outcome from the assessment is a Coast Guard strategy for funding the project.

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9.3   Affordability Assessment Template

Affordability Assessment

XXXX- PROJECT HISTORY AND PURPOSE

Provide a brief history and purpose of the project.

The project is/will:

-
-

This project will significantly improve the Coast Guard's operational effectiveness and ability to _____.

(Project Name) Project alignment – place an * to show specific alignments with USCG Mission Programs and DHS Strategic Goals and Objectives.

USCG Mission-Programs

Maritime Safety		Maritime Mobility		Protection of Natural Resources		Maritime Security				National Defense
Search & Rescue	Marine Safety	AtoN	Ice Operations	MEP	LMR	Drugs	Migrants	Other LE	PWCS	Defense Readiness

DHS Strategic Goals and Objectives

Awareness		Prevention			Protection		Response			Recovery	Service	
1.1	1.4	2.1	2.4	2.5	3.1	3.6	4.1	4.2	4.3	5.2	6.3	6.4

ASSETS TO BE ACQUIRED (provide the quantity of assess that will be acquired)

By the end of this acquisition project in FY 20XX, the USCG will have _____ in ____ locations throughout the United States.

Quantity

- Total number of assets that will be acquired

Location

- See attached for list and delivery schedule

Service Life

- # years

PROJECT RESOURCE REQUIREMENTS (provide the funding needs for the project)

Table 1 – (Project Name) Life Cycle Cost Estimate of Funding ($M)

C-Stage Budget (Then-year dollars)	Appropriation		FY 20XX-20XX Capital Investment Plan					FY 20XX	Annually Recurring	Total (Initial Estimate)
	FY 20XX	FY 20XX	FY 20XX	FY 20XX	FY 20XX	FY 20XX	FY 20XX			
FY 20XX-20XX CIP									(In Congress)	**n/a**
AC&I REQUIRED									(Per Sponsor/)	
AC&I DELTA									(needs resolution)	
AC&I – # assets **Obligated**							[FOC]		(Project Complete)	
OE – FTE										
OE – Personnel*										
O&M**										
OE per Req'd AC&I										
OE – # assets **Delivered**							[FOC]			

*OE Personnel cost = $__M per asset annually; **O & M cost = $__M per asset annually. Note: OE [tail] = Personnel + O&M costs

CONCLUSION

{CG-82 completes this section}

Total Acquisition Cost

Summary statement

In FY 20XX RAP (Then-year dollars)	Appropriation		C-Stage	FY 2007-2011 Capital Investment Plan					Annually Recurring	Total (Initial Estimate)
	FY 20XX	FY 2005	FY 20XX	FY 20XX	FY 20XX	FY 20XX	FY 20XX	FY 20XX		
FY 20XX-20XX CIP										**n/a**
AC&I REQUIRED									(Per Sponsor)	
AC&I DELTA									(needs resolution)	
AC&I – Number of									(Project Complete)	

Operating Expenses
Personnel – {issue(s)}
Operations – {issue(s)}

Maintenance – {issue(s)}

 Future Years Homeland Security Program

OE tail and the FYHSP – is this project's OE costs currently in the FYHSP?

Yes	No	What is (or will be) the annual recurring OE funding requested?	Beginning when?
			FY

Funding Strategy(ies) (CG-82 Completes this portion)

Briefly explain how the project is to be funded. Include a description of trade-offs that will be needed to fund the project.

10.0   TEST AND EVALUATION MASTER PLAN

10.1   TEMP Purpose

The Test and Evaluation Master Plan (TEMP) is the basic "top-level" planning document for all Test and Evaluation (T&E) related activities for a major acquisition. The TEMP describes the necessary Developmental Test and Evaluation (DT&E) and Operational Test and Evaluation (OT&E), including Early Operational Assessment (EOA). The TEMP identifies all critical technical characteristics and operational issues and describes the objectives, responsibilities, resources, and schedules for all completed and planned T&E. It also describes all subordinate plans (e.g., DT&E Plan, EOA Plan, OT&E Plan), required reports (e.g., DT&E Report, EOA Report, OT&E Report), and assigns responsibility for preparing and approving these plans and reports.

10.2   TEMP Preparation

The PM shall prepare a TEMP in accordance with the template provided in section 10.3 as early in the project as possible, but no later than three months after approval of the initial PORD/ORD. If the initial PORD/ORD is prepared in support of a Decision Milestone, the initial TEMP shall be prepared to support that Decision Milestone.

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).

The TEMP is a dynamic document and requires regular updating. As a minimum, the TEMP shall be reviewed, updated, and approved at the end of each fiscal year, as well as at each Decision Milestone.

10.2.1 Developmental Test and Evaluation Plan

The Developmental Test and Evaluation Plan provides detailed information, guidance, scheduling, and tasking for all planned DT&E. The DT&E Plan is prepared by the PM with the assistance of the TMOT.

10.2.1.1 Developmental Test and Evaluation Report

The Developmental Test and Evaluation Report provides the results of all developmental testing; the results are used to support the decision to move on to OT&E. For projects which include LRIP, the 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 the DT&E Report.

10.2.2 Early Operational Assessment Plan

For projects where the Sponsor has elected to conduct EOA, the EOA Plan is prepared by the Sponsor/Sponsor's Representative with the assistance of the PM and

the TMOT; it provides detailed information, guidance, scheduling, and tasking for planned EOA.

10.2.2.1 Early Operational Assessment Report

For projects electing to conduct EOA, the EOA Report is prepared by the Sponsor's Representative 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 CD&D Phase or enter LRIP, as appropriate.

10.2 3 Operational Test and Evaluation Plan

The Operational Test and Evaluation Report provides detailed information, guidance, scheduling, and tasking for all planned OT&E. The OT&E Plan is prepared by the Sponsor/Sponsor's Representative with the assistance of the TMOT.

10.2.3.1 Operational Test and Evaluation Report

The Operational Test and Evaluation Report supports the Decision Milestone to enter the Production and Deployment Phase. After receipt of all data and subordinate reports, the Sponsor/Sponsor's Representative will prepare the OT&E Report, which should include a recommendation whether or not to enter production. The Sponsor/Sponsor's Representative should be prepared to brief the CGARC and/or the JRC/IRB on the results of OT&E and make a recommendation regarding production.

10.3   TEMP Template

TEST AND EVALUATION MASTER PLAN

for the

[PROJECT TITLE]

Submitted by: _____   _____
                   Project Manager (G-AYY)   Date

Endorsed by: _____   _____
                   Project Sponsor (G-Y)   Date

Approved by: _____   _____
                   Project Director (G-A)   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.

REVISION SUMMARY (IF APPLICABLE)

The Revision 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.

SECTION 1: INTRODUCTION

1.1   Background

Briefly summarize the mission of the deployed system. Briefly describe the system design. Include 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.

1.2   Operational Performance Requirements

List in matrix format (see below table) the minimum acceptable operational performance requirements. Candidates for inclusion in the list are those included by the Sponsor 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
Operational Suitability		
Requirement	**Parameter**	**Threshold**
	Mean Time Between Failures	2000 Hours
	Mean Time Between Critical Failures	5000 Hours
Maintainability	Mean Time To Repair	2.5 Hours
Operational Availability	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 from Section 3 of the ORD 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

Examples of Critical Technical Parameters for various types of systems are included in the

following table.

Examples of Critical Technical Parameters

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
Corrosion Control	Corrosion Control
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	Airworthiness
Survivability Systems	
Information Technology	**Radars**
Enterprise Architecture Compliance	Range
Speed of Calculation	Detection Limits
Memory Utilization	Jamming Protection
Throughput Capability	Reliability
Reliability	Error Rate/Signal Processing
Software Maintainability	Human Factors
Information Management	
Security Controls	
Human Factors	

SECTION 2: PROJECT SUMMARY

2.1   Integrated Master Schedule.

Graphically display the integrated time sequencing of the critical T&E phases and events.
The PM may use any graphical technique that clearly shows the key T&E events and their
sequential relationship (see Figure below for an example).
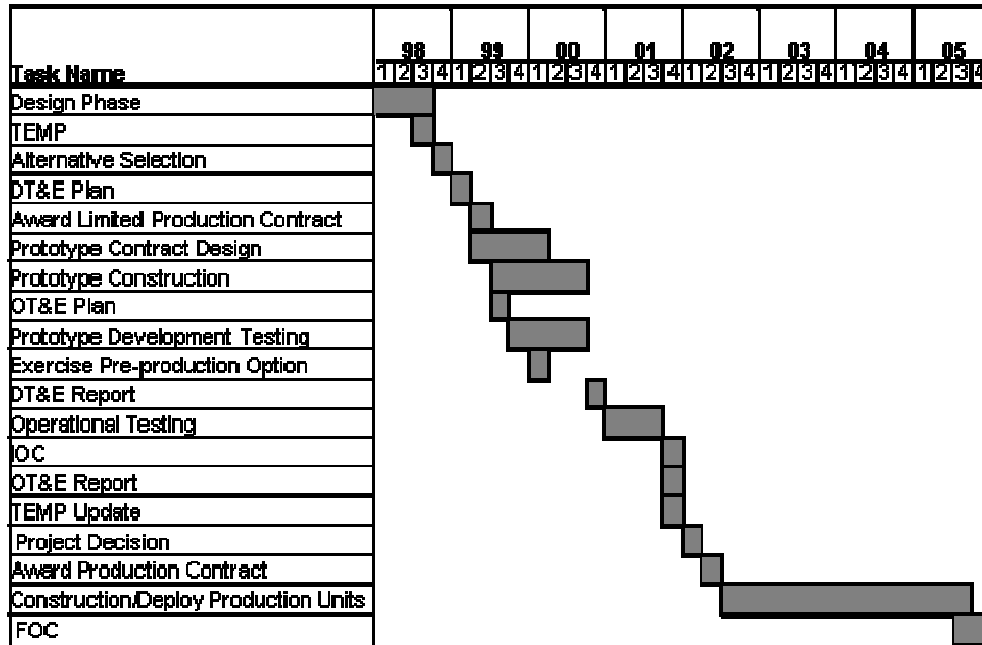
Sample Integrated Schedule

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 Decision Milestones, test article
availability, 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, and OT&E Plan) and T&E reports (DT&E Report, EOA
Report, and OT&E Report).

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 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
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. Explain how the planned (or accomplished) DT&E will verify the status of the engineering design and development progress, verify that design risks have been minimized, and 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; and

- 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 which has 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.

3.3   Future Developmental Test and Evaluation

Discuss all remaining DT&E that is 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. 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 and justify their use.

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 Concerns;

- Interoperability with Other Coast Guard or Component Systems;

- Electromagnetic Effects; 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.

SECTION 4: OPERATIONAL TEST AND EVALUATION OUTLINE

4.1 Operational Test and Evaluation Overview

Discuss the overall goals and objectives of the OT&E program, including any combined DT&E/OT&E, EOA, and all OT&E. Discuss how OT&E is structured to ensure that an operationally effective and operationally suitable system is delivered to the Sponsor. Provide information to show how OT&E will (or has) evaluate 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.

4.2   Critical Operational Issues

List the Critical Operational Issues (COI) that have been identified by the Sponsor in the ORD. 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?)

Some COIs will have required operational characteristics, parameters, thresholds, and/or evaluation criteria associated with them. Attainment of individual attributes does not

necessarily guarantee that a particular COI has been resolved; the evaluators must use their collective best judgment to determine if a COI has been favorably resolved.

The list of COIs 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 Production and Deployment Phase should be carefully evaluated.

4.3   Early Operational Assessment Overview

For those projects electing to conduct EOA, provide an overview of the EOA effort. Describe the objectives of EOA and how they will be met. Describe any EOA, which has been completed, and discuss all remaining EOA.

4.4   Early Operational Assessment Plans and Reports

For those projects electing to conduct EOA, describe all required EOA 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.

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 system actually tested and how its configuration relates to the 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   Future Operational Test and Evaluation

Future 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 future 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 Decision Milestone(s) supported. OT&E which supports the Project Decision Milestone (MS3) should have test objectives that examine all areas of operational effectiveness and suitability.

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.

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 submitted.

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 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-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 in an approved TEMP 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 appropriation 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
RDT&E	50	100					150
AC&I			100	250	100		450
OE					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 enclosures to the TEMP.

(A)   Bibliography

Cite in this enclosure 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).

10.4   TEMP Review and Approval

TEMP review and approval should follow the standard document review and approval procedures in Part I, Documentation, Section 1.0 Document Review and Approval Process of this Appendix.

10.4.1 Developmental Test and Evaluation Plan

Following consensus of the TMOT through concurrent clearance, the DT&E Plan shall be approved by Commandant (G-A). Recommended changes should be submitted to the PM for consideration by Commandant (G-A).

10.4.1.1 Developmental Test and Evaluation Report

A draft copy of the report shall be sent to the Sponsor/Sponsor's Representative for review and comment. The final DT&E Report will be signed by the PM and forwarded to Commandant (G-A); copies will also be made available to the CGARC members to support entering OT&E and/or LRIP.

10.4.4.2 Early Operational Assessment Plan

The EOA Plan shall undergo a concurrent clearance review by the TMOT. Following resolution of any concerns, the Sponsor shall submit the EOA Plan via the PM to Commandant (G-A) for endorsement prior to Sponsor approval.

10.4.4.2.1 Early Operational Assessment Report

A draft copy will be sent to the PM for review and comment. The final report will be signed by the Sponsor and copies will be provided to CGARC members for consideration.

10.4.4.3 Operational Test and Evaluation Plan

The OT&E Plan shall undergo a concurrent clearance review by the TMOT. Upon resolution of any concerns, the OT&E Plan shall be jointly approved by the Sponsor and Commandant (G-A). Recommended changes should be submitted to the Sponsor/Sponsor's Representative for consideration by the Sponsor and Commandant (G-A).

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11.0   INTEGRATED LOGISTICS SUPPORT PLAN

11.1   ILSP Purpose

The ILSP is the primary logistics document for Coast Guard 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 Systems Integrated Logistics Support Policy, COMDINST M4105.8 (Series).

11.2   ILSP Preparation

The ILS Manager shall prepare an initial ILSP, in accordance with the template provided in section 11.3, during the C&TD Phase and submit it for approval prior to DHS Alternative Selection Decision Milestone (MS2). 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 electronics systems acquisitions are provided by Commandant (CG-44) and the technical and organizational specialties represented on the ILSMT. Tailoring considerations for IT systems are provided by the Assistant Commandant for Command, Control, Communications, Computers and Information Technology (CG-6).

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. Each

iteration 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 reviewed and updated prior to each DHS Decision Milestone. 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.

11.3   ILSP Template

INTEGRATED LOGISTICS SUPPORT PLAN

for the

[PROJECT TITLE]

Submitted by: _____   _____
                  Project Manager (G AYY)   Date

Endorsed by: _____   _____
                  CG-1   Date

Endorsed by: _____   _____
                  CG-4   Date

Endorsed by: _____   _____
                  CG-6   Date

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

Endorsed by: _____   _____
                  CG-8   Date

Approved by: _____   _____
                  Program Director (G-A)   Date

TABLE OF CONTENTS

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 salient points of each section in the plan to include the applicable 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.

REVISION SUMMARY (IF APPLICABLE)

The Revision 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.

SECTION 1: INTRODUCTION

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. ILS planning must support and be consistent with an overall support concept. Supportability analyses must be accomplished to generate the specific data required. The types of analyses that are performed dictate the type and detail of information that is generated.

1.1   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.

1.2   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 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 DHS Project Decision Milestone (MS3), (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).

1.3   Logistics Support Concepts

Identify the overall logistics support concept, logistics acquisition strategy and support objectives planned for the system/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.

1.4   Supportability Analysis

Describe the methodology being (or to be) used in identifying the logistics support infrastructure and resources needed to support the new system/equipment after it is operationally fielded. Identify the supportability related plans, analyses, and data deliverables that are (or will be) included as requirements in the design/development/production contract(s). Identify any analyses that will be accomplished by government activities, the types of information to be obtained by these analyses, and whether the resulting information will be provided to the contractor. Identify who will be responsible for conducting what tasks (Coast Guard/Project Resident Office/matrix/IPT, contractor or both), and whether a manual or automated database will be used. Identify who will be responsible for maintaining the ILS data after product delivery.

SECTION 2: INTEGRATED LOGISTICS SUPPORT MANAGEMENT

2.1   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.

2.2   Integrated Logistics Support Management Team

Describe the Integrated Logistics Support Management Team (ILSMT), its function, and how often it meets. 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.)

2.3   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 3: LOGISTICS SUPPORT ELEMENTS

This part of the ILSP identifies the top level tailoring of the ten logistic elements to the project (concepts, approach, supporting analysis or basis, and detailed element planning requirements, responsibilities).

3.1 Maintenance Planning

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. An example of the maintenance planning process for Hull, Mechanical, and Electrical (HM&E) and Electronics could be the evolution from Maintenance Support Outlines (MSOs) to Maintenance Support Guides (MSG). The MSGs evolve into a Preliminary Cutter Class Maintenance Plan, which after being verified, evolves into the Cutter Class Maintenance Plan (CCMP) for the platform, system, or equipment. 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. 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 that restore lost functionality or restore failure resistance following a function 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, and can be accomplished off-equipment may be accomplished at a higher level of maintenance. Traditionally, there have been three levels of maintenance: organizational, intermediate, and depot. However, there is a trend towards having only two levels: organizational and depot. Maintenance tasks which formerly would be identified as intermediate level are 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.

- Intermediate Level. Intermediate level (I-level) maintenance is a higher level of maintenance capability that normally consists of: calibration, repair or replacement of damaged or unserviceable parts, components or assemblies that have been removed from the end item system/equipment; emergency manufacture of non-available parts; and technical assistance in accomplishing on-equipment tasks that are beyond O-level capability. Identify supporting and unique intermediate level maintenance activities, the services they provide, and procedures required to obtain support.

- Depot Level. Depot level (D-level) is the highest level of maintenance capability which provides maintenance on material requiring major overhaul or a complete rebuild/remanufacture of parts, subassemblies or end item components including 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. As applicable, describe how the project will comply with the Depot Maintenance Interservice (DMI) program requirements of the Joint Logistics Commanders (JLC).

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, Maintenance Support Guide, or Maintenance Plans for installed equipments of each applicable equipment category.

- Tri-Level Support Matrix and Coast Guard Planned Maintenance System (electronics).

- Applicable support analysis results and support system reports/documentation.

3.2   Supply Support

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. Identify and briefly 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 what details will 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. 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.

- Electronic Repair Parts Allowance List (ERPAL).

- Electronic HM&E ERPAL.

- Allowance Equipage List.

- 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 (electronics and aviation).

- Management Information for Configuration and Allowances.

3.3   Training and Training Support

Concept/Approach. 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. Consider the following:

- Training Allowance Billets.

- Support Allowance Billets.

- Funding; including quota costs.

- Instructor and facility costs.

- Training equipment (including any simulators) that is required or desirable. (Also consider the location of this equipment and costs associated with how this equipment will be made available for training purposes.)

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 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

- Contractor training deliverables.

- Instructional Plan.

3.4   Support and Test 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. Identify and briefly 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 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 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.

- 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.

3.5   Manpower and Personnel

<u>Concept/Approach</u>. 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.

<u>Element Detail Planning</u>. 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).

- Baseline comparison system analysis results.

- Required ship, shore, or squadron/unit manning document change summaries.

- Personnel Supportability requirements summary.

- 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.

3.6   Packaging, Handling, Storage, and Transportation

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 material 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 them, 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 Material Code of Federal Regulations* 49CFR Part 100-177; and environmental considerations of 40 CFR Parts 1-800, *Transportation of Freight*, COMDTINST M4610.5 (series).

3.7   Facilities

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 (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, 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 materials, and fire protection).

- Work space and storage facilities requirements summary (including hazardous material and waste storage) and any special requirements for electrical power, compressed air, etc within these facilities.

3.8   Computer Resources Support

Concept/Approach. Identify sub-systems which have embedded software/firmware. For these embedded computer resources identify and describe the 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 which 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 them, 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.

3.9   Technical Data

Concept/Approach. 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 or hard copy) 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; documentation of computer programs and related software are. Identify all software documentation to be delivered. Also 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 Operational Test and Evaluation? 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, 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 technical data element details, as appropriate.

- Technical Manual Contract Requirements document or Technical Manual Requirements summary.

- Engineering drawing requirements listing, summary or other documented requirements required by Naval Engineering Manual, COMDTINST M9000.6 (series), Information System Technology Architecture, COMDTINST M5230.45 (series), or other applicable documents.

3.10   Design Interface

Concept/Approach. Identify the specific ways in which the ILS community will be involved in the design of the equipment. This should include participation in design and program reviews. Identify how system/equipment supportability will be addressed during these reviews. Identify any planning for reliability and/or maintainability demonstrations. Describe how the results of supportability analyses will be used to ensure supportability is considered during system/equipment design. Identify what provisions will be, or have been included in the solicitation/contract concerning Diminishing Manufacturing Sources and Material Shortages (DMSMS) and how the Cost Guard will be notified of any DMSMS condition occurring. Identify any unique support or design philosophies likely to affect support after fielding (for example: planned technological upgrades or extensive integration of CANDI components into a system). Describe how these factors influence detailed maintenance and logistics element requirements planning and development. Reference other project acquisition documents that contain support related design parameters (for example: Acquisition Plan, Preliminary Operational Requirements Document (PORD), and Operational Requirements Document (ORD)).

Element Detail Planning. Identify and briefly describe the detailed design interface 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, provide any necessary life cycle updates 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 design interface element details.

- Reliability/Maintainability/Availability analyses results.

- Reliability Centered Maintenance (RCM) analysis results.

- Failure Modes Effects and Criticality Analysis (FMECA) results.

- Level Of Repair Analysis (LORA) and other appropriate task results, summaries and

related reports.

- Human Factors Engineering (HFE) requirements summary.

- Coast Guard Authorized Use List parameters for "environmentally preferable" materials and alternatives.

- System Safety analysis results

- Results of environmental analyses and constraints imposed.

SECTION 4: OTHER PROGRAM SUPPORT

4.1   Human Systems Interface

Identify any human systems (i.e., human to machine) interface guidelines and constraints that are applicable to the project and any resultant impacts (positive or negative) on supportability.

4.2   Configuration Management

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 and proposed/implemented configuration changes, and how the logistics support impact of changes (i.e., impacts to provisioning data, technical manuals, etc.) is identified and considered.

If the PM elects to include Configuration Management (CM) planning information in the ILSP in lieu of a separate CM Plan, the information identified as required for the Government CM Plan in MIL-HDBK-61 (series) should be provided here. Do not duplicate information that is already contained in other parts of the ILSP.

4.3   Diminishing Manufacturing Sources and Material Shortages (DMSMS)

Diminishing Manufacturing Sources and Material Shortages (referred to as Obsolescence) impacts are experienced when the last known manufacturer of an item stops producing that item or a material shortage precludes continued availability of an item. *Diminishing Manufacturing Sources and Material 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 in accordance with COMDTINST 4105.12 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.

4.4   Test and Evaluation

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).
What support requirements/parameters will be evaluated during OT&E. Are operation and
maintenance technical manuals evaluated for adequacy and suitability during OT&E? 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.

4.5   Miscellaneous

Identify any other related program support requirements affecting the logistics effort, such as
metrication, system safety, pollution prevention and environmental hazard
control/management, human engineering, etc., as appropriate. Identify any Memorandum of
Agreements (MOAs) or Memorandum of Understandings (MOUs) established between the
Coast Guard and Other Government Agencies (OGAs), their purpose and effective dates
(e.g., DoD, GSA). Identify any other negotiated plans that may affect system supportability.

SECTION 5: KEY LOGISTICS EVENTS

Identify key logistics events completed and those planned to be completed during the next
acquisition phase. Identify all actions/tasks that must be completed in order to achieve each
key event, and the criteria for successful completion of each action/task using a tabular
format as shown below.

Key Event		
	Action/Task	
		Success Criteria
	Action/Task	
		Success Criteria
Key Event		
	Action/Task	
		Success Criteria

Key logistics events and actions/tasks to be completed should be included in the Project
Integrated Master Schedule (IMS). Append a copy of the ILS portion of the IMS.

Appendices:

      (A)   ILS Portion of Integrated Master Schedule

      (B)   Acronyms

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12.0   CONFIGURATION MANAGEMENT

12.1   CMP Purpose

The purpose of Configuration Management is to enable the orderly development of a system, subsystem, or configuration item. The CMP identifies the tailored Configuration Management (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.

12.2   CMP and CCB Charter Preparation

Prior to DHS Alternative Selection Milestone (MS2), the PM shall prepare a comprehensive CMP, tailored appropriately for the individual acquisition. The CMP shall be prepared following the guidance for the Government CM Plan contained in MIL-HDBK-61 (series). At the PM's option, the CMP (section 12.3) may be prepared as a stand alone document or may be incorporated as a part of the ILSP for the project. The PM must specify which option will be implemented in the PMP. If prepared as a separate document, it must include a cover page, table of contents, and Executive Summary (similar to the requirements for an ILSP) in addition to the main body of the document.

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 12.4.

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 CCB Charter, once prepared and approved, requires no updating unless external changes are made which must be reflected. The CMP, on the other hand, is a dynamic document that requires updating for each Decision Milestone subsequent to Alternative Selection Decision Milestone (MS2). The CMP may be provided to the CGARC, CGAE, and HAE as a supporting document for each Decision Milestone decision. 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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12.3 CMP Template

CONFIGURATION MANAGEMENT PLAN

for the

[PROJECT TITLE]

Submitted by: _____   _____
                          Project Manager (G-AYY)   Date

Approved by: _____   _____
                          Project Director (G-A)   Date

TABLE OF CONTENTS

CONFIGURATION MANAGEMENT PLAN

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. Also discuss salient points of each section in the plan to include the applicable 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.

REVISION SUMMARY (IF APPLICABLE)

The Revision 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.

SECTION 1: INTRODUCTION

1.1   Purpose.

Identify the purpose of the CMP.

1.2   Scope.

Identify the scope of the CMP and the acquisition phase to which it applies.

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

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.

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?

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

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.

SECTION 4: DATA MANAGEMENT

Provide a discussion of the technical data concept of operation including such elements as:

- 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.

SECTION 5: CM PROCESS

5.1   CM Management and Planning

Provide a description of the project's CM process for accomplishment of the Configuration Management activities to include:

- Applicable Government and Government/Contractor CM actions.

- Selected decision criteria, and evaluation factors, where applicable.

- Metrics, if any, 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 milestones and events, 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

- Conducting major configuration audits

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. 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.

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.

5.5   Configuration 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.

Appendices:

      (A)   Acronyms and Definitions

Include a glossary of acronyms and definitions that are used in the CMP.

      (B)   Reference Documents

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.

12.4 CCB Charter Template

U.S. Department of Homeland Security **United States Coast Guard**	Commandant United States Coast Guard	2100 Second Street, S.W Washington, DC 20593-0001 Staff Symbol**: (G-XXX)** Phone: **(202) 475-** Fax: **(202) 475-** Email: **(address)**

4130

MEMORANDUM

From **(Name of Assistant Commandant for Acquisition)**   Reply to: **(Code)**
         G-A   Attn of: **(Name)**

To: Distribution

Subj: **(PROJECT NAME)** CONFIGURATION CONTROL BOARD CHARTER

Ref: (a) U.S. Coast Guard Configuration Control Boards, COMDTINST M4130.10
          (b) Major Systems Acquisition Manual, COMDTINST M5000.10
          (c) (PM Charter, G-CCS 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) and (b). 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) Engineering Change Proposals (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) and (b), 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.

Authority. The **(Project Name)** PM is designated as the CCB Chairperson and granted the

authority to approve/disapprove configuration changes in accordance with reference (c). 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.

    c. CCB Membership. The CCB shall consist of **(but not limited to)**:

FUNCTIONAL AREA	CODE	RESPONSIBILITY
Project Manager	G- AYY	Chairperson
Deputy PM	G- AYY	Permanent Member
Technical Manager	G- AYY	Permanent Member
Logistics Manager	G- AYY	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	G-ACS	Permanent Member
Safety, Security, and Environmental Health	CG-113	Permanent Member
Program Management	CG-441	Permanent Member
Configuration Management	CG-444	Permanent Member
Configuration Manager	G-AYY	Recorder
Legal	G-LPL	Ad Hoc Member
Training and Performance	CG-132	Ad Hoc Member
Acquisition Technical Support	G-A-2	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) and (b). 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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13.0   DEPLOYMENT PLAN

13.1   DP 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, or new 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.)

13.2   DP Preparation.

As a major acquisition project approaches the mid-Capability Development and Demonstration (CD&D) 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 DHS Project Decision Milestone (MS3) and entry into the Production and Deployment Phase. If applicable, the deployment or redeployment of assets used during Operational Test and Evaluation 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, Integrated Logistics Support Management Team and Configuration Control Board 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 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 the establishment of user capability to operate and maintain the assets.

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13.3   DP Template

DEPLOYMENT PLAN

for the

[PROJECT TITLE]

Submitted by: _____   _____

                               Sponsor's Representative (G-YY)   Date

Endorsed by: _____   _____

                               Project Manager (G-AYY)   Date

Approved by: _____   _____

                               Project Sponsor (G-Y)   Date

TABLE OF CONTENTS

DEPLOYMENT PLAN

CONTENT REQUIREMENTS

EXECUTIVE SUMMARY

Provide a brief (one or two pages) Executive Summary of the Deployment Plan. Highlight the salient points of each section in the plan.

REVISION SUMMARY (IF APPLICABLE)

The Revision 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.

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 Engineering Logistics Center (ELC), the Operations Systems Center (OSC), the Aircraft Repair and Supply Center (ARSC), the Telecommunications and Information Systems Command (TISCOM), the Command and Control Center (C2CEN), 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.

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)

14.0   PROJECT TRANSITION PLAN

14.1   PTP 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 Operations and 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 G-A, 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 Operations & Support Phase. This briefing will set the official handoff of responsibilities for the acquired capability to the sustainment community.

14.2   PTP Preparation

The PM should prepare the draft PTP, in accordance with the template provided in section 14.3, 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.

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14.3 PTP Template

PROJECT TRANSITION PLAN

for the

[PROJECT TITLE]

Submitted by: _____   _____
                     Project Manager (G-AYY)   Date

Endorsed by: _____   _____
                     Project Sponsor (G-Y)   Date

Endorsed by: _____   _____
                     Supporting Organization (G-Y)   Date

Approved by: _____   _____
                     Project Director (G-A)   Date

TABLE OF CONTENTS

Enclosures: (as applicable)

PROJECT TRANSITION PLAN

CONTENT REQUIREMENTS

EXECUTIVE SUMMARY

The Executive Summary should be a brief one to two page discussion of the PTP, highlighting the salient points of each section. Include a brief description of the goals and objectives of the plan and briefly discuss the roles and responsibilities of key participants.

REVISION SUMMARY (IF APPLICABLE)

The Revision 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.

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, problems, etc.

1.2   Assumptions

Describe any assumptions that have been made in preparing the PTP and in preparing to closeout 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, 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.

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. 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   Project Manager's Charter

Address the timing of the memorandum that will cancel the PM's Charter and list potential remaining problems relevant to its cancellation and their likely resolution. The PM will advise the CGARC Executive Secretary when the Chief of Staff's memorandum canceling the PM's charter is required. G-A-2 will prepare this memorandum for approval by the Chief of Staff. The memorandum will summarize remaining project tasks and reassign the responsibility for the completion of these tasks, as appropriate. It will be coordinated with all affected operational and support organizations prior to being forwarded for approval.

2.4   Operating Facility Change Orders

In accordance with COMDTINST M5440.3 (series), *Operating Facility Change Orders (OFCO) Procedures*, 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.

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 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 (G-A-1) and the Coast Guard Personnel Command.

4.2   Project Resident Office

The PM will describe the planned assignment of Project Resident Office (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: DHS REPORTS AND REVIEWS

5.1   Post Implementation Review

Address requirements for the Post Implementation Review – who is to conduct it and when it will be conducted.

5.2   Operational Analysis Report

Address requirements for Operational Analyses including when the first Operational Analysis will be conducted.

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15.0   PROJECT MANAGER's CHARTER

15.1   Charter Purpose

The project manager's charter provides the Project Manager 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.

15.2   Charter Preparation

Section 15.3 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.

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15.3 Project Manager's Charter Template

U.S. Department of
Homeland Security

United States
Coast Guard

Commandant
United States Coast Guard

2100 Second Street, S.W.
Washington, DC 20593-0001
Staff Symbol: G-A-2
Phone: (202) 475-3150
Fax: (202) 475-3911
Email: Peter.J.Boyd@uscg.mil

5200

MEMORANDUM

From: Robert J. Papp, VADM   Reply   G-A-2
        G-CCS   to   P. Boyd
                                       Attn of:

To: xxxxx
        G-YYY

Thru: John P. Currier, RDML
        G-A

Subj: XXXXX PROJECT MANAGER CHARTER

Ref: (a) Major Systems Acquisition Manual, COMDTINST M4150.2 (series)
        (b) DHS Investment Review Process, DHS MD #1400
        (c) DHS Acquisition Certification Requirements for Program Managers, DHS
            MD #0782

4. <u>Purpose</u>. You are hereby designated Project Manager for the xxxx Project. You shall carry out your duties as Project Manager in compliance with references (a) and (b). This Charter supersedes all previous designations.

5. <u>Project Objectives</u>. Provide a brief description of the objectives for the project.

6. <u>Project Manager Charter</u>.

   a. <u>Scope of Project</u>. The xxxxx Project is an Acquisition Level xxxx investment proceeding from and in conformance with reference (b). In conformance with the approved Acquisition Plan, Acquisition Program Baseline, and the Program Management Plan, the xxxxx Project shall meet the requirements contained in the approved Operational Requirements Document.

   b. <u>Your Responsibilities</u>. 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;

(3) Coordinate submission of resource proposals for the acquisition and initial sustainment of fielded end items and software;

(4) Comply with DHS guidance on earned value management (EVM);

(5) Serve as the principal source of information for internal and external inquiries and for project documentation;

(6) Develop plans, documentation, reports, and briefings identified in reference (a);

(7) Collaborate with other DHS and Coast Guard investment projects to ensure interoperability and to address standardization;

(8) Ensure that the interests of all Coast Guard Operating and Support Program Managers are addressed by the project;

(9) Acquire and field an initial sustained support capability for the xxxxx;

(10) Chair the xxxx Configuration Control Board (CCB) for the duration of the acquisition project;

(11) Continually populate the Acquisition Directorate's Lessons Learned System as key events produce shared insights for enhancing acquisition processes; and

(12) Obtain Level III DHS Project/Program Manager certification, and maintain certification by satisfying the 40 hours annual skills currency requirements identified in reference (c).

c. <u>Your Authority</u>. 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/configuration changes, within established constraints;

(3) Obtain resource commitments from Operating and Support Program Managers to perform specific project tasks;

(4) Sign correspondence relating to the xxxx Project as:

Project Manager

xxxxx Project (G-xxxx)

    d. <u>Your Accountability</u>. You shall be accountable to the Assistant Commandant for Acquisition (G-A).

7. <u>Action</u>. 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.

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PART II. 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.

1.0   Annual Reviews

Each project is required to brief senior Coast Guard acquisition leadership at least annually to provide a status of the project. The following areas should be presented at the annual review:

- Agenda. A list of the slides presented.

- Overview. The mission of the project should be clearly described and the Sponsor should be identified. The system assets or incremental capabilities being acquired should be listed. The current phase of the acquisition project should be shown, including the last and next Decision Milestones.

- 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.

- Acquisition Program Baseline 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 goals contained in the APB. Any anticipated revisions to the baseline should be discussed. Indicate the APB version (revision #) and date of most recent revision.

- Funding. 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).

- Schedule. Provide the planned and actual project schedule with all Decision Milestones and key project events identified. Highlight important events in the next six months (not required when providing a Project Transition Brief).

- 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 Watchlist and include an explanation of each assessment and ongoing risk mitigation actions. Risk assessments should show historical trends and future projections (not required when providing a Project Transition Brief).

▪ Logistics Assessment. Provide a summary assessment of the efforts to date and anticipated efforts to provide for logistics support throughout the lifecycle of the system asset or incremental capability.

▪ 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.

▪ 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.

Additional Information to be briefed for the Project's last Annual Brief (Transition Brief)

▪ Project Transition Plan (PM Brief). Provide a top level summary of the project's plan for transition.

> Note: Annual briefs provide project name, PM, project briefer, and date of brief.

2.0   Project Transition Briefs

The project transition brief is intended to provide a clear turn-over between the acquisition project and the sustainment program manager before senior Coast Guard acquisition management (G-CV/G-CCS).

▪ Agenda. A list of the slides presented.

▪ Achievements Since Last Annual 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.

▪ 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 that are delivered. Provide effective dates (FY budget) for OE funding being effective.

▪ Logistics Assessment. Address the logistics posture – current and final. *The Program/Support Sponsor is to assist in briefing the logistics assessment and provide a status for the ILSP and overall support posture at the time of transition.*

  ➢ Detail the logistics support – current and planned. Include:

    o Significant actions accomplished to provide a full logistics support capability for sustained operational use. If a full support capability has not been fielded, identify

what assets remain to be fielded, status of actions in progress, and when each remaining capability will be provided. Identify what 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 in place to provide sustained support capability.

o   Identify key logistics dates (including Coast Guard Support Date (CGSD)).

o   Address the ILSP status. Address whether the ILSP has been updated (or planned date) prior to the transfer to the sustainment logistics support activity. Include when and to what activity the ILSMT will be transferred.

o   Identify funding required to support logistics sustainment and status of any outstanding Resource Proposals needed for logistics.

- Configuration Management.

  ➢ Address the planned transition for configuration management.

- 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 and the first Operational Analysis.

3.0   Decision Milestone Reviews

Decision Milestone reviews are intended to provide the milestone decision authority with an appropriate level of information from which a decision can be reached concerning the project's initiation approval and subsequent entry into the following acquisition phases. The Deputy Secretary is the initial milestone decision authority and remains such for DHS Level 1 investments while the JRC becomes the milestone decision authority for DHS Level 2 investments. The following paragraphs provide standard formats for the briefs to the milestone decision authority. While the formats are 'standard', the Project Manager can deviate where needed in order to adequately present the information needed to support a milestone decision.

3.1   Project Initiation – Milestone 0

The intent of MS 0 is to initiate a new major system acquisition project.
This is a Coast Guard only milestone prior to entering the DHS Investment Review Process. The Chief of Staff is the Milestone Decision Authority for Project Initiation (MS 0) Decision Milestone because of the resource implications of initiating a new project.

- Decision Requested.   The normal decision would be direction to use the project entry process and develop the MNS, the Exhibit 300, a Resource Proposal, and submit an Investment Review Request (IRR) to DHS.

- Background. Provide background information, if pertinent.

- Mission Analysis Results. Synopsize the analysis. Include the capability gap shortfall with timeframe and the material solution needed to fill the gap.

- Initial Cost Estimate. Provide an initial cost estimate (Acquisition Cost). Identify the basis for estimate.

- Affordability Assessment. Coordinate with CG-82 to address the Capital Investment Plan (CIP) and how the cost will impact the CIP. Provide a recommended funding profile by Fiscal Year.

- Pre-Acquisition Phase Activities. Identify activities that are planned that are above and beyond developing a Mission Need Statement, Exhibit 300, a Resource Proposal, and submitting an Investment Review Request. Examples include: analyses that are planned (e.g., operational scenarios, CONOPS, manning studies), improving the cost estimate, outreach plan, etc. Include funding/resources required to accomplish the activities.

3.2   Project Authorization - Milestone 1

This brief is given to formally initiate the project with DHS and to gain entry into the C&TD Phase. Sponsor's Representatives should use this format when developing a presentation for approval at Project Authorization. The brief will be provided to the CGARC, JRC, and IRB. The Deputy Secretary should be the milestone decision authority.

- Decision Requested. State the decision(s) requested such as: designation as a DHS Level 1 investment, approval of the Project's Strategic Direction and/or Mission Need Statement (MNS), authorization to proceed to the next logical acquisition 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 (not programmatic) 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 milestones (e.g., Initial Operating Capability (IOC) and decision points (major contract award decision). (One slide).

- Alternative Approaches. Discuss what alternatives will be considered to satisfy the need.

- Acquisition Strategy Objectives. Describe your acquisition strategy.

- Key Issues. Describe the projects key areas of concern (one page).

- ▪ <u>Recommended Project Level</u>. Recommend the Investment Level for the project (Level 1 or 2).

- ▪ <u>Proposed Exit Criteria</u>. Provide the proposed exit criteria for the next acquisition Phase (see Section 3.0 for instructions on 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 Milestone Decision, the PM will develop and propose Exit Criteria appropriate to the next acquisition phase. The Milestone Decision Authority 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 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 C&TD Phase Exit Criteria
Demonstrate initial project affordability
Document feasibility and tradeoff analyses (if applicable)
Demonstrate technology maturity
Proposed at Project Alternative Selection for CD&D 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

3.3   Subsequent Decision Milestones (Milestones 2 and 3)

These briefs are given to gain entry into each succeeding phase. Documentation submitted for approval at each of these Decision Milestones is as described in Chapter 2. Required slides are as shown below. Project Staffs should use this format when developing a presentation for DHS Alternative Selection (MS2) and Project Decision Milestones (MS3).

- Decision Requested. State the decision(s) requested such as: approval to enter the next acquisition phase; request reassessment of program designation (one slide).

- Mission Need. Review program/project description, legislative mandates, or operational goals. Revalidate MNS or explain changes requested (one slide).

- Current Project Status. Discuss where the project stands relative to the Exit Criteria established at the previous IRB review.

- Results of Previous Phase Activities. Discuss the results of the previous phase activities including: achievement of exit criteria established at the previous IRB, technical capabilities, technical risk, schedule, life cycle cost estimates, cost benefit analyses, testing, etc.

- Acquisition Strategy Goals and Objectives. Address logistics support, configuration management, training, and test and evaluation. Address Acquisition Strategy for the next phase.

- Acquisition Plan (AP) Approval. Address proposed contracting strategy; competition, contract type, and contractor performance measurement.

- 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 (major contract award decisions) (one slide).

- Project Risk. Explain what the project risks are (cost, schedule and technical) and how they are being addressed.

- 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 Decision Milestone. Discuss where the project is going and what events, including testing activities, will occur prior to the next Decision Milestone (if applicable).

- Proposed Exit Criteria. Provide the proposed exit criteria for the next acquisition phase.

- Key Issues. Describe the project's key areas of concern.

4.0   Information Briefs

This type of briefing is used to give DHS a project overview (5-20 minutes) to help identify cross-programmatic issues and assess opportunity for consolidation/coordination of effort among investments. This is an opportunity for the Sponsor to highlight the need and cause for action, raising Joint Requirement Council (JRC) awareness of future JRC/Investment Review Board (IRB) action. DHS is interested in commonality and interoperability within portfolios and will normally specify a 5 or 20 minute format. The slides should be prepared in PowerPoint using the standard G-A template and contain the following basic format and types of information.

▪   Mission Need. Short project overview and/or graphic description that allows DHS reviewers to recognize the urgency of the need and understand the proposed solution. Identify any legislative mandates or operational goals (two slides max) driving the project.

▪   Current Capability. Explain how current capability is not meeting the mission need. Address mission deficiency in broad functional terms (two slides max).

▪   Planned Capability. Discuss planned capability in functional (not programmatic) terms (two slides max).

▪   Current Program Status. Discuss results to date with emphasis on interoperability and commonality with other DHS projects. Discuss major program accomplishments, current phase, and recent successes.

▪   Schedule. High level timeline of major project events/activities. Show dates of major events and planned Decision Milestones (one slide).

▪   Funding. High level review of project funding received, current funding requirements and out-year requirements, by fiscal year. Slide should identify CIP and FYHSP level and identify sources and type of funds. Show the total acquisition cost estimate, and life cycle cost estimate, and useful life (two slides max).

▪   Program Risk. Address any significant program risk concerns regarding cost, schedule and performance (one slide).

▪   Key Issues.

5.0   Portfolio Reviews

This type of briefing is used to give DHS a short project overview as part of their annual review of DHS project portfolios.

▪   Mission Need. Short project overview and/or graphic description that allows DHS reviewers to recognize the urgency of the need and understand the proposed solution. Identify any legislative mandates or operational goals (two slides max) driving the project.

▪   Current Capability. Explain how current capability is not meeting the mission need. Address mission deficiency in broad functional terms (two slides max).

- ▪ <u>Planned Capability</u>. Discuss planned capability in functional (not programmatic) terms (two slides max).

- ▪ <u>Current Program Status</u>. Discuss results to date with emphasis on interoperability and commonality with other DHS projects. Discuss major program accomplishments, current phase, and recent successes.

- ▪ <u>Schedule</u>. High level timeline of major project events/activities. Show dates of major events and planned Decision Milestones (one slide).

- ▪ <u>Funding</u>. High level review of project funding received, current funding requirements and out-year requirements, by fiscal year. Slide should identify CIP and FYHSP level and identify sources and type of funds. Show the total acquisition cost estimate, and life cycle cost estimate, and useful life (two slides max).

- ▪ <u>Program Risk</u>. Address any significant program risk concerns regarding cost, schedule and performance (one slide).

- ▪ <u>Key Issues</u>.

  Individual Coast Guard Projects may be part of several DHS annual portfolio reviews and are expected to tailor their presentations to address interoperability and commonality with other projects within the portfolio being reviewed.

  PMs are expected to tailor the above format as needed to get their message across to the audience and any specific agenda.

6.0   Briefing Template

In order to maintain uniformity and standardization, the template to be used for all briefings are on the G-A-2 CG Central Site. Note that the "background" of the slides is to be white unless color is specifically needed for a given slide.

7.0   JRC/IRB Notional Timelines

The timeline depicted below describes the activities that happen during the Decision Milestone Process.

JRC/IRB Notional Timelines (Calendar Days)

Time Period	Activity
T minus 81 days	Coast Guard Acquisition Review Council (CGARC) meeting held. CGAE approves project to proceed to DHS for Decision Milestone approval.
T minus 70 days	PM/Sponsor electronically sends updated Decision Milestone Package of documents (.PDF) and presentation to CGARC Executive Secretary.
T minus 67 days	CGARC Executive Secretary forwards Decision Milestone Package to IRB Executive Secretary.
T minus 30 days	JRC review held.
T minus 15 days	IRB pre-meeting with DHS Program Analysis and Evaluation (PA&E) staff.
T	IRB meeting held.
T plus 5 days	IRB post-meeting with DHS PA&E staff.
T plus 14 days	Acquisition Decision Memorandum issued by Homeland Security Acquisition Executive (HAE)

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Acronyms

AC&I	Acquisition Construction and Improvement
ADM	Acquisition Decision Memorandum
AE	Acquisition Executive
Ao	Operational Availability
AP	Acquisition Plan
APB	Acquisition Program Baseline
APUC	Average Procurement Unit Cost
AR&SC	Aircraft Repair & Supply Center
AS IPT	Acquisition Strategy Integrated Product Team
ASMB	Asset and Services Management Board
AT&L	Acquisition Technology and Logistics
ATON	Aids to Navigation
AWCB	Acquisition Workforce Certification Board
C&TD	Concept and Technology Development
C2CEN	Command and Control Center
C4I	Command, Control, Communications, Computers and Information Technology
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
CAIV	Cost As an Independent Variable
CANDI	Commercially Available Non-Developmental Item
CBA	Cost-Benefit Analysis
CCA	Clinger Cohen Act
CCB	Configuration Control Board
CCMP	Cutter Class Maintenance Plan
CD&D	Capability Development and Demonstration
CDR	Critical Design Review
CFO	Chief Financial Officer
CFSR	Contract Funds Status Report
CGAE	Coast Guard Acquisition Executive
CGSD	Coast Guard Support Date
CGARC	Coast Guard Acquisition Review Council
CI	Commandant Instruction
CI	Configuration Item
CIM	Commandant Instruction Manual
CIP	Capital Investment Plan
CM	Configuration Management
CMP	Configuration Management Plan
COE	Common Operating Environment
COI	Critical Operational Issue
COMDTINST	Commandant Instruction
CONOPS	Concept of Operations
COO	Chief Operating Officer

COTS	Commercial Off-the-Shelf
CPO	Chief Procurement Officer
CPR	Contract Performance Report
CSA	Configuration Status Accounting
D-Level	Depot-Level
DAU	Defense Acquisition University
DHS	Department of Homeland Security
DMI	Depot Maintenance Interservice
DoD	Department of Defense
DOTMLPF	Doctrine, Organization, Training and Education, Materiel, Leadership, Personnel, and Facilities
DP	Deployment Plan
DT	Developmental Test
DT&E	Developmental Test and Evaluation
EA	Enterprise Architecture
EAB	Enterprise Architecture Board
ECP	Engineering Change Proposal
EIA	Environmental Impact Assessment
ELC	Engineering Logistics Command
EOA	Early Operational Assessment
ERPAL	Electronics Repair Parts Allowance List
EVM	Earned Value Management
EVMS	Earned Value Management System
FAR	Federal Acquisition Regulations
FASA	Federal Acquisition Streamlining Act
FEA	Federal Enterprise Architecture
FMECA	Failure Mode, Effects and Criticality Analysis
FOC	Full Operational Capability
FoS	Family of Systems
FY	Fiscal Year
FYHSP	Future Years Homeland Security Program
GPRA	Government Performance and Results Act
GSA	General Services Administration
HAE	DHS Acquisition Executive
HCA	Head of Contracting Activity
HSAM	Homeland Security Acquisition Manual
HSI	
I-Level	Intermediate-Level
IBR	Initial Baseline Review
IDS	Integrated Deepwater System
ILS	Integrated Logistics Support
ILSM	Integrated Logistics Support Manager
ILSMT	Integrated Logistics Support Management Team
ILSP	Integrated Logistics Support Plan
IMS	Integrated Master Schedule
IOC	Initial Operational Capability

IPG	Integrated Planning Guidance
IPRT	Integrated Project Review Team
IPT	Integrated Product Team
IRB	Investment Review Board
IRP	Investment Review Process
IRR	Investment Review Request
IT	Information Technology
JLC	Joint Logistics Commanders
JRC	Joint Requirements Council
KO	Contracting Officer
KPP	Key Performance Parameter
LCC	Life Cycle Cost
LCCE	Life Cycle Cost Estimate
LORA	Level Of Repair Analysis
LRIP	Low Rate Initial Production
MAA	Mission Area Analysis
MAR	Mission Analysis Report
MARSEC	Maritime Security
MD	Management Directive
MLC	Maintenance and Logistics Command
MNS	Mission Need Statement
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPT	Manpower, Personnel and Training
MS1	Milestone Decision 1 (Project Authorization Milestone)
MS2	Milestone Decision 2 (Alternative Selection Milestone)
MS3	Milestone Decision 3 (Project Decision Milestone)
MSAM	Major Systems Acquisition Manual
MSG	Maintenance Support Guide
MSO	Maintenance Support Outline
MTBF	Mean Time Between Failure
MTTR	Mean Time to Repair
NDI	Non-Developmental Item
O-Level	Operational-Level
O&S	Operations and Support
OATP	Objective Architecture & Transition Plan
OCIO	Office of the Chief Information Officer
OE	Operating Expense
OFCO	Operating Facility Change Order
OGA	Other Government Agency
OJT	On-the-Job Training
OMB	Office of Management and Budget
ORD	Operational Requirements Document
OSC	Operational Systems Center
OT	Operational Test
OT&E	Operational Test and Evaluation

OV	Operational View
P&D	Production and Deployment
PA&E	Program Analysis and Evaluation
PDR	Preliminary Design Review
PHS&T	Packaging, Handling, Storage, and Transportation
PIR	Post Implementation Reviews
PM	Project Manager
PMA	President's Management Agenda
PMP	Project Management Plan
POC	Point of Contact
PORD	Preliminary Operational Requirements Document
PPBE	Planning Programming Budgeting and Execution
PRO	Project Resident Office
PTP	Project Transition Plan
Q	Quarter
R&D	Research and Development
RAD	Resource Allocation Decision
RAP	Resource Allocation Plan
RCM	Reliability Centered Maintenance
RMA	Reliability, Maintainability and Availability
ROI	Return on Investment
RP	Resource Proposal
S&T	Science and Technology
SCN	Specification Change Notice
SoS	System of Systems
SRR	System Requirements Review
SV	System View
SW	Software
T&E	Test and Evaluation
TEMP	Test and Evaluation Master Plan
TISCOM	Telecommunications & Information Systems Command
TM	Technical Manual
TMOT	Test Management Oversight Team
TV	Technical View
US/M	Under Secretary for Management
WBS	Work Breakdown Structure