UNITED STATES COAST GUARD
Enterprise Architecture

Performance
Mission Execution
& Measurable
Results

Security
Confidentiality,
Integrity, Availability,
& Privacy

Business
Technology
Alignment

UNITED STATES COAST GUARD

EA

1790

Technology
Standardization
& Simplification

Information
Sharing
& Quality

Service
Interoperability
& Component
Reuse

EXECUTIVE HANDBOOK
March 2008
A Product of the Office of Enterprise Architecture and Governance

CGEA

To the Men and Women of the Coast Guard:

Welcome to the second release of the Coast Guard Enterprise Architecture (CGEA) Executive Handbook. The past nine months have brought unprecedented growth in the C4&IT knowledge base as the Office of Enterprise Architecture and Governance continues to collect and synthesize information from throughout the U.S. Coast Guard (USCG). This information provides insight into how the USCG operates so we can make the best decisions for the USCG's missions of safety, security, and stewardship.

This second release of CGEA includes 60 information products that describe the USCG's mission, business, and technology in greater depth, breadth, accuracy, and completeness. Each piece of information has been re-examined and validated by subject matter experts from throughout the USCG. As a result, we updated almost all of the CGEA products, and added eight new profiles and inventories to the CGEA product framework. These additions and changes are summarized below.

New CGEA Products
- Major Programs Profile
- Data Profile & Inventory
- Services Profile
- Command Center Profile
- C4&IT Transition Profile, Timeline & Inventory

Major Updates to CGEA Products
- Quadrupled the size of the Systems Inventory
- Aligned the Business Inventory to the Activity Dictionary
- Restructured and populated the C4 Products Inventory & Profile
- Developed a more comprehensive Security Inventory & Profile

Other major accomplishments since the last release include:
- Awarded a new contract to continue the development of CGEA
- Established the Enterprise Architecture Board (EAB) to review all USCG C4&IT acquisitions
- Launched the USCG Enterprise Data Management Office (EDMO) and Geospatial Management Office (GMO) in alignment with DHS
- Developed a Service Oriented Architecture (SOA) Implementation Plan with Carnegie-Mellon University
- Transferred The Enterprise Architecture Management System (TEAMS) to OSC for operations and maintenance, and completed its Certification and Accreditation (C&A)
- Developed a CGEA front-end for users to easily obtain CGEA information
- Exhibited CGEA products and communicated with stakeholders at the 2007 Innovation Expo

As it has grown, CGEA has gained support and commitment across divisions. With the recent establishment of the Enterprise Architecture Board, the full benefit and value of CGEA can be realized as the board leverages CGEA information for Command, Control, Communications, Computers, and Information Technology (C4&IT) governance and strategic planning.

If you have questions or comments about CGEA 2, please contact Andrew Blumenthal, Director of the Office of Enterprise Architecture and Governance and Chief Enterprise Architect. On behalf of the CGEA program and our customers, thank you for your continued support.

To view the full suite of CGEA products and C4&IT governance services, please visit: http://cgea.uscg.mil.

Sincerely,

Rear Admiral David T. Glenn
Assistant Commandant for C4 & Information Technology,
Chief Information Officer
United States Coast Guard

CGEA

Table of Contents

CGEA

CGEA

Table of Figures

CGEA

Introduction

Purpose
The Coast Guard Enterprise Architecture (CGEA) makes information transparent to help the USCG community make better, more informed decisions. This Executive Handbook serves as your desktop reference to C4&IT planning and governance.

Authority
The CGEA has been developed under the authority of the Chief Enterprise Architect, an office Director under the Assistant Commandant for C4&IT. The CGEA authority is established in COMDTINST 5230.68, the C4&IT EA Policy, which names CG-6 responsible for C4&IT management and the implementation of EA throughout the USCG. Further authority is provided by COMDINST 5230.71, the C4&IT Investment Management Policy, which states that CG-6 has final approval authority for C4&IT investment management practices. Additionally, the CGEA authority is derived from COMDTINST 5401.5, which establishes CG-6 as the office responsible for all Coast Guard operational, business, and infrastructure C4&IT assets.

Outline
The sections of the CGEA Executive Handbook are as follows:

- **Enterprise Architecture Overview**: Provides a high-level overview of EA concepts, guidance, and principles.

- **CGEA Overview**: Describes the CGEA mission, vision, goals, value proposition, benefits, mandates, alignment to the Department of Homeland Security (DHS) and Federal Enterprise Architecture (FEA), and assumptions and constraints.

- **Methodology**: Provides detailed information about the CGEA program including the levels of architecture, CGEA framework, metamodel, product framework, and principles.

- **Roles and Responsibilities:** Describes the roles involved in the Office of Enterprise Architecture and Governance, CGEA products, program interaction, and the Enterprise Data Management Office (EDMO) and Geospatial Management Office (GMO).

- **Management Controls**: Provides information about how the CGEA is managed and maintained using a configuration management plan, product release schedule, and performance measurement.

- **Tools & Resources:** Introduces the tools and resources available to CGEA users including The Enterprise Architecture Management System (TEAMS), the CGEA Web site, the CGEA Executive Handbook, and additional communication and outreach materials.

- **CGEA Next Steps**: Provides the Office's projects, goals, proposed products, and performance metrics for the 2008 calendar year (CY 2008).

- **Governance Services:** Provides in-depth information about the Governance Services provided by the CGEA program, including the EAB and PSB.

- **Information Products**: Describes each of the CGEA perspectives (Performance, Business, Information, Service, Technology, and Security) and its products, and displays the entire suite of profile level CGEA products with in-depth descriptions.

Enterprise Architecture Overview

Enterprise Architecture (EA) is a way of helping leaders view business and technical information in a simple way. When complexity is simplified, the value of the underlying information is visible and executives can make decisions to improve efficiency and effectiveness. EA provides the information needed by decision-makers to identify both redundancies and gaps in capability among organizational units.

More formally, EA is the practice of aligning Command, Control, Communications, Computers, and Information Technology (C4&IT) requirements to mission and performance goals.

The following definitions of EA, as provided by other guiding organizations, support the USCG definition of EA while providing insight into EA implementation throughout the Federal government.

- **Federal Enterprise Architecture (FEA) Practice Guidance, Nov 2007**: EA is a management practice that maximizes the contribution of an agency's resources, IT investments, and system development activities to achieve its performance goals. Architecture describes clear relationships from strategic goals and objectives through investments to measurable performance improvements for the entire enterprise or segment of the enterprise.

- **Chief Information Officers (CIO) Council, 2001**: EA establishes a roadmap to achieve an agency's mission through optimal performance of its core business processes within an efficient information technology environment. Simply stated, enterprise architectures are 'blueprints' for systematically and completely defining an organization's current (baseline) or desired (target or to-be) environment.

- **Federal Enterprise Architecture Framework, Sept 1999**: The Federal Enterprise Architecture is a strategic information asset base that defines the business, information necessary to operate the business, technologies necessary to support the business operations, and transitional processes for implementing new technologies in response to the changing needs of the business.

- **Office of Management and Budget (OMB) Circular A-130**: An EA is the explicit description and documentation of the current and desired relationships among business and management processes and information technology. This definition supports the approach of optimizing the organization's structure and business processes before making IT investments.

Figure 1: Three Stage EA Diagram

An EA includes an As-Is EA, a To-Be (Target) EA, and an Enterprise Transition Plan, as depicted in Figure 1.

CGEA

- **As-Is EA**: The set of products that portray the existing enterprise, the current business practices, and technical infrastructure.

- **Enterprise Transition Plan**: A planning document that establishes the migration strategy to get from the As-Is EA to the To-Be (Target) EA. The plan is created by identifying the gaps between the As-Is and Target, and then plotting the process, system changes, and additions required to bridge the gaps.

- **To-Be (Target) EA**: The set of products that portray the future or end-state of the enterprise, generally captured in the organization's strategic thinking and plans.

In accordance with the Office of Management & Budget's Circular A-130, agencies must implement the EA consistent with following principles:

- Develop information systems that facilitate interoperability, application portability, and scalability of electronic applications across networks of heterogeneous hardware, software, and telecommunications platforms.

- Meet information technology needs through cost effective intra-agency and interagency sharing, before acquiring new information technology resources.

- Establish a level of security for all information systems that is commensurate to the risk and magnitude of the harm resulting from the loss, misuse, unauthorized access to, or modification of the information stored in or flowing through these systems.

Overall, EA can help organizations to continuously improve by working better and faster with less expense to the taxpayer. Figure 2 illustrates how moving from a silo structure to an interoperable one provides organizational benefits.
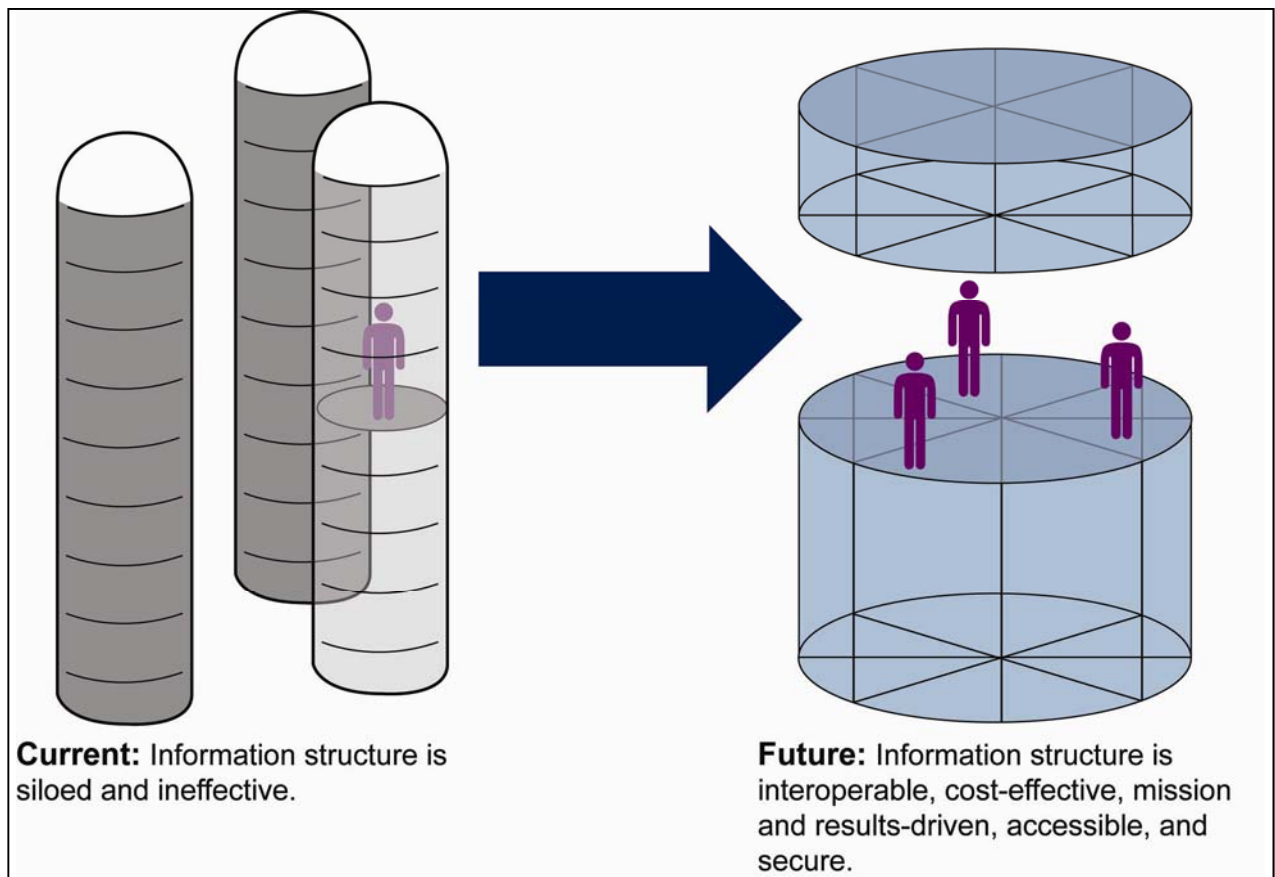

Current: Information structure is siloed and ineffective.

Future: Information structure is interoperable, cost-effective, mission and results-driven, accessible, and secure.

Figure 2: Silo Diagram

CGEA

CGEA Overview

The United States Coast Guard's Enterprise Architecture (CGEA) is the blueprint for modernizing and transforming legacy systems to meet future mission capabilities and requirements. The CGEA brings together key business and technical information across the organization to support better decision making for C4&IT. The CGEA does this by capturing, organizing, and communicating information about USCG performance measures, business processes, information requirements, applications, systems, technologies, and security.

Mission
To improve USCG planning and governance.

Vision
To make information transparent and enable better decision making.

Goals
- **Insight:** Develop, maintain, and leverage use of information products for end-users to aid USCG planning, governance, and decision-making.

- **Oversight:** Provide C4&IT governance services by conducting architectural reviews of proposed new C4&IT projects, products, and standards, to enable sound C4&IT investment decisions, portfolio management, and more successful project delivery.

Value Proposition
CGEA provides a user-centric value proposition, which means that it focuses on providing useful and useable products and services to the user. Useful and useable products and services contain information that is relevant, easy to understand, and accessible to the user. By providing a more understandable means of communicating business and technical information, the CGEA aims to improve the effectiveness C4&IT governance and decision making activities including C4&IT planning; investment portfolio management; Systems Development Life Cycle (SDLC); knowledge management; and enterprise, segment, and solution architectures.

The user-centric CGEA process consists of four key steps (depicted in Figure 3: CGEA Value Proposition):

1. **Inputs:** Capture USCG information that is implicit, explicit, structured, and unstructured. This includes mission, vision, strategy, goals, business opportunities, and current and emerging technologies.

2. **Program controls, process, and mechanisms:** Process the CGEA information by analyzing and cataloging it in defined, repeatable, and measurable ways.

3. **Outputs:** Serve the information to USCG users in useful and useable ways that are tailored to user requirements and level of interest. A key component of CGEA information delivery is visualization.

4. **Outcomes:** Achieve improved IT planning and governance for the USCG through the delivery of synthesized information in user-friendly formats.
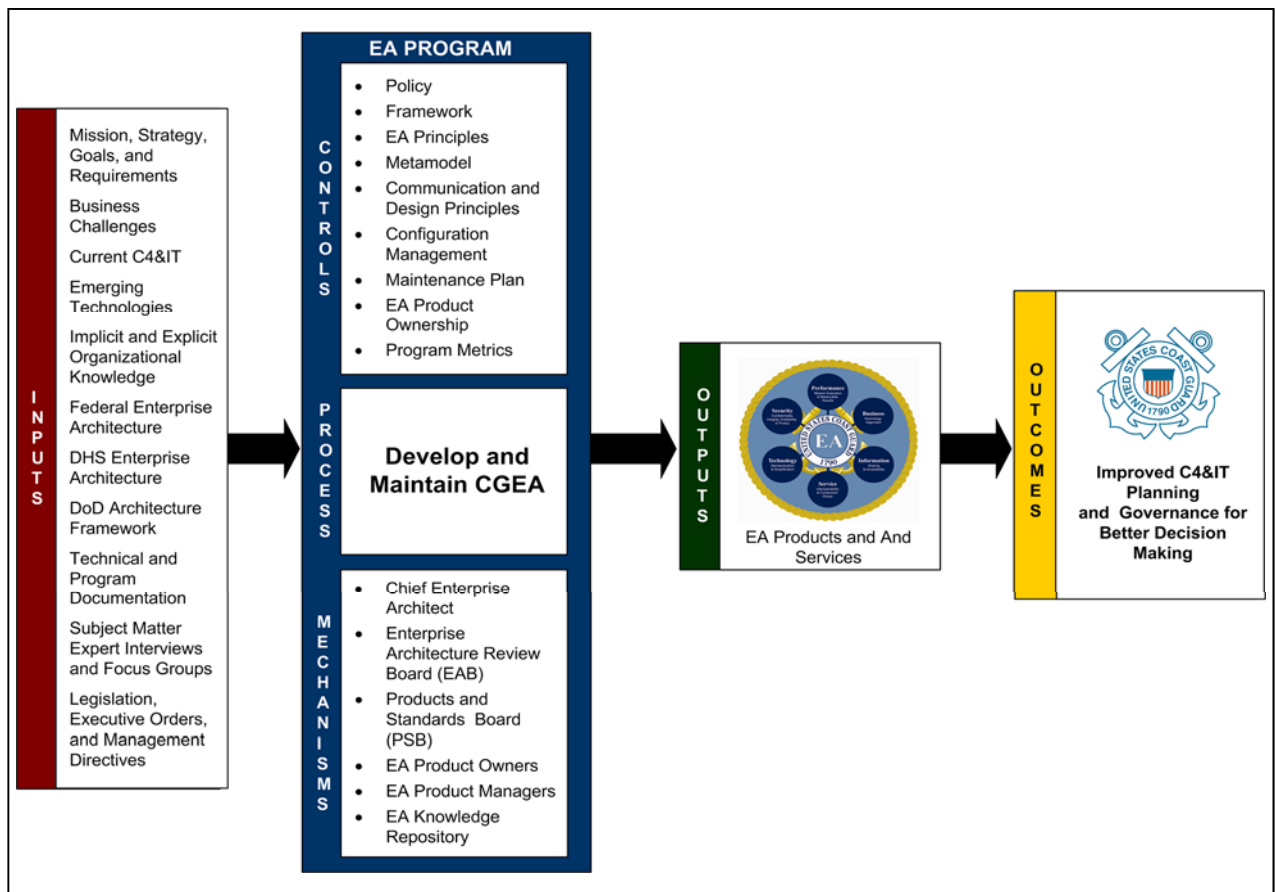
Figure 3: CGEA Value Proposition

Benefits to the USCG

EA is a discipline that brings together key business and technical information across the organization to support better decision making. General benefits of CGEA include:

- Guidance on C4&IT investments through reviews conducted by the EAB and PSB

- Analysis of problem areas, and discovery of gaps, redundancies, inefficiencies, and opportunities

- A robust (business and technology) knowledge base that fulfills information needs

- Development, documentation, and communication of C4&IT plans

- Improvement of business processes through business process reengineering and the introduction of new technologies

- Delivery of solutions that meet requirements by matching technology solutions to end-user needs and the current and target (to-be) EAs

Figure 4: EA Benefits Diagram

Although exact dollar savings are not available, the following statements show the potentially huge cost-savings offered by a mature EA:

- An organization with a more mature EA capability will have lower overall IT costs than an organization with a less mature EA capability (Dick Burke, Chief Federal Enterprise Architect, July 2006).

- The projected cost savings over 10 years from an EA-driven Line of Business (LOB) consolidation is between 16 and 27 percent (OMB presentation, March 2006).

Mandates

Several mandates, laws, and regulations call for the development of EA and C4&IT governance at the USCG. The table below summarizes these mandates and provides further explanation about each one.

Type	Mandates	CGEA	Governance
USCG	**Commandant's Intent Action Order #10 – eCG Service Oriented Architecture Implementation** CIAO #10 establishes the USCG's Service Oriented Architecture (SOA) initiative, including the consolidation of C4&IT resources under the CIO; improved governance for investment and portfolio management through the C4&IT Investment Review Board (IRB); and a robust EA supporting mission-technology alignment, information sharing, systems interoperability, technology standardization, performance measurement, and information assurance.	✓	✓
	C4&IT EA Policy, COMDTINST 5230.68 This Instruction establishes the authority, roles, and responsibilities governing the USCG's C4&IT EA. This policy applies to all C4&IT assets, including systems, data, and products that enable C4&IT capability in support of the USCG's missions or business functions. All USCG organizations involved in the planning, acquisition, production, deployment, support, operation, and disposition of C4&IT systems and services shall employ the EA Policy and adhere to the roles it defines.	✓	✓
DHS	**DHS Management Directive 1400** This establishes DHS's vision for the authorities and responsibilities of the Department's Chief Information Officer. According to the directive, component CIOs are responsible for the timely delivery of IT mission services in direct support of the component's mission, goals, objectives, and programs; and effective management and administration of all component IT resources and assets to meet departmental and enterprise program goals.	✓	✓
	DHS Management Directive 0007.1 This directive states that the component CIO is responsible for effective management and administration of all component IT resources and assets to meet mission, departmental, and enterprise program goals.	✓	✓
	DHS Management Directive 4300 This directive establishes Department of Homeland Security (DHS) policy regarding the identification and safeguarding of sensitive but unclassified information originated within DHS.	✓	✓
Federal	**Clinger-Cohen Act of 1996** This law requires agencies to use a disciplined Capitol Planning and Investment Control (CPIC) process to acquire, use, maintain, and dispose of IT. The purpose of the act is to improve the productivity, efficiency, and effectiveness of Federal programs through improved acquisition, use, and disposal of IT resources.	✓	✓

CGEA

Type	Mandates	CGEA	Governance
Federal	**Electronic Government (E-Government) Act of 2002 (P.L. 107-347)** This law requires agencies to develop performance measures for implementing E-Government, defined by the act as "web-based Internet applications or other information technology to enhance access to and delivery of government information and services to the public, other agencies, and other government entities; or to bring about improvements in government operations." The act also requires agencies to support government-wide E-Government initiatives and to leverage cross-agency opportunities to further E-Government.	✓	✓
	Executive Order 13011 Federal Information Technology (1996) This directive instructs Federal agencies to improve the management of information systems; refocus IT management in support of strategic missions; establish clear accountability for information resources management activities; and promote a coordinated, interoperable, secure, and shared Government-wide infrastructure.	✓	✓
	Federal Information Security Management Act (FISMA - 2002) As part of the part of the E-Government Act of 2002, this law establishes a framework to protect the government's information, operations, and assets. FISMA requires agencies to integrate IT security into their capital planning processes, conduct annual IT security reviews of all programs and systems, and report the results of those reviews to OMB.		✓
	Federal Records Act of 1950 Establishes the framework for records management programs in Federal agencies. As the primary agency for records management oversight, the National Archives and Records Administrations (NARA) is responsible for assisting Federal agencies in maintaining adequate and proper documentation of policies and transactions of the Federal government. This is done by appraising records (determining record value and final disposition of temporary or permanent records), regulating and approving the disposition of Federal records, operating the Federal Records Centers, and preserving permanent records.		✓
	Government Performance and Results Act (GPRA) This law provides for the establishment of strategic planning and performance measurement in the Federal government and encourages collaboration between OMB and Federal Agencies to develop outcome oriented, program specific performance measures.	✓	✓

CGEA

Type	Mandates	CGEA	Governance
Federal	**OMB Circular A-11, Part 7 - Capital Planning Budget Reporting, Exhibits 52, 5 and 300B** The OMB Capital Programming Guide provides guidance on the principles and techniques for effective capital programming. The Capital Programming Guide integrates the various administration and statutory asset management initiatives (including GPRA, Clinger/Cohen Act, and others) into a single, integrated capital programming process to ensure that capital assets contribute to the achievement of agency strategic goals and objectives.		✓
	OMB Circular A–130, Management of Federal Information Resources, Section 8b This circular establishes policy for the management of Federal information resources and states that the USCG's CPIC "process must build from the current EA and its transition from current architecture to target architecture." As a result, the circular requires that the USCG document and provide its EA to OMB as significant changes are incorporated.	✓	✓
	President's Management Agenda (Fiscal Year 2002) This guidance addresses strategic management of human capital, competitive sourcing, improved financial performance, expanded electronic government, budget, and performance integration with a focus on improving government performance.	✓	✓
	Privacy Act of 1975 This attempts to regulate the collection, maintenance, use, and dissemination of personal information by federal executive branch agencies. The act states that no agency shall disclose any record without a written request by, or with the prior written consent of, the individual to whom the record pertains.		✓
	Public Printing and Documents, Federal Information Policy (U.S. Code Title 44 3506(b)(2) and (a)(3)) This law requires each Federal agency to manage information resources to reduce information collection burdens ; increase program efficiency and effectiveness; and improve information integrity, quality, and utility, and makes each agency CIO responsible for ensuring compliance with information policies. The act states that all electronic records created and received by agencies are subject to the same existing statutory and regulatory records management requirement as records in other formats and on other media.	✓	✓
	Rehabilitation Act of 1998 (Section 508) This requires that Federal electronic and information technology be accessible to people with disabilities. The law applies to all Federal agencies when they develop, procure, maintain, or use electronic and information technology.		✓

CGEA

Service Oriented Architecture (SOA)

Service Oriented Architecture (SOA) is a software design methodology that uses loosely coupled services to perform business functions and processes. SOA is not a specific technology nor is it a final destination; it is an architectural path with a set of design principles for system development.

The most essential element of SOA is a service, which is a logical representation of a repeatable business activity that is well-defined and self-contained. A service has a published interface that developers can use when building different applications and business processes. In essence, SOA centers on developing a service for a single application, project, or organization and reusing that service across the enterprise.

In 2006, the Commandant, as part of his CIAOs, called for e-Coast Guard (eCG) and SOA Implementation (CIAO #10). The goal of this mandate is to enhance USCG mission performance through optimal C4&IT investments and management.

In support of CIAO #10, the Office of Enterprise Architecture and Governance worked with graduate students from Carnegie Mellon University to develop a USCG SOA implementation plan. The implementation plan outlines an approach that the USCG can consider as it moves forward with implementing SOA. The approach includes a SOA roadmap and maturity model concepts; ideas for SOA process, governance, and outreach; and private sector case studies.

In addition, the USCG Operations Systems Center (OSC), whose primary function is to provide full life-cycle support for operationally-focused information systems, is working to implement SOA as it develops and enhances USCG systems. As part of this effort, OSC successfully implemented an instance of SOA for the Authoritative Parts Service (APS) and selected an enterprise service bus for future SOA development.

CGEA

Alignment

DHS Enterprise Architecture (DHS EA)

CGEA aligns to the DHS EA, as shown in the table below. The first column, CGEA Perspective, lists the six CGEA perspectives. The second column, CGEA Products, shows an example product from each perspective that aligns to a DHS EA Product (third column). The fourth column, CG/DHS EA Collaboration, shows how the USCG collaborates with the DHS EA.

CGEA Perspective	CGEA Product	DHS EA Alignment	CG/DHSEA Collaboration
Performance	Performance Profile Core Missions	DHS Performance Goals	Department of Homeland Security Enterprise Architecture Board (DHS EAB)
Business	Value Chain Alignment	DHS Value Chain	DHS EAB
Information	Information Profile	DHS Information Architecture	DHS EAB, EDMO, GMO, Data Steward Working Group (DSWG), Data Management Working Group (DMWG)
Service	C4&IT Transition Portfolio Profile	DHS IT Portfolios	DHS EAB, Service Oriented Architecture Working Group (SOA WG)
Technology	IT Products & Standards Profile	All CG products in the DHS Technical Reference Manual (TRM)	DHS EAB, DHS Acquisition Review ($2.5 million review)
Security	Security Profile	DHS Security Architecture	Cross-cutting

Federal Enterprise Architecture (FEA)

CGEA aligns to the FEA, as shown in the table below. The first column, CGEA Perspective, lists the six CGEA perspectives. The second column, CGEA Products, shows an example product from each perspective that aligns to an FEA product (third column). The fourth column, CG/FEA Collaboration, shows the USCG method of collaboration with the FEA.

CGEA Perspective	CGEA Product	FEA Alignment	CG/FEA Collaboration
Performance	Performance Inventory	FEA Performance Reference Model (PRM)	
Business	Business Inventory	FEA Business Reference Model (BRM)	
Information	Enterprise Data Model	FEA Data Reference Model (DRM)	Through DHS to Federal CIO Council
Service	Service Profile	FEA Service Component Reference Model (SRM)	
Technology	IT Products and Standards Profile	FEA Technical Reference Model (TRM)	
Security	Security Profile	FEA Security Profile	

Assumptions and Constraints

As with any major project or program, a series of assumptions and constraints influence the development and maintenance of CGEA. Assumptions are activities outside the control of the Office of Enterprise Architecture and Governance that need to occur for the CGEA to be successful, while constraints are things that might restrict or limit the success of CGEA. The following are the assumptions and constraints facing the CGEA program.

Assumptions

- **EA Unification**: The USCG will unify around a single CGEA by integrating C4&IT governance with the staffs working on EA throughout the USCG to avoid duplicating efforts and diluting resources.

- **EA Implementation**: The information in the architecture is only as good as how the USCG uses it. To maximize the value of CGEA, the USCG will leverage the information it provides to improve C4&IT governance and planning. This includes continuing to support the EAB and establishing the PSB.

- **EA Prioritization**: The USCG leadership will continue management commitment to CGEA and C4&IT Governance including provisions for adequate resources and funding.

- **EA Enforcement**: USCG leadership will enforce EA compliance throughout the enterprise so that all LOBs, Center of Excellence (COEs), and commands adhere to CGEA and C4&IT governance policies and practices.

- **EA Authority**:The Enterprise Architecture Management System (TEAMS), the repository for EA and requirements, will be the authoritative source and enterprise solution for requirements and EA.

Constraints

- **Legacy Policy and Practice**: The USCG currently has in place a series of legacy C4&IT policies and practices that need to be updated to reflect the current reality of the CGEA program and C4&IT governance. Updating these policies will provide the USCG with clarity about the CGEA program and its relationship to C4&IT governance and the USCG's SDLC.

- **Legacy Strategic Plan**: The current C4&IT strategic plan from June 1998 does not reflect the current USCG strategy for C4&IT. As the strategic plan is a key input into the target (to-be) architecture and vice versa, updating this plan will help to maximize the value of CGEA.

Methodology

The following sections describe some of the primary elements that guide CGEA development, maintenance, and use. This includes the levels of architecture, framework, metamodel, product framework, principles, and roles and responsibilities of CGEA.

Levels of Architecture

The USCG develops architecture in three levels: enterprise (USCG), segment Lines of Business (LOBs), and solution. The three levels vary in degree of detail and address related but distinct concerns, as shown in Figure 5.
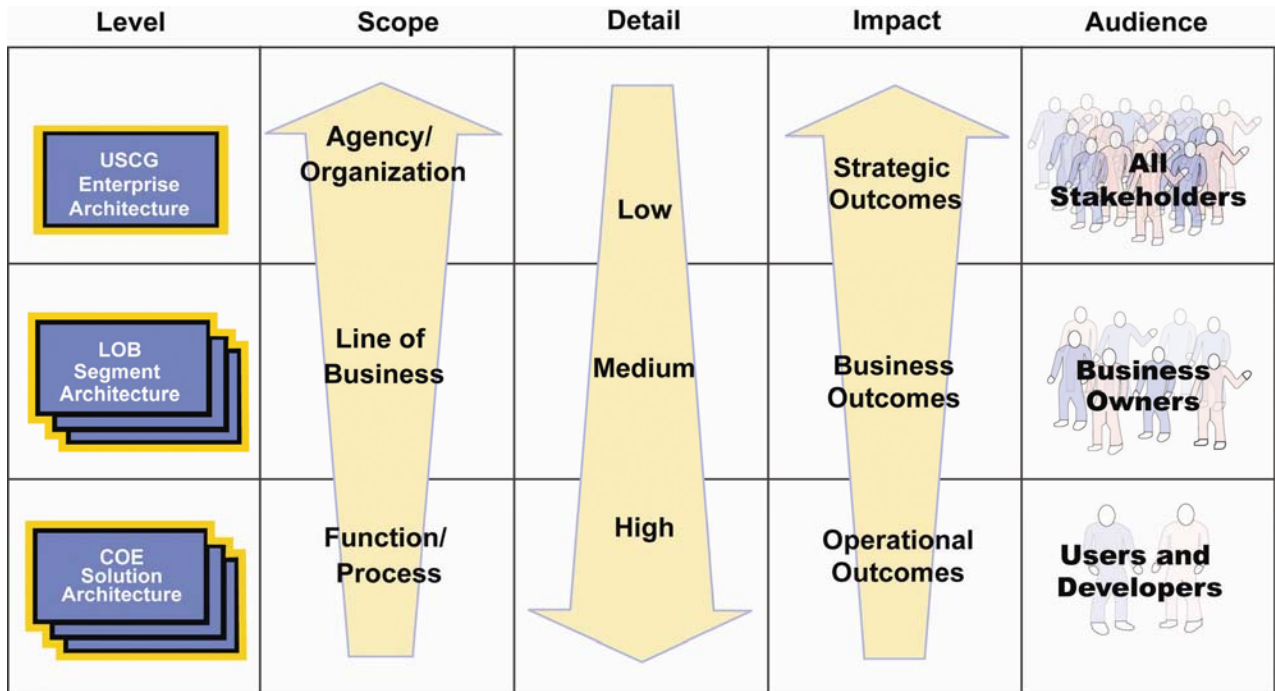

Figure 5: EA Levels of Architecture (Adopted from the 2006 FEA Practice Guidance)

The three different architecture levels are as follows:

1. **Enterprise Architecture (EA)**: An EA focuses on the agency, at a low level of detail, and drives toward strategic outcomes. The EA identifies common or shared assets such as performance goals, organizational structure, business processes, investments, data, systems, or technologies. Driven by strategy, an EA helps agencies properly align their resources to agency mission, strategic goals, and objectives. An EA is used to drive IT investment portfolio decisions and its primary stakeholders are senior managers and executives tasked with ensuring agencies effectively and efficiently fulfill mission objectives. At the USCG, the CGEA is the single authoritative EA.

2. **Segment Architecture**: A segment architecture focuses on an individual LOB, at a medium level of detail, with a focus on business outcomes. It defines a simple roadmap for a core mission area, business service, or enterprise service. Within each area or service, segment architecture provides the following: baseline and target (to-be) performance; business, data, services, and technology architecture; an implementation plan to achieve measurable performance improvements; and products that improve the delivery of services to citizens and agency staff. All segment architectures shall comply with the CGEA.

Segment architecture is related to EA through the following three principles:

- *Structure*: Inherits the EA framework, although it may be extended and specialized to meet the specific needs of a core mission area or common service.

- *Reuse*: Reuses important assets defined at the enterprise level including: data, common business processes and investments, and applications and technologies.

- *Alignment*: Streamlines elements defined at the enterprise level, such as mission-business strategies and processes; performance goals; and technology standards, solutions, principles, and policies. All segment architectures align with the CGEA.

3. **Solution Architecture**: A solution architecture includes functions or processes within a segment, with a focus on operational outcomes with a great level of detail. Scope is typically limited to a single project where it is used to implement all or part of a business solution. A solution architecture is constrained to and inherits specific technologies and standards defined at the enterprise level. Solution architectures also provide specific definitions for data or services within a core mission or service. These are often IT assets such as the applications or components used to improve individual business functions. Primary stakeholders for solution architectures are system users and developers. Like segment architecture, all solution architectures shall comply with the CGEA.

CGEA Framework

The CGEA framework shows how information is organized and structured within CGEA. The framework consists of six CGEA perspectives as identified in the six circles of Figure 6. To show the alignment of CGEA to the overall USCG mission, the framework incorporates the USCG seal.

Figure 6: CGEA Framework

CGEA Perspectives

The six perspectives of the CGEA framework organize the USCG's complex business and technical information. The perspectives enable users to compare and relate information across mission and organizational boundaries to promote information sharing and integration. Each perspective provides users a different view of USCG business and IT information as described below.

- **Performance:** The Performance Perspective provides information about the measurement of USCG strategic and business outcomes. This includes information from the U.S. Coast Guard Posture Statement (with 2009 Budget in Brief) and the OMB Performance Assessment Rating Tool (PART).

- **Business:** The Business Perspective describes the functions and activities that the USCG performs. An example of these functions and activities is "port, waterway, and coastal security."

- **Information:** The Information Perspective depicts the information needed to perform the USCG mission and business activities. Examples include information about vessels, cargo, parties, patrols, rescues, boardings, and investigations.

- **Service:** The Service Perspective includes systems and applications, and their capabilities and functions that support USCG information requirements. Marine Information for Safety and Law Enforcement (MISLE) is an example of a system.

- **Technology:** The Technology Perspective shows the underlying technology infrastructure that supports USCG service delivery. An example of the type of information found in this perspective is the USCG Data Network (CGDN+).

- **Security:** The Security Perspective describes how the USCG assures the confidentiality, integrity, availability, and privacy of USCG information. Symantec Corporate anti-virus software is an example of the type of information managed in this perspective.

CGEA Metamodel

The CGEA Metamodel, Figure 7, shows how CGEA information is organized and displayed within each perspective. It consists of three different levels: profiles, models, and inventories.

The pyramid below shows the connections between the levels and how the higher-level views are built on a foundation of the lower levels. The background images represent level of detail with the inventories cataloging the most detail, models showing relationships, and profiles providing a high-level (strategic) view.
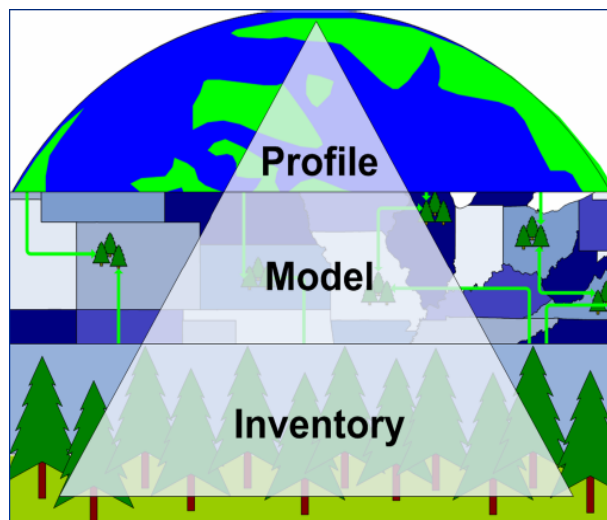

Figure 7: CGEA Metamodel

The metamodel tailors CGEA information to user needs and allows them to access information in various levels of detail as summarized below.

- **Profiles**: High-level, strategic views of CGEA information for the executive decision-maker. As the satellite view of CGEA, profiles use graphic visualization to show complex information in a condensed format.

- **Models**: Mid-level information products that graphically represent relationships. Models map the connections between elements in the CGEA by showing relationships between processes, entities, and the information they exchange.

- **Inventories:** Detailed-level information products that provide a lot of descriptive information, usually in a spreadsheet or database format. Inventories define the distinct elements in the EA information forest and contain lots of information about distinct configuration items.

CGEA Product Framework

The CGEA Product Framework, Figure 8, brings together the structure of the CGEA Framework (the six perspectives) and the CGEA Metamodel (profiles, models, and inventories).

The columns are the categories or perspectives of information in the architecture. The rows classify the level of information detail: high (profiles), medium (models), and low (inventories). The green-shaded cells indicate the information products that have been completed for Release 2 while the white-shaded cells indicate information products planned for future release.

	PERFORMANCE	BUSINESS	INFORMATION	SERVICE	TECHNOLOGY	SECURITY
PROFILES (High-Level)	Performance Profile Core Missions	Business Profile	Information Profile	Systems Profile		
	Performance Profile C4&IT	Value Chain Alignment	Data Profile	Services Profile	IT Products and Standards Profile	Security Profile
	Balanced Scorecard C4&IT	USCG CONOPS	GIS Profile	External Services Profile	C4 Products Profile	
		USCG Snapshot		Command Center Profile	Network Profile	
		Major Programs Profile			Frequency Spectrum Profile	
		Sector Commands Profile		C4&IT Transition Portfolio Profile		
		USCG Cutters & Aircraft Profile		C4&IT Transition Timeline Profile		
MODELS (Mid-Level)	Unified Performance Logic Model	Business Models	Data Models	Systems Models	Network Models	
		Organization Charts		Applications to Business Activities Matrix		
INVENTORIES (Detail-Level)	Performance Inventory	Business Inventory	Information Inventory	Systems Inventory		
	USCG Posture Statement	USCG Strategy for Maritime SSS	Data Inventory	Services Inventory	IT Products and Standards Inventory	Security Inventory
		Functional Statements	GIS Inventory	External Services Inventory	C4 Products Inventory	
		Activity Dictionary	Information Exchange Matrix		Infrastructure Inventory	
		USCG Universal Task Library (CGUTL)	Information Dictionary		Frequency Spectrum Inventory	
		USCG Operational Nodes (SDL)	USCG Policy and Planning Lexicon	C4&IT Transition Inventory		

Figure 8: CGEA Product Framework

CGEA Principles

The following principles help to drive all the products within a perspective to a common goal. The principles for each perspective are based on government and industry best practices.

Perspective	Guiding Principles	Description
Performance	**Mission execution and measurable results**	The Performance Perspective strives to incorporate performance measures into systems and processes in an automated and transparent manner whenever possible (OMB, 2007).
Business	**Technology alignment**	The Business Perspective reflects the USCG's strategic plan and core missions so that business can drive technology implementation (OMB, 2007).
Information	**Sharing and accessibility**	The Information Perspective focuses on ways that the USCG can give users access to the information necessary to perform their duties, including data sharing across USCG functions, organizations, systems, and services (The Open Group, 2007).
Service	**Interoperability and component reuse**	The Service Perspective encourages the use of common solutions, designs, and services by identifying and classifying common service components and system functions across the enterprise (OMB, 2007). In essence, the goal is to define what kinds of systems are relevant to the enterprise, and what those systems need to do in order to accomplish the goals and mission needs of the enterprise (The Open Group, 2007).
Technology	**Standardization and simplification**	The Technology Perspective aims to control technology diversity, and minimize the cost of maintaining expertise in and connectivity between multiple technology environments. To achieve standardization and simplification, software and hardware must conform to defined standards that promote interoperability for data, applications, and technology (The Open Group, 2007).
Security	**Confidentiality, integrity, availability, and privacy**	The Security Perspective helps to ensure that data is protected from unauthorized use and disclosure. In addition to the traditional aspects of national security classification, this includes (but is not limited to) protection of pre-decisional, sensitive, source selection-sensitive, proprietary, and privacy-related information (The Open Group, 2007).

CGEA

CGEA User-Centric Approach

As seen in Figure 9, user-centric EA principles focus on enhancing decision making by delivering useful, useable EA products tailored to user needs and levels of interest.

In essence, user-centric EA embraces the following guidelines:

- User-centric EA focuses on developing useful and useable products and governance services for the USCG end-user.

- User-centric EA information is relevant (current, accurate, and complete), easy to understand, and readily available.

- User-centric EA impacts all steps of the EA development process from the capture of information, based on a strict value proposition of improving IT planning and governance, to process information in a collaborative and structured way, and providing users with information views that are facilitated by principles of communication and design.

- User-centric EA affects how we manage and enforce the architecture process using metrics, configuration management, a single information repository, policy, and governance boards.
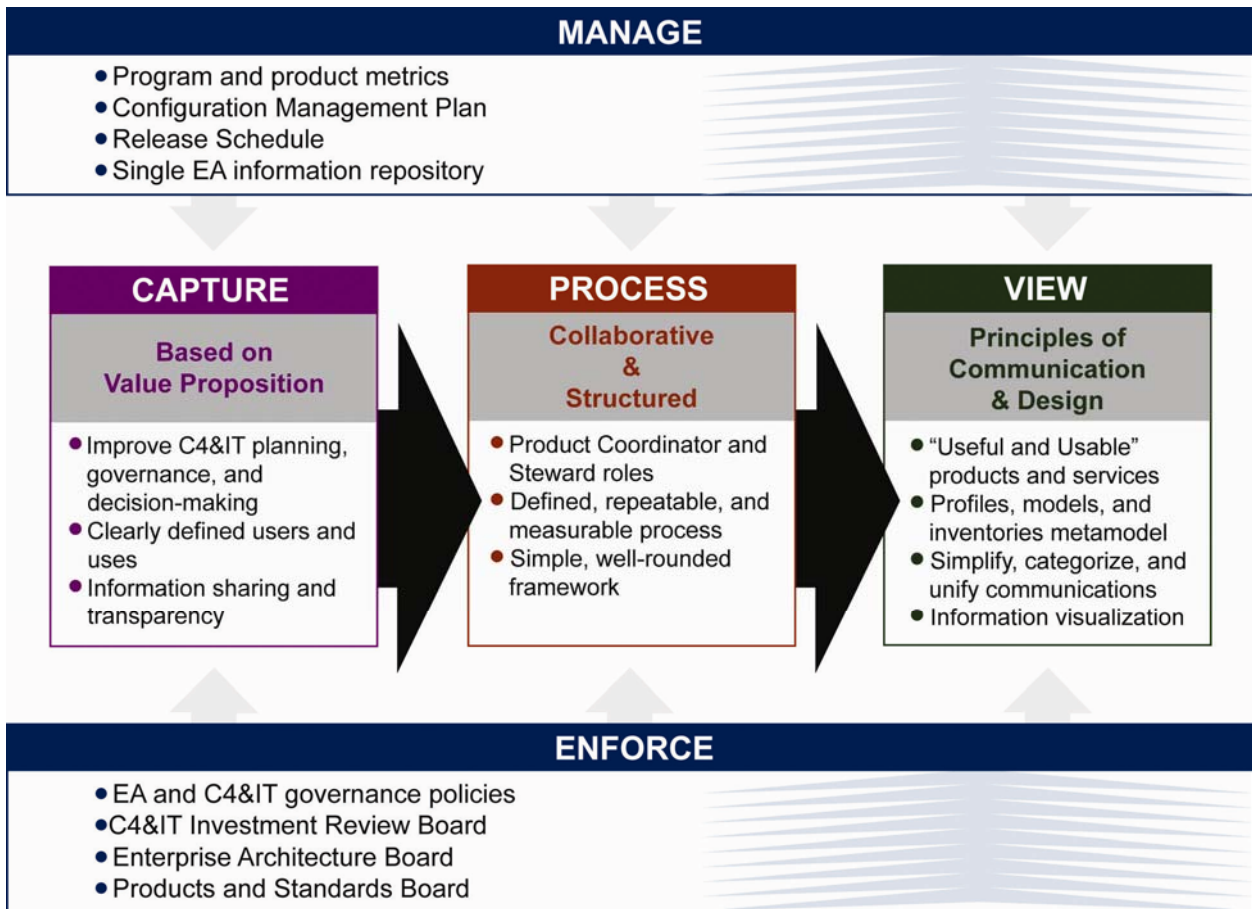

Figure 9: User-Centric EA Principles

Roles & Responsibilities

Office of Enterprise Architecture & Governance

In collaboration with USCG lines of business, the Office of Enterprise Architecture and Governance has two primary functions as described below.

Enterprise Architecture

- Developing and maintaining the CGEA and the USCG's C4&IT plans

- Supporting performance results, mission-technology alignment, information sharing and accessibility, component re-use, systems interoperability and integration, technology standards, and information assurance

- Validating and maintaining requirements to ensure alignment with CGEA and C4&IT plans

- Implementing an accurate, complete, and accessible repository of C4&IT business and technology information as the single source of standard investments throughout the Coast Guard.

Governance

- Promoting C4&IT management best practices (such as ITIL, PMBOK, CMMi, and COBIT) to enhance operational effectiveness and efficiency

- Integrating the CGEA, with all C4&IT governance and acquisition processes into a singular streamlined investment governance process to select, acquire, use, maintain, and dispose of C4&IT.

- Initiating a portfolio management process to ensure alignment of ongoing projects and investments with the DHS IT Portfolio structure to ensure best strategic value to the Coast Guard.

- Determine and utilize relevant and meaningful performance measures to monitor changes in C4&IT investments, usage, standardization, and accessibility.

CGEA ORGANIZATION CHART

IMAGE WITHHELD PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

CGEA Product Roles

The CGEA Roles and Responsibilities Matrix, Figure 11, illustrates the key product roles for CGEA and their relationships.

Each of the following roles are key to the development and maintenance of EA products:

CGEA PRODUCT ROLES MATRIX

IMAGE WITHHELD PURSUANT TO FOIA EXEMPTION (b) (2)
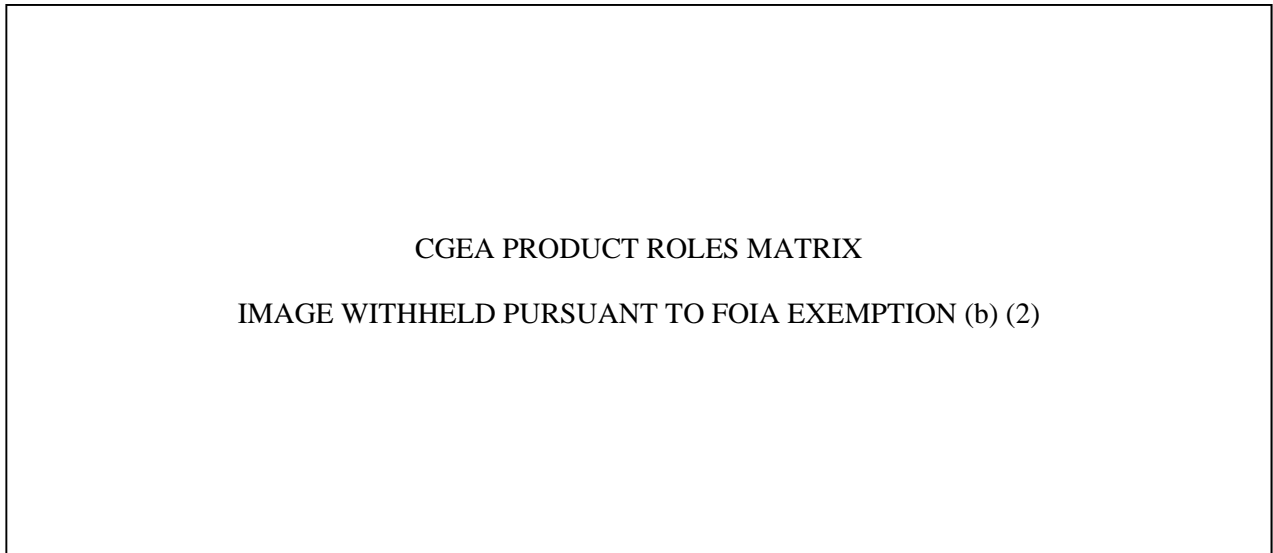
Figure 11: CGEA Product Roles Matrix

- **CGEA product owner**: This person is responsible for the quality and quantity of content in the CGEA information products and serves as the product's approval authority. The product owner is responsible for participating in the development of CGEA products and ensures ongoing updates are documented as new information becomes available.

- **CGEA product manager**: This individual is responsible for the structure and process of CGEA product development and maintenance. The product manager follows the Configuration Management Plan and works in concert with the product owner as the Subject Matter Expert to implement changes when new information becomes available.

Additional Roles

The following are additional roles and responsibilities with respect to CGEA product development and maintenance.

- **CGEA configuration manager**: This person works with the product owner to develop and maintain CGEA information products. The configuration manager is responsible for overall configuration management of the CGEA; maintaining the integrity of the information therein; and managing the approval process and controlled release of information products.

- **CGEA product stakeholder**: This is an individual or group who is or could be affected, or who will or could affect the development of the CGEA. Examples of CGEA product stakeholders include USCG mission and support personnel and C4&IT asset managers. The CGEA product stakeholder works with the product owner and configuration manager to ensure content in the CGEA reflects USCG mission and business needs accurately and completely.

- **Product subject matter expert**: This individual exhibits the highest level of expertise in performing a specialized job, task, or skill and/or possesses an in-depth knowledge of a mission, business, or technical subject area within the USCG. The subject matter expert works with the product owner and configuration manager to ensure content in the CGEA reflects USCG mission and business needs, and is accurate, current, and complete.

CGEA Program Interaction

The CGEA Program Interaction diagram, Figure 12, demonstrates how the CGEA program interacts with the USCG Lines of Business (LOBs) and CG-6 (C4&IT).

The CGEA Program has two major roles:

- Define and manage the C4&IT governance process through the EAB and the PSB

- Develop and manage the CGEA information products and strategic plans

The USCG LOBs and CG-6 interact with the CGEA in the following ways:

- From a planning perspective, by ensuring that information in CGEA is accurate and current and by using the aggregate information to enhance decision making

- From a governance standpoint, through segment and solution architectures alignment to and compliance with CGEA
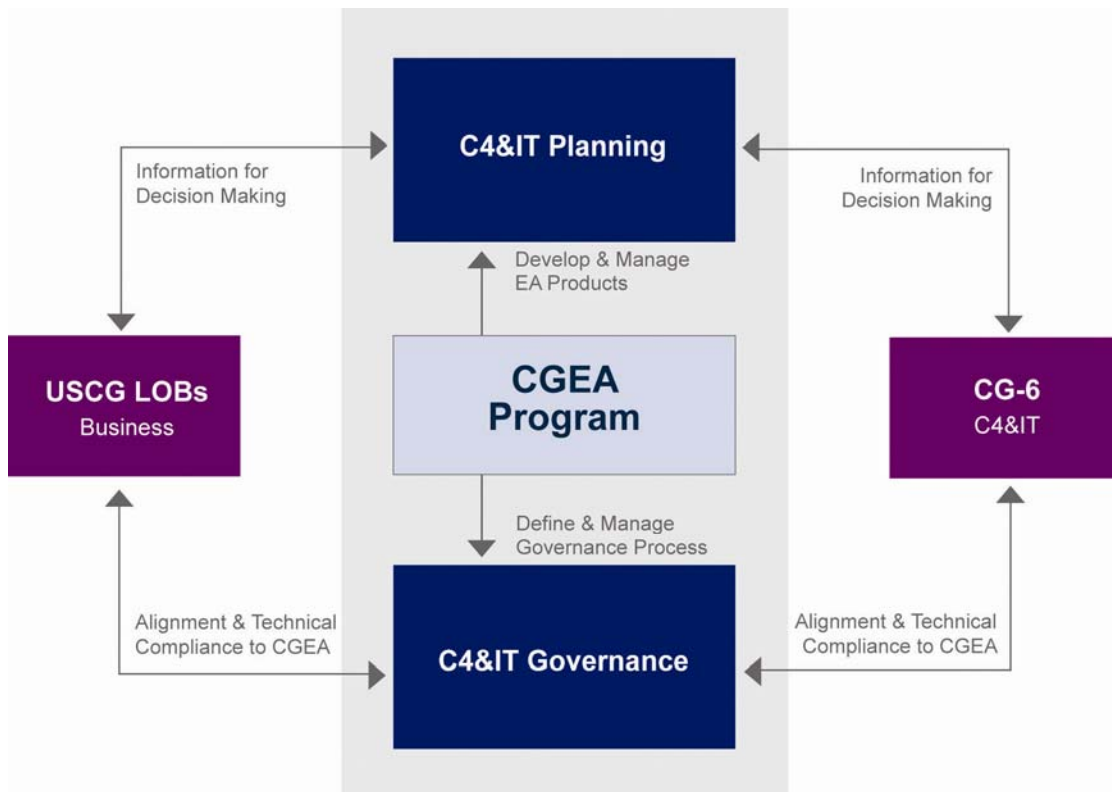

Figure 12: CGEA Program Interaction Diagram

Enterprise Data Management Office

The Enterprise Data Management Office (EDMO) is an arm of the Office of Enterprise Architecture and Governance that focuses on improving information quality, sharing, and governance.

Formally established in December 2007, in alignment with DHS, the EDMO will develop policies, practices, and standards for data synthesis and unification across the enterprise. In support of CPIC and SDLC processes, the EDMO will provide a framework for managing the actionable data used to support the USCG's eleven mission areas. Data is actionable when it is active (current and relevant), assured (accurate and secure), and available (accessible and shareable). Actionable data is the foundation of productive analysis, reporting, and informed decision making.

Scope

The EDMO will establish governance for enterprise data, which includes all data that supports USCG-wide missions and business functions as well as data that the USCG imports from or exports to other organizations. Enterprise data may be automated and stored via computer applications, or non-automated processes, such as card files containing historical data reports submitted in paper form. Throughout this executive handbook, the term "data" is understood to mean "enterprise data." Enterprise data may have many managers but the Commandant is recognized as the sole owner.

Goals & Objectives

The overarching goal of the EDMO is to establish a data stewardship framework that allows for the improvement of data quality. Data stewardship forms the foundation of an infrastructure that ensures the cooperative development and use of well-integrated data resources for mission execution and support. These resources will work collaboratively to provide accurate, consistent, and cohesive data, which will in turn support the enterprise and its missions and business functions.

Creating a data stewardship framework allows for the achievement of specific objectives:

- Improved data and information sharing exchange and delivery across the enterprise

- Identification and resolution of data inconsistencies and/or duplication

- Clarification and documentation of data definitions and standards for usage

- Consideration of data from an enterprise perspective when business decisions are made

- Maintaining information integrity, validity, and access by anyone who has a legitimate need

- Enablement of Maritime Domain Awareness (MDA) and the Common Operating Picture (COP)

Roles & Responsibilities

The following roles are essential to the successful implementation of the USCG EDMO:

- **EDMO Manager**: The EDMO manager is responsible for providing the data stewards with the tools and guidelines they need for maintaining the Enterprise Data Warehouse (EDW), including information and data policies, practices, and standards.

- **Data Steward**: Each USCG functional group will appoint a data steward to control the quality of content entering the data repository. The data stewards will be empowered as the caretakers of data assets and accountable for their integrity.

CGEA

Geospatial Management Office

The Geospatial Management Office (GMO) is an arm of the Office of Enterprise Architecture and Governance that focuses on improving geospatial information quality, sharing, and governance.

Formally established in December 2007, in alignment with DHS, the GMO will develop policies, practices, and standards for geospatial data synthesis and unification across the enterprise. In support of CPIC, EDMO, and SDLC processes, the GMO will provide a framework for managing the geospatial data used to support the USCG's core missions.

Scope

The GMO will establish governance for enterprise geospatial data, which includes all data that supports USCG-wide missions and business functions as well as geospatial data that the USCG imports from or exports to other organizations.

Goals & Objectives

The overarching goal of the GMO is to establish a data stewardship framework specifically for geospatial data that allows for the improvement of data quality.

Creating a data stewardship framework for geospatial data allows for the achievement of specific objectives:

- Eliminate redundancy and aliased data sets

- Promote standards-driven consistency and quality in data products and services

- Assure interoperability between stakeholders, geospatial resources, and Department needs

- Assess, monitor, and assure USCG enterprise geospatial operations within FEA requirements

Roles & Responsibilities

The following roles are essential to the successful implementation of the USCG GMO:

- **GMO Manager**: The GMO manager is responsible for providing the data stewards with the tools and guidelines they need for maintaining the repository of geospatial data, including information and data policies, practices, and standards.

- **Geospatial Data Steward**: Each USCG functional group that uses geospatial data will appoint a geospatial data steward to control the quality of content entering the geospatial data repository. The geospatial data stewards will be empowered as the caretakers of data assets and accountable for their integrity.

CGEA

Management Controls

CGEA Configuration Management Plan

The Configuration Management (CM) Plan describes the process of identifying, collecting, reviewing, and implementing changes to published CGEA products in a systematic and controlled manner. As the doctrine for keeping the evolving information products under management and change control, the plan contributes to satisfying quality assurance parameters and communicating changes. The CM plan also documents the process for controlling and recording changes that are made to the CGEA throughout the architecture product life cycle. See the CGEA CM Plan document for complete details on the configuration management schedule, change requests, review and approval process, versioning, content changing and dating, and verification of CGEA products.

CGEA Change Request Process

All changes to the CGEA must be reviewed and approved by the appropriate approval authorities (product owners, EAB, PSB) prior to the publication of the official version of the CGEA. This occurs approximately four weeks prior to any new release. The configuration manager is responsible for managing the change requests as product stakeholders submit them.

Minor changes, such as content edits, can be forwarded to and handled directly by each product's assigned product manager. The product manager then submits these changes to the product owner for approval.

In addition, C4&IT sponsors may submit requests for major changes to C4&IT products or standards to the EAB and the PSB, depending on the type of request. More information about C4&IT governance, the EAB, and the PSB is provided in the Governance Services section, p. 37.

Product Release Schedule

The CGEA Program plans to refresh and release a new version of CGEA on an annual basis. However, that schedule is subject to change based on mandates, management requirements, and resource allocations. Further, change requests that are time sensitive, as dictated by management or stakeholder requirements, may be made between releases as long as appropriate configuration management processes are followed. All other changes are done according to the scheduled release of the CGEA.

CGEA

Performance Measurement

The CGEA program evaluates performance based on two primary performance measurement categories: program metrics and product metrics. Within each of these measurement categories, the CGEA program collects and maintains specific performance metrics. The following sections provide a summary of the value of each measurement category and specific metrics that show the progress of the CGEA program.

Program Metrics

The CGEA program metrics are the performance measures of major CGEA program areas: use of governance services, CGEA development and maintenance, and use of CGEA products. The number of products developed and maintained, the number of EAB/PSB reviews, and the number of USCG and external information requests filled are all important measures of the productivity of the program. Tracking on a semi-annual basis gives a good measure of the effectiveness of the program. The figure below shows how over time the number of newly developed products drops while the number of products maintained, reviews completed, and requests fulfilled all rise.
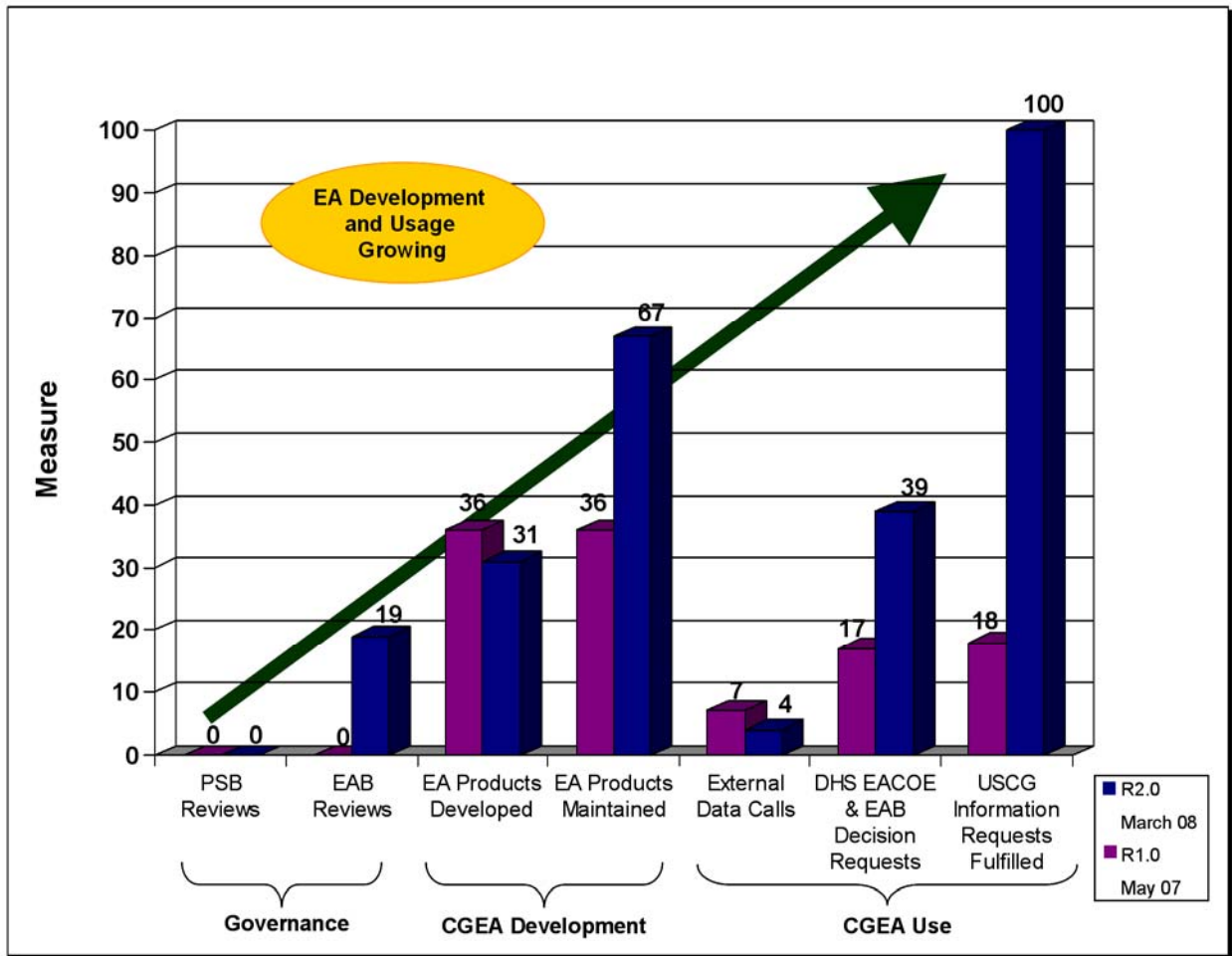

Figure 13: CGEA Program Metrics

Product Metrics

The CGEA product metrics show the amount of information captured, cataloged, and presented in the CGEA products. These metrics help to gauge the scope of the CGEA products, the depth and breadth of data in them, and their complexity. Figure 14 shows the challenge of keeping all CGEA products accurate, current, and complete.
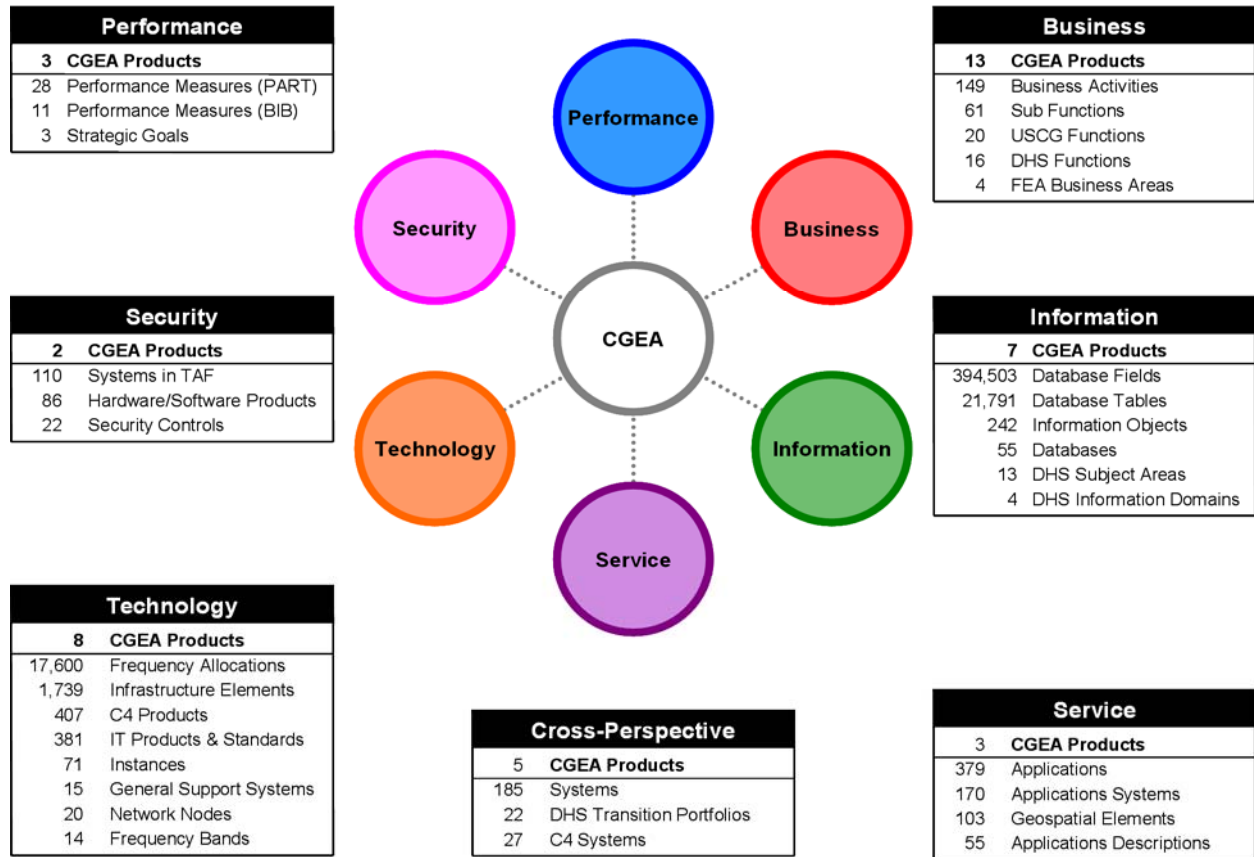

Figure 14: CGEA Product Metrics

Tools & Resources

The Enterprise Architecture Management System (TEAMS)

TEAMS is the authoritative repository for EA information products, governance services, and requirements management. In addition, it provides an environment for the development of new architectural products.

CG-6 and sponsoring organizations may utilize TEAMS as a tool to oversee the development of C4&IT system requirements, business processes, and architectural products. TEAMS is maintained by CG-6 and access is granted to other organizations so that they may develop their segment or solution architectures.

TEAMS supports the following strategic objectives:

- Provides a single, authoritative centralized repository for enterprise requirements and standards to improve information visibility and integrity

- Eliminates the development of "stovepipe" systems by providing an easy to use environment that connects to a single database

- Reduces the time involved in architecture development by reusing and sharing multiple programs

- Supports the requirements necessary for the completion of OMB documents

Delivery Channels

The CGEA program utilizes the CGEA Web site and this executive handbook as the two primary delivery channels, along with numerous other secondary channels (such as poster boards, briefings, and demos), to provide information to stakeholders.

Designed to meet different user needs and situations, the CGEA Web site and Executive Handbook provide a set of complementary functions.

The table below summarizes the features of the two delivery methods.

| MEDIUM | OFFERINGS | | | | | | REFERENCE TYPE | |
	All CGEA Products	All Profile Product s	C4&IT Governance Forms	Communication with CGEA Team	Regular Product Updates	Descriptive Text	Physical	Electronic
Executive Handbook		✓			✓	✓	✓	
CGEA Web site	✓	✓	✓	✓	✓	✓		✓

CGEA

- **CGEA Executive Handbook**: This delivery channel serves as an executive-level view of the CGEA program and a desk reference for the program's procedures, practices, and information.

  As shown in Figure 15, COMDTINST 5230.68 and related practice documents establish the top two levels of guidance within CG-6, which was established by COMDTINST 5401.5. This handbook provides the updated implementations to improve the capabilities and effectiveness of the CGEA program. As such, this handbook is the implementation for the current CGEA effort.
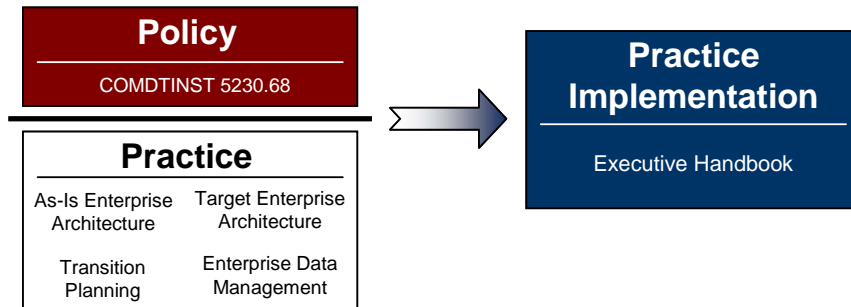
Figure 15: C4&IT Policies, Practices, and Implementation

- **CGEA Web Site**: This delivery channel provides all users of the USCG network access to published CGEA materials. Downloadable copies of CGEA products and briefings, information about and communications with the CGEA team, and the means for stakeholders to contribute to the CGEA and request changes to materials are available on the web site. Figure 16 shows the homepage of the CGEA Web site.
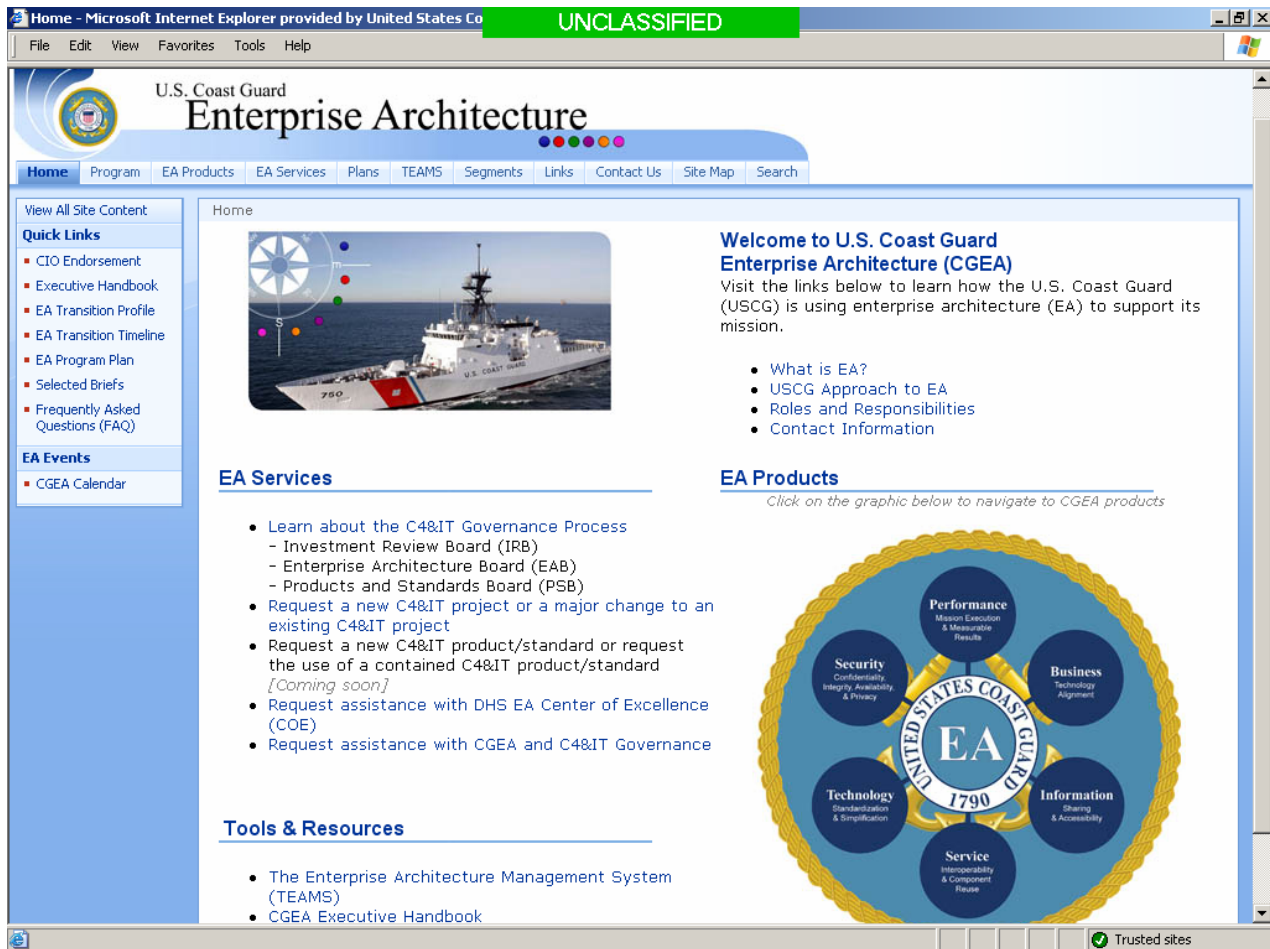
Figure 16: CGEA Web site

Communication & Outreach

Effective communication and outreach help to ensure that individuals and departments throughout the USCG have access to CGEA information and understand how to use it to make informed decisions. As a result, communication and outreach help to maximize the value of CGEA. In support of the CGEA Program's dedication to information transparency, the team regularly communicates with stakeholders.

Some typical CGEA communication activities include:

- Briefings to USCG senior managers, leaders, and executives

- Regular updates to the CGEA Web site: http://cgea.uscg.mil

- Publication and distribution of the CGEA Executive Handbook

- Coordination of the EAB across all USCG organizations

- Informative articles in USCG publications (i.e. *The Coast Guard Magazine*)

- Individual meetings with CGEA partners and stakeholders

- Weekly activity reports to the USCG CIO

Figure 17: CGEA at the 2007 Innovation Expo

CGEA Communications Plan

This coming year the CGEA team plans to develop a strategic communications plan for the CGEA program to ensure that the program delivers accurate, consistent, and timely information that meets stakeholder needs. The plan will outline the objectives of CGEA communication and outreach, identify stakeholders and their information needs, and outline specific communication strategies and tactics to meet those needs. As a living document, the CGEA team will revisit and update the communications plan with each release to ensure that it reflects changing stakeholder needs.

Program Plan

The program plan for the Office of Enterprise Architecture & Governance, Figure 18 (next page) shows a high-level summary of the Office's projects, goals, proposed products, and performance metrics for CY 2008.

The program plan lists the two primary functions (Enterprise Architecture and Governance) at the top of the graphic with detailed activities underneath each.

At the center, the plan shows specific projects and goals for each quarter of the calendar year. The projects and goals listed for quarter one (CGEA Release 2, establish the EDMO and GMO, and complete TEAMS C&A) are complete. Moving across the timeline, the Office plans to accomplish the following projects and goals over the next year: establish a C4&IT governance working group; complete SDLC for TEAMS; complete a C4&IT Strategic Communications Plan; establish a Requirements Management working group; host an EA user summit; migrate data to TEAMS; complete a CGEA Communications Plan; revise the C4&IT governance policy; and expand the TEAMS tool set. Ongoing activities for CY 2008 include CGEA development and maintenance; facilitation of EAB reviews; and facilitation of PSB reviews.

Underneath the timeline, the plan shows proposed CGEA products such as a C4&IT Strategic Plan; Infrastructure Inventory; C4&IT Performance Profile; C4&IT Balanced Scorecard; and Business, Data, and Systems Models.

At the bottom, the plan lists performance metrics for each of the office's ongoing tasks: CGEA development and maintenance, EAB reviews, and PSB reviews.

The projects, proposed products, and specific dates listed on the plan depend on the needs and requirements of CGEA users and stakeholders, and are subject to change over the year.

OFFICE OF ENTERPRISE ARCHITECTURE & GOVERNANCE
CY 2008 PROGRAM PLAN

Functional Statement

Enterprise Architecture
- Develop and maintain the CGEA and the USCG's C4&IT plans
- Support performance results, mission-technology alignment, information sharing and accessibility, component re-use, systems interoperability and integration, technology standards, and information assurance
- Validate and maintain requirements to ensure alignment with CGEA and C4&IT plans
- Implement an accurate, complete, and accessible repository of C4&IT business and technology information as the single source of standard investments throughout the Coast Guard.

Governance
- Promote C4&IT management best practices (such as ITIL, PMBOK, CMMi, and COBIT) to enhance operational effectiveness and efficiency
- Integrate the CGEA, with all C4&IT governance and acquisition processes into a singular streamlined investment governance process to select, acquire, use, maintain, and dispose of C4&IT.
- Initiate a portfolio management process to ensure alignment of ongoing projects and investments with the DHS IT Portfolio structure to ensure best strategic value to the Coast Guard.
- Determine and utilize relevant and meaningful performance measures to monitor changes in C4&IT investments, usage, standardization, and accessibility.

Projects & Goals

Q1	Q2	Q3	Q4
Release 2.0	Establish Governance Working Group	Establish Requirements Mgmt Working Group	C4&IT Governance Policy
Establish EDMO & GMO		EA User Summit	
TEAMS C&A	TEAMS SDLC	TEAMS Data Migration	TEAMS Tool Expansion

CGEA Development & Maintenance

Enterprise Architecture Board (EAB) Reviews

Products & Standards Board (PSB) Reviews

C4&IT Strategic Communications Plan	CGEA Communications Plan

Proposed Products

- C4&IT Strategic Plan*
- Infrastructure Inventory
- Coast Guard Component Specific Transition Profile

- C4&IT Performance Profile
- C4&IT Balanced Scorecard
- LOB Profiles
- SATCOM Profile

- External Services Inventory & Profile
- Frequency Spectrum Inventory
- Business, Data, and Systems Models
- Information Exchange Matrix
- Information Dictionary

Program Metrics

CGEA Development & Maintenance
# of CGEA Products Developed
# of CGEA Products Maintained

EAB Reviews
# of EAB Reviews Conducted

PSB Reviews
# of PSB Reviews Conducted

*Project pending resources

Figure 18: CGEA Program Plan

CGEA

INTENTIONALLY BLANK

Governance Services

What is C4&IT Governance?

C4&IT governance consists of the leadership and organizational structures and processes that ensure that the organization's C4&IT sustains and extends the enterprise's strategies and objectives.

C4&IT governance and the effective application of a C4&IT governance framework are critical in helping enterprises gain more value from information and IT while ensuring that IT remains aligned with the enterprise strategy, values, and culture.

As reported in *DM Review*, C4&IT governance is a two-fold endeavor (Hainuat and Walker, February 8, 2008):

- **Value creation**: "IT governance is about balancing the interests of investors and stakeholders by focusing resources on the creation of value…if the mission of IT is to provide systems the business wants, it is equally important to provide systems the business actually needs," (Hainuat and Walker, February 8, 2008).

- **Accountability**: "IT governance is the system by which IT is directed and controlled. It should address the roles and responsibilities of groups and individuals…articulate the rules and procedures for making IT decisions, and provide a structure through which IT objectives are set, attained, and monitored," (Hainuat and Walker, February 8, 2008).

Value creation and accountability relate to the select, control, and evaluate phases of the Federal IT Investment Management (ITIM) process for CPIC.

- **Select:** This phase supports value creation. It involves the selection of projects based on a combination of the following factors: alignment with mission/business strategy, highest return on investment, lowest risk, and alignment to and compliance with the EA.

- **Control:** This phase supports accountability. It involves monitoring and managing IT projects for cost, schedule, and performance parameters. Projects that deviate from their targets risk being reorganized, downsized, or entirely phased out.

- **Evaluate:** This phase supports both value creation and accountability. It is the evaluation of whether IT projects meet their intended performance goals. This phase provides lessons learned for future IT project selections and for controlling their steady progress. In addition, it holds the project sponsor and team accountable for their IT project.

Benefits of C4&IT Governance

As identified by the IT Governance Institute's Control Objectives for Information and Related Technology (COBIT) framework, benefits of an effective governance framework include:

- **Strategic alignment**: Ensures the linkage of business and C4&IT plans, definition, maintenance and validation of the C4&IT value proposition, and alignment of C4&IT operations with enterprise operations.

- **Value delivery:** Underscores the value proposition throughout the delivery cycle, ensuring that C4&IT delivers the promised benefits against the strategy, by concentrating on optimizing costs and proving the intrinsic value of C4&IT.

CGEA

- **Resource management**: Ensures optimal investment in and the proper management of critical IT resources including: processes, people, applications, infrastructure, and information. Resource management key issues relate to the optimization of knowledge and infrastructure.

- **Risk management**: Promotes risk awareness to senior executives and provides a clear understanding of the enterprise's tolerance of risk, transparency about the significant risks to the enterprise, and embedding of risk management responsibilities into the organization.

- **Performance measurement**: Tracks and monitors strategy implementation, project completion, resource usage, process performance and service delivery, using, for example, balanced scorecards that translate strategy into action to achievable goals that are measurable beyond conventional accounting.

C4&IT Governance Scope

The CGEA Terms and Taxonomy Profile, Figure 19 (next page) shows the scope of C4&IT at the USCG. The governance process described in the following sections applies to all C4&IT at the USCG.
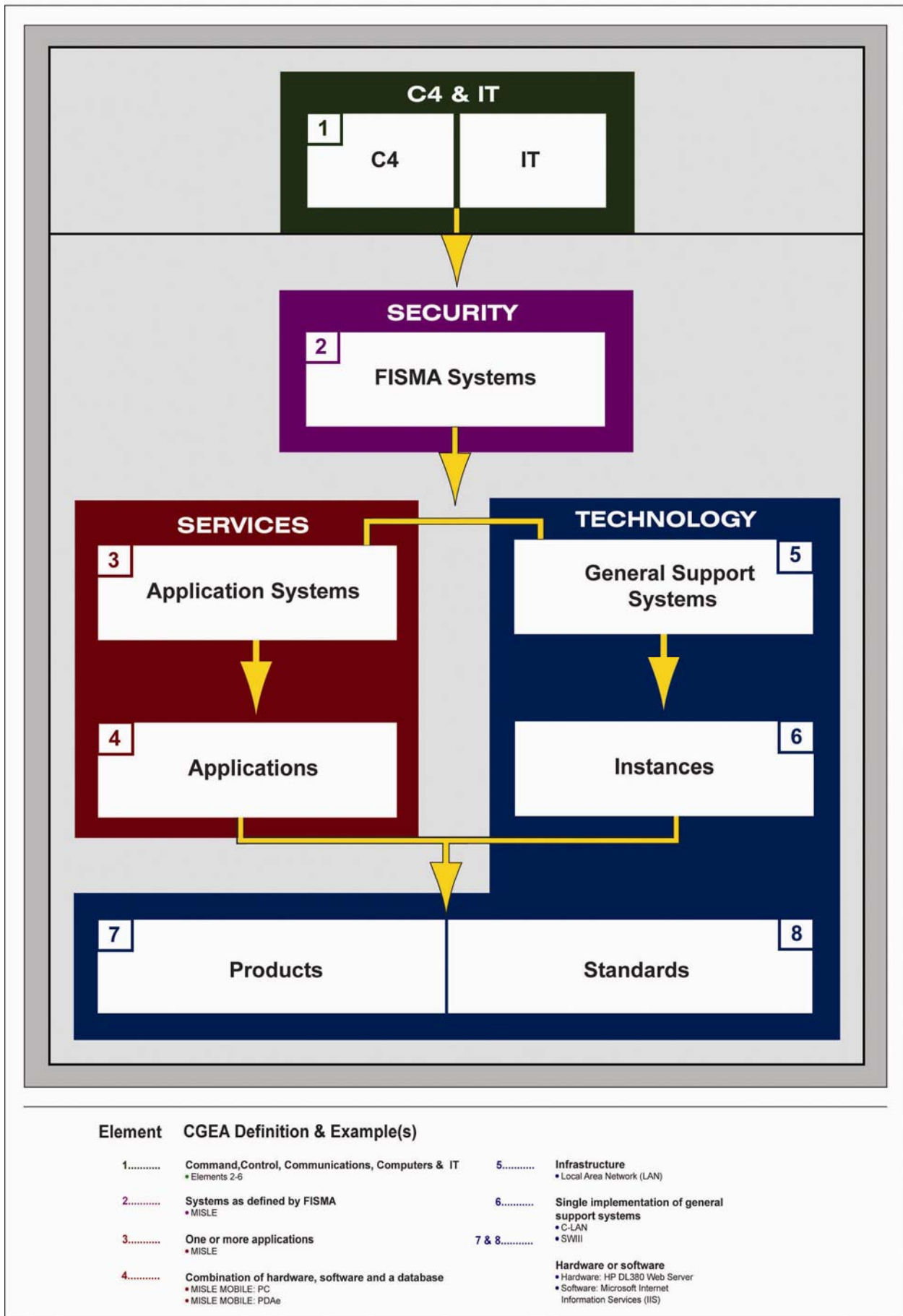
C4 & IT

1	
C4	IT

SECURITY

2
FISMA Systems

SERVICES

3
Application Systems

4
Applications

TECHNOLOGY

5
General Support Systems

6
Instances

7	8
Products	Standards

Element   **CGEA Definition & Example(s)**

Element	CGEA Definition & Example(s)
1..........	Command,Control, Communications, Computers & IT • Elements 2-6
2..........	Systems as defined by FISMA • MISLE
3..........	One or more applications • MISLE
4..........	Combination of hardware, software and a database • MISLE MOBILE: PC • MISLE MOBILE: PDAe
5..........	Infrastructure • Local Area Network (LAN)
6..........	Single implementation of general support systems • C-LAN • SWIII
7 & 8..........	Hardware or software • Hardware: HP DL380 Web Server • Software: Microsoft Internet Information Services (IIS)

Figure 19: CGEA Terms and Taxonomy Diagram

CGEA

Sourced Definitions

C4 & IT	Any equipment or interconnected system or subsystem of equipment, or techniques used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of digital, voice, or video data or information to the appropriate levels of command. This includes command and control networks, common operational picture systems, information assurance services, communication products and standards, computers, ancillary equipment, software, firmware, procedures, services (including support services) and related resources. (DHS SLC and Air force Joint C4 Plan and Defense Security Cooperation Agency Policy)
FISMA SYSTEMS	An application or general support system that meets requirements of the Federal Information System Management Act (FISMA) of 2002, including completion of certification and accreditation (C&A), risk assessments, instances policies and procedures, security plans, security awareness training, annual security testing, remediation procedures, incident response procedures, and contingency plans ("FISMA", 44 U.S.C. § 3541; NIST FIPS-199)
APPLICATION SYSTEMS	A discrete set of information resources [i.e. Applications] organized for the collection, processing, maintenance, use, sharing, dissemination, or disposition of information. (NIST 800-37 (page 53); NIST FIPS 199 (App-A); OMB Circular A-130 (6.q.); USC 44 Sec 3502 (8))
APPLICATIONS	The use of information resources (information and information technology) [i.e. Hardware, software and database] to satisfy a specific set of user requirements. (NIST 800-37 (page 50); OMB Circular A-130, App-III (A.2.b.))
GENERAL SUPPORT SYSTEMS	An interconnected set of information resources under the same direct management control that shares common functionality. It normally includes hardware, software, information, data, applications, communications, and people [i.e. Infrastructure].(NIST 800-37 (page 52); OMB Circular A-130, A-III (A.2.c))
INSTANCES	A single instantiation of an interconnected set of information resource under the same direct management control that shares common functionality.
PRODUCTS	Includes hardware, the physical parts of a computer system, and software, the programs or other "instructions" that a computer needs to perform specific tasks. ("Readiness for the Networked World: Glossary." Harvard University)
STANDARDS	Guidelines that reflect agreement on products, practices, or operations by nationally or internationally recognized industrial, professional, trade associations, or government bodies. (ATIS Telecom Glossary 2000:T1.523-2001 Developed by Alliance for Telecommunications Industry Solutions (ATIS) Approved by American National Standards Institute, Inc.)

Figure 20: Sourced Definitions

CGEA

USCG C4&IT Governance

The USCG C4&IT Investment Review Board (IRB), EAB, and PSB utilize an IT Portfolio management approach to prioritizing investments to ensure best strategic value to the USCG.

Process Overview

The governance process begins with the C4&IT sponsor submitting a Decision Request (DR) (left side of the process flow) and ends with an update to the CGEA (right side of the process flow).

Systems Development Life Cycle (SDLC) Alignment:

- Projects: An EAB review is done during the Conceptual Planning phase, prior to moving into the Planning and Requirements Phase.

- Products/Standards: A PSB review is done once a proposed technical design is developed in conjunction with CG-6.

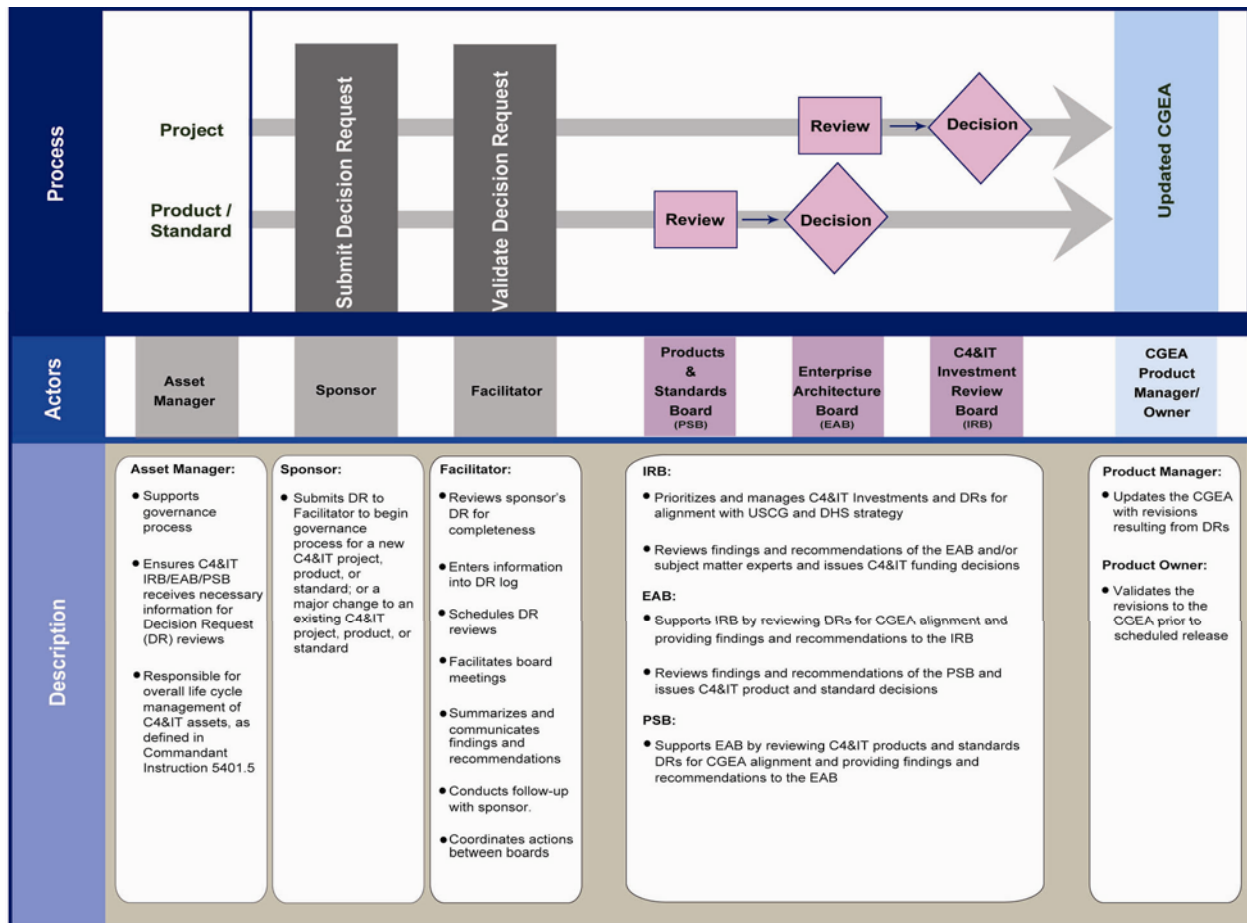The specific steps of the C4&IT governance process are as follows:

Figure 21: C4&IT Governance Services

1. The C4&IT sponsor begins the process by submitting a Decision Request (DR) to the EA Facilitator when he or she needs a new project, product, or standard; or a major change to an existing C4&IT project, product, or standard.

2. The Asset Manager, with the assistance of the EA Facilitator, supports and facilitates the entire process and ensures that the C4&IT Investment Review Board (IRB) has the information needed to make a decision. As defined in Commandant Instruction 5401.5, Establishment of the CG-6 Directorate and Associated Duties, CG-6 Asset Managers are responsible for the overall life cycle management of specific C4&IT assets.

3. The EA Facilitator reviews the stakeholder's DR, enters it into the DR log and then forwards it to the appropriate review group.

4. Each DR is reviewed by the appropriate group as follows:

   a. The IRB reviews DRs that affect C4&IT investments. In addition, the IRB reviews the findings and recommendations of the EAB and/or subject matter experts and issues a decision.

   b. The EAB supports the IRB by reviewing DRs for Enterprise Architecture alignment. In addition, the EAB reviews the findings and recommendations of the Products and Standards Board (PSB) and issues a decision.

   c. The PSB supports the EAB by reviewing DRs for C4&IT products and standards. After reviewing each DR for potential impact on USCG mission execution and the CGEA, the PSB provides their findings and recommendations to the EAB.

5. The Product Manager is responsible for updating the CGEA with revisions resulting from DRs.

6. The Product Owner is responsible for validating the revisions resulting from DRs prior to scheduled releases of the CGEA.

C4&IT Investment Review Board (IRB)

The C4&IT IRB is the executive board responsible for executing all phases of CPIC for the USCG CIO.

Scope

The IRB shall govern the planning and management, and execute all phases of capital planning (selection, control, and evaluation) of the USCG's C4&IT investment portfolio.

Deliverables

The IRB shall provide the following deliverables to the CIO:

- Prioritized list of all C4&IT investment, divestment and reinvestment alternatives within target/base.

- C4&IT investment opportunities above target/base for EXSTAGE consideration.

- Input to the Enterprise Architecture and C4&IT Strategic Plan.

Authority/Responsibility

The IRB shall perform the following for C4&IT investments:

- Evaluate the need for new or changes to existing investments.

- Prioritize, authorize, and manage all new and existing investments. The IRB will set dollar thresholds for consideration for the various categories of C4&IT.

CGEA

- Charter the EAB to support the development of the Enterprise Architecture and the C4&IT Strategic Plan, and to conduct architecture reviews of all requested business cases and decision requests. The EAB will provide their findings and recommendations to the IRB who will issue their decision. The EAB will consist of members from CG-6, C4&IT Centers of Excellence (COE) and Line of Business (LOB) program managers. The LOB program representatives will be responsible for ensuring the accuracy, currency, and completeness of the business and information requirements and architecture. The CG-6 and COE members will be responsible for developing the technical architecture for the enterprise to meet strategic outcomes of the USCG.

- Ensure investments align with USCG strategic goals and objectives, strategic and tactical plans, DHS CIO goals and objectives, and comply with applicable legislation and policy.

- Ensure investments align with the USCG/DHS enterprise architecture, IT security, and any other applicable C4&IT discipline.

- Ensure investments balance the needs of the entire USCG, maximize return on investment, and meet cost, schedule, and performance objectives.

- Make recommendations to the CIO on the management and control of all investments, including course corrections by redirecting, reprioritizing or canceling funding and/or projects and programs.

- Review and suggest modifications to the CGEA and DHS EA, and C4&IT strategic plan, tactical plan, budget, spend plan, and OMB Exhibit 300 and Exhibit 53 documents as required to meet the IRB's responsibilities.

Organization
The following are the voting members of the IRB:

Role	Office
Chair	CG-6D
Member ACO	CG-ACO-R-2
Member CG-1	CG-10
Member CG-2	CG-21
Member CG-4	CG-48
Member CG-5	CG-51
Member CG-7	CG-761
Member CG-8	CG-83
Member CG-9	CG-928

These members will be designated by the Directorates and will have decision authority for them.

In addition, the IRB may call upon senior managers and subject matter experts to serve as advisory members. The chair will assign someone from CG-6 to act as secretariat to the IRB.

Process
The IRB will develop a governance document that will more fully develop the processes and procedures for the requirements identified in this section.

All USCG investments in C4&IT products and services will be reviewed and approved by the IRB before a commitment of resources, financial, and/or human capital shall occur.

CGEA

1. All Directorates shall prepare and submit decision requests to the IRB for:

    a. New investments for C4&IT requirements or programs

    b. Changes in scope, cost, schedule, or performance parameters of C4&IT projects and programs.

3. All C4&IT projects and programs will be reviewed by the IRB to include cost, schedule, and performance.

4. All Directorates shall prepare and submit reports and briefings on changing operational requirements and CONOPS when requested by the IRB.

5. During the approval process, the IRB shall ensure that all financial and mixed systems are compliant with Federal financial accounting and reporting requirements, meet internal control standards under OMB Circular A-123, and comply with information resources management policies under OMB Circular A-130.

6. Directorates may appeal IRB decisions to the CIO.

7. The final slate of budget build investments, Request Proposals (RPs), will be submitted through the Resource Group for inclusion with other USCG investments. The consolidated investments will then be submitted to the Investment Board (IB) for approval.

8. The final slate of current year investments will be submitted to the IB in concert with the Execution Stage (EXSTAGE) Process.

Enterprise Architecture Board (EAB)

The EAB is to be the recommendation-making body and technical arm to the IRB for the apportionment and spending of C4&IT funds across all USCG C4&IT investments. The EAB will ensure technical compliance for all C4&IT investments, as required by the Clinger-Cohen Act of 1996, and DHS Management Directive 1440 (series). EAB members will be familiar with technical planning documents and requirements for the USCG, DHS, and DoD.

Scope

The EAB shall support the development of the CGEA and C4&IT Strategic Plan, and conduct architecture reviews of all requested C4&IT business cases and decision requests. The EAB will provide its findings and recommendations to the IRB, which will issue its decision of whether or not to implement the recommendation. The EAB consists of LOB program representatives and CG-6 and Centers of Excellence (COE) technical representatives. The LOB program representatives will be responsible for ensuring the accuracy, currency, and completeness of the business and information requirements and architecture. The CG-6 members will be responsible for developing the technical architecture for the enterprise to meet strategic outcomes of the USCG.

Deliverables

The EAB shall provide the following deliverables to the IRB:

*   Technical reviews, including any findings and recommendations for requested C4&IT business cases and decision requests

*   An archive of all technical reviews conducted by the EAB

CGEA

- Regular updates to CGEA and C4&IT strategic plans through a scheduled release, and controlled by a CGEA CM plan

Authority/ Responsibility

The EAB shall:

- Conduct a technical review of all requested C4&IT decision requests for alignment to and compliance with the following:

    o CGEA

    o C4&IT strategic and tactical plans

    o Information security

    o SDLC

    o IT management best practices

    o Applicable legislation and policy

- Evaluate the need for new investments or changes to existing investments

- Make recommendations to the IRB on the management and control of all C4&IT investments, including course corrections by redirecting, reprioritizing, or canceling funding and/or projects and programs

Organization

The following are the members of the EAB:

Role	Office
Chair	CG-66, Chief Enterprise Architect
Member	CG-0931
Member	CG-1
Member	CG-2
Member	CG-4
Member	CG-5
Member	CG-7
Member	CG-8
Member	CG-9
Member	CG-61, Office Chief
Member	CG-62, Office Chief
Member	CG-63, Office Chief
Member	CG-64, Office Chief
Member	CG-65, Office Chief
Member	CG-68, Office Chief
Member	CG-69, Office Chief
Member	C4&IT Service Center Representative
Advisory Member	CG-6, COE-C2CEN, Commanding Officer
Advisory Member	CG-6, COE-OSC, Commanding Officer
Advisory Member	CG-6, COE-TISCOM, Commanding Officer
Advisory Member	ACO
Advisory Member	NPFC Representative

All headquarters Directorates will designate representatives at the O-6 and GS-15 level with decision authority as members. In addition, the EAB may call upon senior managers and subject matter experts from CG-6 to serve as advisory members.

Process

As directed by the IRB, the EAB will conduct technical reviews of USCG C4&IT and decision requests:

1. All sponsors shall complete the EAB review form for C4&IT decision requests and, as requested, conduct a briefing and/or demonstration to the EAB.

2. The EAB will issue its findings and recommendations to the IRB, who communicates the findings and recommendations to the Sponsor.

3. All sponsors shall respond to the findings and recommendations of the EAB.

CGEA

Products and Standards Board (PSB)

The PSB is to be the recommendation-making body and technical arm to the EAB for conducting technical reviews of product and standard decision requests. It will recommend changes to the TRM, Standards Profile, other CGEA informational products (as appropriate), and C4&IT strategic plans. The PSB will ensure technical compliance for all C4&IT products and standards with the CGEA, as required by the Clinger-Cohen Act of 1996 and DHS Management Directive 1440 (series). The PSB membership will be familiar with technical planning documents and requirements for the USCG, DHS, and DoD.

Scope

The PSB shall support the EAB in conducting technical reviews of all requested C4&IT business cases and decision requests.

Deliverables

The PSB shall provide the following deliverables to the EAB:

- A technical review, including any finding and recommendations for requested C4&IT product and standard decision requests

- An archive of all technical reviews conducted by the PSB

- Regular updates to the CGEA and C4&IT strategic plans through a scheduled release, and controlled by a CGEA CM plan

Authority/Responsibility

The PSB shall:

- Conduct a technical review of all requested C4&IT product and standard decision requests for alignment to and compliance with the following:

  o CGEA

  o C4&IT strategic and tactical plans

  o SDLC

  o IT management best practices

  o Applicable legislation and policy

- Evaluate the need for new products and standards or changes to existing products and standards

- Make recommendations to the EAB on the management and control of all C4&IT products and standards; the EAB will issue the decision or a recommendation to the IRB on whether or not to implement the recommendation.

Organization

The CG-6 office chiefs and COEs represented in the PSB in order to include all interests and technical experience.

The following are the members of the PSB:

Role	Office
Chair	Chief Technology Officer, Representative
Member	CG-61
Member	CG-62
Member	CG-63
Member	CG-64
Member	CG-65
Member	CG-66
Member	CG-69
Member	C4&IT Service Center Representative
Advisory Member	CG-6, COE-C2CEN, Commanding Officer
Advisory Member	CG-6, COE-OSC, Commanding Officer
Advisory Member	CG-6, COE-TISCOM, Commanding Officer

These offices and COEs will designate representatives as members at the O-5 and GS-14 level who are technical subject matter experts, and members will have decision authority for them. In addition, the PSB may call upon senior managers and other subject matter experts from CG-6 to serve as advisory members.

Process

1. The PSB will conduct technical reviews of USCG C4&IT product and standard decision requests.

2. All sponsors shall complete a PSB review form for C4&IT product and standard decision requests, and, as requested, conduct a briefing and/or demonstration to the PSB.

3. The PSB will issue its findings and recommendations to the EAB who communicates the findings and recommendations to the Sponsors.

4. All sponsors shall respond to the findings and recommendations of the PSB and decisions of the EAB.

5. Directorates may appeal EAB decisions to the IRB by contacting the IRB facilitator.

CGEA

Information Products

Performance Perspective

The Performance Perspective focuses on the measures used to evaluate the effectiveness of the organization in performing its business functions. It also shows the actual results of measuring the performance of the organization.

Performance measurement promotes better management of the organization at a strategic level by providing a means to measure the success of C4&IT investments and their impact on strategic outcomes. Supporting performance frameworks offer a structure to accomplish these goals by establishing a common language by which the USCG can describe the outputs and measures used to achieve program and business objectives (The Open Group, 2007).

Products

Type	Name	Description
Profile	**Performance Profile Core Missions**	This profile shows the USCG's core mission areas, the performance measures, and whether each one met their performance target in Fiscal Year 2007 (FY 2007).
	Performance Profile C4&IT *	This profile will show C4&IT performance metrics as they relate to the DHS performance areas and FEA BRM.
	Balanced Scorecard C4&IT *	Developed by the Harvard Business School, the balanced scorecard will provide an overview of USCG C4&IT performance in four perspectives: business process, learning and growth, customers, and finances.
Model	**Unified Performance Logic Model ***	This model provides a framework for planning, managing, measuring, and evaluating CGEA programs. It illustrates the cause-effect linkages between program activities and outcome results.
Inventory	**Performance Inventory**	The Performance Inventory shows USCG performance (measurement) indicators and their alignment to DHS performance areas and FEA PRM measurement areas, groupings, and categories.
	U.S. Coast Guard Posture Statement	This document identifies and describes USCG roles, missions and strategies for success in the maritime domain; outlines the budget in brief for FY 2009; and summarizes the performance of the 11 USCG mission areas for FY 2007. The Posture Statement complements the DHS Budget in Brief and coincides with the annual submission of the President's Budget

* Planned for future development

CGEA

Performance Profile Core Missions

Contents

This profile contains a summary of core USCG mission area performance trends. To create this profile, the CGEA program synthesized information from the U.S. Coast Guard Posture Statement (with 2009 Budget in Brief), published in February 2008.

The three strategic areas outlined by the Commandant and reported in the U.S. Coast Guard Posture Statement are as follows:

- **Safety**: Saving lives and protecting property. (i.e. search and rescue & marine safety).

- **Security**: Establishing and maintaining a secure maritime system while facilitating its use for the national good.

- **Stewardship**: Managing the sustainable & effective use of its inland, coastal & ocean water resources for the future.

The USCG can use this profile to focus on those mission programs that are not performing as expected, to determine why performance is not meeting expectations, and to decide what corrective actions are necessary.

Design

The Performance Profile consists of three main sections: maritime safety, maritime security, and maritime stewardship. Within each mission area the measurement description is displayed and the performance trend is indicated by a two-colored traffic light as follows:

- **Green**: Met performance goal

- **Red**: Did not meet performance goal

The three sections further decompose into the 11 USCG missions from search and rescue and law enforcement through defense readiness, and ice operations. For each of the 11 mission areas, the profile shows alignment to the DHS performance goals of prevent, protect, respond, and recover. For example, search and rescue is a response mission.

USCG Performance Profile Core Missions

Business Perspective

Aligned to the FEA BRM, the Business Perspective describes the functions and activities that the USCG performs, and provides a functional (rather than organizational) view of the USCG's LOBs. In other words, the Business Perspective documents information about business functions independent of the offices, units, and divisions performing them.

CGEA has maximum value when it is closely aligned with the USCG's strategic plan and other organizational-level directions, concepts, and planning. As a result, the USCG develops the CGEA in concert with strategic planners and operational staff. As the strategic plan changes, the future environment and the target architecture also change (OMB, 2007).

Products

Type	Name	Description
Profile	**Business Profile**	This is a profile of the highest level USCG functions from which all other business activities are derived.
	Value Chain Alignment	This profile shows value alignment of the USCG to DHS and the FEA.
	USCG CONOPS	This diagram represents the USCG concept of operations, which applies to multi-mission operations worldwide.
	USCG Snapshot	This profile is a summary of interesting facts about the world's finest coast guard.
	Major Programs Profile	This profile provides an executive-level view of information about the major USCG programs that consume the majority of the USCG's C4&IT-related acquisition budget.
	Sector Commands Profile	This profile provides a geographic depiction of USCG command breakdown including areas, districts, and sectors.
	USCG Cutters & Aircraft Profile	The USCG Cutters and Aircraft Profile shows a high-level view of the types of cutters, buoy tenders, construction tenders, icebreaking tugs, small harbor tugs, coastal patrol crafts, icebreakers, fixed wing aircraft, helicopters unmanned aerial vehicles, and boats used by the USCG.
Models	**Business Models ***	These models display CGEA business activities and can be used to identify dependencies, redundancies, and gaps between the USCG's activities.
	Organization Charts	This is the USCG Headquarters Organizational Chart as of November 2007.

* Planned for future development

CGEA

Type	Name	Description
Inventories	**Business Inventory**	The Business Inventory shows USCG high level activities and their definitions. Also, it displays their relationship to the FEA BRM.
	USCG Strategy for Maritime Safety, Security, and Stewardship (SSS)	This document provides the Commandant's strategic intent, which guides all USCG actions.
	Functional Statements *	This document describes the roles and missions of USCG HQ Offices.
	Activity Dictionary	This dictionary identifies and standardizes the vocabulary used to describe all USCG activities for tracking and analysis purposes.
	USCG Universal Task Library (CGUTL)	This is an interoperability tool designed as a master menu of tasks, conditions, and standards. It provides common language and structure for USCG commanders to use in developing Coast Guard Mission Essential Task Lists (CGMETLs).
	USCG Operational Nodes Standard Distribution List (SDL)	This document is a list of all of the operational facilities of the USCG organized by their physical locations.

* *Planned for future development*

CGEA

Business Profile

<u>Contents</u>

The Business Profile contains USCG high-level, mission-business functions grouped into three major categories:

- **Core Mission Functions**: These functions include the 3 USCG roles and the 11 mandated mission programs.

- **Mission Support Functions**: These functions directly support the execution of the missions and are typically performed at field units. These include asset and supply chain management, and training.

- **Business Support Functions**: These functions indirectly support the execution of the missions and are typically performed at Headquarters. These include back-office functions such as finance, human resources, and congressional and public affairs.

To create this profile the CGEA program synthesized information from current USCG publications including: USCG Strategy for Maritime Safety, Security, and Stewardship; U.S. Coast Guard Posture Statement (with 2009 Budget in Brief); USCG Publication 1; and activity dictionaries from multiple LOBs.

This information can be used at the Department level to understand how DHS is bringing together the 16 components through enterprise solutions. For example, the business support areas are common areas across all components; so Emerge2 and MAXHR e-performance are enterprise solutions DHS designed for the business support area.

Additionally, this may be used as a quick, simple way to understand our mission functions within the USCG.

<u>Design</u>

The Business Profile is designed in three tiers showing core mission functions at the top (red), mission support functions that directly support core mission delivery in the middle (yellow), and business support functions at the base (blue).

The profile further decomposes the core mission functions into the three strategic roles—maritime safety, maritime security, and maritime stewardship with their accompanying missions are listed beneath each.

Behind the stacked functional areas is a dotted line, in the shape of a pyramid, to demonstrate the hierarchical nature of the core mission, mission support, and business support functions. The pinnacle of what the USCG does is the core mission functions.

CGEA

CORE MISSION FUNCTIONS
- Primary alignment -

Maritime Safety

Search and Rescue
Marine Safety

Maritime Security

Ports, Waterways, & Coastal Security
Illegal Drug Interdiction
Undocumented Migrant Interdiction
Defense Readiness
Other Law Enforcement

Maritime Stewardship

Marine Environmental Protection
Living Marine Resources
Aids to Navigation
Ice Operations

MISSION SUPPORT FUNCTIONS

Asset Management
Capabilities Planning
Command, Control, Communications
External Partnerships
Maritime Domain Awareness
Regulatory Activities
Research and Development
Supply Chain Management
Training

BUSINESS SUPPORT FUNCTIONS

Acquisition
Congressional and Public Affairs
Finances
Human Resources

Information Technology
Legal Services
Performance Measurements and Evaluation
Policy and Strategic Plans

CGEA

Value Chain Alignment

<u>*Contents*</u>

The USCG Value Chain aligns USCG business sub-functions to the DHS Value Chain. It also shows the alignment of those sub-functions to the FEA BRM. The alignment was made through analysis of the USCG Business Profile and Business Inventory. The four FEA business areas are as follows:

- **Service to Citizens**: The mission and purpose of the United States government in terms of the services it provides both to and on behalf of the American citizen.

- **Mode of Delivery**: The mechanisms the government uses to achieve the purpose of government, or its "Services to Citizens".

- **Support Delivery of Services**: The critical policy, programmatic, and managerial foundation to support Federal government operations.

- **Management of Government Resources**: The back office support activities that enable the government to operate effectively.

This information can be used to understand the value of the USCG's business and the enterprise vision.

<u>*Design*</u>

The Value Chain is designed to show functional alignment between OMB, DHS, and the USCG. FEA business areas (from the FEA BRM) are represented in dark blue boxes, DHS/USCG values (functions) are represented in light blue boxes, and USCG activities (business sub-functions) are shown in the white text boxes.

From left to right the overall FEA business areas are deconstructed into the more detailed DHS values, and then exemplified by the USCG Functions.

Within the "Service to Citizens" business area, the DHS/USCG values are shown with the corresponding DHS strategic goal in parenthesis. For example, "Prevent Incidents" aligns to the "Prevention" performance area. Underneath this title, the six USCG sub-functions which relate to prevention are listed in the white box.

The "Mode of Delivery" business area maps to the DHS/USCG value of "Manage Knowledge & Intelligence Information," which maps to "Awareness," a DHS strategic goal. In the white text box to the right, all USCG functions, which are contained within this value, are listed.

The final two business areas are broken down into eight DHS/USCG values, which can all be contained in the DHS strategic goal of "Organizational Excellence." The USCG sub-functions are listed to the right of the subsections to display how the three levels of government (Federal, DHS, and USCG) relate.

Mode of Delivery, Support Delivery of Services, and Management of Government Resources are displayed horizontally to demonstrate support of the USCG missions.

The DHS vision stretches along all categories, as shown in the red arrow on the right.

CGEA

USCG Value Chain Alignment

		Identify Threats to and Vulnerabilities of the Homeland (Awareness)	Prevent Incidents (Prevention)	Disseminate Information (Awareness)	Respond to Incident (Response)	Recover from Incident (Recovery)	
Service to Citizens		• Maintain Maritime Domain Awareness (MDA) • Intelligence Operations **Facilitate the Flow of People and Goods (Services)** • Aids To Navigation (ATON) • Ice Operations • Undocumented Migrant Interdiction	• Marine Safety • Other Law Enforcement • Illegal Drug Interdiction • Defense Readiness • Undocumented Migrant Interdiction • Ports, Waterways, & Coastal Security	• Maintain Maritime Domain Awareness • Intelligence Operations **Prepare for Incident (Protection)** • Marine Environmental Protection • Living Marine Resources • Ports, Waterways, & Coastal Security	• Search & Rescue • Marine Environmental Protection • Ports, Waterways, & Coastal Security	• Marine Environmental Protection • Regenerate - Maintain Equipment - Restore Supplies - Conduct Readiness Training	"Secure the Homeland, its People, Assets, and Interests"
Mode of Delivery		**Manage Knowledge & Intelligence Information (Awareness)**	Assess Information and Data | Conduct Inspections | Conduct Investigations | Manage Public Affairs | Monitor and Collect Data				
Support Delivery of Services	(Organizational Excellence)	**Develop Plans and Performance Measures**	Conduct Mission Analysis | Develop Plans and Direction | Integrate Budget and Programs | Integrate Planning and Performance | Manage Internal Controls | Manage Financial Performance | Manage Process Improvement | Manage Quality | Perform Strategic Planning				
		Develop Policy	Develop Policy & Regulatory Guidance | Develop Regulations & Standards | Manage Congressional Affairs				
		Manage Legal Activities	Administer Military Legal System | Provide Legal Counsel				
Management of Government Resources		**Manage Human Resources**	Administer Compensation | Administer Learning | Manage Employee Performance | Manage Employee Travel | Manage Health & Safety | Manage Recruitment | Manage Security Clearances | Workforce Planning				
		Manage Technology	Develop Systems | Maintain IT Infrastructure | Maintain IT Systems | Manage Information Security | Manage Lifecycle & Change | Manage Record Retention				
		Manage Procurements & Acquisitions	Acquire Goods | Acquire Services | Control Inventory				
		Manage Facilities and Property	Develop New Goods | Dispose of Assets | Maintain Facilities | Maintain Fleet | Material Engineering				
		Manage Budget and Finances	Account for Funds | Administer Budget | Make Payments | Manage Assets & Liabilities | Report Information				

■ - Federal Enterprise Architecture   ☐ - DHS Value Chain Elements   ☐ - Coast Guard Functions

CGEA

USCG Concept of Operations (CONOPS)

The CONOPS diagram represents the "Concept of Operations" for the USCG. It illustrates the concept of a common operation picture of information, which can disseminate near real-time graphical information from and to anywhere at any time.

This graphic was designed by the John Hopkins University Applied Physics Laboratory and adopted by the USCG for inclusion in the USCG Strategy for Maritime Safety, Security, and Stewardship dated 19 January 2007.

This information can be used to understand how the common operation picture provides clear information across various sources.

Design

Law Enforcement, Intelligence, Maritime Industry and Port Authority are shown on and around the green island depicted at the top of this graphic. The vessels surrounding the island, whether by land or by air, are shown together in the common operation picture located in the bottom left corner.

CGEA
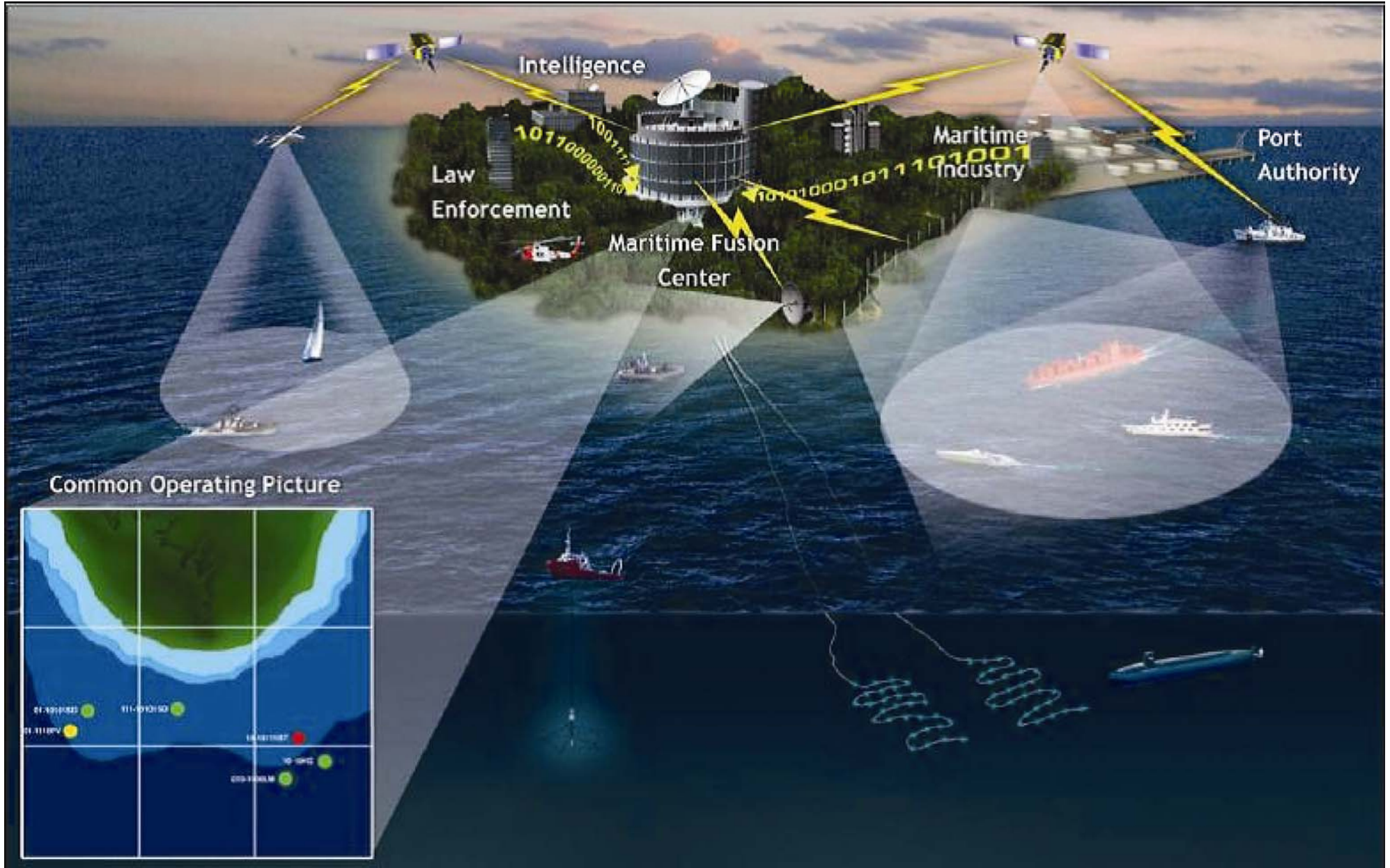
USCG Snapshot

<u>Contents</u>

The USCG Snapshot is a summary of facts and figures about the USCG and shows the depth and breadth of USCG operations. Facts include USCG leaders, values, missions, DHS alignment, demographics, facilities and fleet information, budget, and mission performance measurements. This USCG informational snapshot is maintained by CG-0925.

This information can be used to easily locate interesting facts and figures about the USCG that differentiate it from other military branches and federal agencies.

<u>Design</u>

The USCG Snapshot organizes information across two pages. On the first page, along the left side, the profile lists facts about USCG culture, leaders, history, and demographics. On the right side of the page, the profile shows daily statistics, 2007 facts and budget, and mission information.

On the second page, along the left side, the profile lists information about USCG key missions, modernization, systems and platforms, organization, and business processes. The right side of the second page lists USCG career opportunities and internet links.

CGEA

U.S. Coast Guard Snapshot
A summary of facts and figures about America's Coast Guard

The United States Coast Guard is a proud 217-year-old military, multimission, maritime service and a member of the U.S. Department of Homeland Security.

DHS Vision: Preserving our freedoms, protecting America…we secure our homeland.

DHS Mission: We will lead the unified national effort to secure America. We will prevent and deter terrorist attacks and protect against and respond to threats and hazards to the nation. We will ensure safe and secure borders, welcome lawful immigrants and visitors, and promote the free flow of commerce.

DHS Strategic Goals: Awareness, Prevention, Protection, Response, Recovery, Service, and Organizational Excellence.

Coast Guard Culture

Character: The Coast Guard is a military, multimission, maritime organization dedicated to protecting the lives, safety, security, and stewardship of the American people.
Core Roles: Maritime Safety, Security, and Stewardship
Core Values: Honor, Respect, Devotion to Duty
Coast Guard Motto: *Semper Paratus* (Always Ready)

Key Leaders

DHS Secretary: Hon. Michael Chertoff
CG Commandant: Adm. Thad W. Allen
CG Vice Commandant: Vice Adm. Vivien S. Crea
CG Chief of Staff: Vice Adm. Robert Papp
Master Chief Petty Officer of the CG: MCPOCG Charles W. Bowen

Coast Guard History

"A few armed vessels, judiciously stationed at the entrances of our ports, might at small expense be made useful sentinels of the laws." *Federalist Paper 12*
- 1790: "Revenue Marine" created within the Treasury Department
- 1863: "Revenue Cutter Service" established
- 1915: Revenue Cutter Service combines with the U.S. Lifesaving Service (1848) to create the Coast Guard
- 1939: U.S. Lighthouse Service (1789) added
- 1946: Steamboat Inspection Service (1838) added
- 1967: CG transferred to Department of Transportation
- 2003: CG transferred to Department of Homeland Security

Coast Guard Demographics, 2006

Workforce Totals					
Civilian	7,233	Asian	0.5	Average Time in Service (Yrs.)	
Officers	7,946	Black	6.2	Officers	15.1
Enlisted	32,059	Hispanic/Latino	9.6	Enlisted	7.8
Reserve		Multiple Race	5.8		
– Select Reserves	8,103	Native Hawaiian/		Commissioning Sources (%)	
– Indiv. Ready Res.	4,310	Pacific Islander	0.4	Academy	45.1
		White	79.0	CWO to LT	5.2
Active Duty Workforce		Married (%)		OCS Prior Enlisted	13.0
Gender (%)		Officers	67.5	Direct Commission	14.7
Men	88.1	Enlisted	54.5	OCS Reserve	19.6
Women	11.9	Average Age (Yrs.)		EAD	2.2
Race/Ethnicity		Officers	37.3		
American Indian/		Enlisted	29.1		
Alaskan Native	2.6				

Every day, the Coast Guard …
- Saves 14 lives
- Boards 193 ships and boats
- Assists 123 people in distress
- Interdicts 22 illegal migrants at sea
- Responds to 12 oil/hazardous chemical spills
- Inspects 25 waterfront facilities
- Conducts 78 search and rescue cases
- Seizes $8.4 million worth of illegal drugs
- Administers 21 commercial vessel safety examinations

Coast Guard Basics, 2007

Active Duty Strength:	40,005
Coast Guard Auxiliary:	34,885
Cutters: 12 HECs, 29 MECs, 3 Polar Ice Breakers	251
Shore Units: 2 Areas, 9 Districts, 35 Sectors, 23 Air Stations, 2 MLCs	Approx. 740
Aircraft: 95 HH-65s, 41 HH-60s, 8 MH-68A, 32 C-130s, 20 HU-25s, 2 Command and Control	198
Boats:	1,709

Coast Guard Budget, 2007 ($ Thousands)

FY07 Budget	$8,626,864
Operating Expenses (includes pay)	$5,568,162
Acquisition, Construction & Improvement	$1,306,145
Reserve Training	$122,448
Research Development, Testing & Evaluation	$17,000
Mandated Spending	$1,307,525

Mission Breakout
(by % of FY07, enacted, operating expenses)

Port Security	21.3
Drug Interdiction	15.6
Aids to Navigation	13.2
Search and Rescue	10.6
Living Marine Resources	9.9
Marine Safety	8.1
Defense Readiness	7.7
Migrant Interdiction	6.0
Marine Environmental Protection	4.0
Other Law Enforcement	1.9
Ice Operations	1.7

Contact Information
Laura Williams (202) 372-4603
E-Mail: Laura.A.Williams@uscg.mil
http://www.uscg.mil

United States Coast Guard
U.S. Department of Homeland Security

Key Messages

FY08 Budget
President Bush requested $8.7B for the Coast Guard to:
- **Improve Operational Capability:** Improving Coast Guard capabilities is vital to controlling our maritime borders and preserving our multimission responsiveness. The budget addresses this need through development of the "Strategic Trident" Force Structure, controlling and extending our maritime borders, and creating adaptive force packaging.
- **Build Awareness:** Greater awareness of people, vessels, and cargo in the maritime domain will help identify threats before they reach our vital ports, waterways and coastline, and aid in risk-based decision-making. The budget addresses this need through Global Maritime Intelligence Integration and Leveraging Partnerships.
- **Create Maritime Regimes:** Port security, and the broader concept of maritime security, cannot be reduced to a single threat vector, a single theory. Maritime security impacts, and is impacted by, economic structures, intermodal transportation systems, and the environment.

Modernization
The Coast Guard is modernizing its fleet of ships, aircraft, and command and control systems as it reorganizes its operational forces and realigns its business systems to better execute and support its many missions. This modernization will ultimately transform the service to keep pace with the rapid growth and significant expansion of the diverse responsibilities it faces in today's complex, dynamic operating environment. This modernization will better align the Coast Guard with the Department of Defense, Department of Homeland Security, and its interagency partners. It will also improve the skills, capabilities, and well-being of the Coast Guard workforce to meet the challenges of the 21st century.

Systems and Platforms
The Coast Guard is responsible for a variety of missions spread over 95,000 miles of coastline in the continental United States, Alaska, Hawaii, Guam, and Puerto Rico, plus America's navigable rivers and lakes. These waterways are used for recreation, commerce, and tourism by more than 78 million boaters.

Yet virtually the entire Coast Guard fleet (most of it fielded in the 1960s) is in danger of becoming obsolete and unusable. The Integrated Deepwater System program is acquiring new and modernized Coast Guard ships and planes while adding new sensors and communications equipment that will enable assets to "network" with each other, military assets, and civilian law enforcement agencies and emergency responders.

The Coast Guard is also modernizing its search and rescue communications and command and control system. The Coast Guard has implemented the Rescue 21 recapitalization program, which will greatly improve the Coast Guard's ability to locate and rescue mariners in distress, ultimately saving more lives and property at sea more effectively. In addition, Rescue 21 will increase maritime homeland security mission effectiveness by providing closer interoperability with federal, state, and local agencies and first responders.

Organization and Business Processes
The Coast Guard needs to be organized for optimal mission execution, and it is now working to develop the best possible framework. The single most visible adjustment will be to its command structure.

The Coast Guard's new organizational structure will improve the way the Coast Guard trains, equips, deploys, and supports its shore-based, maritime patrol, and deployable forces across all of its missions. The new framework will provide better headquarters and field alignment by merging existing Pacific Area and Atlantic Area command and control functions into one Coast Guard Operations Command (OPCOM). In addition, it will remove layers from the current multi-tiered support system by establishing one Force Readiness Command (FORCECOM), which will improve the quality and efficiency of support provided for all Coast Guard operations.

Aligning the command and control system and support structure will enhance the Service's unity of effort within the Department of Homeland Security and all levels of government. In short, this modernization will enhance Coast Guard readiness for all hazards and threats while preparing the Coast Guard for continued success in the 21st century.

Career Opportunities

Officer (recruiting approx 352 in FY07 for the following specialties):
- Aviation
- Command, Control, Communications, Computer and Information Technology
- Engineering
- Finance
- Human Resources
- Intelligence
- Legal/Law
- Management
- Medical
- Operations Afloat
- Operations Ashore – Prevention (Port Security)
- Operations Ashore – Response (Search and Rescue)
- Reserve Programs

Enlisted (recruiting 4,150 active and 1,075 Reserve in FY07 in the following categories):

Deck and Ordinance Group
- Boatswain's Mate
- Gunner's Mate
- Operations Specialist

Hull and Engineering Group
- Damage Controlman
- Electrician's Mate
- Electronics Technician
- Information System Technician
- Machinery Technician

Aviation Group
- Aviation Maintenance Technician
- Aviation Survival Technician
- Avionics Electrical Technician

Administrative and Scientific Group
- Food Services Specialist
- Health Services Technician
- Marine Science Technician
- Public Affairs Specialist
- Storekeeper, Yeoman, Musician

Reserve Only
- Investigator
- Port Security

Coast Guard Information on the Web

DHS:	www.dhs.gov
CG Website:	www.uscg.mil
CG Recruiting:	www.gocoastguard.com
CG Academy:	www.CGA.edu
Civilian Careers:	www.uscg.mil/hq/cgpc/cpm/jobs/vacancy.htm
Deepwater:	www.uscg.mil/deepwater
Boating Safety:	www.uscgboating.org
CG Volunteers:	www.cgaux.org
News:	www.uscg.mil/news
Rescue 21:	www.uscg.mil/rescue21
In Your Community:	www.uscg.mil/community

U.S. Coast Guard Snapshot

CGEA

USCG Major Programs Profile

Contents

The USCG Major Programs Profile contains executive level information about programs that utilize a significant portion of the USCG's acquisition budget. These programs are as follows:

- **Deepwater**: Focuses on the recapitalization of our fleet, including vessel and air assets and their C4&IT.

- **Rescue 21**: Involves next generation emergency (or 9-1-1) maritime communications, including triangulation capability for locating distress calls.

- **Nationwide Automatic Identification System (NAIS)**: Consists of onboard transponders for identifying origination, destination, people, and cargo to help determine vessels of interest.

- **Command 21**: Involves the modernization of sensors and communications (particularly for our Common Operating Picture) and is viewed as the overarching program for enabling CG Maritime Domain Awareness (maritime situational awareness and information sharing).

As part of our strategic-level, target (to-be) architecture for C4&IT integration and modernization, this profile can be used to obtain basic information about the major initiatives underway at the USCG.

Design

This profile highlights four major programs: Command 21, NAIS, Rescue 21, and Deepwater. For each program, the profile displays the Program's concept diagram with a definition underneath. Command 21 is depicted across the top of the profile because it is viewed as the overarching program for USCG Maritime Domain Awareness.

When accessing this file on the CGEA website, clicking on each program's image will redirect you to its website for more information.

CGEA

COMMAND 21

Command 21 arms Operational Commanders with the ability to see, understand and share activities and information in critical ports and coastal waterways. Through Command 21, port surveillance sensors and intelligence and information enterprise data systems feed the local tactical picture at Sector Command Centers allowing watchstanders to monitor port activities, detect and classify vessels, and share information with all port partner agencies in support of interagency operations.

Type: Commercial Tugboat
Loc: 45N 37W
Des: 250N 422W
Crew: 5
Load: N/A

NAIS

The information provided by the Nationwide Automatic Identification System (NAIS) project supports all of the nation's maritime interests -- from the safety of vessels and ports through traffic management and collision avoidance, to the safety of the nation through vessel detection and classification. Providing near and long-range tracking of vessels operating in or approaching US ports and waterways, NAIS is a critical component of the Coast Guard's strategy to achieve Maritime Domain Awareness (MDA).

RESCUE 21

Rescue 21 is a life-saving communications system that monitors the international VHF-FM distress frequency, triangulates exact position, and facilitates the coordination of search and rescue operations. Replacing the antiquated National Distress and Response System (NDRS), Rescue 21 also provides vital command, control and communications support for other Coast Guard missions in the coastal zone.

DEEPWATER

Integrated Deepwater Systems recapitalizes all Coast Guard coastal and offshore surface, air and C4ISR assets and systems. Deepwater assets and systems enable Coast Guard operational forces to perform more effectively, efficiently and safely resulting in increased operational rediness and enhanced mission performance.

CGEA

USCG SECTOR COMMANDS PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG SECTOR COMMANDS PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG Cutters & Aircraft Profile

<u>*Contents*</u>

The USCG Cutters and Aircraft Profile provides a high-level view of the types of cutters, buoy tenders, construction tenders, icebreaking tugs, small harbor tugs, coastal patrol crafts, icebreakers, fixed wing aircraft, helicopters, unmanned aerial vehicles, and boats used by the USCG. For each of the asset types, the profile identifies specific USCG-owned assets.

The USCG Cutters and Aircraft Profile was designed by THALES and incorporated into the architecture in 2008.

This profile can be used to learn more about the cutters and aircraft owned and used by the USCG. The profile may also be used as the single authoritative reference for USCG platforms.

<u>*Design*</u>

The USCG Cutters and Aircraft Profile organizes information into four main categories: cutters, Deepwater program, aircraft, and boats. Each of these primary categories is marked with a dark blue header.

Within each category the profile identifies asset subcategories. For example, "Medium Endurance Cutter" is a sub-category under "Cutters" while "Fixed-Wing" is a sub-category of "Aircraft." The profile denotes these sub-categories in white header boxes with the USCG stripe.

Underneath each sub-category, the profile displays images (in black) of the specific type of asset represented. For example, the profile identifies "282-Foot," "270-Foot (Famous Class)," and 210-Foot (Reliance Class)," as specific asset types under "Medium Endurance Cutter."

Finally for each type of asset identified, the profile lists specific USCG assets. For example, "Mohawk" is under the "270-Foot (Famous Class)" sub-category while "Alex Haley" is in the "282-Foot" sub-category.

INTENTIONALLY BLANK

Information Perspective

The Information Perspective describes the data that is important to the business functions. This includes information about how and where the data is stored, and relationships between data elements. The National Information Exchange Model (NIEM) Standards and DHS Lexicon provide guidance for this perspective of CGEA.

Timely access to accurate information is essential to improving the quality and efficiency of enterprise decision-making. It is less costly to maintain timely, accurate data in a single source and share it, than it is to maintain multiple, duplicative data sources for applications. The speed of data collection, creation, transfer, and assimilation supports the organization's ability to share data efficiently across all lines of business (The Open Group, 2007).

Products

Type	Name	Description
Profiles	**Information Profile**	This is a depiction of USCG information objects within the DHS Conceptual Data Model Subject Areas and Domains.
	Data Profile	This profile shows the information currently housed in the Enterprise Data Catalog (EDC).
	GIS Profile	This is a concept diagram of how Geospatial Information Systems support USCG missions.
Models	**Data Models**	Models that portray data structure, description, and attributes, and relationships of the data with other associated data. The EDC is the current USCG tool for information about enterprise data.
Inventories	**Information Inventory ***	This inventory will show all the information objects, produced, archived, and/or required for CGEA activities, reporting, and decision making, and their relationship to the DHS Conceptual Data Model's Subject Areas and Domains.
	Data Inventory	This inventory itemizes all sources of CGEA data: formal production databases, legacy systems, and outsourced and imported data.
	GIS Inventory	The USCG Geospatial Information Systems Inventory provides a detailed view of the primary functions using geospatial resources, the governance standards, the data exchange partnerships, data sources, general technology components and methods, and the main supporting IT products and services.
	Information Exchange Matrix *	This inventory identifies the information transfers that are necessary to achieve USCG tasks.
	Information Dictionary *	This inventory identifies, defines, and provides additional metadata to describe items listed in the information inventory.
	USCG Policy and Planning Lexicon	This publication presents the approved list of terms, their associated definitions, and acronyms.

* Planned for future development

CGEA

Information Profile

The Information Profile shows how USCG information aligns to the DHS information architecture. The Department's information architecture consists of 4 information domains that decompose into 18 subject areas.

To show how the USCG aligns to the DHS information architecture, the DHS subject areas within the profile are populated with USCG information objects. For example, the USCG is responsible for any "Waterborne Terrorist Attack" which is listed as a type of "Case" under that DHS subject area.

This conceptual data model is the beginning of a USCG information and data architecture, which leads to the development of a formal USCG lexicon with common terms, definitions, and standards for term usage.

Design

The Information Profile consists of three layers that align to the hierarchy of the DHS information architecture.

The first layer consists of four boxes that represent the DHS information domains: "Dimensions" (grey, upper left), "Directions" (yellow, center), "Missions" (red, right), and "Administrations" (blue, lower left).

The second layer consists of 18 cylinders that depict the DHS subject areas from locations, assets, and agreements through cases, risks, and technologies.

Within each subject area cylinder, the profile identifies specific USCG information objects in white text. These information objects provide a high-level view of the information needed by the USCG to accomplish its mission.

USCG Information Profile
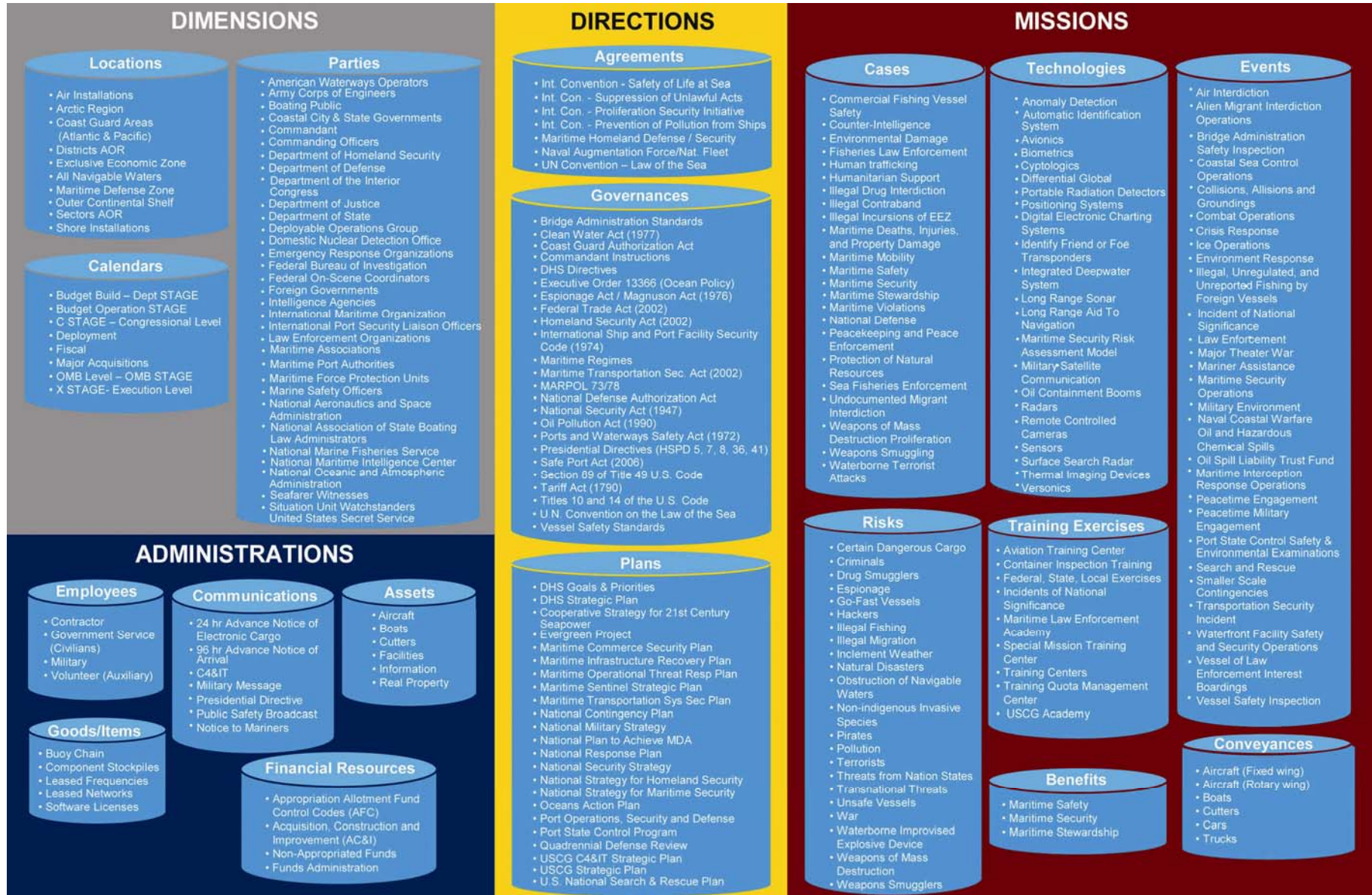
DIMENSIONS

Locations
- Air Installations
- Arctic Region
- Coast Guard Areas (Atlantic & Pacific)
- Districts AOR
- Exclusive Economic Zone
- All Navigable Waters
- Maritime Defense Zone
- Outer Continental Shelf
- Sectors AOR
- Shore Installations

Parties
- American Waterways Operators
- Army Corps of Engineers
- Boating Public
- Coastal City & State Governments
- Commandant
- Commanding Officers
- Department of Homeland Security
- Department of Defense
- Department of the Interior
- Congress
- Department of Justice
- Department of State
- Deployable Operations Group
- Domestic Nuclear Detection Office
- Emergency Response Organizations
- Federal Bureau of Investigation
- Federal On-Scene Coordinators
- Foreign Governments
- Intelligence Agencies
- International Maritime Organization
- International Port Security Liaison Officers
- Law Enforcement Organizations
- Maritime Associations
- Maritime Port Authorities
- Maritime Force Protection Units
- Marine Safety Officers
- National Aeronautics and Space Administration
- National Association of State Boating Law Administrators
- National Marine Fisheries Service
- National Maritime Intelligence Center
- National Oceanic and Atmospheric Administration
- Seafarer Witnesses
- Situation Unit Watchstanders
- United States Secret Service

Calendars
- Budget Build – Dept STAGE
- Budget Operation STAGE
- C STAGE – Congressional Level
- Deployment
- Fiscal
- Major Acquisitions
- OMB Level – OMB STAGE
- X STAGE- Execution Level

ADMINISTRATIONS

Employees
- Contractor
- Government Service (Civilians)
- Military
- Volunteer (Auxiliary)

Communications
- 24 hr Advance Notice of Electronic Cargo
- 96 hr Advance Notice of Arrival
- C4&IT
- Military Message
- Presidential Directive
- Public Safety Broadcast
- Notice to Mariners

Assets
- Aircraft
- Boats
- Cutters
- Facilities
- Information
- Real Property

Goods/Items
- Buoy Chain
- Component Stockpiles
- Leased Frequencies
- Leased Networks
- Software Licenses

Financial Resources
- Appropriation Allotment Fund Control Codes (AFC)
- Acquisition, Construction and Improvement (AC&I)
- Non-Appropriated Funds
- Funds Administration

DIRECTIONS

Agreements
- Int. Convention - Safety of Life at Sea
- Int. Con. - Suppression of Unlawful Acts
- Int. Con. - Proliferation Security Initiative
- Int. Con. - Prevention of Pollution from Ships
- Maritime Homeland Defense / Security
- Naval Augmentation Force/Nat. Fleet
- UN Convention – Law of the Sea

Governances
- Bridge Administration Standards
- Clean Water Act (1977)
- Coast Guard Authorization Act
- Commandant Instructions
- DHS Directives
- Executive Order 13366 (Ocean Policy)
- Espionage Act / Magnuson Act (1976)
- Federal Trade Act (2002)
- Homeland Security Act (2002)
- International Ship and Port Facility Security Code (1974)
- Maritime Regimes
- Maritime Transportation Sec. Act (2002)
- MARPOL 73/78
- National Defense Authorization Act
- National Security Act (1947)
- Oil Pollution Act (1990)
- Ports and Waterways Safety Act (1972)
- Presidential Directives (HSPD 5, 7, 8, 36, 41)
- Safe Port Act (2006)
- Section 89 of Title 49 U.S. Code
- Tariff Act (1790)
- Titles 10 and 14 of the U.S. Code
- U.N. Convention on the Law of the Sea
- Vessel Safety Standards

Plans
- DHS Goals & Priorities
- DHS Strategic Plan
- Cooperative Strategy for 21st Century Seapower
- Evergreen Project
- Maritime Commerce Security Plan
- Maritime Infrastructure Recovery Plan
- Maritime Operational Threat Resp Plan
- Maritime Sentinel Strategic Plan
- Maritime Transportation Sys Sec Plan
- National Contingency Plan
- National Military Strategy
- National Plan to Achieve MDA
- National Response Plan
- National Security Strategy
- National Strategy for Homeland Security
- National Strategy for Maritime Security
- Oceans Action Plan
- Port Operations, Security and Defense
- Port State Control Program
- Quadrennial Defense Review
- USCG C4&IT Strategic Plan
- USCG Strategic Plan
- U.S. National Search & Rescue Plan

MISSIONS

Cases
- Commercial Fishing Vessel Safety
- Counter-Intelligence
- Environmental Damage
- Fisheries Law Enforcement
- Human trafficking
- Humanitarian Support
- Illegal Drug Interdiction
- Illegal Contraband
- Illegal Incursions of EEZ
- Maritime Deaths, Injuries, and Property Damage
- Maritime Mobility
- Maritime Safety
- Maritime Security
- Maritime Stewardship
- Maritime Violations
- National Defense
- Peacekeeping and Peace Enforcement
- Protection of Natural Resources
- Sea Fisheries Enforcement
- Undocumented Migrant Interdiction
- Weapons of Mass Destruction Proliferation
- Weapons Smuggling
- Waterborne Terrorist Attacks

Risks
- Certain Dangerous Cargo
- Criminals
- Drug Smugglers
- Espionage
- Go-Fast Vessels
- Hackers
- Illegal Fishing
- Illegal Migration
- Inclement Weather
- Natural Disasters
- Obstruction of Navigable Waters
- Non-indigenous Invasive Species
- Pirates
- Pollution
- Terrorists
- Threats from Nation States
- Transnational Threats
- Unsafe Vessels
- War
- Waterborne Improvised Explosive Device
- Weapons of Mass Destruction
- Weapons Smugglers

Technologies
- Anomaly Detection
- Automatic Identification System
- Avionics
- Biometrics
- Cryptologics
- Differential Global
- Portable Radiation Detectors
- Positioning Systems
- Digital Electronic Charting Systems
- Identify Friend or Foe Transponders
- Integrated Deepwater System
- Long Range Sonar
- Long Range Aid To Navigation
- Maritime Security Risk Assessment Model
- Military Satellite Communication
- Oil Containment Booms
- Radars
- Remote Controlled Cameras
- Sensors
- Surface Search Radar
- Thermal Imaging Devices
- Versonics

Training Exercises
- Aviation Training Center
- Container Inspection Training
- Federal, State, Local Exercises
- Incidents of National Significance
- Maritime Law Enforcement Academy
- Special Mission Training Center
- Training Centers
- Training Quota Management Center
- USCG Academy

Benefits
- Maritime Safety
- Maritime Security
- Maritime Stewardship

Events
- Air Interdiction
- Alien Migrant Interdiction Operations
- Bridge Administration Safety Inspection
- Coastal Sea Control Operations
- Collisions, Allisions and Groundings
- Combat Operations
- Crisis Response
- Ice Operations
- Environment Response
- Illegal, Unregulated, and Unreported Fishing by Foreign Vessels
- Incident of National Significance
- Law Enforcement
- Major Theater War
- Mariner Assistance
- Maritime Security Operations
- Military Environment
- Naval Coastal Warfare
- Oil and Hazardous Chemical Spills
- Oil Spill Liability Trust Fund
- Maritime Interception Response Operations
- Peacetime Engagement
- Peacetime Military Engagement
- Port State Control Safety & Environmental Examinations
- Search and Rescue
- Smaller Scale Contingencies
- Transportation Security Incident
- Waterfront Facility Safety and Security Operations
- Vessel of Law Enforcement Interest Boardings
- Vessel Safety Inspection

Conveyances
- Aircraft (Fixed wing)
- Aircraft (Rotary wing)
- Boats
- Cutters
- Cars
- Trucks

☐ DHS Dimensions   ⬭ DHS Subject Areas   • USCG Information Objects

CGEA

USCG DATA PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG DATA PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG Geospatial Information System (GIS) Profile

Contents

The USCG Geospatial Information System (GIS) Profile provides a top-level view of the primary functions using geospatial resources, the actuating and governance standards, the data exchange partnerships, data sources, general technology components and methods, and the main supporting IT Products and Services.

The content shown in the profile was identified through analysis of the DHS GIS perspective of OMB's FEA Consolidated Reference Model (CRM).

This profile can be used to learn how the USCG is using GIS to achieve its mission.

Design

The GIS Profile is designed in six sections that show the geospatial resources used to integrate USCG assets into an interoperable system of supporting activities. Technology, strategic partners, standards & policies, data, IT products, and business functions are depicted as equally important resources, which surround the USCG global mission, mission support, and business support activities.

USCG Geospatial Information System (GIS) Profile

DATA
CG Business Locations Database
CG CADD Data
CG Imagery
CG Mission Locations Database
CG Point Data
CG Vector Data
Common Infrastructure Data Sets
Dynamic Sensor Data
Fed/Com'l CD/DVD Subscription & Dynamic Data Feeds
Navigation/Chart Data Sets

IT PRODUCTS
ArcGIS (ESRI)
ArcHICAD/AutoCAD
ArcIMS (ESRI)
ArcSDE (ESRI)
CJMTK
ESRI
Keyhole/Google Earth
MS/SQL
Oracle Relational DB
Oracle Spatial DB
Pixia WMS

FUNCTIONS
Alerts	Maritime Safety	Spill & Hazards Response
Assessment Damage	Navigation/Charting	Supply Staging
Assessments	Personnel Deployments	Vessel Tracking & AIS
ATON Mgmt	Planning	Work Order Management
Capital Asset Management	Portal & Data Catalog	
Compliance	Port Security Planning &	
Environmental Monitoring &	Property Management	
Emergency Planning	Protected Commerce Zones	
Hazards Analysis &	Range Operations	
Housing Management	Response	
Incident Management	SAR Planning & Operations	
Information Resources	Sector Planning	
Inspection	Shore Facility Management	
Interdiction	Shore Site Planning	
Management	Spending Analysis	
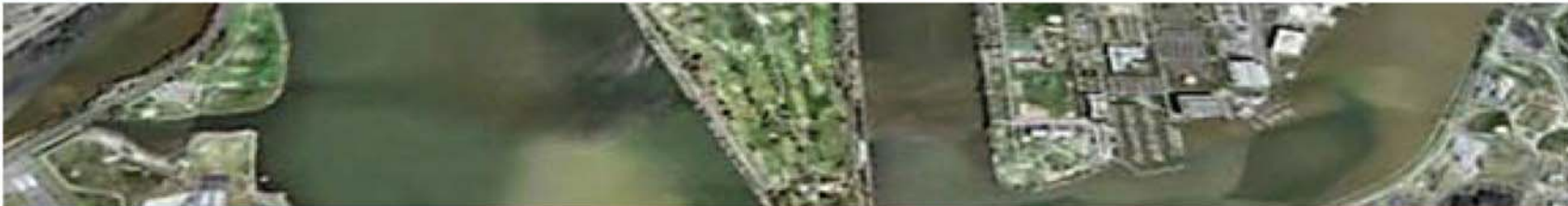
PARTNERS
BOATING PUBLIC	NOAA
C2CEN	STATES EPA/DNR's/OSRO's
CANADIAN CG	USACE
CBP	USCG Academy
CITIES/PORTS EOC's	USCG LoGIC
DHS	USCG OSC
DOI	USCG R&D Center
DOJ	USGS
DOT	USTRANSCOM
EPA	
FEMA	
ICE	
DoD	

STANDARDS & POLICY
CG Logistics Spatial Data Standards (SDSFIE)
DHS EDW, SOA & TRM
DHS Geospatial Data Model
Executive Order 12906
E-Gov Act Section 216
ISO/ANSI Standards for Graphics & Metadata Symbology
National Spatial Data Infrastructure
NIEM Model
OMB Circulars A16, A119 & A130
Open Geospatial Consortium (Intero/Sharing)

TECHNOLOGY
CADD/GIS Conversion	SQL Databases
Client Server Delivery	Relational Databases
Desktop Map & Imagery Software	Web Browser Delivery
Desktop Navigation Systems	Vector & Imagery Analysis Software
GPS	
Imagery Server & Processor Software	
Map Server Software	
Metadata Repositories & Catalogs	
Modeling	
Programmer API's	
Spatial Databases	
Simulation Software	
Sensors Vector Data	

CGEA

Service Perspective

The Service Perspective contains information about the system functions that support business activities and/or general support activities.

The architecture encourages the use of common solutions, designs, and services where applicable and can be used to facilitate the re-use of common activities. By "common" it is meant that the capabilities (services, components and designs) can be reused by multiple systems and that new capabilities can be realized by connecting sets of network accessible services. As a result, new components and services are developed only when necessary, and re-use takes the place of re-creation.

Products

Type	Name	Description
Profiles	Systems Profile	This profile provides a high-level view of the C4&IT systems that enable USCG mission and support functions.
	Services Profile	This profile identifies the USCG systems, applications, and services and aligns them to the FEA Service Component Reference Model (SRM)'s Service Domains and Service Types.
	External Services Profile *	This profile provides a high-level view of systems leveraged at the USCG, but managed outside the USCG.
	Command Center Profile	This profile shows the USCG's classified and unclassified computing environment including applications, services, and products.
	C4&IT Transition Profile	This profile displays the USCG's C4&IT transition strategy including specific milestones.
	C4&IT Transition Timeline	This profile provides a timeline view of the USCG C4&IT transition efforts within 11 DHS IT portfolios. The profile identifies current and target technologies and estimated implementation dates for each of the portfolios.
Models	Systems Models	These models show the relationship of a system to other systems, supporting data, and the business processes requiring the data.
	Applications to Business Activities Matrix *	This model describes the relationship between USCG services and activities.

Planned for future development

CGEA

Type	Name	Description
Inventories	**Systems Inventory**	The C4&IT Systems Inventory is organized by grouping applications to systems. The content includes attributes across each of the six USCG perspectives and provides a baseline mapping assets to the DHS EA and the OMB FEA.
	External Services Inventory *	The External Services Inventory describes systems managed outside the USCG and is organized by grouping applications to systems. The content includes attributes across each of the six USCG perspectives and provides a baseline mapping assets to the DHS EA and the OMB FEA.
	C4&IT Transition Inventory	This inventory provides detailed information about the USCG's C4&IT transition inventory including alignment to the DHS transition strategy and specific milestones.

* Planned for future development

CGEA

USCG SYSTEMS PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG SYSTEMS PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG SERVICES PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG SERVICES PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG COMMAND CENTER PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG COMMAND CENTER PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG C4&IT TRANSITION PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG C4&IT TRANSITION PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG C4&IT TRANSITION TIMELINE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG C4&IT TRANSITION TIMELINE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

Technology Perspective

The Technology Perspective lists the technologies and standards necessary for the performance and support of USCG business activities. It creates a common, standardized framework for cataloguing C4&IT products to help the USCG identify opportunities for collaboration, interoperability, and reuse.

The Technology Perspective also provides economic benefits as it helps to identify solutions and technologies that the USCG can reuse to support additional business functions, missions, and the target (to-be) architecture (OMB, 2007).

Products

Type	Name	Description
Profiles	**Systems Profile**	This profile provides a high-level view of the C4&IT systems that enable USCG mission and support functions.
	IT Products & Standards Profile	This profile identifies primary USCG IT products and standards aligned to the Reference Model service areas and categories of the FEA TRM.
	C4 Products Profile	This profile lists the C4 products used by the USCG and their alignment to the categories and sub-categories of the C4 Products Inventory.
	Network Profile	This diagram is a high-level view of the USCG Data Network (CGDN+).
	Frequency Spectrum Profile	This diagram depicts how the USCG uses the frequency spectrum for mission operations.
	C4&IT Transition Profile	This profile displays the USCG's C4&IT transition strategy including specific milestones and target technologies.
	C4&IT Transition Timeline	This profile provides a timeline view of the USCG C4&IT transition efforts within 11 DHS IT portfolios. The profile identifies current and target technologies and estimated implementation dates for each of the portfolios.
Models	**Network Models**	These models define the USCG network layers and how they interact.
Inventories	**Systems Inventory**	The C4&IT Systems Inventory is organized by grouping, application, system, and business area. The content includes attributes across each of the six USCG perspectives and provides a baseline mapping of assets to the DHS EA and the OMB FEA.
	IT Products and Standards Inventory	This is an inventory of technical products and standards used by the USCG to deliver services and capabilities in support of its missions.
	C4 Products Inventory	This inventory shows the primary products used by operators in the USCG to sense the environments and direct operations.

* Planned for future development

CGEA

Type	Name	Description
Inventories	**Infrastructure Inventory**	This inventory contains all the computers, peripherals, network devices, operating system software, monitoring and support equipment, and other components, which comprise the infrastructure that all C4&IT systems in the USCG run upon.
	Frequency Spectrum Inventory *	This inventory lists the frequency spectrums necessary for the USCG's mission operations.
	C4&IT Transition Inventory	This inventory provides detailed information about the USCG's C4&IT transition strategy including USCG C4&IT portfolios, descriptions, target technologies, and scheduled transition dates.

* Planned for future development

CGEA

IT PRODUCTS PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

IT PRODUCTS PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG C4 PRODUCTS PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG C4 PRODUCTS PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG NETWORK PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG NETWORK PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

USCG FREQUENCY SPECTRUM PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

USCG FREQUENCY SPECTRUM PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

INTENTIONALLY BLANK

Security Perspective

The Security Perspective includes the security requirements, standards, hardware, software, policies, and restrictions protecting the organization's information assets and enabling the business activities to be carried out safely and securely.

To provide adequate access to open information while maintaining secure information, the USCG must identify security needs at the data level, not the application level. This perspective provides a description of security principles and an overall approach for complying with the principles that drive the system design (The Open Group, 2007).

Products

Type	Name	Description
Profiles	**Systems Profile**	This profile provides a high-level view of the C4&IT systems that enable USCG mission and support functions.
	Security Profile	This diagram depicts how the USCG fulfills information assurance objectives through management, operational, and technical controls.
	C4&IT Transition Profile	This profile displays the USCG's C4&IT transition strategy including specific milestones.
	C4&IT Transition Timeline	This profile provides a timeline view of the USCG C4&IT transition efforts within 11 DHS IT portfolios. The profile identifies current and target technologies and estimated implementation dates for each of the portfolios.
Inventories	**Systems Inventory**	The C4&IT Systems Inventory is organized by grouping, application, system, and business area. The content includes attributes across each of the six USCG perspectives and provides a baseline mapping of assets to the DHS EA and the OMB FEA.
	Security Inventory	This inventory lists security topics originating from DHS, DoD, USCG, and NIST guidance. The specific USCG products, standards, and implementations that address these topics are from information compiled by TISCOM.
	C4&IT Transition Inventory	This inventory provides detailed information about the USCG's C4&IT transition inventory including USCG C4&IT portfolios, descriptions, target technologies, and scheduled transition dates.

* Planned for future development

CGEA

IT SECURITY PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

IT SECURITY PROFILE

PAGE WITHHELD

PURSUANT TO FOIA EXEMPTION (b) (2)

CGEA

INTENTIONALLY BLANK

Appendix A: Governance Forms

CGEA

Enterprise Architecture Board (EAB)
Preparing for a C4&IT Project Architecture Review

Instructions

A C4&IT (Command, Control, Communications and Computers & Information Technology) Project Architecture Review is prepared and delivered by the C4&IT Sponsor (or Sponsor Representative) to the EAB on an approved C4&IT project or pending initiative. The purpose of the architecture review is to ensure that new C4&IT projects or any major changes to existing C4&IT projects are consistent with the Enterprise Architecture and current Information Technology (IT) investment planning strategies of the United States Coast Guard (USCG).

A C4&IT Project Architecture Review should be scheduled when you or your project team are in the Conceptual Planning stage of the System Development Life Cycle (SDLC). Applicable projects are those that will result in the implementation of a new C4&IT system, application, or service, cause a significant modification to an existing C4&IT system, application, or service, or that may have a significant organizational impact; or any C4&IT system, application, or service designated by the IRB. However, a C4&IT Project Architecture Review can be requested for existing (legacy) systems, applications or services that are already beyond the first stage of the SDLC.

C4&IT Sponsor Responsibilities

Steps	Instructions
1. **Complete and submit the EAB Project Assessment Form.**	The EAB Project Assessment Form will prepare you for the issues and questions typically raised by the EAB. Once complete, please submit your completed form to EAB.Facilitator@uscg.mil.
2. **Present your project to the EAB.**	There is no prescribed format for presenting your project to the EAB – choose whatever approach works best for communicating your project. Some project managers deliver a PowerPoint presentation that addresses many of the questions posed in this EAB Project Assessment Form. Others brief directly from this document. A review is generally is 20-30 minutes, including questions and answers.
3. **Respond to Action Items identified by the EAB.**	After the review, the EAB will prepare an EAB Project Review Report with the review findings and in some cases suggested follow up actions. Responses to these follow up action items are required prior to implementation of any system or application developed by this project and before a substantial commitment has been made to acquire any hardware or software that is new to the USCG technology environment.

More Information
For more information on the EAB, the review processes, forms and reports, or to look at past EAB reviews, please visit the USCG EA website: http://cgea.uscg.mil.

For definitions of the terms used in this document please visit the USCG EA Glossary: http://cgea.uscg.mil/EAServices/Pages/EAGlossary.aspx.

For further assistance, please contact the EAB Facilitator at EAB.Facilitator@uscg.mil.

CGEA

CGEA

EAB Project Assessment Form

Project Name	

Section 1 – Project Overview	
Presenter Name(s)	
Sponsor Name	
Sponsor Representative Name	
CG-6 Asset Manager Name	
Request Proposal (RP) # *If applicable*	
Anticipated Project Implementation Date	
Project Type	☐ Request for a **NEW** System, Application or Service ☐ Request for a major **CHANGE** to an existing System, Application or Service
USCG SDLC Phase	Select One: Conceptual Planning
Description	Please describe the C4&IT project in terms of what it does, the processes it improves, who manufactures its components, etc. Please also include, if known, the proposed technical solution. *(If an RP has already been developed, the "Executive Summary" from the RP can be used.)*

CGEA

CGEA

Section 2 – Enterprise Architecture Questions	
1	**Business Alignment (Business)**	

	A. Please select the primary USCG Business Function(s) that this project aligns to:
	
	A list of USCG Business Functions along with their associated sub-functions, and activities can be found in the USCG Business Profile (http://cgea.uscg.mil/EAProducts/Business/Pages/BusinessProfile.aspx).
	
	Aligning to the primary USCG Business Functions will align your project to both the USCG Business Inventory and the Federal Enterprise Architecture (FEA) Business Reference Model (BRM).
		Select all that apply:
		
		Core Mission Functions/Sub-Functions:
		    Maritime Safety - Select One
		    Maritime Security - Select One
		    Maritime Stewardship - Select One
		
		Mission Support Functions: Select One
		Business Support Functions: Select One
		
		Other:

	B. If known, what DHS Portfolio would your project fall under?	DHS Portfolio: Select One Other:
2	**Information Sharing and Capture (Information)**	
	A. Please select the USCG Information Object(s) that this project will align to: A list of all USCG Information Objects can be found in the USCG Information Profile (http://cgea.uscg.mil/EAProducts/Information/Pages/InformationProfile.aspx). *Aligning to the USCG Information Objects will align your project to both the USCG Information Inventory and the DHS Information Architecture.*	List all that apply: Others not identified:
	B. What is the source of this information?	
	C. Who are the internal/external users of this information?	
	D. Who is the anticipated Data Steward?	Name of organization entity:
	E. Will this C4&IT project have a Geospatial Information System (GIS) component? If so, what is it? A list of USCG Geospatial Information System components can be found in the GIS Profile (http://cgea.uscg.mil/EAProducts/Service/Pages/GISProfile.aspx). *Identifying Geospatial information system components will assist in the alignment to the DHS GIS perspective of the Office of Management and Budget (OMB)'s FEA Consolidated Reference Model (CRM).*	☐ YES ☐ NO ☐ Unknown List all that apply: Others not identified:
	F. Is there a need for information sharing with other systems? *Projects that have the need for information sharing can potentially make use of a Service Oriented Architecture (SOA).*	☐ YES ☐ NO ☐ Unknown
3	**Federal Compliance (Information/Security)**	
	A. **Privacy -** Will your project involve Personally Identifiable Information (PII)?	☐ YES ☐ NO ☐ Unknown
	B. **Records -** Will federal records be generated by your project?	☐ YES ☐ NO ☐ Unknown

CGEA

Section 2 – Enterprise Architecture Questions		
C. **Section 508 -** Will Section 508 standards be applicable to your project?	☐ YES ☐ NO ☐ Unknown	
D. **Information Assurance -** Will this system be reported in Trusted Agent FISMA (TAF)?	☐ YES ☐ NO ☐ Unknown	
4	**Component Re-use and Interoperability (Service)**	
A. Is there an existing USCG C4&IT system in the CGEA that may provide some or all of the functionality requirements or services? If yes, which ones. If no, please explain. A list of USCG C4&IT systems can be found in the USCG Systems Inventory (http://cgea.uscg.mil/SiteCollectionDocuments/Products/Service/Systems%20Inventory.xls) and a mapping of USCG Systems to the type of service they provide can be found in the USCG Services Profile (http://cgea.uscg.mil/EAProducts/Service/Pages/Services Profile.aspx). *Indicating which C4&IT systems your project can make use of will promote re-use of existing technologies and update the CGEA System Inventory.*	☐ YES ☐ NO ☐ Unknown	
B. What systems could you potentially interface with? *Identifying which systems your project will interface with promotes system interoperability.*		
C. If known, please select the type of solution, if known, that could be used.	Solution Type: Select One	
5	**Standardization and Product Analysis (Technology)**	
A. Are the proposed C4&IT products (hardware or software) and standards proposed for use by this project identified in the IT Products and Standards Inventory as either preferred or supported? If yes, please list the IT products and standards you plan on using[1]. A list of preferred and supported C4&IT products and standards can be found in the IT Products and Standards Inventory (http://cgea.uscg.mil/SiteCollectionDocuments/Products/Technology/IT%20Products%20Inventory.xls). *Indicating which C4&IT IT products and standards you plan to use allows for the alignment of your project to the CGEA IT Products and Standards Inventory and FEA TRM.*	☐ YES ☐ NO	
B. Please explain, if applicable, how the proposed IT products and standards were selected and list the alternative IT products and/or standards considered[2].		

---

[1] The following option will not be available until the Products and Standards Board (PSB) is formally established: If no, please complete and submit a Products and Standards Assessment Form to the PSB at PSB.Facilitator@uscg.mil . The form can be found on the USCG EA website (http://cgea.uscg.mil).

[2] Technical solutions should be developed in conjunction with your CG-6 Asset Manager and SMEs.

EAB DR #	For Official Use Only	Page 4 of 5

Enterprise Architecture Board Project Assessment Form

Section 2 – Enterprise Architecture Questions	
6	**Measurable Results (Performance)**	
	A. Please describe the performance metrics that will be used to measure project performance.

Examples of performance metrics used at the USCG can be found in the USCG Performance Inventory (http://cgea.uscg.mil/SiteCollectionDocuments/Products/Performance/Performance%20Inventory.xls).

Indicating the performance metrics that you will be using allows for the alignment of your project to the CGEA Performance Inventory and FEA Performance Reference Model (PRM). | |

By completing and submitting this form, you agree to align to and comply with the CGEA and all applicable Federal Laws, regulations and/or policies. In addition, you will ensure that all EAB action items and/or requirements, which may be assigned to your project, will be completed as necessary.

Sponsor or Sponsor Rep Name   Date

INTENTIONALLY BLANK

Appendix B: Legacy EA Comparison

COMDTINST 5401.5 established the office of CG-6. COMDTINST 5230.68 established Enterprise Architecture policy and followed CG-6 policy.

The table below, Legacy to Current EA Crosswalk, shows how the current CGEA implementation aligns with and maps to the legacy implementation while expanding capabilities and improving effectiveness of the program.

This document and the products described herein are designed to provide practices implementation aligned to existing policy. Portions of the policy have not been fully implemented in the past, so this document provides the implementation for the current release. It also provides a bridging mechanism from the legacy EA structure to the present and on to the future when further policy is established.

Some examples of these new implementations are the EAB, PSB, and CGEA CM Plan. These boards and the plan provide the functions pf the Enterprise Architecture Management Board (EAMB) and the Change Control Board (CCB) listed in the policy while working with the rest of the policy structure. Updated terminology, roles, and structures provide for the improved capabilities of the program in other areas as shown below.

Legacy to Current EA Crosswalk		
Category	Legacy	Current
Value Proposition	Ensure that C4&IT systems are matched to USCG mission/ business needs and goals.	Improve the effectiveness and overall governance of C4&IT decision-making, including alignment to mission/business needs and goals.
Alignment (primary)	Department of Defense Architecture Framework (DoDAF)	Federal Enterprise Architecture (FEA) at the enterprise level; DoDAF at the segment and solution levels as appropriate
Methodology	Proprietary	User-centric EA
Delivery Channels (primary)	EA Links on CG Central	CGEA Knowledge Center and Executive Handbook
Framework	Various	CGEA Framework
Levels of Detail	• Enterprise • Mission/Function • Project	• Profiles (high-level) • Models (mid-level) • Inventories (detailed catalogs)
Product Framework	"EA Framework – Work Products" shows legacy product arranged in a matrix made of ten categories (see Perspectives below) and broken into three levels of detail.	CGEA products Framework with products in six perspectives (aligned with FEA plus security broken out) and three levels of detail.

Legacy to Current EA Crosswalk		
Category	**Legacy**	**Current**
Principles	Architecture has proper scope, reflects the strategic plan, provides adaptive and responsive capabilities, is of limited (temporal) projection, designed with standard architectural products, implements requirements-based change, maintains controlled technical diversity, addresses integrated information management, utilizes standardized enterprise components, and implements and follows technical standards.	Architecture produces measurable results; maintains business-technology alignment; enables information sharing, accessibility, and quality; encourages service interoperability and component reuse; promotes technology standardization and simplification; and ensures information confidentiality, integrity, availability, and privacy.
Roles	Enterprise Steward	Chief Enterprise Architect
	Office of EA	Product Owner
		Product Manager
	User, Customer, Stakeholder	Stakeholder
	Stakeholder	Subject Matter Expert
	CIO, Asset Manager, Sponsor, program Manager, Sponsor's Representative, System Development Agent, System Support Agent, Data Steward, Data Sponsor	Same
Governance	EA Management Board (EAMB) and EA Configuration Control Board (EA CCB)	EAB, PSB, CM Plan, CGEA release schedule, and program and product metrics.
Perspectives	• Management/Governance • Performance • Mission/Logistics/Business • Capabilities • Data/Information • Technical Solutions • Technical Standards • Security and Privacy • Transition	• Performance • Business • Information • Service • Technology • Security

CGEA

Appendix C: Acronyms

AC&I	Acquisition, Construction and Improvement
Acadis	Academy Information System
ACMS	Aviation Computerized Maintenance System
ADEX	Active Directory Exchange
AFC	Appropriation Allotment Fund Control Codes
AIS	Automatic Identification System
ALMIS	Aviation Logistics Management Information Systems
AMMIS	Aviation Management Information System
AMRAP	Amver Maritime Relations Award Process
AMVER	Automated Mutual-Assistance Vessel Rescue
AOPS	Abstract of Operations System
AOR	Area of Responsibility
API	Application Programming Interface
APS	Automated Parts System
AR&SC	Aircraft Repair And Supply Center
ArcGIS	Commercial GIS Product
ArcHICAD	Commercial GIS Product
ArcIMS	Commercial GIS Product
ArcSDE	Commercial GIS Product
ARMS	Automated Requisition Management System
ATIMS	Aviation Technical Information Management System
ATO	Authority To Operate
ATON	Aids To Navigation
AutoCAD	Commercial Computer-Aided Design product
bps	bits per second
BRM	Business Reference Model
C2CEN	Command and Control Engineering Center
C2PC-CG	Command And Control Personal Computer-Coast Guard
C3	Command, Control, and Communications
C4&IT	Command, Control, Communications, Computers and Information Technology
C4I	Command, Control, Communications, Computers, and Intelligence
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance
CADD	Computer Aided Design (and Drafting)
CAMP	Capital Asset Management Policy
CAMSLANT	Communications Area Master Station Atlantic
CAMSPAC	Communications Area Master Station Pacific
CANAPS	Ceiling And Number Assignment Processing System
CAS	Core Accounting System
CASP	Computer Assisted Search Planning
CBP	Customs and Border Patrol
CCB	Change Control Board
CD	Compact Disk
CEA	Chief Enterprise Architect
CGBI	Coast Guard Business Intelligence
CGDN+	Coast Guard Data Network
CGEA	United States Coast Guard Enterprise Architecture
CGMIX	Coast Guard Maritime Information exchange
CIMS	Contract Information Management System
CIO	Chief Information Officer
CIAO	Commandant's Intent Action Order
CJMTK	Commercial Joint Mapping Toolkit
CM	Configuration Management
CMMi	Capability Maturity Model Integration
CMPlus	Configuration Management Plus
COBIT	Control Objectives for Information and related Technology
COE	Center of Excellence
COE (DISA)	Common Operating Environment
COFR	Certificate Of Financial Responsibility
COI	Communities Of Interest
COMDT	Commandant (USCG headquarters)
COMDTINST	Commandant Instruction
CONOPS	Concept Of Operations
COSPAS	Cosmicheskaya Sistyema Poiska Avariynich Sudov OR Space System For The Search Of Vessels In Distress
COTR	Contracting Officer's Technical Representative
CPIC	Capital Planning and Investment Control
CPS	Claims Processing System
CRM	Consolidated Reference Model
CSS	Cascading Style Sheets
CSV	Certified Server Validation
DAC	Data Advisory Committee
DB	database
DHS	Department of Homeland Security
DHS EAB	Department of Homeland Security Enterprise Architecture Board
DHTML	Dynamic HyperText Markup Language
DISA	Data Interchange Standards Association
DNS	Domain Name System
DoD	Department Of Defense

CGEA

DoDAF	Department Of Defense Architecture Framework		FISMA	Federal Information Security Management Act of 2002
DOI	Department Of The Interior		FLS	Fleet Logistics System
DOJ	Department Of Justice		FPD	Financial Procurement Desktop
DOORS	Dynamic Object-Oriented Requirements System		FY	Fiscal Year
DOT	Department Of Transportation		GAO	Government Accountability Office, formerly General Accounting Office
DR	Decision Request		GIS	Geospatial Information System
DRM	Data Reference Model		GMO	Geospatial Management Office
DSES	Directory Services/Email Server		GPS	Global Positioning System
DSS	Decision Support System		HF	High Frequency
DMWG	Data Management Working Group		HIP	Homeport (Internet Portal)
DSWG	Data Steward Working Group		HSPD	Homeland Security Presidential Directive
DVD	Digital Versatile Disk (varies)			
EA	Enterprise Architecture		HTML	Hyper Text Markup Language
EAB	Enterprise Architecture Board		HTTP	Hyper Text Transfer Protocol
EAIR	Enterprise Architecture Information Repository		IA	Information Assurance
			I-ATONIS	Integrated Aids To Navigation Information System
EACCB	Enterprise Architecture Configuration Control Board		IB	Investment Board
			ICA	Independent Computing Architecture
EAMB	Enterprise Architecture Management Board		ICAM	Integrated Computer-Aided Manufacturing
EACOE	Enterprise Architecture Center of Excellence		ICE	Immigration and Customs Enforcement
eCOFR	Electronic Certificate Of Financial Responsibility		ICSF	Integrated C4I System Foundation
EDC	Enterprise Data Catalog		IEP	Information Exchange Package
EDMO	Enterprise Data Management Office		IEPD	Information Exchange Package Documentation
EDW	Enterprise Data Warehouse			
eCG	e-Coast Guard		IETF	Internet Engineering Task Force
eGIS	Electronic Geographical Information System		IFF	Identification Friend Or Foe
			IIS	Internet Information Services
E-Gov	Electronic Government		IRB	Investment Review Board
ELC	Engineering Logistics Center		ISC	Integrated Support Command
eNoA/D	Electronic Notice Of Arrival/Departure		ISO	International Organization for Standardization
EPA	Environmental Protection Agency			
EPIRB	Emergency Position-Indicating Radio Beacon		IT	Information Technologies
			ITIL	Information Technology Infrastructure Library
ePMO	Electronic Program Management Office			
			J2EE	Java Platform Enterprise Edition
ERR	Enterprise Requirements Repository		JDBC	Java Database Connectivity
ETL	Extract, Transform, Load		JSP	Java Server Pages
EXSTAGE	Execution Stage		JTRS	Joint Tactical Radio System
EZZ	Exclusive Economic Zone		LDAP	Lightweight Directory Access Protocol
FDCC	Federal Desktop Core Configuration		LIMS	Logistics Information Management System
FEA	Federal Enterprise Architecture			
FEA BRM	Federal Enterprise Architecture Business Reference Model		LMR	Living Marine Resources
			LOB	Line Of Business
FEA DRM	Federal Enterprise Architecture Data Reference Model		LoGIC	Logistics Geospatial Integration Center
			LOIS	LORAN-C Operations Information System
FEA PRM	Federal Enterprise Architecture Performance Reference Model			
			LORAN	Long Range Aid To Navigation
FEA SRM	Federal Enterprise Architecture Service Component Reference Model		MAGNet	Maritime Global Awareness Network
			MARPOL	Marine Pollution
FEA TRM	Federal Enterprise Architecture Technical Reference Model		MDA	Maritime Domain Awareness
			MF	Medium Frequency
FEMA	Federal Emergency Management Agency		MFNAVTEX	Medium Frequency Navigational information Telex OR Medium Frequency Navigation Telex Radio
FINCEN	Finance Center			

MILSATCOM	Military Satellite Communications		SOA	Service Oriented Architecture
MISLE	Marine Information For Safety and Law Enforcement		SOA WG	Service Oriented Architecture Working Group
MMLD	Merchant Mariners Licensing and Documentation		SORTS	Status Of Readiness and Training System
MOM	Microsoft Operations Manager		SQL	Structured Query Language
MS	Microsoft		SRM	Service Component Reference Model
NAIS	Nationwide Automatic Identification System		SSS	Safety, Security, Stewardship
NARA	National Archives and Records Administration		SURPIC	Surface Picture
			TAF	Trusted Agent FISMA Database
NESSS	Naval and Electronics Supply Support System		TCP/IP	Transmission Control Protocol/Internet Protocol
NIEM	National Information Exchange Model		TISCOM	Telecommunications & Information Systems Command
NOAA	National Oceanic and Atmospheric Administration		TMT	Training Management Tool
NPFC	National Pollution Funds Center		TOGAF	The Open Group Architecture Framework
NVMC	National Vessel Movement Center		TRM	Technology Reference Model
OASIS	Organization For The Advancement Of Structured Information Standards		UAV	Unmanned Arial Vehicle
			UDDI	Universal Description Discovery
ODBC	Open Database Connectivity		UDP	User Datagram Protocol
OMB	Office of Management and Budget		UHF	Ultra High Frequency
OMG	Object Management Group		UN	United Nations
OSC	Operations Systems Center		USACE	United States Army Corps Of Engineers
OTCIXS	Officer In Tactical Command Information Exchange System		USCG	United States Coast Guard
			USGS	United States Geological Survey
OTH	Over The Horizon		USTRANSCOM	United States Transportation Command
PACAREA	Pacific Area (Headquarters)			
PART	Performance Assessment Rating Tool		VDL	VHF Digital Link
PAWSS	Ports And Waterways Safety System		VDS	Visual Distress Signals
PDD	Presidential Decision Directive		VHF	Very High Frequency
PKI	Public Key Infrastructure		VIS	Vessel Identification System
PL/SQL	Procedural Language / Structured Query Language		VTS	Vessel Traffic Service
			W3C	World Wide Web Consortium
PMBOK	Project Management Body Of Knowledge		WAN	Wide Area Network
			WMS	Web Map Service
PSC	Personnel Service Center		WSDL	Web Services Description Language
PSB	Products and Standards Board		XMI	Metadata Interchange
RAS	Retiree and Annuitant System		XML	Extensible Markup Language
RDP	Remote Desktop Protocol		Xpath	XML Path Language
REM	Runtime Execution Monitoring		XSLT	Extensible Stylesheet Language X-formation
RG	Resource Group			
RP	Resource Proposal			
SAM	Shore Asset Management			
SANS	Ship Arrival Notification System			
SARSAT	Search And Rescue Satellite			
SART	Search And Rescue Transponder			
SAS	Statistical Analysis System			
SATCOM	Satellite Communications			
SCCS	Shipboard Command and Control System			
SDL	Standard Distribution List			
SDLC	Systems Development Life Cycle			
SIPRNET	Secret Internet Protocol Router Network			
SLA	Service Level Agreement			
SLDMB	Self Loading Datum Marker Buoy			
SMTP	Simple Mail Transfer Protocol			

CGEA

INTENTIONALLY BLANK

CGEA

Appendix D: Glossary

Application: The use of information resources (information and information technology) [i.e. hardware, software, and database] to satisfy a specific set of user requirements (NIST, 2006).

Application System: A discrete set of information resources [i.e. applications] organized for the collection, processing, maintenance, use, sharing, dissemination, or disposition of information (NIST, 2006).

Avionics: Equipment / electronics used to fly and operate aircraft.

Business Function: An ongoing functional capability of an organization that is sustained over time (OMB, 2005). Examples of USCG business functions include search and rescue, marine safety, and illegal drug interdiction.

Business Operating Unit: A specific organizational unit that supports an identified set of detailed business functions (OMB, 2005). "Engineering and Logistics" is an example of a specific USCG business operating unit.

Business Perspective: Describes the functions and activities that the USCG performs. An example of these functions and activities is "port, waterway, and coastal security."

Business Process: A business process is a set of coordinated tasks and activities, conducted by both people and equipment, that will lead to accomplishing a specific organizational goal.

C4&IT: Any equipment or interconnected system or subsystem of equipment, or techniques used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of digital, voice, or video data or information to the appropriate levels of command. This includes command and control networks, common operational picture systems, information assurance services, communication products and standards, computers, ancillary equipment, software, firmware, procedures, services (including support services), and related resources.

C4&IT Governance: Consists of the leadership and organizational structures and processes that ensure that the organization's C4&IT sustains and extends the enterprise's strategies and objectives. Source: IT Governance Institute (www.itgi.org)

Combat Systems: Systems used to prevent, designate and/or prosecute targets.

Command and Control: Systems used to receive, analyze, generate, and/or process information used to control resources.

Communications: Systems used to transmit and receive information.

Component Framework: The underlying foundation and technical elements by which Service Components are built, integrated, and deployed across Component-Based and Distributed Architectures.

Core Mission Functions: The unique service areas that define the mission or purpose of the agency (OMB, 2007). The USCG core mission functions are maritime safety, security, and stewardship.

Data: A re-interpretable representation of information in a formalized manner suitable for communication, interpretation or processing (OMB, 2005).

Data Models: Models that portray data structure, description, and attributes, and relationships of the data with other associated data. The EDC is the current USCG tool for information about enterprise data.

DHS Performance Areas: DHS defines seven key performance areas in the DHS Strategic Plan and Value Chain. These performance areas include awareness, prevention, response, recovery, services, protection, and organizational excellence.

EAB: The EAB supports the IRB by reviewing DRs for Enterprise Architecture alignment. In addition, the EAB reviews the findings and recommendations of the Products and Standards Board (PSB) and issues a decision.

Enterprise Architecture: EA is the discipline that synthesizes key business and technology information across the organization to support better decision-making. EA provides useful and usable information products and governance services to the end-user while developing and maintaining the current and target (to-be) architectures and transition plan for the organization. The information in the EA, includes: results of operations, business functions and activities, information requirements, supporting applications and technologies, and security.

Enterprise Services: Common or shared IT services that support core mission areas and business services. Enterprise services are defined by the agency service component model and include the applications and service components used to achieve the purpose of the agency (e.g., knowledge management, records management, mapping/GIS, business intelligence, and reporting) (FEA PMO, 2006).

Facilitator: The Facilitator reviews the sponsor's DR, enters it into the DR log and then forwards it to the appropriate review group.

General Support System: An interconnected set of information resources under the same direct management control that shares common functionality. It normally includes hardware, software, information, data, applications, communications, and people [i.e. infrastructure] (NIST, 2006).

Information: Data that has been analyzed and possibly combined with other data in order to extract meaning, and to provide context (OMB, 2005).

Information Domains: Logical groupings of information that act as the building blocks of the DHS conceptual data model.

Information Objects: An aggregation of data that represents discrete information about a subject area (OMB, 2005). Information objects make up the lowest level of the DHS conceptual data model. An example of a USCG information object is "Waterborne Terrorist Attack" in the "Cases" subject area.

Information Perspective: Depicts the information needed to perform the USCG mission and business activities. Examples include information about vessels, cargo, parties, patrols, rescues, boardings, and investigations.

Information Sharing: The development of policies for sharing classified and sensitive but unclassified homeland security information. Source: GAO-06-385

Infrastructure: All of the elements employed in the delivery of IT services to users, including the computing, network and telecommunications hardware, software, database management and operating systems software, middleware, help desk, Network Operations Center/Security Operations Center, people, documentation, and video (DHS, 2007).

Intel: Systems used to receive and process intelligence information.

Inventory: Detailed-level information product that provides a lot of descriptive information, usually in a spreadsheet or database format.

IRB: The IRB reviews DRs that affect C4&IT investments. After initial review, the IRB can request an EA Assessment from the Enterprise Architecture Board (EAB). They may also ask for assessments from other subject matter experts. The IRB issues a decision after reviewing the findings and recommendations of the EAB and/or SMEs).

Management Controls: The security controls (i.e., safeguards or countermeasures) for an information system that focus on the management of risk and the management of information system security (NIST, 2006)

CGEA

Measurement Indicator: The specific measures, (e.g., number and/or percentage of customers satisfied) tailored for a specific Business Reference Model (BRM) LOB or sub-function, agency, program, or IT initiative (OMB, 2007). An example of a measurement indicator for the USCG mission area of "Safety" is the "Percent of all mariners in imminent danger rescued."

Model: Mid-level information products that graphically map the connections between elements in the CGEA to show relationships between processes, entities, and the information they exchange.

Operational Controls: The security controls (i.e., safeguards or countermeasures) for an information system that primarily are implemented and executed by people (as opposed to systems) (NIST, 2006).

Performance Perspective: Provides information about the measurement of USCG strategic and business outcomes. This includes information from the U.S. USCG Posture Statement (2009 Budget in Brief) and the OMB Performance Assessment Rating Tool (PART).

Performance Targets: Performance measures with targets and time frames. For example, in FY 2007 the performance target for the "Ports, waterways, and coastal security" mission area was to reduce maritime terrorism risk by 15 percent.

Product Manager (PM): The Product Manager is responsible for updating the CGEA with revisions resulting from DRs.

Product: Includes hardware, the physical part of a computer system, and software, the programs or other instructions that computer needs to perform specific tasks (Harvard University, 2002).

Profile: High-level, strategic view of CGEA information for the executive decision-maker. As the satellite view of CGEA, profiles use graphic visualization to show complex information in a condensed format.

PSB: The PSB supports the EAB by reviewing DRs for C4&IT products and standards. After reviewing each DR for potential impact on Coast Guard mission execution and the CGEA, the PSB provides their findings and recommendations to the EAB.

Program: An organizational unit within an agency with responsibility for delivering on a clearly defined mission or service area. Scope of a program may be determined by legislation, executive order, or by organizational structure of the agency to achieve its mission (OMB, 2005). Major programs at the USCG include Rescue 21, Command 21, Deepwater and NAIS.

Security Perspective: Describes how the USCG assures the confidentiality, integrity, availability, and privacy of USCG information. NIST standards are an example of the type of information managed in this perspective.

Segment Architecture: Focuses on business outcomes of an individual LOB and defines a simple roadmap for a core mission area, business service, or enterprise service.

Sensors: Systems that sense, detect, and collect data.

Service Access and Delivery: The collection of Access and Delivery Channels used to leverage the Service Component, and the legislative requirements governing its use and interaction.

Service Interface and Integration: The discovery, interaction, and communication technologies joining disparate systems and information providers. SOAs leverage and incorporate Service Interface and Integration standards to provide interoperability and scalability.

Service Oriented Architecture: A paradigm for organizing and utilizing distributed capabilities that may be under the control of different ownership domains. It provides a uniform means to offer, discover, interact with and use capabilities to produce desired effects consistent with measurable preconditions and expectations (OASIS, 2005).

CGEA

Service Platform and Infrastructure: The collection of platforms, hardware, and infrastructure standards enabling Component Based Architectures and Service Component reuse.

Service Perspective: Includes information about systems, applications, and capabilities that support USCG information requirements. Marine Information for Safety and Law Enforcement (MISLE) is an example of an application system.

Solution Architecture: Includes functions or processes within a segment with a focus on operational outcomes with a great level of detail. Scope is typically limited to a single project where it is used to implement all or part of a business solution.

Sponsor (or Sponsor Representative): The C4&IT sponsor begins the process by submitting a Decision Request (DR) to the Facilitator when he or she needs a major change to an existing C4&IT project, product or standard; a new project, product or standard; or a change to the CGEA.

Standard: A published statement on a topic specifying characteristics, usually measurable, that must be satisfied or achieved in order to comply with the standard (NIST, 2006).

Subject Areas: Topics of interest shared within a community that make up the middle level of the DHS conceptual data model. The full list of subject areas form the context for an organization (OMB, 2005). For instance, the "Cases" subject area contains information about types of USCG-related cases, such as "Fisheries Law Enforcement" and "Waterborne Terrorist Attack.".

Support Equipment: Special purpose equipment that is not applicable to any other category in the framework.

Technical Controls: The security controls (i.e., safeguards or countermeasures) for an information system that are primarily implemented and executed by the information system through mechanisms contained in the hardware, software, or firmware components of the system (NIST, 2006).

Technology Perspective: Shows the underlying technology infrastructure that supports USCG service delivery. An example of the type of information found in this perspective is the USCG Data Network (CGDN+).

Vesonics: Systems used to operate a vessel.

FOR OFFICIAL USE ONLY
PAGE WITHELD

INTENTIONALLY BLANK

CGEA

Appendix F: Document Changes

Version	Description	Date
1	Initial Release	05/16/2007
2	Second Release	03/14/2008

CGEA

References

Federal Enterprise Architecture Program Management Office, U.S. Office of Management and Budget. (2006, December). FEA Practice Guidance. Retrieved December 26, 2007, from http://www.whitehouse.gov/omb/egov/documents/FEA_Practice_Guidance.pdf

Information Technology Group, Harvard University. (2002). Readiness for the Networked World: A Guide for Developing Countries. Retrieved March 12, 2008, from http://cyber.law.harvard.edu/readinessguide/glossary.html

Krafzig, D., Banke, K., Slama, D. (2005). *Enterprise SOA: Service-Oriented Architecture Best Practices.* Upper Saddle River, NJ: Prentice Hall.

National Institute of Standards and Technology, U.S. Department of Commerce. (2006, April 25). NIST Glossary of Key Information Security Terms. NIST IR 7298. Retrieved October 6, 2007, from http://csrc.nist.gov/publications/nistir/NISTIR-7298_Glossary_Key_Infor_Security_ Terms.pdf

OASIS (2005, May). Oasis Reference Model for Service-Oriented Architecture (SOA RM). Retreived February 28, 2008, from www.**oasis**-open.org/committees/download.php/19679/soa-rm-cs.pdf

The Open Group (2007, March). The Open Group Architecture Framework Version 8.1.1, Enterprise Edition. Retrieved December 26, 2007, from https://store.opengroup.org/catalog/ product_info.php? products _id=51

U.S. Government Accountability Office. (1998, April 27). Business Process Re-engineering Glossary. Retrieved October 6, 2007, from http://www.gao.gov/special.pubs/bprag/bprgloss.htm

U.S. Office of Management and Budget. (2005, May). OMB Enterprise Architecture Assessment Framework Version 1.5. Retrieved December 27, 2007, from http://www.whitehouse.gov/ omb/egov/documents/OMB_Enterprise_Architecture_Assessment_v1.5_FINAL.pdf.

U.S. Office of Management and Budget. (2005). "APPENDIX A: Glossary of Selected Terms." FEA Data Reference Model, 2005. Retrieved February 20, 2008, from http://www.whitehouse.gov/OMB/egov/documents/DRM_2_0_Final.pdf.

U.S. Office of Management and Budget. (2007, October). FEA Consolidated Reference Model (CRM) Version 2.3. Retrieved December 26, 2007, from http://www.whitehouse.gov/omb/egov/a-2-EAModelsNEW2.html

U.S. Department of Homeland Security, Management Directives System, MD Number: 0007.1, Issue Date: 03/15/2007, INFORMATION TECHNOLOGY INTEGRATION AND MANAGEMENT

CGEA

Notes

CGEA

Notes

CGEA

Notes

CGEA

UNITED STATES COAST GUARD

Enterprise Architecture

Executive Handbook

Release 2 - March 2008