MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (MANPOWER AND
RESERVE AFFAIRS)
ASSISTANT SECRETARY OF THE NAVY (MANPOWER AND
RESERVE AFFAIRS)
ASSISTANT SECRETARY OF THE AIR FORCE (MANPOWER
AND RESERVE AFFAIRS)
DEPUTY ASSISTANT SECRETARY OF DEFENSE (FORCE
HEALTH PROTECTION AND READINESS)
DEPUTY ASSISTANT SECRETARY OF DEFENSE (CLINICAL
POLICY AND PROGRAMS)
DEPUTY ASSISTANT SECRETARY OF DEFENSE (HEALTH
BUDGETS AND FINANCIAL POLICY)
DEPUTY DIRECTOR, TRICARE MANAGEMENT ACTIVITY
JOINT STAFF SURGEON
COMMANDER, JOINT TASK FORCE NATIONAL CAPITAL
REGION MEDICAL
CHIEF INFORMATION OFFICER, TRICARE MANAGEMENT
ACTIVITY
PROGRAM EXECUTIVE OFFICER, JOINT MEDICAL
INFORMATION SYSTEMS
PROGRAM EXECUTIVE OFFICER, DEFENSE HEALTH
SERVICES SYSTEMS, CLINICAL SYSTEMS
DIRECTOR, MILITARY HEALTH SYSTEM ELECTRONIC
HEALTH RECORD CENTER

SUBJECT:  Military Health System Enterprise Architecture Guide

I am pleased to announce release of the Military Health System (MHS) Enterprise Architecture (EA) Guide. The attached guide supports the MHS CIO's responsibilities for development and maintenance of EA, which complies with the Department of Defense's responsibilities under the Clinger-Cohen Act of 1996, Public Law 104-106.  The MHS CIO is responsible for providing strategic direction and governance of MHS EA and ensuring that an integrated, aligned, and comprehensive EA is developed, maintained, and implemented.  The guide document describes the roles, responsibilities, governance, and procedures for MHS EA.

All MHS organizations should follow this guide in their interactions with the MHS CIO and the Office of the Chief Information Officer's (OCIO's) staff.  It is recommended that the CIOs of the Service Medical Departments incorporate this document into their EA policies and procedures.  This document should be referenced in contracts for MHS Information Technology systems.

Should you have any questions, the point of contact for this guidance in the MHS OCIO, EA Division, is Ms. Stephanie Boyles.  Ms. Boyles may be reached at (703) 681-8788, or Stephanie.Boyles@tma.osd.mil.


Jonathan Woodson, M.D.

Attachment:
As stated

cc:
Surgeon General, United States Army
Surgeon General, United States Navy
Surgeon General, United States Air Force

**Military Health System (MHS)**
**Office of the Chief Information Officer (OCIO)**

# MHS Enterprise Architecture Guide

**Version 1.0**

**Prepared by:**
**MHS Enterprise Architecture Committee**

**1/23/2012**

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# 1. BACKGROUND

The Military Health System (MHS) Chief Information Officer (CIO) has responsibilities for the development and maintenance of Enterprise Architecture (EA), which complies with the Department of Defense (DoD) responsibilities under the Clinger-Cohen Act of 1996, Public Law 104-106.  To support MHS CIO EA responsibilities, the MHS Enterprise Architecture Committee (EAC) was established under the MHS CIO-Management Board (MB) to:

- Guide the development, validation, publication and maintenance of necessary EA policies, standards, procedures and artifacts that are compliant with DoD and MHS standards as well as the Federal Health Architecture

- Serve as an integrating forum that connects Information Technology (IT) capabilities to the strategic and business needs of the MHS

- Serve as the bridge between business/functional planning and IT strategy

- Encourage and maintain collaboration between the functional and technical communities

- Establish processes and tools to achieve the defined goals and deliverables

- Derive realization of business value from the EA and MHS IT investments

The EAC is publishing the MHS EA Guide in support of responsibilities identified in its charter.

# 2. PURPOSE AND SCOPE

The MHS EA Guide establishes guidance and describes the roles, responsibilities, governance, development, maintenance, and procedures for MHS EA.  The MHS EA will describe the people, processes, technologies, and standards required to accomplish the mission of the MHS, realize its vision, and achieve its goals and objectives.  EA does so by defining the DoD health care enterprise in an explicit and formal manner, so that it can be used by MHS to manage complexity, respond to change, and perform its operations efficiently and effectively.  The vision of the MHS EA is to enable MHS to achieve its desired states of integration, interoperability, flexibility, reusability, reduced time-to-market, and adaptability.

# 3. AUDIENCE

The MHS EA Guide is intended for use across the MHS community.  The guide applies to all MHS programs, projects, and initiatives that result in systems, capabilities, data, and/or processes. It is recommended that the CIOs of the Service Medical Department incorporate this document into their EA procedures.

# 4. DEFINITIONS AND REFERENCES

4.1   References used in this document are contained in Appendix A: Reference Documents.

4.2   MHS supporting EA Roles are described in Appendix B: Participating EA Roles.

4.3    Terms used in this document are contained in Appendix C: Terms of Reference.

4.4    Acronyms are defined in Appendix D: Acronym List.

# 5.   MHS ENTERPRISE ARCHITECTURE OPERATIONAL DESCRIPTION

## 5.1   APPLICABILITY

The MHS EA Guide supports the MHS CIO's responsibilities for development and maintenance of Enterprise Architecture.  Within the MHS, EA shall be developed, maintained and applied to guide investment portfolio strategies and decisions, define capability and interoperability requirements, establish and enforce standards, guide security and information requirements, establish business rules, and provide a basis for transition from the existing environment to future state architecture while adhering to MHS standards, principles, architectural frameworks and processes.  All MHS Information Technology (IT) programs/projects participate in the process of developing, acquiring and maintaining the required data for the MHS EA including solution architectures.

## 5.2   PROCEDURES

5.2.1  The MHS EA will:

5.2.1.1    Be used as the primary tool for aligning investments and programs with MHS strategic goals, objectives, and desired outcomes as identified in the MHS Information Management (IM)/IT Strategic Plan, and Veterans Affairs (VA)/DoD Joint Executive Council Joint Strategic Plan.

5.2.1.2    Serve as the foundation for all MHS assessments and functional, engineering, and resource decisions.

5.2.1.3    Serve as a strategic information asset, and shall be appropriately secure, visible, and accessible for MHS stakeholders, federal, state, and corporate partners.

5.2.1.4    Follow Service Oriented Architecture (SOA) principles.  To the maximum extent feasible, MHS programs will pursue a SOA, and use core services provided by the Defense Information Systems Agency's Net-Centric Enterprise Services (NCES) (i.e., NCES SOA Foundation, content discovery, and delivery services).  MHS programs will also adhere to government-wide mandates such as the "Cloud First" initiative described in Reference (a).

5.2.1.5    Adhere to the DoD Architecture Framework and evolve to the most current version depending on cost, schedule, and functionality in accordance with Reference (b).

5.2.1.6    Conform to and align with Federal policy and guidance, legislative mandates, federal initiatives, and oversight requirements in accordance with References (c), (d), (e), and (f).

5.2.1.7    Include baseline and target architectures and transition states to the level of detail needed to support an MHS-wide enterprise perspective without duplicating architecture details maintained by the MHS Central or Service Medical system program offices.

5.2.1.8    Incorporate and adhere to strategies for EA compliance, integration, federation, publication, communication, configuration management, and quality assurance.

5.2.1.9    Be guided by an established set of principles (also referred to as EA tenets) in accordance with its socialization, compliance, uniformity, and adherence to DoD net-centric principles.

5.2.1.10   Consist of contributions from all MHS Components, programs, projects, and initiatives that result in systems, capabilities, data, and/or processes.

5.2.1.11   Be compliant with the appropriate DoD architectures such as Human Resource Management EA, DoD Business Enterprise Architecture, DoD Information Enterprise Architecture, and DoD EA.

5.2.1.12   Be updated and published at least annually each Fiscal Year, or as directed based on EAC validated modifications and updates.

5.2.1.13   Be guided by common EA development standards, modeling methodologies, modeling guidelines, and vocabulary.

5.2.1.14   Incorporate DoD/VA interagency architecture and standards.  The EAC will coordinate with appropriate DoD/VA governance and collaboration groups as needed in accordance with Reference (g).

5.2.1.15   Include EA compliance assessment measures.

5.2.1.16  Show the relationship between the business solution architecture in the business portfolio(s) (e.g. Integrated Electronic Health Record) and the IT capabilities in the IT portfolio (e.g. Identity and Access Management) that enable multiple business functional areas.

5.2.2.  All MHS IT programs/projects and their program/project officers shall participate in the process of developing, acquiring, and maintaining the required data for MHS EA including solution architectures.

5.2.3.   MHS EA (along with capability and solution architectures comprising MHS EA) shall be registered in the DoD Architecture Registry System (DARS) as prescribed by DoD policy in accordance with Reference (h).

5.2.4.  Architecture shall be developed, maintained, and applied in support of any major DoD processes such as, but not limited to, the Joint Capabilities Integration and Development System, Defense Acquisition System, MHS Portfolio Management, Defense Business Transformation, and Business Capability Lifecycle in accordance with References (e), (f), (i), (j), (k), (l), (m), and (n).

5.2.5.  The MHS EA repository will be managed by MHS Office of the Chief Information Officer (OCIO).  The MHS EA repository administrator is located within the OCIO Enterprise Architecture Division (EAD).

5.2.6.  The MHS EA governance process will be guided by the EAC, established under the authority of the CIO-MB Charter.  The EAC is co-chaired by the director of the OCIO EAD and the Director of the MHS Information Management Division (IMD).  The Director of the Enterprise Architecture Division is in the MHS CIO organization.

**APPENDIX A: REFERENCE DOCUMENTS**

(a) Office of Management and Budget (OMB), 25 Point Implementation Plan to Reform Federal Information Technology Management, December 9, 2010

(b) DoD CIO Memorandum, The Department of Defense Architecture Framework, Version 2.02, August 2010

(c) OMB Circular No. A-130, Management of Federal Information Resources, 2003

(d) Public Law 104-106: Clinger-Cohen Act of 1996, February 10, 1996

(e) Section 2222 of Title 10, United States Code

(f) DoDD 5105.82, Deputy Chief Management Officer (DCMO) of the Department of Defense, October 17, 2008

(g) Department of Defense Directive (DoDD) 8000.1, Management of DoD Information Enterprise, February 10, 2009

(h) Directive-Type Memorandum (DTM) 09-013, "Registration of Architecture Descriptions in the Department of Defense's (DOD's) Architecture Registry System (DARS)," September 16, 2010

(i) DoDD 5000.01, The Defense Acquisition System, May 12, 2004 (Certified current as of November 20, 2007)

(j) DoD Instruction (DoDI) 5000.02, Operation of the Defense Acquisition System, December 8, 2008

(k) Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 6212.01E, Interoperability and Supportability of Information Technology and National Security Systems, December 15, 2008

(l) CJCSI 3170.01G, "Joint Capability Integration and Development System," March 1, 2009

(m) DoDI 8115.02, Information Technology Portfolio Management Implementation, October 30, 2006

(n) DTM 11-009, Acquisition Policy for Defense Business Systems (DBS), December 9, 2011

**APPENDIX B: PARTICIPATING EA ROLES**

**B.1   MHS Chief Information Officer (CIO)**

The MHS CIO supports MHS EA by:

- Providing IM/IT strategic direction of MHS EA, including governance and commitment from MHS organizations.
- Ensuring that an integrated, aligned, and comprehensive EA is developed, maintained, and implemented.
- Applying EA in IM/IT investment decision making.
- Ensuring enterprise data management processes are defined and incorporated into IM/IT governance processes.
- Describing impacts of key regulatory requirements and policy as they relate to EA.
- Supporting how EA describes and documents an enterprise, supports the organization's mission, and evolves over time.
- Engaging and communicating IM/IT strategic EA direction to the MHS senior leadership, and enhancing MHS Components' understanding and appreciation for EA.
- Promoting the benefits of EA to Service executives, MHS executives, and other stakeholders via collaborative forums.

**B.2   MHS Chief Technology Officer (CTO)/Chief Architect (CA)**

The MHS CTO supports MHS EA by:

- Developing, modifying, and ensuring adherence to OCIO strategic plans, assessing policy needs, and developing policies to govern IT activities; providing guidance to IT management, staff, and customers.
- Providing technology evolutionary strategy for MHS and ensure it is reflected in MHS EA; align the IT vision with the overall business strategy of the organization and functional requirements in order to deliver high quality IT throughout the organization.
- Ensuring guidance on technology investment requirements and strategy reflect MHS EA strategies.
- Evaluating the feasibility of new systems design, best practice methodologies, and recommend the adoption of the most promising new methodologies, through research, development, testing, and evaluation, including determining business impact to the enterprise.
- Reviewing the final proposed major IT investments for alignment with MHS EA and make funding recommendations.  Ensure investment decisions align with the future state of EA.
- Overseeing and recommending the IT framework, technology procedures, and practices, as well as policies and structures for managing the underlying IT infrastructure captured in MHS EA.
- Coordinating information sharing of MHS EA with IT vendors and suppliers, data center partners, and outsourcing agencies related to buying IT assets that support the efficient running of the IT infrastructure.

## B.3 MHS Chief Medical Information Officer (CMIO)

The MHS CMIO supports the MHS EA by:

- Providing analysis of and recommending actions to ensure MHS EA reflects medical informatics trends and approaches.
- Recommending and championing incorporation of functional and application strategies into MHS EA designed to improve health care (clinical, business, and readiness) outcomes.
- Reviewing investment decisions for alignment with established strategies, MHS EA principles, and any established future state of EA.
- Using MHS EA to evaluate and help de-conflict the relationship and touch points between business architecture, information architecture, and technical architecture to refine sequencing of actions needed to achieve change management and health care outcomes.
- Being the principal voice for clinical matters related to MHS EA decisions.

## B.4 MHS Enterprise Architecture Division (EAD)

The EAD supports the MHS EA by:

- Managing MHS EA through implementation of an integrated, aligned, and comprehensive EA.
- Ensuring EA complies with applicable DoD and industry standards, supports MHS strategic priorities, and contributes to improving MHS mission performance.
- Leading and managing MHS EA policy, guidance, standards, and governance to support MHS strategic priorities and planning, contribute to improving MHS mission performance, and assure compliance with applicable laws, regulations, and standards.
- Managing MHS IM/IT strategic planning and alignment of MHS EA to strategic goals and priorities.
- Applying EA policy, guidance, principles, standards, and best practices to MHS Portfolio Management (PfM) processes.
- Supporting Defense Business Transformation and ensuring MHS EA supports MHS section of the DoD Enterprise Transition Plan and March Congressional Report.
- Providing EA advice and decision support at all decision-maker levels, including integration councils, PfM boards, and other committees. Ensuring investment decisions align with the future state of EA.
- Coordinating within MHS to ensure MHS EA reflects goals and priorities of MHS enterprise.
- Coordinating with external architecture partners to ensure MHS EA Components are incorporated into other Federal or DoD EAs.
- Identifying the use of EA across the system development life cycle and recommend architecture requirements.
- Assess and evaluate any architecture for compliance with MHS EA.

## B.5    MHS Information Management Division (IMD)

IMD supports MHS EA by:

- Developing and maintaining MHS business architecture products aligned with the MHS IM/IT strategy and stakeholder prioritization, including architecture analysis, capturing of existing business processes, and applying Business Process Re-Engineering techniques based on DoD and industry best practices.
- Providing senior-level stakeholder and sponsor participation. Coordinating with architecture teams on standards insertion and renewal, assigning business-line resources (subject matter experts), and overseeing review of business architecture products.
- Providing resources to support the development of MHS IM/IT portfolio business, reference, and data architecture, including strategies and a standard representation of all information related to MHS IM/IT portfolio capabilities, functions, activities, processes, and data needs. Providing integration and quality assurance services for all MHS IM/IT portfolio architectural efforts to ensure quality and alignment.
- Providing support, guidance, and integration services to help the Information Managers ensure requirements and business architecture development efforts meet MHS quality standards, guidelines, and policies established by the MHS EAD.  Coordinating with the MHS EAD to ensure items are acceptable for inclusion into MHS EA repositories.
- Directing, managing, and evaluating architecture developed in support of the Business Process Re-engineering processes required for Defense Business Information Technology certification.
- Developing and maintaining data management processes, procedures, and policies; and providing recommendations on guidance and policy for data architecture development.

## B.6    Military Medical Services

The Military Medical Services support MHS EA by:

- Engaging and communicating MHS IM/IT strategic direction and EA to ensure Military Medical Services have understanding and appreciation for EA.
- Promoting the benefits of EA to Service executives, MHS executives, and other stakeholders via collaborative forums.
- Ensuring commitment and participation as a voting member in the Enterprise Architecture Committee (EAC).
- Implementing EA compliance measures determined by the EAC.
- Ensuring that integrated, aligned, and comprehensive solution architecture for the systems under their purview is developed, maintained, and implemented.
- Providing architecture for Service systems interfacing with MHS centrally-managed systems as required for PfM, Defense Business Transformation, and system review processes.

## B.7    Enterprise Architecture Committee (EAC)

The EAC supports the MHS EA by:

- Guiding governance of MHS EA under the authority of the MHS CIO-MB.  EA is a domain within the IM/IT governance structure.

- Facilitating and guiding the development, validation, publication, and maintenance of necessary EA policies, standards, procedures, and artifacts that are compliant with DoD and MHS standards, and Federal Health Architecture.
- Serving as an integrating forum that connects IT capabilities to the strategic and business needs of MHS.
- Serving as the bridge between business/functional planning and IT strategy.
- Encouraging and maintaining collaboration between the functional and technical communities to establish processes and tools to achieve its goals and deliverables, as well as derive realization of business value from EA and MHS IT investments.
- Performing all responsibilities as documented in its charter.
- Ensuring responsibility for the deliverables specific to the tasks identified in the EAC Charter.

## B.8   Program/Project Officers (PO)

The POs support MHS EA by:

- Developing and maintaining solution architecture in the MHS EA repository throughout the system development lifecycle.
- Developing and submitting architecture artifacts into the DARS in accordance with policy procedures.
- Directing and managing the development of the solution architecture products for the Defense Business Transformation Information Technology certification.
- Ensuring solution architecture complies with the MHS EA and other enterprise architecture depending on the process, project or initiative supported.

## APPENDIX C: TERMS OF REFERENCE

| TERM | DESCRIPTION |
|---|---|
| Business EA | DoD Business Enterprise Architecture (BEA) is an EA for the DoD Business Mission Area and defines the business transformation priorities, the business capabilities required to support those priorities, and the combinations of enterprise systems and initiatives that enable those capabilities. |
| CIO-MB | The MHS Chief Information Officer-Management Board (CIO-MB) is a forum for senior IT managers to guide the resolution and/or elevation of IT issues that require cross-Defense Health Program (DHP) component actions and support the Portfolio Management Oversight Council in the governance, oversight, direction, and execution for a broad spectrum of health Information Technology (IT) programs and initiatives, including: technical architecture and infrastructure requirements, engineering services, enterprise architecture (EA), the Office of Chief Information Officer (OCIO) portfolio, information assurance, and the policies and standards needed to support these initiatives. Additionally, it allows MHS IT leadership to assess the coordination of engineering activities that cut across the Program Offices or DHP components; and address CIO IT execution issues and compliance with Military Department, DoD and Federal IT policies. |
| DoD Architecture Framework | DoD Architecture Framework (DoDAF) provides the structure for organizing architecture concepts, principles, assumptions, and terminology about operations and solutions into meaningful patterns to satisfy specific DoD purposes. DoDAF establishes a common vocabulary for architecture development, exchange of architecture information, and for facilitating interoperability between architectural descriptions. DoDAF 2.02 is the prescribed methodology for architecture development per DoD CIO Promulgation Memorandum, dated August 2010. |
| DoD EA | DoD Enterprise Architecture (DoD EA) is a strategic information asset base, which defines the information necessary to perform the organization's mission, technologies necessary to perform the mission, and transitional processes for implementing new technologies in response to changing mission needs (adapted from version 2.0 of the DoDAF). |
| Enterprise Architecture | An Enterprise Architecture (EA) describes the enterprise in logical terms (such as interrelated business processes and business rules, information needs and flows, and work locations and users), as well as in technical terms (such as hardware, software, data, communications, security attributes, and performance standards). It provides these perspectives both for the enterprise's current, or "as is," environment, and for its target, or "to be," environment, and it provides a transition plan for moving from the "as is" to the "to be" environment. |

| TERM | DESCRIPTION |
|---|---|
| MHS | Military Health System (MHS) is the enterprise responsible for providing health care to Active Duty and retired U.S. military personnel and their dependents. The mission is to provide health support for the full range of military operations and sustain the health of military personnel. MHS includes: Office of the Assistant Secretary of Defense for Health Affairs (OASD (HA)), the Medical Departments of the Army, Navy, Marine Corps, Air Force, Coast Guard, and Joint Chiefs of Staff; the Combatant Command Surgeons; TRICARE Managed Care Providers; TRICARE Management Activity; Force Health Protection and Readiness; Uniformed Services University of the Health Sciences, and the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury. |
| MHS EA | The MHS EA is a federation of descriptions that provide context and rules for accomplishing the mission of the MHS. These descriptions are developed and maintained by each MHS component including OASD (HA), TRICARE Management Activity, the Medical Services Departments, and other stakeholders. The components define the level of architecture granularity needed to support decisions and meet Federal, DoD and MHS policy, guidance, requirements, and standards. The federation of these MHS descriptions collectively defines the people, processes, and technology of the "current environment" and "target environment"; provides the framework used to manage and align technology, people, operations and projects to a target environment and includes the roadmap for transition to the target environment. |
| PfM | The MHS Portfolio Management (PfM) Directorate provides Capital Planning and Investment Control support to the Deputy Assistant Secretary of Defense and CIO Portfolio owners throughout the select, control and evaluation phases of CPIC. Specifically, PfM is responsible for managing central IM/IT Portfolio development and approval; central IM/IT and OCIO funds execution, tracking and reporting; managing the consolidated processing of contract actions; overseeing and standardizing IM/IT Portfolio capability costing; Defense Health Program IM/IT budget submission and Program Objective Memorandum development, based on approved Portfolio, Service and OCIO requirements; Defense Business Transformation certification; and annual performance planning and reporting, and support for overall IM/IT governance. |

**APPENDIX D: ACRONYM LIST**

| ACRONYM | DESCRIPTION |
|---|---|
| CIO | Chief Information Officer |
| CIO-MB | Chief Information Officer Management Board |
| CJCSI | Chairman of the Joint Chiefs of Staff Instruction |
| CMIO | Chief Medical Information Officer |
| DARS | Department of Defense Architecture Registry System |
| DoD | Department of Defense |
| DoDD | DoD Directive |
| DoDI | DoD Instruction |
| EA | Enterprise Architecture |
| EAC | Enterprise Architecture Committee |
| EAD | Enterprise Architecture Division |
| IMD | Information Management Division |
| IM/IT | Information Management/Information Technology |
| IT | Information Technology |
| MHS | Military Health System |
| OASD (HA) | Office of the Assistant Secretary of Defense for Health Affairs |
| OCIO | Office of the Chief Information Officer |
| PfM | Portfolio Management |
| PO | Program/Project Officer |
| VA | United States Department of Veterans Affairs |