

## **Commonwealth of Virginia**



**Information Technology Resource Management**

# **ENTERPRISE ARCHITECTURE STANDARD**

**Virginia Information Technologies Agency (VITA)**

## ITRM Publication Version Control

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### Document Version History

<b>Version Information Table</b>		
<b>Version</b>	<b>Date</b>	<b>Description</b>
EA225-00	07/10/2006	<ul style="list-style-type: none"> <li>• Base Document (a compilation of new and revised enterprise technical architecture standards except for the security standards).</li> </ul>
EA225-01	10/21/2007	<ul style="list-style-type: none"> <li>• Updated Preface</li> <li>• Provided examples for ITRM Publication Version Control</li> <li>• Updated and clarified Section 6, Networking and Telecommunications</li> <li>• Updated and clarified the personal computing portion of Section 7               <ul style="list-style-type: none"> <li>▪ This update removed the prohibition of DVD writers (see change in PLA-R-08)</li> </ul> </li> <li>• Clarification of the location of the security standards in Section 8</li> <li>• Updated links</li> <li>• Clarified glossary entries</li> </ul>
EA225-02	10/1/2008	<ul style="list-style-type: none"> <li>• Updated and clarified: the Preface; Section 1, Introduction; Section 5, Integration Domain; Section 6, Networking and Telecommunications Domain; and Section 8, Security Domain standards list.</li> </ul>
EA225-03	4/1/2009	<ul style="list-style-type: none"> <li>• General administrative updates to the introduction and name change from Enterprise Technical Architecture Standard to Enterprise Architecture Standard</li> <li>• Section 3 ETA Database Domain – updated Database and Other Data Access Methods Technology Component Standard Table DB-S-01</li> <li>• Section 6 ETA Networking and Telecommunications Domain – Added a topic and four (4) existing Internet Domain Naming requirements to this section. Eliminates the need for a separate standard on Virginia Government Internet Domain Naming.</li> <li>• Section 8 ETA Security Domain – administrative changes to reference the current versions of existing Security Standards</li> <li>• Section 9 Enterprise Systems Management Domain- added domain wide requirement ESM-R-23 related to standard operations tools as mandatory components of services provided.</li> </ul>

Version Information Table		
Version	Date	Description
EA225-04	6/19/2009	<ul style="list-style-type: none"> <li>Section 2, ETA Applications Domain has been changed to include all Web Site related development and maintenance requirements. Please note that only those requirements that were added or changed from those standards are highlighted with a side bar in Section 2. This change and the corresponding Web Site Topic report eliminate the need for a separate Web Site policy, standard and guideline; and an Internet Privacy Guideline.</li> </ul>
EA225-05	1/15/2010	<ul style="list-style-type: none"> <li>Section 1, Introduction was changed for the Glossary reference and to reflect a refined definition of “strategic” as it relates to technology standard tables.</li> <li>Section 2, WEB-R-41 requirement corrected.</li> <li>Section 7, updated to reflect substantial changes to the Platform Domain, including new Desktop Productivity Tools Topic Report. <ul style="list-style-type: none"> <li>New requirements: PLA-R-36 through 43 have been added</li> <li>New technology component standard tables PLA-S-17 through 23 have been added</li> <li>Requirements PLA-R-01, 04, 05, 09, 10, 12, 14, 16, 26, 27, 28, 30, 34, and 35 have been rescinded</li> <li>Technology component standard tables PLA-S-07, 14 and 15 have been rescinded</li> </ul> </li> <li>Section 10, the Glossary section was removed and combined with all other ITRM IT Glossaries to create a new separate document. The COV ITRM IT Glossary that may be referenced on the ITRM Policies, Standards and Guidelines web page at <a href="http://www.vita.virginia.gov/library/default.aspx?id=537">http://www.vita.virginia.gov/library/default.aspx?id=537</a></li> </ul>

## Identifying Changes in Sections

- Take note of the Version Information Table entries above
- Note that page header dates vary throughout the document depending on when or if some portion of a particular section has been updated.
- Take note of vertical lines in the left margin for changes in Requirements (EXA-R-*nn*). The specific changes in wording are noted using italics and underlines. The following examples demonstrate how the reader may identify requirement updates, and changes:

**EXA-R-01**    **Technology Standard Example with No Change** – The text is the same. The text is the same. The text is the same.

**EXA-R-02**    **Technology Standard Example with Revision** – The text is the same. *A wording change, update or clarification is made in this text.*

**EXA-R-03**    **Technology Standard Example of New Standard** – *This standard is new.*

- Examples of Technology Component Standard Table changes: No vertical line will appear beside updated Component Tables. Here a revision is indicated by a date and an action in the title of the table.

Table EXA-S-01: Example Table Change Technology Component Standard <i>Updated: [date]</i>	
<b>Strategic:</b>	No change. No Change. <i>This is a change. This is a clarification. This is an addition.</i>
<b>Emerging:</b>	No change in this bullet and second bullet moved to strategic
<b>Transitional/Contained:</b>	No change
<b>Obsolescent/Rejected:</b>	No Change

Table EXA-S-02: Example Table No Change Technology Component Standard <i>Reviewed: [date]</i>	
<b>Strategic:</b>	No change
<b>Emerging:</b>	No change
<b>Transitional/Contained:</b>	No change
<b>Obsolescent/Rejected:</b>	No Change

Table EXA-S-03: Example New Table Technology Component Standard <i>New: [date]</i>	
<b>Strategic:</b>	New standards
<b>Emerging:</b>	New standards
<b>Transitional/Contained:</b>	New standards
<b>Obsolescent/Rejected:</b>	New standards

## Preface

### Publication Designation

ITRM Standard EA225-05: Enterprise Architecture Standard

### Subject

Enterprise architecture implementation

### Effective Date

January 15, 2010.

### Supersedes

COV ITRM Standard EA 225-04, June 19, 2009

### Scheduled Review:

The requirements identified in this standard for the technical domain components of the Enterprise Architecture shall be reviewed on an annual basis.

### Value Statement

This document provides a consolidated list of requirements (in the form of a standard) from the Commonwealth's Enterprise Architecture, including the eight domains that make up the Enterprise Technical Architecture. Provides a single source for Enterprise Architecture related requirements for use by agencies and their business partners.

### Authority

*Code of Virginia*, §2.2-2007 (Powers of the CIO)

*Code of Virginia*, § 2.2-2010 (Additional powers of VITA)

*Code of Virginia*, §2.2-2458 (Powers and duties of the Board [ITIB])

### Scope

This standard is applicable to all Executive Branch state agencies and institutions of higher education (hereinafter collectively referred to as "agencies") that are responsible for the management, development, purchase and use of information technology resources in the Commonwealth of Virginia. This standard does not apply to research projects,

research initiatives or instructional programs at public institutions of higher education.

### Purpose

This standard establishes direction and technical requirements which govern the acquisition, use and management of information technology resources by executive branch agencies.

### General Responsibilities

#### *The Chief Information Officer of the Commonwealth (CIO)*

- Directs the formulation and promulgation of ITRM standards

#### *The Virginia Information Technologies Agency (VITA)*

- Drafts the ITRM standard
- Updates the ITRM standard
- Uses requirements in the ITRM standard when establishing contracts, reviewing procurement requests, agency IT projects, developing services and managing services

#### *The Information Technology Investment Board (ITIB, the Board)*

- Approves the standard requirements or delegates approval to the CIO

#### *Executive Branch Agencies*

- Provide input during the development of requirements and the drafting of the standard
- Provide input for the review and updating of the standard
- Comply with the requirements established
- Use standards information in planning for the acquisition and modification of information technology resources
- Apply for exceptions when necessary

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## Section 1. Introduction

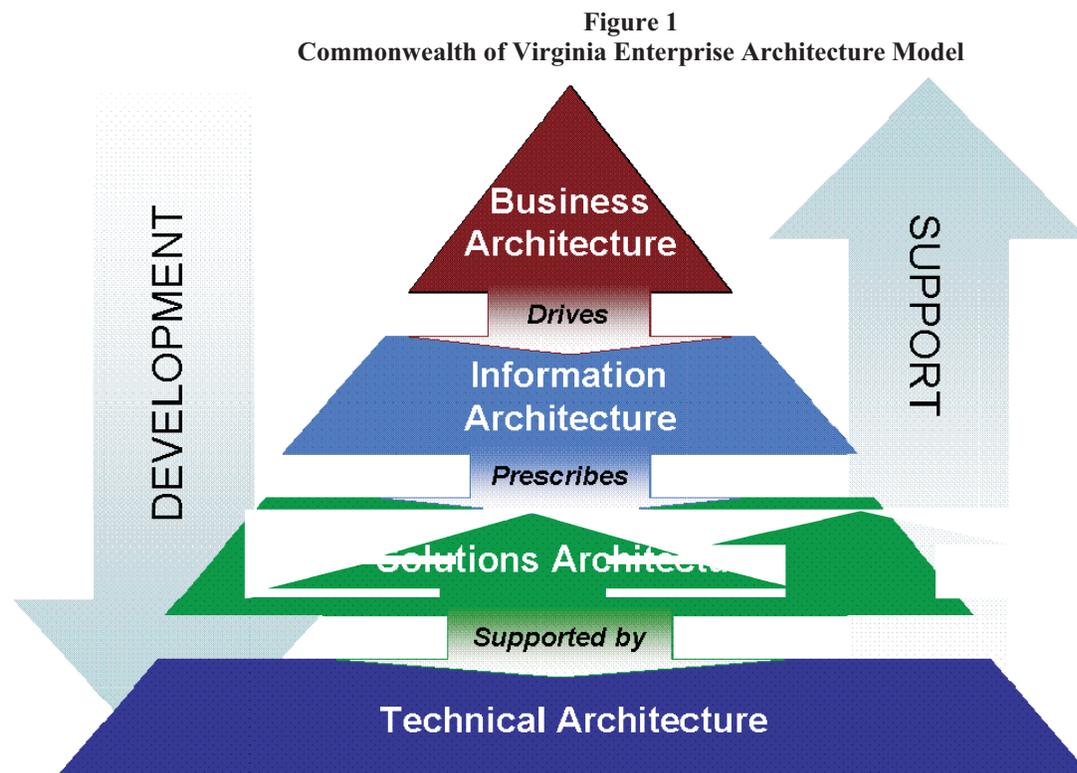
### *Background*

The Commonwealth’s Enterprise Architecture is a strategic asset used to manage and align the Commonwealth’s business processes and Information Technology (IT) infrastructure/solutions with the State’s overall strategy.

The Enterprise Architecture is also a comprehensive framework and repository which defines:

- the models that specify the current (“as-is”) and target (“to-be”) architecture environments,
- the information necessary to perform the Commonwealth’s mission,
- the technologies necessary to perform that mission, and
- the processes necessary for implementing new technologies in response to the Commonwealth’s changing business needs.

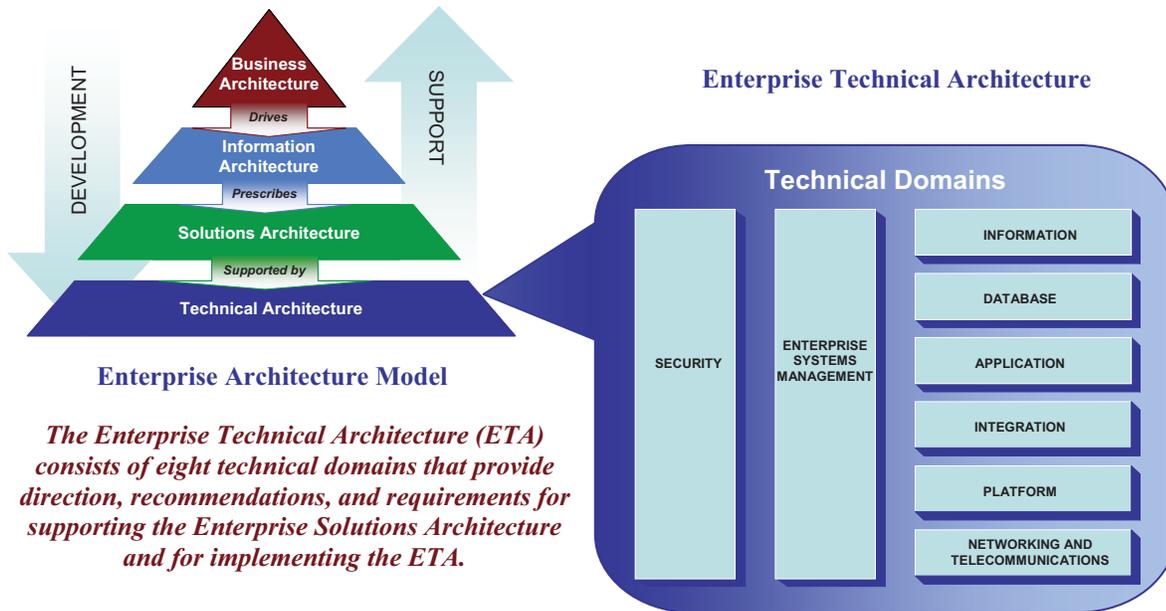
The Enterprise Architecture contains four components as shown in the model in Figure 1.



The Business Architecture drives the Information Architecture which prescribes the Solutions Architecture that is supported by the Technical (technology) Architecture.

The Enterprise Technical Architecture (ETA) shown in Figure 2 consists of eight technical domains that provide direction, recommendations and requirements for supporting the Solutions Architecture and for implementing the ETA. The ETA guides the development and support of an organization's information systems and technology infrastructure.

**Figure 2**  
**ETA Relationship to the Enterprise Architecture**



Each of the domains is a critical piece of the overall ETA. The Networking and Telecommunications and Platform Domains address the infrastructure base and provide the foundation for the distributed computing. The Enterprise Systems Management, Database, Application, and Information Domains address the business functionality and management of the technical architecture. The Integration Domain addresses the interfacing of disparate platforms, systems, databases and applications in a distributed environment. The Security Domain addresses approaches for establishing, maintaining, and enhancing information security across the ETA.

### ***Standard Inputs***

The requirements and technology component standard tables contained in this standard have been consolidated from inputs from EA workgroups and the domain teams responsible for researching, providing recommendations, and developing the Commonwealth's Enterprise Architecture.

### ***Definition of Key Terms***

This standard presents two forms of architecture direction for agencies when planning or making changes or additions to their information technology:

- **Requirements** – statements that provide mandatory Enterprise Architecture direction.

- Technology Component Standard Tables – tables that indicate what technologies or products agencies may acquire at a particular point in time. The requirements are mandatory when acquiring a new or replacing an existing technology or product. The following terms and definitions are applicable to the technology component standard tables presented in this standard:

### **Strategic:**

This technology is considered a strategic component of the Commonwealth's Enterprise Architecture. Strategic technologies define the desired "to-be" state of the Commonwealth.

Before any updated or new Strategic technology can be deployed it must complete a formal operational review. As part of this review, agencies or vendors that provide the services needed to deploy, maintain and/or support that technology must:

- Perform the appropriate testing
- Establish the needed technical support
- Follow a formal Change Management process
- Develop any required images
- Obtain the appropriate operational reviews and approvals

In addition to the operational review, customer agencies should also:

- Perform additional testing on impact to agency specific applications
- Assess impact on business processes
- Assess training needs

The decision to deploy a Strategic technology is a business decision that is made by the agencies or vendors that provide the services needed to deploy, maintain and/or support that technology and the customer agencies. Input from the operational and customer reviews should also be included when creating implementation plans for new or updated Strategic technologies.

### **Emerging:**

This technology requires additional evaluation in government and university settings. This technology may be used for evaluative or pilot testing deployments or in a higher education research environment. Any use, deployment or procurement of this technology beyond higher education research environments requires an approved Commonwealth Enterprise Architecture Exception. The results of an evaluation or pilot test deployment should be submitted to VITA's Policy, Practice and Architecture Division for consideration in the next review of the Enterprise Architecture for that technology.

### **Transitional/Contained:**

This technology is not consistent with the Commonwealth's Enterprise Architecture strategic direction. Agencies may use this technology only as a transitional strategy for moving to a strategic technology. Agencies currently using this technology should migrate to a strategic technology as soon as practical. A migration or replacement plan should be included as part of the Agency's IT Strategic Plan. New deployments or procurements of this technology require an approved Commonwealth Enterprise Architecture Exception.

### **Obsolescent/Rejected:**

This technology may be waning in use and support, and/or has been evaluated and found not to meet current Commonwealth Enterprise Architecture needs. Agencies shall not make any procurements or additional deployments of this technology. Agencies currently using this technology should plan for its replacement with strategic technology to avoid substantial risk. The migration or replacement plan must be included as part of the Agency's IT Strategic Plan.

## ***Glossary***

As appropriate, terms and definitions used in this document can be found in the COV ITRM IT Glossary.

## ***Agency Exception Requests***

Agencies that want to deviate from the requirements and/or technology standards specified in this standard may request an exception using the *Enterprise Architecture Change/Exception Request Form*. All exceptions must be approved prior to the agency pursuing procurements, deployments, or development activities related to technologies that are not compliant with this standard. The instructions for completing and submitting an exception request are contained in the current version of *COV ITRM Enterprise Architecture Policy*.