COMMONWEALTH OF VIRGINIA

Enterprise Architecture (EA)

**Information Technology
Resource Management (ITRM)**

**Enterprise
architecture
standard**

Preface

Publication Designation
Enterprise Architecture Standard (EA225)

Subject
Enterprise Architecture

Effective Date
Completion of guidance document process, expected to be July 2024

Supersedes
Past versions (see above table)

Scheduled VITA Review
Periodically or as needed

Authority

Code of Virginia, §2.2-2006
(Definitions)

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

Code of Virginia, §2.2-2007.1
(Additional duties of the CIO relating to information technology planning and budgeting)

Code of Virginia, § 2.2-2009
(Additional duties of the CIO relating to security of government information)

Code of Virginia, § 2.2-2012
(Additional powers and duties related to the procurement of information technology)

Code of Virginia, §2.2-603(F)
(Authority of agency directors, with respect to IT and data security and risk management)

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 *the framework for enterprise architecture* direction and technical requirements, which govern the acquisition, use and management of information technology resources by executive branch agencies.

General Responsibilities

Chief Information Officer of the Commonwealth (CIO)
Agency head of VITA. Responsible for and approves statewide technical and data policies, standards, guidelines, and requirements for information technology, including with respect to information technology planning, procurement, and security

Virginia Information Technologies Agency (VITA)
At the direction of the CIO, VITA leads efforts that draft, review, and update technical and data policies, standards, guidelines, and requirements for information technology.

VITA uses requirements in IT technical and data related documents when establishing contracts; reviewing procurement project, and security and budget requests and strategic plans, and when developing and managing IT enterprise and infrastructure services

Executive Branch Agencies
Provide input and review during the formulation, adoption and update of statewide technical and data policies, standards and guidelines for information technology.

Comply with the requirements established by COV policies and standards. Apply for exceptions to requirements when necessary.

Related ITRM Policies, Standards, and Guidelines
Enterprise Architecture Policy (EA200)

Reviews

Updates to this publication and opportunities for review occur through the regulatory process for guidance documents.

Publication Version Control

Please direct questions related to this publication to VITA's Enterprise Architecture Division (EA) at ea@vita.virginia.gov. VITA notifies the Agency Information Technology Resources (AITRs) and other interested parties of revisions to this document.

The following table contains a history of the revisions to this publication.

Version	Date	Revision Description
225-15.2	10/31/2019	Last copy of webpage version
225-15.3	5/21/2024	Administrative revision, focused on reformatting the document to delineate the guidance document framework from the individual technical publications.
225-15.4	5/20/2025	Links updated due to updated VITA website. No content updates.

Table of Contents

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

Acronyms

AITR: Agency Information Technology Resource

CIO: Chief Information Officer of the Commonwealth

EA: Enterprise Architecture

IT: Information Technology

ITRM: Information Technology Resource Management

ORCA: Online Review and Comment Application

PSG: Policy, Standard and Guideline

VITA   Virginia Information Technologies Agency

Glossary

As appropriate, terms and definitions used in this document can be found in the COV ITRM IT Glossary, at https://www.vita.virginia.gov/it-governance/glossary/

Enterprise Architecture Standard

Enterprise Architecture Components and Requirements

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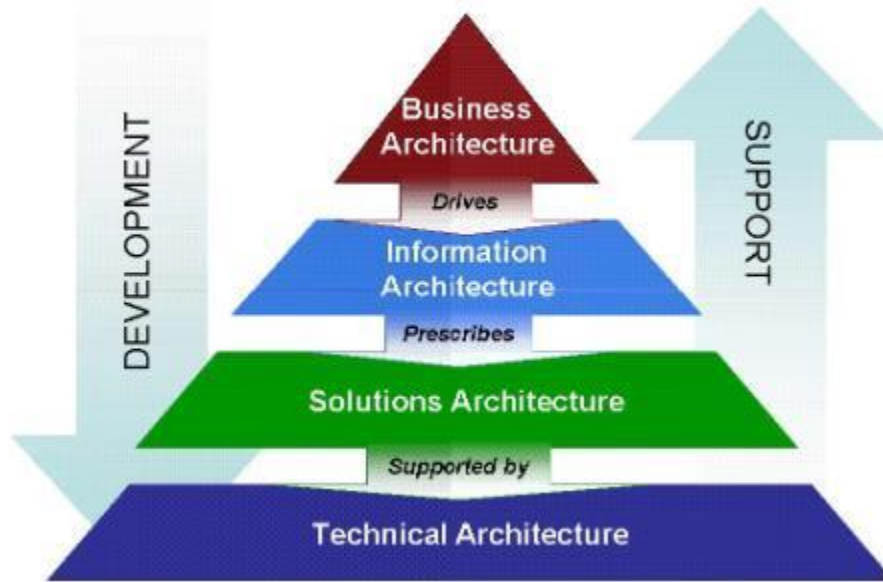

Figure 1 – COV Enterprise Architecture Model

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

Standard Inputs

The requirements and technology component standard tables contained in this standard have been consolidated from inputs from EA workgroups, Customer Account Managers (CAMs), Agency Information Technology Resources (AITRs), the Architecture & Innovation Governance Forum (AIGF) and the Platform Service Delivery Forum (PSDF) when 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:

- Requirement Statements – This standard's requirement statements present mandatory Enterprise Architecture direction for agencies when planning or making changes or additions to their information technology.
- Technology Roadmaps – Roadmaps indicate what technology or products agencies may acquire at a particular point in time, when acquiring a new or replacing an existing technology or product.

Agency Exception Requests

The requirements included within this document are mandatory. Agencies that want to deviate from the EA requirements and/or technology standards may request an exception using the Enterprise Architecture

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Change/Exception Request Form in [VITA's Archer application](#). 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.

Enterprise Business Architecture – EBA

The EBA documents the business strategy, governance, organization and business functions of state government, and identifies which organizations perform those functions. The EBA provides a look at the big picture of state government from a business perspective to define who we are, what we do and where we want to go.

The Enterprise Business Model (EBM) of the EBA was developed to define the "what we do" in terms of business functions independent of the organizations that perform those functions. That model was developed from the Federal Enterprise Architecture's Business Reference Model and was validated through workshops of agency business leaders. These workshops mapped individual agency business functions to the EBM, thus creating the Commonwealth's "as-is" business architecture for Executive Branch agencies.

For additional information, readers can use the EBA application or consult published EBA reports on the COV EA225 website at:

https://www.vita.virginia.gov/policy--governance/enterprise-architecture/

Enterprise Information Architecture – EIA

Government and government services are normally information driven. Government organizations constantly and dynamically gather and process data to create information needed to support their missions, whether it is disaster recovery, environmental protection, citizen security or other direct services. The EIA provides the framework/model and methodology that will enhance each agency's ability to quickly discover, access and understand data and create the information needed to make critical decisions and support agency business functions.

The EIA is designed to provide a common framework for the cost effective sharing of government information across organizational lines while respecting the security, privacy and appropriate use of that information. It enables agency leaders to manage information as a Commonwealth asset to better serve the citizens of Virginia. It increases the Commonwealth's agility in drawing out the value of information as a strategic mission asset.

EIA reports and publications may be found on the COV EA225 website at:

https://www.vita.virginia.gov/policy--governance/enterprise-architecture/

Enterprise Solutions Architecture – ESA

The expectations of government to deliver more services, to deliver them better and more cheaply presents a challenge for the Commonwealth. Well-engineered automated solutions [1] can increase productivity in service delivery to help meet these expectations.

Commonwealth agencies make significant investments in these automated solutions in order to carry out the business of Virginia government. [2] The ESA provides the framework/model and methodology that supports the transition from silo-based, application-centric and agency-centric information technology investments to an enterprise approach where solutions are designed to be flexible. This allows agencies to take advantage of shared and reusable components, facilitates the sharing and reuse of data where appropriate and makes the best use of the technology infrastructure that is available.

The ESA needs to contain a unified view of solutions to achieve this increase in reuse and the reduction of solution complexity. To support this, the framework/model and methodology includes inventories, governance/guidance, and the relationships between agency applications and the other EA component architectures.
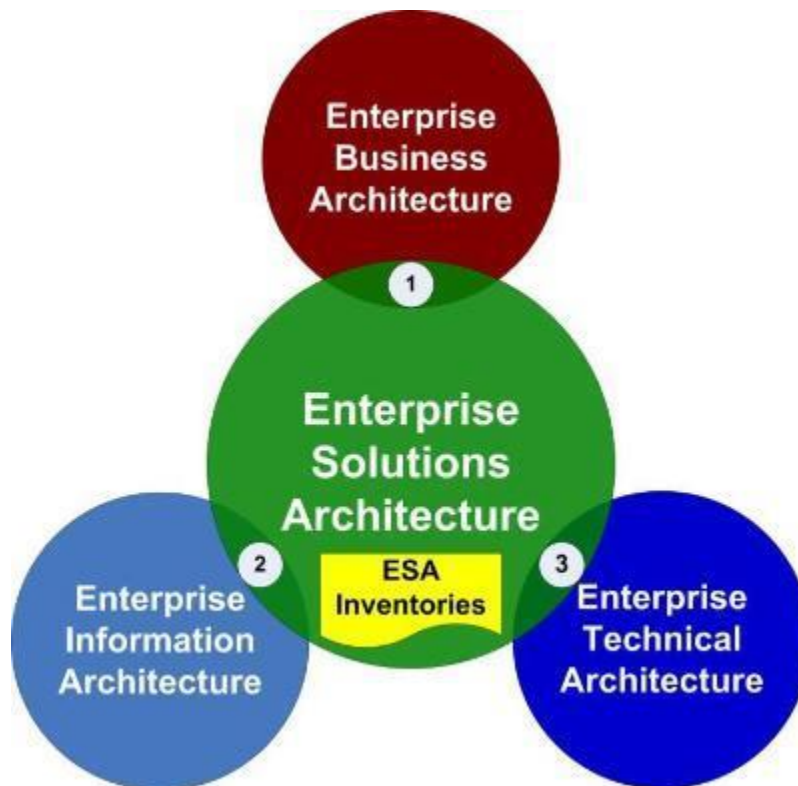

Figure 2 – COV ESA: Unified View of Solutions

The unified view of solutions includes the Business (EBA), Information (EIA) and Technology (ETA) perspectives. This view also shows how agency solutions/applications connect to:

- The business of the Commonwealth - by sub-lines of business
- Data Exchanges
- Infrastructure Services - by Software Tools (Operating Systems, Languages, etc.)

ESA reports and publications may be found on the COV EA225 website at:

https://www.vita.virginia.gov/policy--governance/enterprise-architecture/

Enterprise Technical Architecture – ETA

The ETA guides the development and support of an organization's information systems and technology infrastructure.

ETA reports and publications may be found on the COV EA225 website at:

https://www.vita.virginia.gov/policy--governance/enterprise-architecture/