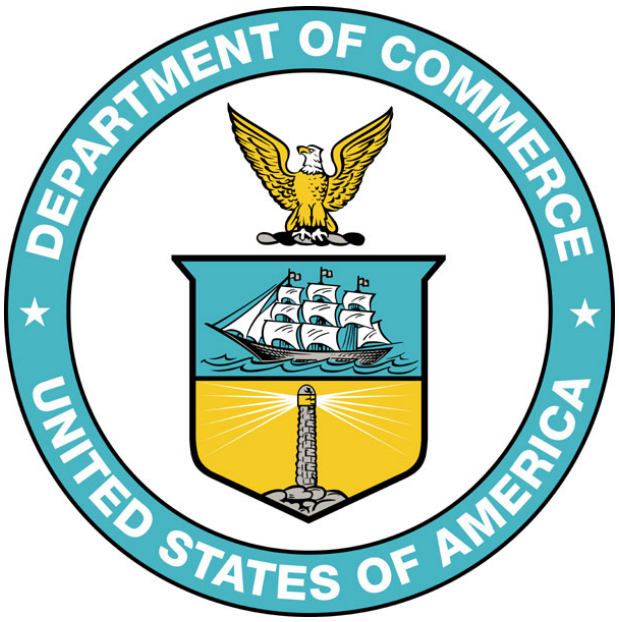

United States Department of Commerce

Enterprise Architecture Program Support

Enterprise Architecture

Template

Version Number 1.2

October 3, 2007

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1. Introduction

The purpose of this document is to provide a framework for completing the Baseline and Target Architectures for each of the Department of Commerce (DOC) operating units (OU), and provide a mechanism for "rolling up" the operating unit architectures into a single DOC Enterprise Architecture (EA).

The structure of this template is based on the Federal Enterprise Architecture (FEA) Reference Models, and the Completion Area of the OMB Enterprise Architecture Assessment Framework v2.1. It is designed to provide a hierarchical view of the Architecture and document the vertical linkages between each of the FEA Reference Models.

This template provides guidance for the type and format of information needed for the Department's EA submission to OMB. Each operating unit should develop documentation sufficient to describe its architecture that is beyond this template. For services provided at the Departmental level (e.g., human resources, financial management, supply chain management, and administrative management), provide only those architectural features that are not accounted for at the Departmental level and are unique to your operating unit. Additionally, each operating unit can continue to use its current format to capture the description of its complete EA, or that information documented in the operating unit EA that is not requested in this template. The template is at the end of this document. Submit the completed template by email to Tom Pennington, tpennington@doc.gov by November 23, 2007.

The following are required documents:

- For EA maturity self-assessments, use the OMB EA Assessment Framework v2.1.
- For completing the EA tables, use the template at the end of this document
- Provide all requested artifacts as MS Word documents.

The following is a listing of the major reference artifacts available:

- DOC Strategic Plan
- Operating unit's Strategic IT Plan (available from your CIO)
- Operating unit's Operational IT Plan (available from your CIO)
- Capital Planning and Investment Control Guide
- OMB Enterprise Architecture Assessment Framework v2.1
- OMB Federal Enterprise Architecture Consolidated Reference Models

2. Completion Capability Area

The Completion Capability area of the OMB Enterprise Architecture Assessment Framework requires agencies to associate their enterprise architecture views with the views defined by the Federal Enterprise Architecture Reference Models, to optimize the use of information technology in support of their respective missions and strategic goals. Section 2.1 addresses the Baseline Architecture, and Section 2.2 addresses the Target Architecture. For each program, fill in all of the information in section 2.

2.1. Baseline Architecture

The Baseline Architecture is a description of the operating unit as it currently exists. It should be used as the starting point for all planning activities. The Baseline Architecture comprises the business, performance, data, application, and infrastructure architecture layers. **Complete the template for each Business Area and sub-function performed by the operating unit.** The following are detailed instructions to assist in completing the template

2.1.1. Identification Section

The identification section provides the name of the organization that performs the business function, the chief architect of that organization and the program manager responsible for managing the business function.

Below is a description of the fields in the Identification Section.

Operating Unit Name – Enter the name of the operating unit.

Chief Architect – Enter the name of the operating unit chief architect.

Program Manager – Enter the name of the program manager responsible for the line of business.

2.1.2. Business Architecture

An effective EA must be business-driven, requiring alignment between the IT architecture layers and the business processes.

The FEA Business Reference Model (BRM) describes the major business areas of the Federal Government, the major Lines of Business (LoB) within each area, and the sub-functions within each LoB. For each operating unit Business Function, identify the FEA components listed in Business Architecture section. Information on the BRM can be found in the Consolidated Reference Models document noted on page 1.

Below is a description of the fields in Business Architecture Section.

BRM Business Area – Identify the BRM Business Area that maps to the business function/focus area. If you are mapping to the Services for Citizens Business Area, a mapping to the appropriate Mode of Delivery must be included.

BRM Line(s) of Business – Identify the BRM Line(s) of Business that maps to the business function/focus area.

BRM Sub-function – Identify the BRM Sub-function(s) that maps to the BRM Line(s) of Business identified in column 4 and that apply to the business function/focus area.

OU Business Function/Focus Area – Provide the OU business function/focus area. This is a further division of the LoB and sub-function that focuses on a single mission task or function. It provides a finer level of granularity within the given LoB.

Description of the OU Business Function/Focus Area – Provide a brief description of the OU business function/focus area emphasizing how this business function supports the overall mission of the department.

2.1.3. Performance Architecture

Each operating unit's EA must clearly demonstrate how it furthers the Department's strategic objectives and aligns to well-defined performance goals. To achieve this, it is important to identify meaningful performance measurement indicators that are aligned with the FEA Performance Reference Model (PRM). Use the Performance Architecture section to map your performance architecture to the DOC strategic plan. The reference information needed in this section can be found in the DOC Strategic Plan, the operating unit strategic plan, and the FEA Consolidated Reference Models document as noted on page 1. This section is for steady-state programs and the performance measures should include the current fiscal year (2008) as well as the next two (FY2009, FY2010).

Below is a description of the fields in the Performance Architecture section.

DOC Strategic Goal – Provide the DOC Strategic Goal that your business function/focus area supports.

DOC Strategic Objective – Provide the DOC Strategic Objective(s) related to the DOC Strategic Goal identified in Row 1 that relates to your Line of Business and sub-function.

OU Level Strategic Goal - Identify the OU level Strategic Goal(s)/Objective(s) that map to the business function/focus area.

Fiscal Year – There should be entries for the current fiscal year and the next four, if possible, in order to capture the incremental improvements for each of the performance measures indicated.

PRM Area – Identify the PRM Measurement Area that pertains to the Line of Business and sub-function.

PRM Category – Identify the PRM Measurement Category that pertains to the Line of Business and sub-function.

PRM Grouping – Identify the PRM Measurement Grouping that pertains to the Line of Business and sub-function.

Measurement Indicator – Identify the PRM Measurement Indicator that pertains to the Line of Business and sub-function.

Baseline Value – Provide the OU baseline value for this metric.

Target Metric – Provide the OU target value for this metric.

Actual Results – Provide the actual results achieved where available.

2.1.4. Data Architecture

The FEA Data Reference Model (DRM) provides a standard means by which data may be described, categorized, and shared. These are reflected within each of the DRM's three standardization areas:

- Data Description: Provides a means to describe data uniformly, thereby supporting its discovery and sharing.
- Data Context: Facilitates discovery of data through an approach to the categorization of data according to classification standards. Additionally, it enables the definition of authoritative data sources.
- Data Sharing: Supports the access and exchange of data where access consists of ad hoc requests (such as a query of a data asset), or the exchange of fixed, recurring transactions between parties. It is enabled through capabilities provided by both the Data Context and Data Description standardization areas.

The terminology used in the DRM may be unfamiliar to many people, however the concepts are familiar. It is a means of identifying data files or data feeds (Exchange Package), where the data come from (Supplier), where it goes (Consumer), what organization is responsible for the data (Data Steward), where

the data is physically stored (Data Location), and the format of the data (Data Classification). Much of the data originating in the Department has definition, format, and content standards already in place, such as Demographic Census data, weather and climate data, economic data, etc. Reference the formal standards or agreements that describe the data. The scope of the standard refers to whether it is a DOC standard, a Federal Government Standard, an International Standard, governed by an International Treaty; etc.

Below is a description of the fields in the Data Architecture section.

Data Exchange Package - Provide a description of each type of data exchange package that is used to perform the business function/focus area identified in column 1. Specifically, what data is transferred from one system to another?

Supplier – Provide the supplier of the data exchange package, i.e., what system and organization are the source of the data.

Consumer – For each data exchange package, identify the consumer based on the business function/focus area. Where does the data go? Which Line of Business sub-function is the recipient of the data?

Data Steward – For each data exchange package, identify the data steward (responsible organization). This organization is responsible for data maintenance and data quality for this specific type of data.

Data Location – For each data exchange package, identify where the data is stored. Be as specific as possible. This includes the name of the system it is stored on, and the physical location of that system.

Data Classification – For each data exchange package, identify it as one of the following:

- Structured (defined in a database or structured file system
- Unstructured (data with a free form format such as a document or report),
- Semi-structured (data that has characteristics of both structured and unstructured data such as e-mail);

Data Standard - For each data exchange package, identify the data standard(s) that apply.

Scope of Standard – For each data exchange package and its data standard(s), provide a description of the scope of that particular standard (e.g., is the standard a community wide standard, mandated, Departmental level, OU level).

2.1.5. Application Architecture

The Service Component Architecture defines discrete operational tasks or services that are used to build and provide a business function. The Service Component Reference Model (SRM) is a tool to organize and standardize these components so they can be identified for reuse.

Identify all of the SRM components employed in the LoB sub-function, and enter them into the Application Architecture section of the template. Information on the Service Component Reference Model is located in the FEA Consolidated Reference Models document as noted on page 1. In many, if not most instances, a major application will be composed of two or more service components. Evaluate the application carefully and list all of the significant service components that make it up.

Below is a description of the columns in Application Architecture section.

Major Application Name – Identify the major applications used to perform the business tasks in this sub-function.

SRM Service Domain - Identify the SRM Service Domain(s) that relate to the Major Application.

SRM Service Type – For each SRM Service Domain identified, provide a mapping to the appropriate SRM Service Type(s) that apply.

SRM Service Component – For each SRM Service Type(s), provide a mapping to the appropriate SRM Service Component(s) that apply.

2.1.6. Infrastructure Architecture

The Infrastructure Architecture is a perspective of the overall agency EA that provides information about the agency's hardware and software environment. **For each Service Component identified in the Application Architecture section, there should be one or more Technical Reference Model (TRM) components that define the physical implementation of the service.** Information on the TRM can be found in the FEA Consolidated Reference Models document as noted on page 1.

Below is a description of the columns in the Infrastructure Architecture section.

SRM Service Component – Copy each service component entry from the Application Architecture section**.**

Hardware / Software Component – Identify the hardware and/or software component(s) used to provide the SRM Service Component.

TRM Service Area - Identify the TRM Service Area that relates to the hardware or software component.

TRM Service Category - Identify the TRM Service Category within the TRM Service Area that relates to the hardware or software component.

TRM Service Standard –Identify the TRM Service Standard within the TRM Service Category that relates to the hardware or software component.

2.1.7. Interfaces to External Systems

An application system typically interacts with other application systems at some point in its normal processing cycle. When planning modifications to a system, the effect of the change on upstream and downstream processes must be determined and appropriately planned for. Documenting these interfaces is a crucial piece of the comprehensive EA. Complete this section for each interface identified within this Line of Business and sub-function combination.

Below is a description of the fields in this section.

External System Name - The name of the system on the other end of the interface.

Owner – The organization that is responsible for the other system.

Data Exchanged – The name of the Data Exchange Package identified in the Data Architecture section above.

Interface Type - Is the process automatic or manually initiated? Is the exchange performed over a network or by use of magnetic media (tape)?

Frequency of Exchange – How often does the exchange occur?

2.2. Target Architecture

The Target Architecture describes the EA in a future state (e.g., in the next 3-5 years) and includes a description of those investments needed to close the gap between the baseline architecture and the target state. **The Target EA should include all planned changes to the existing baseline, regardless of funding status in the 3-5 year view of the Target.** The target architecture captures development initiatives/investments that will be initiated over the 3-5 year period.

2.2.1. Identification Section

The identification section provides the name of the organization that performs the business function, the chief architect of that organization and the program manager responsible for managing the business function.

Below is a description of the fields in Identification Section.

Project Name – Enter the name of the investment or initiative that is associated with completing this section of the target architecture.

Project Manager – Enter the name of the individual responsible for the execution of the project.

Exhibit 53/300 UPI Code - If available, enter the identification number from the most recent Exhibit 53 or Exhibit 300 that covers the funding requested for this project.

2.2.2. Performance Architecture

The Target Performance Architecture measures the performance of changes to the existing baseline. Performance Measure for each initiative must be meaningful, quantitative where possible, and demonstrate that the initiative/investment is achieving the intended mission goal.

The directions for and explanation of the Target Performance Architecture section are the same as those for the Baseline Performance Architecture section, except that the measures in this section refer to the target state, NOT the current state, and should NEVER be the same as the current baseline. Additionally, the column for the actual result has been removed since this is for the target and actual results have not yet been realized. Finally, a new field has been added below.

Identified Performance Gap / Required New Capability - This describes the business drivers that are driving the project, and what the project must accomplish.

2.2.3. Data Architecture

The Target Data Reference Model describes the changes and/or additions to the data of the Line of Business, and how this data is acquired, processed, and disposed of.

For this section, discuss only the changes from the existing baseline, what new or altered data is required for this initiative.

2.2.4. Application Architecture

The Target Application Architecture describes the changes and additions to the applications required to provide new or enhanced capabilities required by the Target Business Architecture and associated Performance Architecture metrics.

The directions for and explanation of the Target Application Architecture section are the same as those for the Baseline Application Architecture section with the addition of one field described below.

New / Updated - For new application components, enter **NEW**, for updated or modified ones enter **UPDATED**.

2.2.5. Infrastructure Architecture

The Target Infrastructure Architecture describes the changes and additions to the infrastructure required to provide new or enhanced capabilities required by the Target Business Architecture and associated Performance Architecture metrics.

The directions for and explanation of the Target Infrastructure Architecture section are the same as those for the Baseline Infrastructure Architecture section with the addition of one field described below.

New / Updated - For new infrastructure components, enter **NEW**, for updated or modified ones enter **UPDATED**.

2.2.6. Interfaces to External Systems

The directions for and explanation of this section are the same as those for section Baseline Interfaces to External Systems section with the addition of one field described below.

New / Updated - For new interfaces, enter **NEW**, for updated or modified ones enter **UPDATED**.

3. Transition Strategy and Sequencing Plan

The EA Transition Strategy is a critical component of an effective EA practice. It describes the overall plan for the Department and its operating units to achieve the target EA within a specified timeframe. It clearly links investments to the target architecture and defines the priorities that drive the Sequencing Plan. The Sequencing Plan provides a Departmental view of all investments and a means of capturing the timing of the investments and their contribution to the major lines of business of the Department.

For all initiatives in your organization, provide the following information in the Transition Strategy and Sequencing Plan table.

Initiative Name – The name of the initiative.

Initiative Line of Business – The primary line of business the initiative supports.

Start Date – The date actual work starts on the initiative.

Completion Date – The date the initiative will be ready for use.

Major Milestone Dates – The dates for any significant milestones in the development of the initiative. This could include the completion of a phase, completion of a major component, etc. It should also include any milestones related to IPv6 migration and Homeland Security Presidential Directive-12 (HSPD-12) integration for the initiative.

Milestone Description – A brief explanation of the accomplishment the milestone represents.

4. Enterprise Architecture Template

4.1 Baseline Enterprise Architecture

Identification Section	
Operating Unit Name:	
Chief Architect:	
Program Manager:	
Business Architecture	
BRM Business Area	
BRM Line of Business	
BRM Sub-function	
OU Business Function	
Brief description of the OU Business Function	
Performance Architecture	
DOC Strategic Goal:	
DOC Objective:	
OU Strategic Goal/Objective:	

Fiscal Year	PRM Area	PRM Category	PRM Grouping	Measurement Indicator	Baseline Value	Target Metric	Actual Results
FY2006							
FY2007							
FY2008							

Data Architecture	
Description of Data Exchange Package	
Supplier	
Consumer	
Data Steward	
Data Location	
Data Classification	
Data Standard	
Scope of Standard	

Application Architecture

Major Application Name	SRM Service Domain	SRM Service Type	SRM Service Component

Infrastructure Architecture

SRM Service Component	Hardware / Software Component	TRM Service Area	TRM Service Category	TRM Service Standard

Interfaces to External Systems

External System Name	Owner	Data Exchanged	Interface Type	Frequency of Exchange

4.2 Target Enterprise Architecture

Identification Section						
Project Name:						
Project Manager:						
Exhibit 300 UPI Code:						
Performance Architecture						
Identified Performance Gap / Required New Capability						
Fiscal Year	**PRM Area**	**PRM Category**	**PRM Grouping**	**Measurement Indicator**	**Baseline Value**	**Target Metric**
FY2008						
FY2009						
FY2010						

Data Architecture
Changes/Additions Required:

Application Architecture				
Major Application Name	**SRM Service Domain**	**SRM Service Type**	**SRM Service Component**	**New or Updated**

Infrastructure Architecture					
SRM Service Component	Hardware / Software Component	TRM Service Area	TRM Service Category	TRM Service Standard	New or Updated

Interfaces to External Systems					
External System Name	Owner	Data Exchanged	Interface Type	Frequency of Exchange	New or Updated

4.3 Transition Strategy and Sequencing Plan

Operating Unit Sequencing Plan					
Initiative Name	Initiative Line Of Business	Start Date	Completion Date	Major Milestone Dates	Milestone Description