

# **United States Department of Commerce**

## **Enterprise Architecture Program Support**

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# **Enterprise Architecture Configuration Management Plan**

Version 1.0

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## Document Change History

Version Number	Official Release Date	Summary of Changes
1.0	2/10/2006	Initial Release

## Approvals

This Configuration Management Plan has been presented to and approved by:

	Date	Signature
Chief Enterprise Architect	2/10/06	Thomas J Pennington
Chair, DOC Enterprise Architecture Review Board	2/10/06	Thomas J Pennington
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## 1. Introduction

This document describes and defines the organization, roles, processes, and policies for the Configuration Management (CM) of the Department of Commerce (DOC) Enterprise Architecture Repository. The intent of this document is to establish a formal CM plan for DOC to ensure the accuracy and authenticity of all Enterprise Architecture artifacts, and to provide a mechanism for the formal approval these artifacts by the DOC Enterprise Architecture Review Board and the DOC Chief Information Officer.

### 1.1 Purpose

The Enterprise Architecture CM plan defines the process, and tools required to perform the CM activities associated with the DOC Enterprise Architecture project.

### 1.2 Scope

This document defines the DOC Enterprise Architecture project's configuration management activities to be performed, the schedule of activities, and tools required. EA configuration management supports the organization in maintaining, tracking, and providing status accounting of the configured environment.

This configuration management plan applies to all artifacts that are listed in the DOC Enterprise Architecture Project Plan deliverables. In addition, it covers the final versions of the EA documents from each of the DOC operating units and any supporting documentation issued with them.

The broader scope of approving the changes to the baseline in regard to the content of the change is the scope of the DOC Architecture Review Board. This document deals with the mechanics of handling change from the point of view of insuring integrity and maintaining accuracy of the artifacts under its control; it does not pass judgment of the content of the artifacts.

### 1.3 Reference Documents

The following additional DOC documentation and templates will be used on this project and are referenced in this document.

- DOC System Development Life Cycle document
- DOC Enterprise Architecture Repository
- DOC Enterprise Architecture Advisory Group Charter
- DOC Enterprise Architecture Review Board Charter
- Commerce Information Technology Review Board Charter

## **2. Configuration Management Artifacts**

This section introduces the work process and information flow through the Configuration Management (CM) process. The identification of specific roles and responsibilities is also defined in this section.

### **2.1 Baseline Version**

In order for any form of change management to function, there must be a fixed baseline from which all change is documented. Since DOC has been developing its EA for several years prior to bringing it under a CM process, the baseline will consist of the most recent approved and published version of the EA prior to commencement of the CM process.

### **2.2 Composition of Baseline**

The following list of EA artifacts comprises the set of baseline EA artifacts:

- EA Governance Plan
- EA Program Plan
- Performance Architecture
- Business Architecture
- Data Architecture
- Service Component Architecture
- Technology Architecture
- Transition Strategy
- EA Models
- EA Training Plan
- EA Communication Plan
- Configuration Management Plan
- EA Framework Document
- EA Business Questions Inventory

Each of these artifacts will be fully controlled under the DOC Enterprise Architecture CM process. Any changes to any of these artifacts must be reviewed and approved by the DOC EA Review Board before it is incorporated into the CM system as a new baseline level.

### **2.3 Supporting Documents**

The following documents are significant supporting documents to the EA program, but are developed and managed outside the scope of the EA. Because of their importance in the EA process, these documents will be kept in the EA repository, and marked according to the version of the EA they pertain to. They

will not come under the CM plan however, since they are managed external to the EA process.

- Strategic Plans
- Strategic IT Plans
- Operational IT Plans
- EA Review Board Meeting Summaries
- EA Training Materials
- Configuration Management Reports
- Systems Development Life Cycle Guide
- Capital Planning and Investment Control Guide
- Commerce IT Review Board Summaries

## **2.4 Models and Meta-models**

One of the most important aspects of the CM process for EA is to control the EA models and meta-model extensions. The EA models will come under very tight CM control since they will contain the most detailed level of information and will be used in the decision making process by managers at all levels. The meta-model extensions must be controlled and moved to the Department level so that models sent from the operating units are readable at all levels. Additionally, if one group requires an extension to a model, it is quite possible that others will require the same functionality. It is imperative in maintaining the integrity of the models that all extensions are controlled through the CM process.

## **2.5 Physical EA Repository**

The actual implementation of the repository will be done using the Troux Metis Team Server software. The repository will reside on an Intranet accessible server and all users will be granted access rights according to their roles.

The repository consists of multiple layers. Each operating unit will have a Development Repository where current work is done. At the Department level there will be an Integration Repository where all changes from all operating units are merged, tested, and verified as being compliant. Once the change has been certified, the Repository Manager will merge the changes into the Final Repository where a new revision will be assigned and it will become the new baseline.

### 3. Configuration Management Process

The basic process flow for the DOC Configuration Management process is diagramed below in figure 3.1.

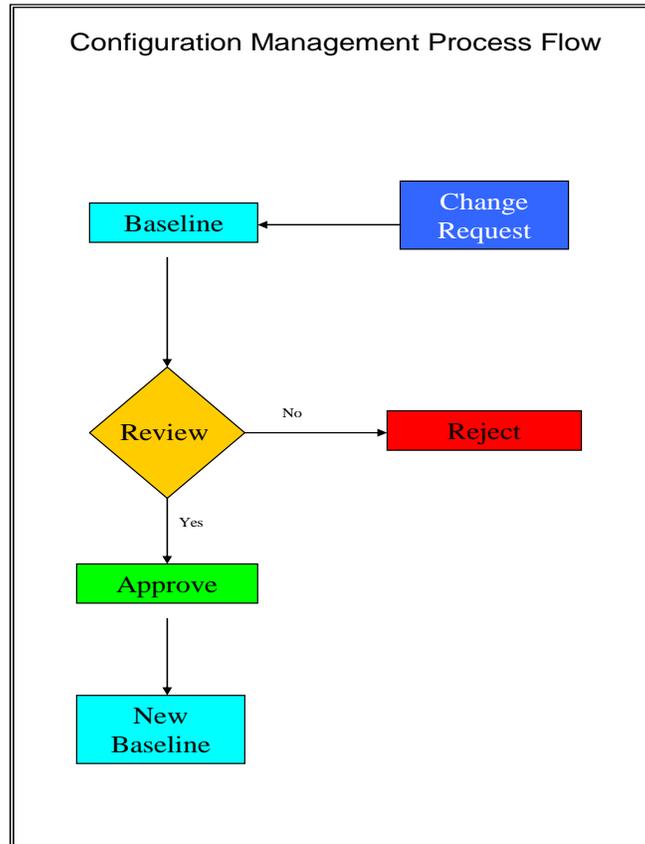


Figure 3.1 DOC CM Process Workflow

#### 3.1 Baseline

The baseline version of the artifact is the initial version or the current approved version, which details all aspects of the EA covered by the artifact in question. Once changes have been reviewed and approved, they are incorporated into a new baseline.

#### 3.2 Change Request

Change requests can be initiated from a number of different sources. The most typical is from the program manager requesting a change to add, modify, or delete capabilities of the existing baseline component they are responsible for. Other sources for change requests include the Chief Information Officer with

regard to the technical deployment and IT security aspects of the system, as well as Congressional legislation, Presidential directives, and other external sources.

Change requests are submitted to the Enterprise Architect for the business unit involved or to the Chief Enterprise Architect if the change encompasses several or all DOC Operating Units.

### **3.2.1 Change Request Content**

The format of the Change Request (CR) is not important, but the content is. It should contain the following information:

- EA Level(s) Affected (business, data, application, infrastructure, security, performance )
- Who is initiating the request
- System(s)/Applications/EA Model(s) Affected
- Change Description Summary
- Configuration Change Details
- Who/What will be impacted by the Change?
- Why is the change being requested?
- Who is the program manager?

Once this information has been obtained with the change request, the work will be assigned to the appropriate group or individual to develop a detailed draft of the proposed change.

### **3.3 Review**

The Review process is concerned with validating the format of the submission and not the content. If the artifact under review is an EA model, the review determines that the correct object types and relationships are used. If it is a document, it verifies that all mandated sections of the document are addressed. A full list of the criteria used in the review process is contained in the DOC Configuration Management Review Criteria in Appendix A of this document.

The CM Review process assumes that the requested change has already been approved by the DOC Enterprise Architecture Review Board, which analyzes the content of the proposed change. The CM Review is used to guarantee that the change does not violate the rules governing the construction of the EA itself, whereas the EA Review Board determines how and if the proposed change fits into the overall vision as defined by the EA.

### **3.4 Approval**

A change request is approved once it meets ALL of the requirements as set forth in Appendix A of this document. Once this occurs, the change must be affirmed by signature of the responsible individuals involved.

If the change request affects only one operating unit and line of business, it must be signed by the Chair of the EA Review Board, Chief Architect for the Operating Unit, the Chief Information Officer (CIO) for the operating unit, and the Program Manager responsible for the line of business involved.

If the change request affects two or more operating units, it must be signed by the Chair of the EA Review Board, CIO for each Operating Unit, the Chief Information Officer for the Department, and the Program Managers responsible for the line of business involved.

### **3.5 Rejection**

A proposed change is rejected if it does not meet ALL of the requirements set forth in Appendix A of this document. If this occurs, a written description of the deficiencies signed by the Chairman of the EA Review Board will be sent to the Program Manager responsible for the line of business as well as the individual who initiated the change request. The description should detail what changes need to be made to meet the requirements.

### **3.6 New Baseline**

When the proposed change has been successfully reviewed and approved, it will be incorporated into the repository and establish a new baseline. The new baseline will be assigned a revision number as outlined in Appendix B, and will become the standard by which all subsequent changes will be analyzed.

## **4. Roles and Responsibilities**

There are a number of different roles involved in the CM process, and each is defined in the following section.

### **4.1 Enterprise Architecture Review Board**

The Enterprise Architecture Review Board (EARB) is charged with the review of all artifacts for compliance to the acceptance criteria outlined in Appendix A. The board is defined in the Enterprise Architecture Review Board charter. Once the EARB has approved the content of the architecture, it will review the change request and all associated documents and models and issue its decision with a full explanation of its decision and what remedial steps need to be addressed (if any).

### **4.2 Chair of the Enterprise Architecture Review Board**

The role of the chair includes all of the normal duties of a member plus the added role of being the person who signs the approval or denial of the change request. The chair is also the spokesperson for the Board, and will help to educate the EA community regarding CM and its specific application at DOC.

### **4.3 Repository Manager**

The Repository Manager will be responsible for incorporating all changes into the Final Repository, and assigning a new baseline revision number to the EA. As stated above, this will be done after the changes have been reviewed and certified.

Additionally, the Repository Manager will provide monthly reports to the DOC Chief Architect on the status of on-going work and the state of the repository. The Repository Manager will also coordinate all maintenance work on the repository including software upgrades

### **4.4 DOC Chief Architect**

The DOC Chief Architect is the Program Manager for the repository and is responsible for the overall maintenance and integrity of the repository. As part of this role, the Chief Architect will arbitrate and resolve all conflicts between the various sub-architectures to maintain consistency and accuracy of the EA.

The Chief Architect will ensure that the repository system is fully compliant with all applicable security requirements and work with the Repository Manager to provide a stable, reliable system.

## Appendix A Configuration Management Review Criteria

The following list of questions should be used to evaluate a change request and the associated documentation for approval and incorporation into the CM Repository.

### Part 1: Documents

1. Does the updated document address all affected EA views:
  - changes to business (should almost always have some impact)
  - changes to data (quantity, type, location, availability)
  - changes to applications (new, enhanced, retired)
  - changes to infrastructure (new or upgraded hardware, net connections)
  - updated performance goals reflective of new state
2. Does the updated document clearly define the vertical linkage across all views?
3. Are there any “orphan” components in any view?
4. Are there any duplicative components or links?
5. Are all links to external references (other documents or models) correctly defined and validated?
6. Is a summary of the changes attached?

### Part 2: EA Models

1. Has all meta-data use been validated?
  - all new objects use correct meta-object
  - all relationships are valid and use correct meta-model type
  - any new meta-data constructions are validated and approved by CM board
2. Has the linkage between all views been validated?
  - vertical linkage between all layers is in place
  - no “general” relationships exist
  - no orphans exist
  - any new meta-data constructions are validated and approved by CM board
  - horizontal linkage
  - all links to other Lines Of Business are documented

3. Are all interfaces to external systems are documented?
4. Are all shared resources are documented?
5. Has a model validation report been performed?
  - Report must show NO errors
  - Any errors in the report must be addressed and fixed
6. Are all external document links verified?
  - Do the linked documents accompany the model submission
7. Is the linkage between sub-model and parent intact?