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The Solution Life Cycle

Configuration Management Process Guide

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1.0 Introduction

Configuration Management (CM) is the process of identifying, organizing and managing the integrity of the project work products throughout the project's life cycle. These products include software code and software-related non-code components, such as designs, requirements, project plans, processes and test plans. In general, configuration management should be applied to any item whose loss will put the organization's systems at risk.

The benefits of configuration management include:

- CM can be used for software and non-software rollout projects.
- Reduced errors due to lost data and use of obsolete and/or conflicting information across the enterprise and projects
- Integrity of software and other critical work products is maintained throughout the development life cycle
- Project work products are identified and controlled
- Version histories are established
- Packaged configurations are readily available
- Consistent delivery of solutions on time with improved quality

Configuration Management manages change to software or systems at the project-level within an organization. CM refers to the processes, tools, and resources required for ensuring consistency and integrity between configuration items and their environment as they change over time. CM is performed by teams at the project level and manages changes internal to a particular application or solution that generally do not impact other systems.

1.1 Overview of Configuration Management and Enterprise Change Management at FSA

CM is performed at the Project Level within FSA in accordance with the FSA Configuration Management Policy.

This CM Process Guide gives an overview of CM at FSA. It describes the steps needed to plan and perform project-level CM activities at FSA. Its intended audience consists of those project resources, such as the CM Lead and Change Control Group (CCG) members, who are involved in the planning and performing of CM.

Enterprise Change Management (ECM) is an enterprise-wide process of managing and prioritizing all change requests (development, enhancements and maintenance) across the business channels to help FSA obtain the most from its development and maintenance budget. ECM ensures the proposed changes are aligned with the business goals and objectives of FSA.



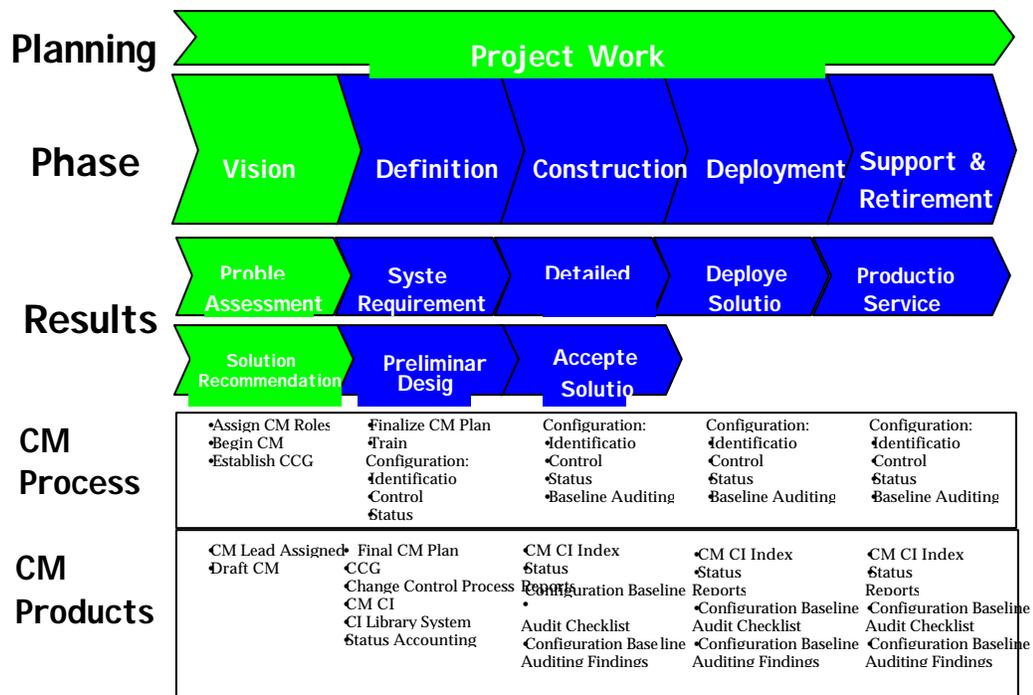
Project-level CM and ECM integrate because it is the Project-level CCG that identifies and submits CRs to the appropriate Enterprise level area, for example, using FSA Infrastructure Change Management.



Applications that submit development or production changes to a data center (e.g. Virtual Data Center) use the Enterprise Change Management (ECM) Tool to submit and track their CRs. The ECM Tool is a Rational ClearQuest application customized for FSA that automates the drafting, submitting, tracking and management of Enterprise CRs. *(For more detail on the ECM process, reference the Enterprise Change Management Workflow Diagram in Appendix G.)*

1.2 Configuration Management Activities by Solution Life Cycle (SLC) Phase

Configuration Management is one of the Key Process Areas of the FSA SLC. CM processes and activities are performed at the project level throughout the five phases of the SLC. The diagram below provides a view of project CM processes to be followed and CM products to be generated during each SLC Phase.



CM processes to follow when implementing a CM plan throughout the SLC are described in greater detail below.





1.2.1 Vision Phase

- **Assign CM Lead** – a CM lead is needed at the project level. (See 2.1.1 Assign Configuration Management Roles for specific roles and responsibilities)
- **Begin a draft of the CM Plan** – The draft of the CM plan should include a general idea of what is needed for the CM Plan. The CM Plan should include a brief description of the following CM processes for the project (*see 2.1.4 Document Configuration Management Plan*):
 - ❑ Configuration Identification - Identify work products, or configuration items essential to the project, i.e. requirements documents, design documents, testing documents, source code and technical architecture components
 - ❑ Configuration Control (Change Control) - the process of making change decisions
 - ❑ Configuration Status Accounting - The administrative process for tracking and reporting of all configuration items
 - ❑ Configuration baseline auditing - the process of auditing the baseline to ensure it is properly maintained and ensure that the CM policies and procedures are followed

1.2.2 Definition Phase

- **Finalize CM Plan** – Update the Vision phase Draft CM Plan and finalize before the Construction phase.
- **Train CM** – The CM lead ensures CM support staff and project team members are familiar with CM and their roles and responsibilities (*see 2.1.3 Train Configuration Management*)
- **Establish a Change Control group** – (*see 2.1.2 Establish a Change Control group*). The Change Control group manages change and retains authority for deciding what proposed changes are incorporated in a baselined work product, or configuration item.
- **Develop a Configuration Item (CI) Library System Index** – Establish a CI Library as a repository for baseline products, storing and updating Configuration Items (*see 2.2.1 Configuration Identification*)
- **Status Accounting** – Administrative tracking and reporting of all configuration items (*see 2.2.3 Configuration Status Accounting*)



1.2.3 Construction, Deployment and Support & Retirement Phases

- **Change Control Process** – Manage all desired changes through the Project level CCG and enter CRs to be submitted to the Data Center into the ECM Tool.
- **Update CM CI index** – Update configuration items and the configuration item index and library
- **Status Accounting** – Continue to perform the administrative tracking and reporting of all configuration items.
- **Baseline Auditing** – perform audits to ensure the change control process outlined in the CM Plan is being properly followed (*see 2.2.4 Configuration Baseline Auditing*)



2.0 Configuration Management Process

The CM Process Guide describes the two fundamental aspects of CM at FSA:

- Planning CM – Section 2.1
- Performing CM – Section 2.2

2.1 Plan Configuration Management

Planning CM involves:

- Assignment of CM Roles – Section 2.1.1
- Establishment of a Change Control Group – Section 2.1.2
- CM Training – Section 2.1.3
- Documenting the CM Plan – Section 2.1.4

2.1.1 Assign Configuration Management Roles

Assigning Configuration Management Leadership is crucial to the effective implementation of CM. The following describes the leadership roles that should be assigned for Configuration Management at the Project level. It is essential to include in the Project Workplan time, resources and budget for the planning and performing of CM activities. (*Reference the Estimating Guidelines for Configuration Management Effort in Appendix D*)

IPT Project Manager – The IPT Manager leads the Integrated Product Team and has overall responsibility for ensuring that Configuration Management is implemented for the project. The IPT Project Manager ensures that a Project CM Lead is assigned to the project.

Project CM Lead(s) - Essential to the beginning of project activities is the assignment of overall Configuration Management responsibilities to a Project CM Lead. The Project CM Lead manages the CM process activities and is ultimately responsible for all CM activities performed for the Project. Given the level of effort required, the Project CM Lead may acquire additional staffing to support the Project CM efforts. The staffing and time allocation requirements are directly related to the project size, complexity, and risk. The Project CM Lead prepares the Project CM plan, establishes the Project Change Control Group and ensures that the project adheres to the FSA CM Policy and Process.



2.1.2 Establish a Change Control Group

In the CM Process, a Change Control Group (CCG) serves as the focal point for change management and retains the authority for deciding which proposed changes actually get incorporated in a baselined work product. Change Control Groups are needed for application projects within FSA.

Project CCG(s) – Each project establishes a CCG to control changes to baselines that are within the project's scope. The size of the CCG will depend upon the project size, complexity, and scope. The Project CM Lead together with the IPT Project Manager establishes the Project CCG. For a particular project the CCG may include the Executive Sponsor, IPT Project Manager, End-User representative, Project CIO Representative, System Security Officer, Quality Assurance Lead, Development Lead, and/or Documentation Lead. The Project CM Lead may perform or assign the Secretariat role for the CCG.

Note: An Enterprise CCG has been established to support the ECM function of the FSA Infrastructure Change Management Process. If a change request is drafted for submission to a data center (e.g. VDC) for an application in development or production, the Change Request must be entered into the ECM Tool. The Enterprise Change Control Group reviews escalated Change Requests that are submitted to the data center that could not be resolved by the normal process. *For further information, reference the Enterprise Change Control Group Escalation Process (Location TDB).*

2.1.3 Configuration Management Training

The Project CM Lead ensures that all CM support staff and project members are familiar with CM and with their CM roles and responsibilities. Each CM team member and project member should receive instructions relevant to their responsibilities and how to carry them out.

CM Training for Project team members should include a general orientation as to the importance and value of performing CM. As well, project-specific information, for example, standards for file naming conventions, version control and migration control; procedures for using the CM Library and tools, and how to submit a change request to the Project CCG.

A good example of CM training is for the FSA recommended standard Rational ClearCase tool, used as a Project-level application development tool. It is suggested that each developer take the ClearCase Overview training (approximately 16 hours of classroom time). CM Leads typically take a 40-hour administrative course on ClearCase.



Currently, FSA is utilizing a customized Rational ClearQuest schema the Enterprise Change Management Tool to manage Enterprise CRs. Training on the ECM Tool is available through the FSA Point of Contact.



2.1.4 Document Configuration Management Plan

As defined in the FSA Solution Life Cycle (SLC), each Project should document a Configuration Management (CM) Plan as a part of the Project Work Plan. Although specific CM activities may not be known, the Project should begin the CM Plan in the Vision Phase of the SLC. The CM plan should be updated during the Definition phase and finalized before the Construction phase. The CM Plan is approved by the IPT Project Manager in conjunction with the sign-off of the Project Work Plan by the Executive Sponsor. *Reference the CM Plan Template in Appendix A.*

The CM plan should include a brief description of the following CM processes for the project:

- Configuration Identification
- Configuration Control (i.e. Change Control)
- Configuration Status Accounting
- Configuration Baseline Auditing

The CM plan must be maintained through the Support & Retirement phase of the project life cycle. The CM plan is a living document and reflects the most up-to-date configuration management activities on a project. The CM lead is responsible for maintaining the CM plan.



2.2 Perform Configuration Management

Performing CM involves:

- Configuration Identification – Section 2.2.1
- Configuration Control – Section 2.2.2
- Configuration Status Accounting – Section 2.2.3
- Configuration Baseline Auditing – Section 2.2.4

2.2.1 Configuration Identification

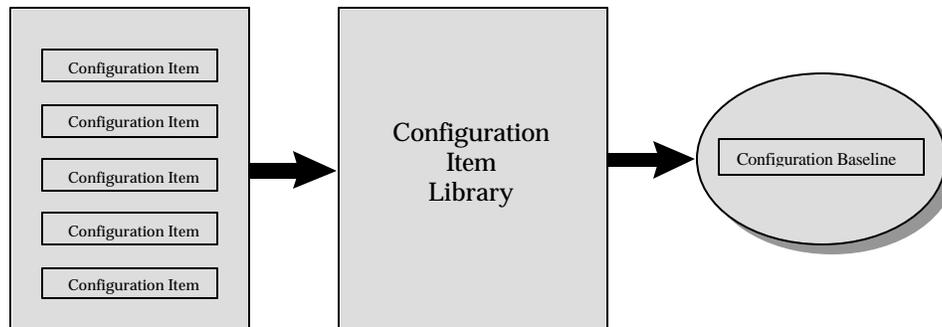
Configuration Identification includes procedures to:

- Identify Configuration Items – Section 2.2.1.1
- Establish a Configuration Item Library – Section 2.2.1.2
- Baseline Configuration Items. – Section 2.2.1.3

The objective of managing configuration items is to identify, control, and make available baselined configurations. **Configuration items** are work products, such as requirements, designs, testing documents, source code, technical architecture components and project plans including the CM Plan. A **configuration** is composed of multiple configuration items. A release of a project would be considered a configuration.

A **baseline** is a specification or product that has been formally reviewed and agreed upon, that thereafter serves as the basis for further development, and that can be changed only through formal change control procedures. A **configuration baseline** is a group of baselined configuration items that are packaged for release. A **configuration item library** is a repository for storing configuration items and their associated records.

The flow of configuration items through a Configuration Item Library to form a configuration baseline is illustrated in the diagram below:







2.2.1.1 Identify Configuration Items

The CM Lead along with the IPT Development Project Manager should identify configuration items for the project. This is an ongoing activity performed throughout the project life cycle. The CM Lead should document all configuration items in the configuration item index of the Configuration Management Plan. *Reference the Configuration Item Index Template in Appendix B.* The index is simply an updated inventory of configuration items.

2.2.1.2 Establish a Configuration Item Library

Critical to the management of configuration items is the establishment or access to a configuration item library. Configuration Item Library systems are tools and procedures used to store and access environments for development and storage of configuration items. An organized file repository directory structure to store the configuration items is important. *(Reference the File Repository Directory Structure Template in Appendix E.)* The CM Lead should consider the following when establishing or selecting a library system:

- A configuration item requires multiple environments. At a minimum, configuration items require a build, and baseline environment. The baselined environment contains configuration items that may be packaged for release.
- Each library requires access privileges and restrictions. The build environment (draft items not approved) has the least control, if any, whereas baseline environments have protective restrictions and strict check in/out procedures.
- Each library requires a disaster recovery plan. Frequent backups and archived configurations are required to save a project from unforeseen catastrophe.

Once the configuration item library is established, the CM Lead should ensure that procedures are implemented for development and migration between environments. The CM Lead should adopt and document standards in the Configuration Identification section of the CM Plan. At a minimum the CM Plan should cover the following standards.

- Naming and identification standards for configuration items
- Migration standards for the movement of configuration items from one environment to another
- Change and version control standards to trace changes of a configuration item





2.2.1.3 Baseline Configuration Items

When a configuration item is complete and approved, the CM Lead should ensure that it is migrated to the baseline environment. Baselining usually occurs to a collection of configuration items rather than individual configuration items. For example, at the end of design, all detailed design deliverables are baselined. Baselining usually occurs at the end of a life cycle phase or review. The IPT Development Manager and the CM lead should determine and document when baselining would occur within the project schedule.



2.2.2 Configuration Control

Configuration Control includes:

- Changing configuration items – Section 2.2.2.1
- Project Change Control Process – Section 2.2.2.2
- Controlling configuration items – Section 2.2.2.3

Once the configuration item is baselined, all proposed changes to the baseline must be controlled.

2.2.2.1 Change Configuration Items

At the Project Level, the CM Lead establishes a change control process that is specific to the needs of the project. In general, a CM Lead must ensure that a formal change control process is documented and followed. The change control process should establish an audit trail of baseline changes and define how change requests are reviewed and authorized by the Change Control Group. The process should include activities for tracking and classifying change requests, conducting impact analyses and obtaining formal approvals. (*Reference the Impact Analysis Worksheet in Appendix F*).

Change control is performed throughout the project life cycle, especially during testing. The CM Lead must ensure that all project and CCG members are familiar with and adhere to the change control process.

The complexity of the change control process is directly related to the complexity and risk to the configuration item. For example, the change control activities for standards documentation may amount to only a few simple steps with little oversight. In contrast, the activities for source code change control would have many steps and multi-level oversight.

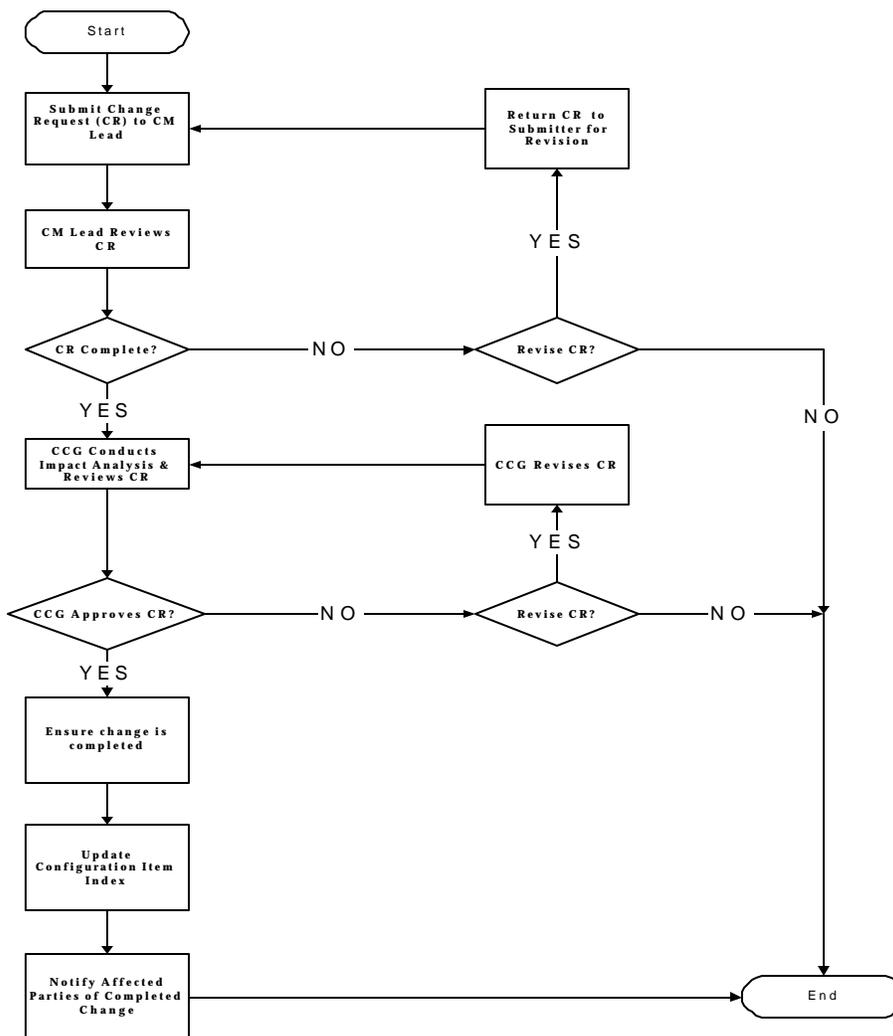




2.2.2.2 Project Change Control Process (example)

The CM Lead will develop a Change Control Process to meet their particular needs. However, some basic components to a change control process exist. The following diagram provides an example of a generic change control process that can be tailored to the individual project.

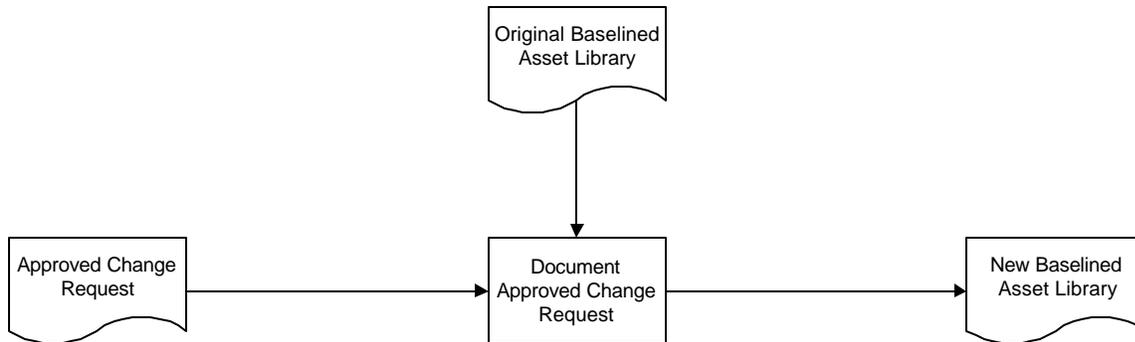
Project Change Control Process (example)





2.2.2.3 Control Configuration Items

As configuration items are baselined, they are stored in the project's configuration management library using a configuration management tool. The CM Lead should identify the tools and methods used for storing configuration items in the project CM Plan.



The development project stores its baselined work products in the Configuration Item Repository. Upon completion of the Production Readiness Review (PRR), the CCG directs the CM Lead or other designated resource to transfer the appropriate baselined non-software work products and deliverables to the Enterprise Repository in the CIO space on FSANet. *Reference the Enterprise Repository Process Guide (Location: TBD)*



2.2.3 Configuration Status Accounting

Configuration Status Accounting is the administrative tracking and reporting of all configuration items. Configuration Status Accounting ties together all other CM functions: configuration identification, configuration control, and configuration audit. It also ensures the storage of CM activity information for subsequent retrieval and reporting.

Throughout the project life cycle, the Project CM Lead must ensure that project information is collected about the system under development and is reported back to applicable groups and individuals, including the IPT Project Manager and senior management.

Configuration Status Accounting includes a series of predefined and ad-hoc reports on the status and trends of items controlled through configuration management.

In general, the CM Lead should identify the reports that the project will produce in the CM Plan. A sample set of standard reports include:

- Change Control Group Meeting minutes
- Trouble Report summary and status
- Summary of changes made to baselines
- List and revision history of configuration items
- Baseline Status Report
- Results of baseline audits
- Count and trends of open and closed change requests
- Count and trends of the status of change requests
- Count of open change requests by severity
- Count of resolved change requests

2.2.4 Configuration Baseline Auditing

Configuration Baseline Auditing involves:

- Conduct CM Audit – Section 2.2.4.1
- Report CM Audit Results – Section 2.2.4.2

Configuration management audits ensure that CM policies and procedures are followed. The purpose of the audit is to identify deficiencies, provide improvements, and ensure compliance with standards. An audit will also provide feedback to senior management about the status of configuration management activities.



2.2.4.1 Conduct Configuration Management Audit

The Project CM Lead and other members of the CCG periodically audit the project to ensure that configuration management objectives are achieved. The CM Lead should prepare for the configuration management audit by identifying the checkpoint information in the Configuration Management Audit Checklist prior to performing the audit. *Reference the A Configuration Management Audit Checklist template in Appendix C.*

Using formal audit procedures, the CM Leads:

- Assess the integrity of baselines
- Review the structure and environment of the CM Library
- Verify the completeness and correctness of the baseline library contents
- Verify Compliance with FSA Configuration Management Policy and Process

2.2.4.2 Report CM Audit Results

Following the configuration audit, the CM Lead prepares a report summarizing the audit findings. The report should include the completed audit checklist and be distributed to the IPT members, IPT Project Manager, and senior management, as needed. The CM Audit report indicates areas for improvement as well as required follow-up audits to ensure compliance. The CM Lead ensures that action items from the audit are tracked to closure.



3.0 Appendices

Appendix A Configuration Management Plan Template

Client: _____
Project: _____
Project Manager: _____
Configuration Lead: _____
Implementation Date: _____

Document History

Make sure to update the document history information below. Also, update the “Status” and “Version” number in the footer to match this section.

Version Number	Date Modified	Author Name	Description
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Goals

The goal of the CM plan is to present a general approach for conducting CM activities. It should be specific only to the point that it will indicate goals and expectations. It should not go into the level of detail that would require constant updating as detailed procedures change. Detailed procedures will exist outside of this document; however, they will be referenced. The CM plan can be integrated with the quality plan or can be a separate document.

Purpose and Scope

(Define the high-level objective and scope of configuration management activities to be performed on the project)

***Please reference the name and location of any supporting documentation.*

Organization and Responsibilities and Resources

(Document the configuration management team organization and responsibilities. Identify the Budget needed for CM activity, Staff required, specific tools and unique facility requirements.)

***Please reference the name and location of any supporting documentation.*

CM Activities

(Briefly describe the **general** approach for conducting the CM activities listed below. Do not go into a detailed description in this document. For versioning and easier maintenance purposes, document the detailed procedures outside of the CM plan and reference that documentation with a brief summary in the CM plan.)

***Please reference the name and location of any supporting documentation.*

Configuration Identification

Configuration Control

Configuration Status Accounting

Configuration Auditing



Configuration Management Plan Template



Schedule – Audits and Reports

(Document the schedule for the baseline audits and other major CM activities detailed in section 3.)

***Please reference the name and location of any supporting documentation.*

Name of CM activity (Report, Audit, etc.)	SLC Phase	Scheduled completion date
	Vision	
	Definition	
	Construction	
	Deployment	
	Support & Retirement	

Document References and Definitions

Identify all referenced documents, definitions, associated abbreviations and acronyms

Reference Document	Location	Document Description
[Name]	{Identifier}	[Short description]

Word/Acronym/Abbreviation	Description
[Name]	[Short description]



Appendix B Configuration Item Index Template

Executive Sponsor: _____
Project Name: _____
Project Manager: _____
CM Lead: _____

Configuration Item Name	Owner		Location Type/Description/Comments
Work products to be controlled and managed (from SLC Process Guide, listed by phase)	Each Configuration Item has an owner (team member).	FSA Publications Library	Print Media Standards Documentation
Vision Phase			
<i>Acquisition Planning Estimation Worksheet</i>			
<i>Solution Acquisition Plan</i>			
<i>Business Case</i>			
<i>Statement of Objectives (SoO)</i>			
<i>Task Order</i>			
<i>Communication Plan</i>			
<i>Work Breakdown Structure</i>			
<i>Business Performance Model</i>			
<i>Solution Acquisition Status Reports</i>			
<i>Issue Tracking Matrix</i>			
<i>Risk Tracking Matrix</i>			



Configuration Item Index Template

<i>High Level Requirements</i>			
<i>Security Assignment Letters</i>			



Configuration Item Index Template

Configuration Item Name	Owner	Location(s)	Location Type/Description/Comments
<i>SLC Security Vision Phase Checklist</i>			
<i>Quality Assurance Plan</i>			
<i>Configuration Management Plan</i>			
<i>Transition to Support Plan</i>			
Definition Phase			
<i>Updated Business Case</i>			
<i>Updated Solution Acquisition Plan</i>			
<i>Approved Work Breakdown Structure</i>			
<i>Updated Business Performance Model</i>			
<i>Lower Level Requirements Document</i>			
<i>RDM Plan</i>			
<i>Requirements Traceability Matrix</i>			
<i>Preliminary Design Document</i>			
<i>TTS Plan</i>			
<i>SLC Security Definition Phase Checklist</i>			
<i>Quality Assurance Plan</i>			
<i>Memorandum of Records</i>			
<i>CM Plan</i>			
<i>Configuration Item Index</i>			
<i>Configuration Item Library System</i>			



Configuration Item Index Template

Configuration Item Name	Owner	Location(s)	Location Type/Description/Comments
Construction Phase			
<i>Requirements Traceability Matrix (updated)</i>			
<i>Detailed Design Document</i>			
<i>System Security Construction Phase checklist</i>			
<i>System Security Plan</i>			
<i>Construction Phase Risk Assessment</i>			
<i>Build Solution</i>			
<i>System Test Plans</i>			
<i>System Test Results</i>			
<i>Memorandum of Records</i>			
<i>Production Readiness Review (PRR) Material</i>			
<i>Configuration Management Item Index (Updated)</i>			
<i>CM Audit Findings</i>			
<i>TTS Readiness Review Material</i>			



Configuration Item Index Template

Configuration Item Name	Owner	Location(s)	Location Type/Description/Comments
Deployment			
<i>Work Breakdown Structure (Updated)</i>			
<i>Deployed Solution</i>			
<i>Project Inventory List</i>			
<i>Support Readiness Orientation</i>			
<i>Transition Sign-off</i>			
<i>User Training Materials</i>			
<i>Service Level Agreements</i>			
<i>Final System Security Plan</i>			
<i>SLC Security Deployment Phase Checklist</i>			
<i>Risk Assessment Corrected Action Plan</i>			
<i>QA Reviews</i>			
<i>Configuration Management Item Index (Updated)</i>			
Support & Retirement			
<i>Closeout Documentation</i>			
<i>Post Implementation Review Documentation</i>			
<i>Security Control review</i>			
<i>SLC Security Deployment Phase Checklist</i>			
<i>Completed Transition Support & Retirement Phase Checklist</i>			
<i>IPT Closure Documentation</i>			
<i>Configuration Management Item Index (Updated)</i>			





Appendix C Configuration Management Audit Checklist Template

Client: _____
 Project: _____
 Project Manager: _____
 CM Lead: _____
 Release Date: _____

Document History

Make sure to update the document history information below. Also, update the “Status” and “Version” number in the footer to match this section.

Version Number	Date Modified	Author Name	Description
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Complete the following checklist—make sure to add comments. Any item checked “No,” requires a comment to explain the finding. All items reviewed must be in compliance to check “Yes.” Otherwise, check “No” and identify which items are not in compliance. This form will be the basis for the audit report.

Checkpoints	Yes	No	n/a	Comments/Ref Info.
CM strategy documented				
CM Manager Identified				
CM plan started and up-to-date				
CM organization chart created				
CM team members trained to perform activities				
Configuration items identified and documented on the configuration item index				
Libraries established for configuration items				



Configuration Management Audit Checklist Template

Checkpoints	Yes	No	n/a	Comments/Ref Info.
procedures exist for development and movement of configuration items in the libraries				
Project members trained in CM procedures for configuration item development				
Baselined configuration items protected				
Documented change control procedures exist for each type of configuration item				
Project members trained in CM change control procedures for the configuration items they are working with				
(Add additional checkpoints as needed)				



Estimating Guidelines for Configuration Management Effort

Appendix D Estimating Guidelines for Configuration Management Effort

The following are general guidelines for estimating work effort involved with Configuration Management (CM) activities:

<u>Activity</u>	<u>Description</u>	<u>Estimated Hours Budgeted</u>
CM Start-up Activity	Initial Production of a CM Plan by newly appointed CM Lead (CM Plan includes definition of all CM Procedures)	8-12 (one time)
Weekly CM Activities (Team Lead)	<ul style="list-style-type: none"> •Preparing for and hosting the weekly Change Control Group (CCG) Meeting •Managing baselines •Managing Change Request process •Conducting CM audits (as required by CM Plan) 	5-10 (weekly)
Weekly CM Activities (Project Team Managers/Members)	<ul style="list-style-type: none"> •Attending CCG meetings (if designated by CM Plan) •Maintaining version control (as required by CM Plan) •Following Change Request Process 	1-2 (weekly)

N.B. CM (Configuration Management) activities are often confused with CMM (Capability Maturity Model) activities. CM is simply one component of CMM (in addition to Peer Reviews, Solution Quality Assurance (SQA) Reviews and other Metrics requirements). The Quality Process Improvement (QPI) Team focuses on having Project Teams implement CMM standards while ECMI is focused exclusively on CM. A very approximate estimate for work effort associated with ongoing CMM activities (other than the CM component) would be 5 hours weekly.



Appendix E File Repository Directory Structure Template

Overview

Projects may organize their File Repositories in different configurations. This Directory Structure Template is recommended for projects in the Vision Phase. It should be reviewed and updated by projects in each later phase of the Solutions Life Cycle (SLC) to ensure the directory structure's suitability to enable efficient Configuration Management (CM).

Files marked with an Asterisk (*) are recommended as Configuration Items. Configuration Items (CI) are those work products that are placed and maintained under strict Configuration Management. Projects should begin practicing CM during the Vision Phase.

The focus of this Template is on the Administrative Section of the File Repository Directory Structure. The other sections are far more project-specific.

To the CM Lead:

Use this template to select those files that apply to your project's needs, and eliminate those that do not, to organize your File Repository Directory Structure.

Project Name

- Administration
 - Workplan
 - Project Workplan*
 - Project Plan
 - Project Plan*
 - Business Case
 - Business Case (Phase)*
 - IRB Presentation*
 - Status Reports
 - Bi-weekly FSA Status Reports*
 - Client Executive Briefing Status Reports*
 - Team (Internal) Status Reports
 - Kick-off Presentation
 - Metrics
 - FCG Monthly Metrics Workbook*
 - Project Specific Metrics*
 - Status Meetings
 - Status Meeting Minutes*
 - Status Meeting Agendas*
 - Status Meeting Presentations
 - SQA
 - SQA Schedule*
 - SQA Report
 - Configuration Management



File Repository Directory Structure Template

- CM Plan*
- CM Audit Schedule*
- CM Audit Reports*
 - Change Requests
- VDC CRs*
- Requirements CRs*
- Code CRs*
 - Change Log
- Change Log*
 - Templates
- Project Standard Template Guidance
- Templates (project-specific)
 - Deliverables
- Deliverable Tracking Spreadsheet*
- Deliverables (project-specific)
 - Risks
- Risk Tracking/Assessment Matrix*
 - Issues
- Issues Log*
- Issues for Escalation
 - Contacts
- Team Contact List
- Mod Partner Contact List
- Design
 - Requirements
 - Design CCB Meeting Minutes
 - Requirements Traceability Matrix
 - Process Flows
 - Use Cases
- Development
 - Technical Specifications*
 - Environment Specifications
 - Clear Case Specifications (project-specific)
 - Deliverable Code Modules
 - Code Tracking (project-specific)
- Testing
 - Test Plan*
 - Test Conditions
 - Test Scripts
 - Test Results
 - SIR Log
- Communications
 - Communication Plan
 - Conferences & Event Presentation (project-specific)
- Operations



File Repository Directory Structure Template

- Operations Procedures
- Transition Plan
- Working Groups
 - (Team-specific)



Appendix F Impact Analysis Worksheet

Having received a change request, the CM Lead or Group works together with other knowledgeable resources to conduct an impact analysis. They assess the effort required to make the change and, the impact to the following:

- Performance
- Architecture
- Supportability
- System resource utilization
- Schedule
- Work in progress
- Cost
- Risk

The proposed solution should include a list of items that need to be updated along with the effort required to make the changes.

Changes to existing commitments that could be impacted by acceptance of the change should be considered and the commitments adjusted to reflect the change.

The CM Lead/Group makes a recommendation for the Change Control Group to approve or reject or escalate based on the impact to scope, quality, effort, risk, and time. This will provide a basis for discussion during the review of the Change Request.



Impact Analysis Worksheet

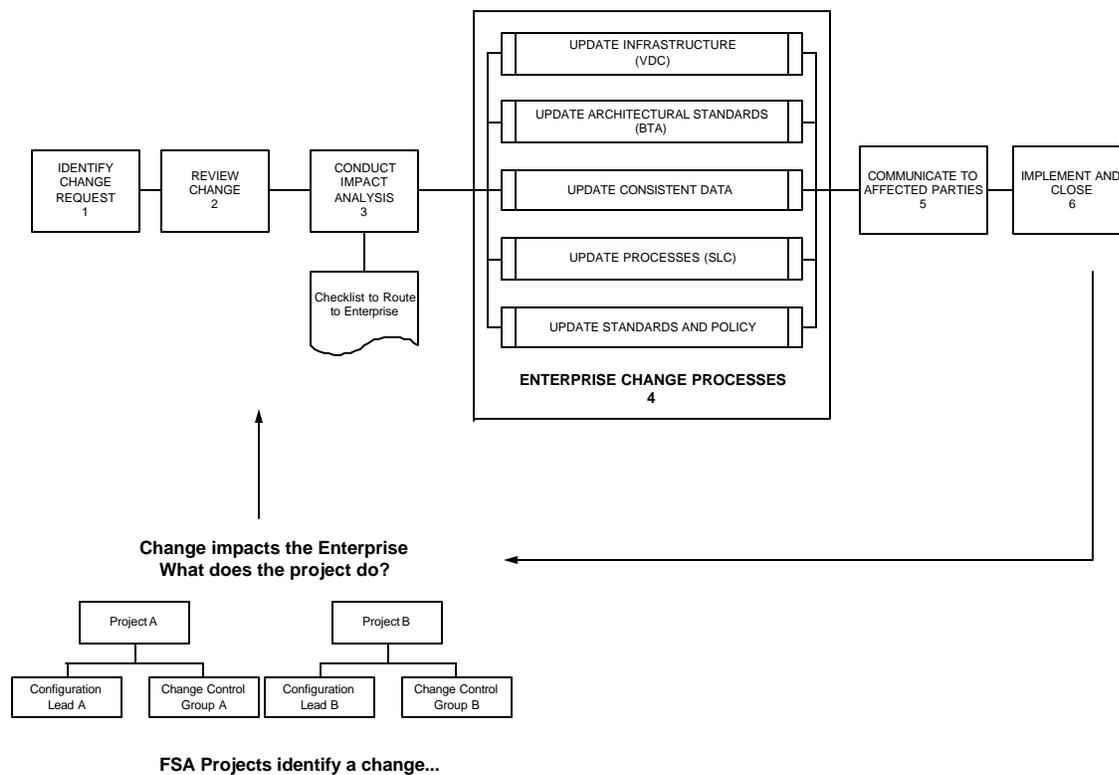
Description of Change Request	Effort Required	Impact to the following:	Affected Groups	Items requiring updates and associated effort	Commitments requiring adjustment
		Performance:			
		Architecture:			
		Supportability:			
		System resource utilization:			
		Schedule:			
		Work in progress:			
		Cost:			
		Risk:			
Recommendation:					



Appendix G Enterprise Change Management Workflow Diagram

Enterprise Change Management occurs when a Project Change Control Group or team member identifies a change request that may affect other applications or systems. The CCG identifies the appropriate Enterprise level area to which to submit the CR.

The Enterprise Change Management process is shown in the following workflow diagram:



Enterprise Change Management occurs within each of the following enterprise level activities

- Architecture
- Infrastructure (e.g. VDC)
- Consistent Data
- Standards & Policies (Technology Handbook)
- Processes (Solutions Life Cycle)

For further detail on the ECM Process *reference the ECM Process Guide (location: TBD)*

More information regarding submission of Infrastructure Change Requests from applications in development or production is also available. (*Reference the FSA Infrastructure Change Management Process Guide, the ECM Tool User Guide and the ECM Tool Orientation-Rollout*)



Enterprise Change Management Workflow Diagram

Briefing found in the Project Documentation Repository of the CIO area on FSANet (or FSA Extranet).