



Configuration Management Orientation

Federal Student Aid Modernization Partner Configuration Management

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Configuration Management (CM) is Change Control for Solution Acquisitions.

- CM is the process that:
 1. Identifies and documents critical work products
 2. Controls changes to those work products
 3. Records and reports change processing
 4. Verifies compliance with specified requirements
- Controlled work products include both software and non-software components, such as data, designs, documents, software code, processes, and requirements.
- CM takes place at two different levels: Enterprise (FSA-wide) level and Project Level.

Benefits of CM

CM is an effective way for a project to avoid rework and possible project delays.

- CM practices help projects manage their work product development efforts more effectively, through standardized and repeatable processes and procedures
- Effective CM controls could recently have saved a project 2 days of delay in their systems testing effort and avoided at least 16 hours of rework
- Studies have shown that developers well trained in CM are more efficient in their development activity
- Simple CM practices will highlight issues which affect other areas. Raising issues to the Enterprise CM level can eliminate redundancy, thus costing less money and effort
- **CM activity is reviewed in detail by the FSA QA (IV&V) Effort, so a solid CM program simplifies the review process**
- Helps projects comply with required Mod Partner Quality Process Improvement (QPI) CMM QA reviews

Benefits of CM - continued

CM outlines the appropriate processes and procedures needed to help consistently track and monitor changes to work products throughout the Solution Life Cycle (SLC).

CM ensures the integrity of software and non-software items placed under CM. It typically saves time, money, and effort, while lowering the risk of costly rework

- Repeatable processes and procedures do not have to be reinvented
- Best Practices are established and shared among projects, thereby increasing efficiency and effectiveness
- Time and money are better utilized during projects by not “reinventing the wheel” and referring to the Best Practices already developed
- The amount of errors and rework is reduced by following a pre-approved process
- CM assists projects in maintaining organized and accurate data for their projects

Estimation of CM Work Effort

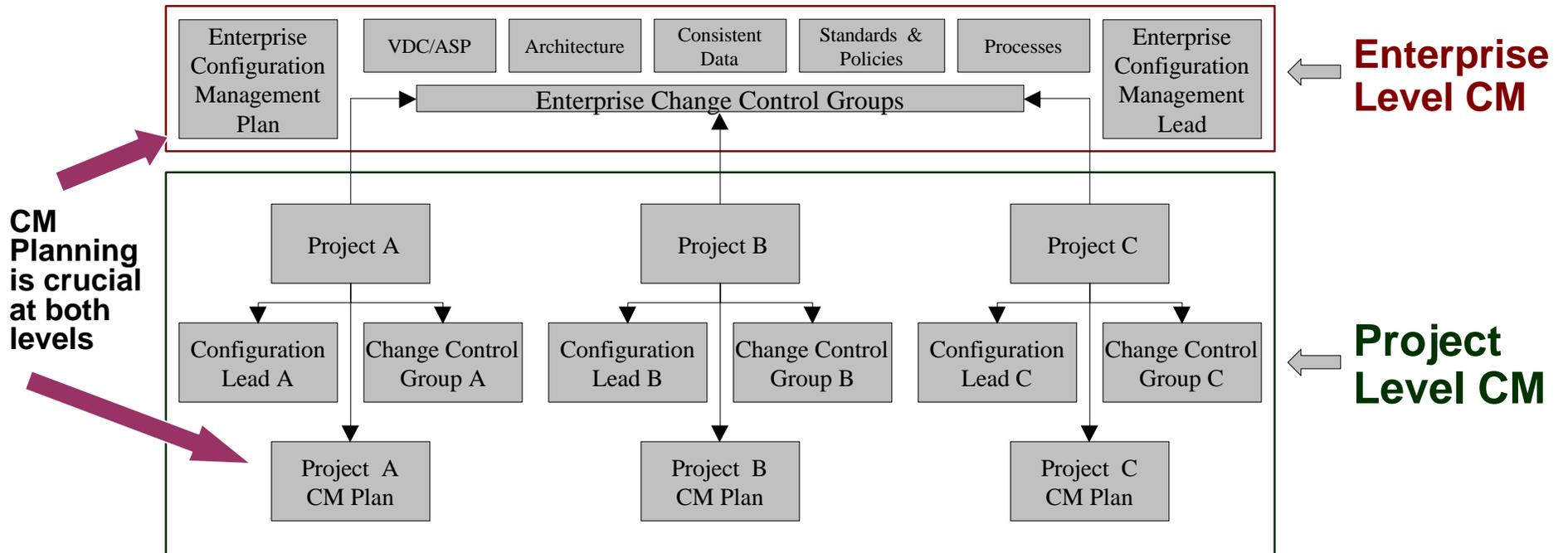
The following are loose estimates of work effort involved with CM activities:

Activity	Description	Estimated hours budgeted
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, 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 loose estimate for work effort associated with ongoing CMM activities (other than the CM component) would be 5 hours weekly.

Enterprise/Project Level Distinction

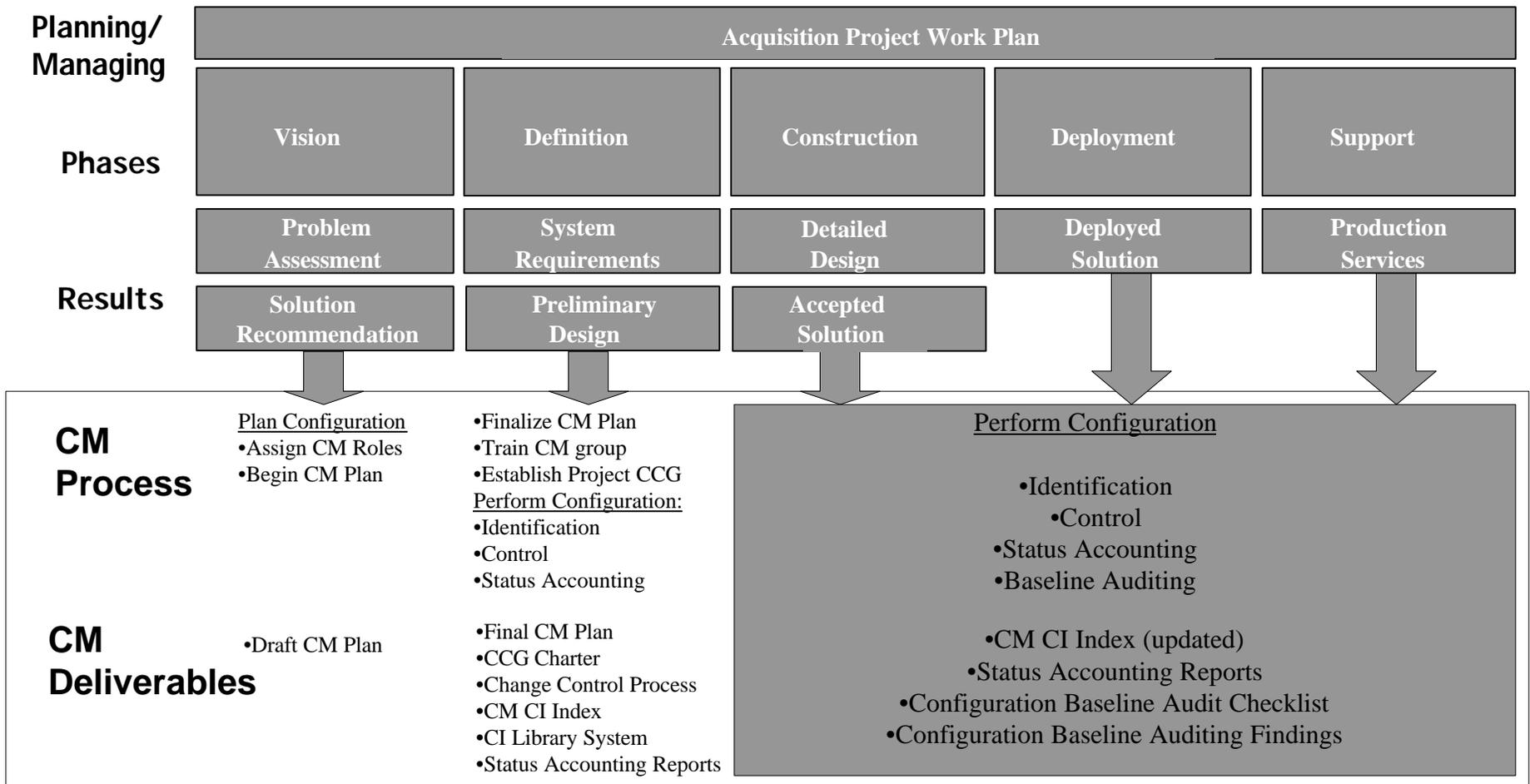
The Enterprise CM Change Control Groups (CCG) are used when a change will impact multiple FSA projects.



There is significant industry evidence to show that proper CM performance helps prevent costly redesign efforts further in the Solutions Life Cycle.

CM Process in the SLC

The Project CM Lead is assigned at the beginning of the SLC to monitor the CM activities performed throughout the SLC.



Streamlining CM to Add Value

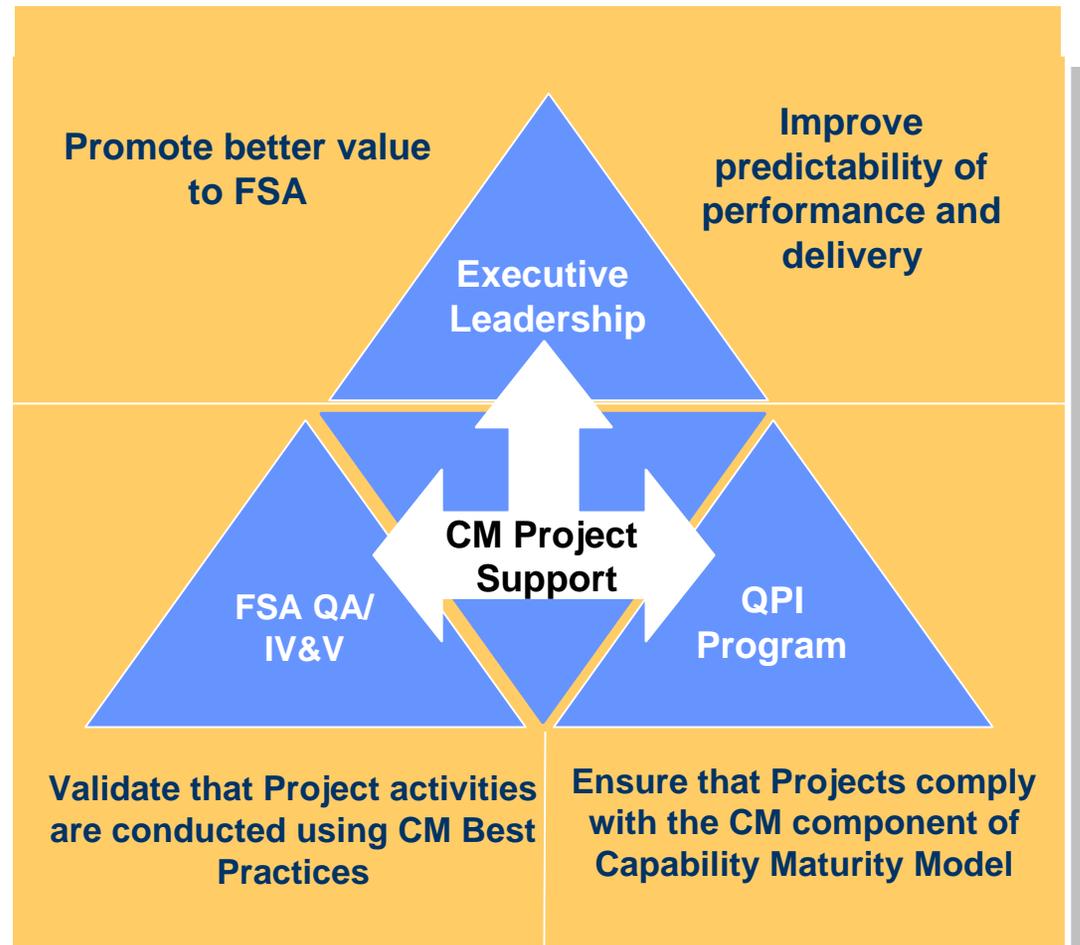
CM Deployment Team's Multi-Lateral/Streamlined Approach based on Coordination

• Configuration Management advice and oversight emanate from different groups:

- FSA & Mod Partner Executive Leadership Team
- FSA QA/IV&V Team
- Accenture's QPI Program Team
- FSA CM Deployment Team

• CM Deployment provides a framework for CM success in all these areas.

• The CM Deployment Team has tailored a multi-lateral approach to help Projects most efficiently address the concerns of these entities



Project Level CM Tasks



Plan Configuration Management

Assign CM Roles

Document CM Plan

Establish CCG

Train IPT in CM

An IPT's Project Manager appoints the Project CM Lead.

The Project CM Lead develops and maintains the Project CM Plan.

The Project CM Lead appoints the Project CCG.

The Project CM Lead is responsible for ensuring the Project IPT is trained in how to perform CM for that project.



Project Level CM Tasks



Perform Configuration Management

Configuration Identification

Configuration Control

Configuration Status Accounting

Configuration Baseline Auditing

Identify items that need to be placed and maintained under CM.

All changes to configuration items are classified, documented, and stored.

Administratively track and report on all of the configuration items.

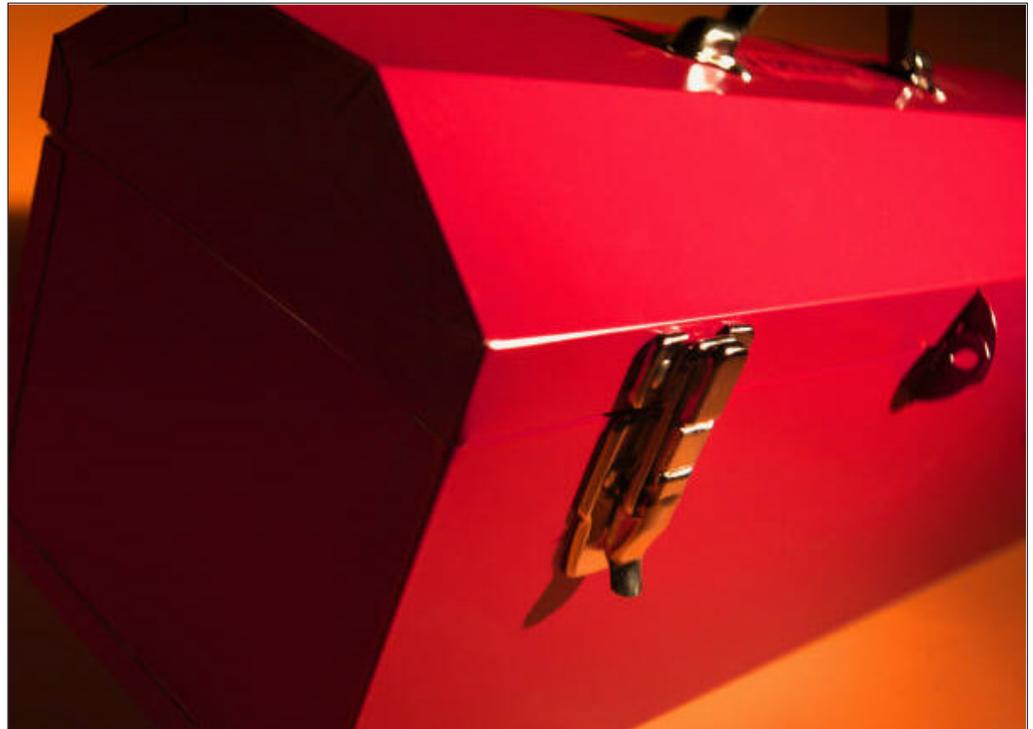
Identify deficiencies, provide improvements, and ensure compliance with standards.

Configuration Management Tools

The SLC provides needed processes, procedures, job aids, templates, and samples to support best practices. Tools are provided to enable CM activity at both the project and the enterprise level.

CM Tools

- CM Policy – establishes roles and responsibilities
- **CM Process Guide – provides the steps required to implement CM across FSA**
- CM Plan Template – provides form for project CM plan
- CM Item Identification Index – provides form for what items need to go into CM
- CM Baseline Audit Checklist – provides form for conducting baseline audits



CM Deliverables and Summary

CM enables teams to track and monitor changes in a consistent manner throughout the project life cycle. This allows projects to save time and money on rework throughout the SLC.

	CM Activity	Deliverables
	Plan Configuration Management	
Plan CM	Assign Configuration Management Roles	Project CM Lead Assigned
	Document Configuration Management Plan	Configuration Management Plan
	Establish Change Control Group	Change Control Group Charter
	Train Configuration Management	CM Project Resources are trained
	Perform Configuration Management Activities	
Perform CM	Configuration Identification and Baselineing	CM Plan Configuration Item Index Configuration Item Library System
	Configuration Control	Change Control Process
	Configuration Status Accounting	Appropriate Status Accounting Reports
	Configuration Auditing	Configuration Audit Checklist Configuration Audit Findings