

Attachment J

PSPO Configuration Management Plan



U.S. Customs & Border Protection

Passenger Systems Program Office

PSPO Configuration Management Plan

December 27, 2006

**Document Number:
PSPO-CMP**

Change Control Log

Revised by	Date	Description of Revisions
(b) (6)	11/28/2005	Updated document to reflect implementation of Dimensions and new change management process
(b) (6)	09/25/2006	Updated document to include process for management of documents within Dimensions
(b) (6)	10/17/2006	Removed specific code instructions; will be included in a separate document identifying instructions for both mainframe and client code
(b) (6)	12/27/2006	Updated document to make changes as a result of new SLC

Table of Contents

- 1. INTRODUCTION..... 1
 - 1.1 BACKGROUND 1
 - 1.2 PURPOSE..... 1
 - 1.3 SCOPE..... 2
 - 1.4 CMP MAINTENANCE..... 2
- 2. POLICIES, PLANS, AND PROCEDURES 3
 - 2.1 ORGANIZATIONAL POLICY 3
 - 2.2 PROGRAM OFFICE PLAN 3
 - 2.3 DIMENSIONS PROCEDURES 3
- 3. RELATED REFERENCE DOCUMENTS..... 4
- 4. PSPO TECHNICAL INTEGRATION SUPPORT TEAM..... 7
 - 4.1 DESCRIPTION..... 7
 - 4.2 CM GROUP..... 7
 - 4.3 CM/QA STAFF MEETINGS..... 7
- 5. CM TRAINING..... 8
 - 5.1 REQUIRED TRAINING..... 8
 - 5.2 CM GROUP MEMBERS..... 8
 - 5.3 CM TRAINING FOR PROJECT TEAM MEMBERS 8
- 6. PERFORMANCE MEASUREMENTS 9
- 7. CM PLANNING..... 10
 - 7.1 CM ACTIVITIES 10
 - 7.2 CM ROLES AND RESPONSIBILITIES 12
- 8. DOCUMENTATION MANAGEMENT..... 13
- 9. PROJECT CONFIGURATION ITEMS 14
 - 9.1 PROJECT CONFIGURATION ITEMS DESCRIPTION 14
 - 9.2 IDENTIFYING PROJECT CONFIGURATION ITEMS 15
 - 9.2.1 Documentation..... 15
 - 9.2.2 Applications..... 15
- 10. BASELINE MILESTONES 16
- 11. MANAGING CHANGES..... 17
 - 11.1 HANDLING PROBLEMS RECEIVED FROM THE FIELD 18
 - 11.2 LIBRARY MANAGEMENT 18
 - 11.3 CONFIGURATION CONTROL BOARDS..... 18
- 12. CONFIGURATION STATUS ACCOUNTING..... 19
 - 12.1 SOFTWARE CONFIGURATION STATUS ACCOUNTING..... 19
- 13. CONFIGURATION AUDITS..... 20
 - 13.1 PROJECT CM REPRESENTATIVE RESPONSIBILITIES 20
 - 13.2 PURPOSE OF CM AUDITS 21
 - 13.3 QA_CM AUDIT WORKSHEETS 21
 - 13.4 QA_CM AUDIT FINDINGS REPORT 22
- APPENDIX A. DOCUMENTS TO BE MANAGED IN DIMENSIONS 23

List of Tables

Table 1. Reference PSPO Documents	4
Table 2. PSPO TIST CM Responsibilities	7
Table 3. CM Activities	10
Table 4. CM Roles and Responsibilities.....	12
Table 5. Priority Levels	17
Table 6. List of Documents to be Managed in Dimensions.....	23

Passenger Systems Program Office Configuration Management Plan

1. Introduction

Configuration Management (CM) is a discipline that applies technical, administrative, and surveillance processes to establish and maintain the integrity and traceability of a product through its entire life cycle. CM manages and tracks system components (software, hardware, and documentation) throughout the developmental and operational life cycles.

The objective of CM is to establish and maintain the integrity of work products by applying procedures for configuration identification, control, and audits. This *Configuration Management Plan* (CMP) defines policies and practices for managing identified configuration items (CIs) within the Passenger Systems Program Office (PSPO). The plan describes the practices to be followed throughout the life cycle of CIs to ensure that changes to work products are controlled, monitored, and recorded, and that the integrity of all items is maintained. This CMP defines the automated CM tool that will be used and describes the roles and responsibilities of personnel involved with CM at PSPO.

Dimensions is the mandated CM tool for PSPO. All PSPO projects must use Dimensions for their project-related documentation, within the parameters established in Section 8.

1.1 Background

The PSPO resides under the Office of Information and Technology (OIT), Customs and Border Protection (CBP), Department of Homeland Security (DHS). PSPO is responsible for the design, development, and maintenance of CBP passenger systems. PSPO performs unit and integration testing of programs and works closely with the Independent Testing group for acceptance testing into the Production environment.

1.2 Purpose

This CMP provides CM activity guidance for all projects under PSPO. All projects under PSPO may include their CM activities within the CM section of the *Project Plan* or develop a project-specific CMP tailored to meet the requirements of the project. High-level CM activities conducted in accordance with this PSPO-level CMP may be referred to in the *Project Plan* to eliminate duplication.

1.3 Scope

The CMP establishes the CM activities for identifying, tracking, and controlling all CIs to include hardware, software, and related documentation maintained and supported by PSPO. Currently PSPO does not maintain nor support hardware, however, any future efforts that include hardware will adhere to this CMP.

CM is a process applied over the life cycle of a product that provides visibility and control of a product's functional and physical characteristics. Processes and procedures facilitate the orderly management of project information and provide a formal change methodology throughout a project's life cycle to support:

- New development
- Enhancement
- Defect correction
- Maintenance (longevity)
- Reduced risk, liability, and cost

The following CM activities are to be performed on all projects within PSPO:

- Establish, implement, and maintain CM policies, plans, and processes
- Develop a CMP or include CM activities within the *Project Plan*
- Integrate automated tools and database repositories
- Train personnel on CM principals and CM tools

1.4 CMP Maintenance

This CMP is under configuration control and is stored within Dimensions, the OIT-mandated CM tool, with read-only access to PSPO staff. This plan will be reviewed and updated (as necessary) periodically following the appropriate change control process.

2. Policies, Plans, and Procedures

2.1 Organizational Policy

The *System Life Cycle Handbook* (SLC) (CIS-HB 5500-07B) is the official policy and includes approved development life cycles, processes, and documentation requirements. The SLC describes a project's responsibilities for requirements management, project planning, project monitoring, quality assurance, configuration management, information technology security, and contract management.

2.2 Program Office Plan

In addition to the SLC, PSPO CM staff and project members are guided by the PSPO *Configuration Management Plan*.

2.3 Dimensions Procedures

When Dimensions was implemented at PSPO, a working group comprised of PSPO CM members and project leads was established. This group was tasked with creating step-by-step Dimensions instructions for use by and training of PSPO staff members. These instructions are maintained within Dimensions and address the following areas:

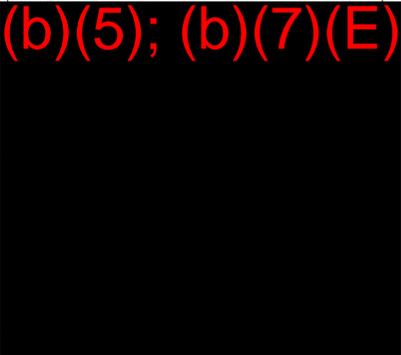
- Add an Item to Dimensions
- Check Items Into and Out of Dimensions
- Create a Dimensions Help Desk Ticket
- Helpful Dimensions Information
- Move ESB Projects Through Dimensions
- Process Problem Reports in Dimensions
- Show Users and Roles in Dimensions
- SQA Dimensions Process

3. Related Reference Documents

Table 1. Reference PSPO Documents

File Name	Document Name	Location in Dimensions
Joint SDD and ISD Emergency Change Request Approval Procedure	<i>Joint SDD and ISD Emergency Change Request Approval Procedure</i>	(b)(5); (b)(7)(E)
Change Request Questionnaire I	<i>Change Request Questionnaire</i>	
PSPO Change Process & Procedure	<i>PSPO Change Process & Procedure</i>	
Engineering Review Board Charter	<i>ESB Engineering Review Board Charter</i>	
Engineering Review Board Procedure	<i>ESB Engineering Review Board Procedure</i>	
Project CCB Procedure	<i>ESB Project Change Control Board Procedure</i>	
Branch-CR Impact Analysis Template	<i>ESB Change Request Impact Analysis</i>	
Branch-CR Analysis & Design Template	<i>ESB Change Request Analysis & Design</i>	
Branch-CRF Template (Excel)	<i>Change Request Form (Excel Version)</i>	
Branch-CRF Template (Word)	<i>Change Request Form (Word Version)</i>	
Branch-CRF Tracking Log	<i>ESB Tracking Log</i>	
PSPO User Request for Change	<i>User Request for Change to Certified Functional Requirements</i>	

File Name	Document Name	Location in Dimensions
Branch-Unit Test Problem Template	<i>Unit & Integration Testing Problem Report (UTR)</i>	(b)(5); (b)(7)(E)
Add an Item to Dimensions	<i>Add an Item to Dimensions</i>	
Check Items Into and Out of Dimensions	<i>Check Items Into and Out of Dimensions</i>	
Create a Dimensions Help Desk Ticket	<i>Create a Dimensions Help Desk Ticket</i>	
ESB SQA Dimensions Process	<i>ESB SQA Dimensions Process</i>	
Helpful Dimensions Information	<i>Helpful Dimensions Information</i>	
Managing Project Tasks Within Dimensions	<i>Managing Project Tasks Within Dimensions</i>	
Move ESB Projects Through Dimensions	<i>Move ESB Projects Through Dimensions</i>	
Process Problem Reports in Dimensions	<i>Process Problem Reports in Dimensions</i>	
PSPO Team Lead Handbook	<i>PSPO Team Lead Handbook</i>	
Show Users and Roles in Dimensions	<i>Show Users and Roles in Dimensions</i>	
PSPO TLC Process	<i>Project Tailoring Process</i>	
PSPO DOCNAMESTORE	<i>Project Documentation Naming, Storing & Baselining Procedure</i>	

File Name	Document Name	Location in Dimensions
PSPO Software Development Process	<i>Software Development Life Cycle Process</i>	(b)(5); (b)(7)(E) 
QA_CM Audit Worksheets Template	<i>QA_CM Audit Worksheets Template</i>	
QA_CM Audit Findings Report Template	<i>CM-QA Audit Findings Report</i>	

4. PSPO Technical Integration Support Team

4.1 Description

PSPO has established a Technical Integration Support Team (TIST). This group is comprised of the following functional areas: CM, Quality Assurance (QA), Project Tracking & Oversight, and Technical Writing.

4.2 CM Group

Table 2 lists the PSPO TIST CM responsibilities.

Table 2. PSPO TIST CM Responsibilities

Responsibilities
Project CM Support, Dimensions Support, CM Auditing
Database Administration (e.g., Project Configured Items List, Requirements Traceability Matrix)
Code Migration
Implementation Planning

4.3 CM/QA Staff Meetings

The TIST government lead conducts weekly CM/QA staff meetings. During these meetings, CM and QA staff members review with the TIST government lead the status of current program office and project CM and QA related activities. The group also discusses how CM and QA activities are being managed within the program office, as well as any changes that should be made to policies or procedures.

5. CM Training

5.1 Required Training

OIT management is responsible for providing the necessary training to ensure that all project team members can perform their CM roles effectively and efficiently within each program office of the organization. SLC policies defined below state the required training level for all projects:

- (SLC Policy 2.6.5.1) *The members of all affected organizations who are responsible for performing CM-related activities shall be trained in the objectives, procedures, and methods for performing their CM activities.*
- (SLC Policy 2.6.5.2) *Members of the OIT CM Organization and the Project CM Team shall be trained in the objectives, procedures, and methods for performing their configuration management activities.*
- (SLC Policy 2.6.5.3) *The members of the Project Team and other software-related groups shall be trained to perform their Configuration Management activities.*

5.2 CM Group Members

Members of the PSPO CM group are assigned their CM duties based upon qualifications developed through appropriate prior experience. At PSPO, they are provided training in the CBP OIT organization's SLC, as well as other requisite training in the methods and tools used to implement the CM processes at PSPO. These include the PSPO CM tools (e.g., LibControl and Dimensions). Knowledgeable members of the project team mentor the CM staff in the organization's processes and procedures. All PSPO staff members receive Dimensions training appropriate to their project role.

Members of the CM group are have or are currently receiving formal training in CM from the Institute of Configuration Management (ICM) using its proprietary CMII Model training.

5.3 CM Training for Project Team Members

The PSPO CM staff is currently equipped to provide training on all CM elements, including Dimensions, to all project members. This is accomplished on an as-needed basis. A designated Dimensions support group provides formal Dimensions user training to all appropriate PSPO staff members.

6. Performance Measurements

The SLC requires that measures be captured and documented throughout the life cycle of a project. The goal is to ensure that quantitative data are available for decision-making and trend analysis. Measurements may be collected and combined into one or more measures, which identify the performance of a process. They are used to measure the progress of a project and the quality of the project products. The benefit of compiling and using these measures is to improve the product's value to cost ratio.

All PSPO projects will report the following performance measurements, however, other measures necessary to project goals can be captured:

- Completion of milestones for CM activities compared to the plan
- Total number of changes originated, closed, and remaining, and the priority level of each change. These statistics can be captured over a period of time (e.g., the number of test cases successfully tested for one month or total lines of code received).

7. CM Planning

CM planning is the process of identifying and defining the CM activities that will be performed within a project, assigning CM roles and responsibilities, establishing CM training needs, and determining CM performance measures to be captured. The TIST CM lead assigns a project CM representative to the project.

7.1 CM Activities

Table 3. CM Activities

Stages	Project CM Activities/Tasks and Responsible Person
Stage 1: Initiation and Authorization	<p>CM Lead</p> <ul style="list-style-type: none"> • Receive notification of project initiation • Assign CM auditor to project <p>Project Team Lead</p> <ul style="list-style-type: none"> • Develop <i>Project Tailoring Document</i> • Set up project directory structure within Dimensions • Create work request and related tasks within Dimensions • Create and store in Dimensions the work products identified in the <i>Project Tailoring Document</i> as required for Stage 1 <p>CM Representative</p> <ul style="list-style-type: none"> • Assist with set up of project directory structure • Attend pre-Project Initiation Review and Authorization (PIRA) • Perform Stage 1 CM audit • Create Project Configured Items List (PCIL) and store in Dimensions • Establish Stage 1 Dimensions baseline
Stage 2: Project Definition	<p>Project Team Lead</p> <ul style="list-style-type: none"> • Create / update and store in Dimensions the work products identified in the <i>Project Tailoring Document</i> as required for Stage 2 <p>CM Representative</p> <ul style="list-style-type: none"> • Attend Project Definition Completion Review (PDCR) • Perform Stage 2 CM audit • Update PCIL and store in Dimensions • Establish Stage 2 Dimensions baseline
Stage 3: System Design	<p>Project Team Lead</p> <ul style="list-style-type: none"> • Create / update and store in Dimensions the work products identified on the <i>Project Tailoring Document</i> as required for Stage 3 <p>CM Representative</p> <ul style="list-style-type: none"> • Attend pre-Critical Design Review (CDR) • Perform Stage 3 CM audit • Update PCIL and store in Dimensions • Establish Stage 3 Dimensions baseline

Stages	Project CM Activities/Tasks and Responsible Person
Stage 4: Construction	<p>Project Team Lead</p> <ul style="list-style-type: none"> • Create / update and store in Dimensions the work products identified on the <i>Project Tailoring Document</i> as required for Stage 4 <p>CM Representative</p> <ul style="list-style-type: none"> • Attend Test Readiness Review (TRR) • Perform Stage 4 CM audit • Update PCIL and store in Dimensions • Establish Stage 4 Dimensions baseline
Stage 5: Acceptance and Readiness	<p>Project Team Lead</p> <ul style="list-style-type: none"> • Ensure code and infrastructure are ready for Production and all Dimensions change documents (move requests, test problem reports) are created and properly managed • Create / update and store in Dimensions the work products identified on the <i>Project Tailoring Document</i> as required for Stage 5 <p>CM Representative</p> <ul style="list-style-type: none"> • Attend pre-Production Readiness Review (PRR) • Attend Operational Readiness Review (ORR) • Perform Stage 5 CM audit • Update PCIL and store in Dimensions • Establish Stage 5 Dimensions baseline
Stage 6: Operations	<p>Project Team Lead</p> <ul style="list-style-type: none"> • Ensure systems and databases are moved to Production and all Dimensions change documents (move requests, change requests) are created and properly managed • Create / update and store in Dimensions the work products identified on the <i>Project Tailoring Document</i> as required for Stage 6 <p>CM Manager Representative</p> <ul style="list-style-type: none"> • Attend pre-Post Implementation Project Review (PIPR) • Perform Stage 6 CM audit • Update PCIL and store in Dimensions • Establish Stage 6 Dimensions baseline

7.2 CM Roles and Responsibilities

Note: PSPO staff is composed of government and contractor personnel.

Table 4. CM Roles and Responsibilities

Roles	Responsibilities
PSPO Director	<ul style="list-style-type: none"> • Demonstrate business awareness and credibility in the organization to ensure CM processes support the business priorities • Appoint CM team members
Project Team Leads	<ul style="list-style-type: none"> • Plan and manage CM activities on their projects • Identify project members to assume the role and be responsible for various Dimensions activities • Enforce the CM process activities on the project • Ensure system users and sponsors agree on the baselines for functional and technical requirements
PSPO CM Team	<ul style="list-style-type: none"> • Identify, control, and baseline work products or CIs • Oversee Dimensions repository to control all project-related CIs and associated work products • Review all move and migration requests • Manage all CM activities to ensure the CM process is being followed throughout the entire life cycle of a project • Conduct audits to ensure consistency, repeatability, and traceability • Ensure training of CM activities is provided for all staff members • Attend scheduled external pre-exit gate and internal exit gate meetings

8. Documentation Management

Documentation will be managed with PSPO using the following guidelines:

1. All documents listed in Appendix A are to be developed and managed within Dimensions.
2. For all project documentation that is not listed in Appendix A, the project lead may store their documentation on the shared drive.
3. As part of each SLC stage CM audit, the PSPO CM team will check the project's shared drive to ensure no document exists there that should be in Dimensions. If one does, the PSPO CM team member will move the document into Dimensions, delete it from the shared drive, and note the discrepancy on the audit findings report.
4. At the end of a project, all project artifacts will be moved off of the shared drive and into Dimensions. When a project has moved into Production, a PSPO CM team member will verify that this has occurred. If it has not, the PSPO CM team member will move the documents and notify the appropriate branch director of the discrepancy.

9. Project Configuration Items

9.1 Project Configuration Items Description

Each project's CIs consist of software components (mainframe and client) and documentation. The total of these items comprise the project's CIs.

1. **Client** software code is stored as an image.
2. **Mainframe** software components consist of program modules, maps, and include members. All source code is stored in an environment-specific library. CA-Librarian Source Management System, version 4.2, is the commercial off-the-shelf (COTS) product used to check in and check out the source code modules. Note: For a complete list of all project software products, see the current approved system design document (SDD) for the project. All mainframe software components are listed on the project's Dimensions move request.

3. **Documentation** is stored within Dimensions under the following path:

(b) (7)(E)

All project documentation is listed in the current PCIL and in the approved *Project Tailoring Document* for the project.

Dimensions project subfolders in (b) (7)(E) are explained below:

- **Correspondence**
Correspondence (e.g., e-mails) related to the project is stored in this subfolder.
 - **Meeting Minutes and Agendas**
Information (e.g., agendas, minutes) related to project meetings are stored in this subfolder. This includes project manager meeting minutes, tech lead meeting minutes, and weekly status meeting minutes. TIST CM/QA meeting minutes are also managed in Dimensions under (b) (7)(E)
 - **Project CCB**
Information (e.g., change request forms, CCB invitations) related to project Change Control Boards (CCBs) is stored in this folder.
 - **Project Documentation**
Project information not properly contained in one of the other folders is stored in this folder.
- **Audits**
The project CM and QA representatives store information related to CM and QA audits performed on the project in this folder (i.e., completed project audit checklists and .pdf files of audit summary reports signed by the project CM and QA representatives and the project manager).

- **SLC**
All documentation required for the project by the SLC is stored in this folder. This includes all items listed on the approved *Project Tailoring Document* for which the PSPO director has determined the project is responsible (e.g., *Project Plan*, *Requirements Traceability Matrix*, *Work Breakdown Structure*, *Technical Requirements Document*, *System Design Document*).

9.2 Identifying Project Configuration Items

9.2.1 Documentation

At the beginning of each project, a project tailoring meeting is held. This meeting is chaired by the PSPO director (or designee) and is attended by the project team lead, the project CM representative, the project QA representative, and any other relevant party. The objective of this meeting is to identify those specific SLC documents that will be required for the project. During this meeting, the *Project Tailoring Document* is reviewed. This document lists, by SLC stage, all possible documents required for any project. During this review, a decision is made as to which documents will be required for the project and which will be waived. Upon completion of the tailoring, the PSPO director and the team lead provide signature approval to the *Project Tailoring Document*. The documents listed on the approved form are those CIs that will be managed throughout the life of the project. The PSPO director must recertify any subsequent changes to the approved tailoring document.

9.2.2 Applications

Programs to be created or modified for the project are identified in the project's *Technical Requirements Document* (TRD). The TRD is written by the project development team and is based upon requirements stated in the *Functional Requirements Document* (FRD). Upon completion of the TRD, the project team lead chairs a TRD certification meeting. This meeting is attended by the user, appropriate development team members, CM project representative, QA project representative, and any other relevant party. The purpose of this meeting is for the user to certify the TRD so that the project may proceed to the construction phase.

All COTS products that need to be purchased for a specific project must be approved by the OIT CM team. Upon approval, COTS products are managed by the OIT CM team. All approved COTS products are listed in the project's TRD.

10. Baseline Milestones

A baseline is a formally designated set of work products that identify CIs at a specific stage in the development life cycle. All projects within PSPO will adhere to the SLC-required baseline requirements. Baseline CIs are subject to approval or agreement consistent with the SLC prior to progressing to the next stage. When the baselines detailed in are approved, changes must go through the formal PSPO change process.

The project CM representative is responsible for baselining the project subsequent to the completion of each SLC stage. Instructions for baselining are given in the *Project Documentation Naming, Storing & Baselining Procedure*.

11. Managing Changes

Configuration control begins when a CI has been identified and baselined (i.e., approved and certified) through a formal review process. Change requests (CRs) may be initiated for a variety of reasons, such as, providing a new capability requested by the customer, correcting product defects or deficiencies, implementing preplanned product improvement, or inserting new technology. CRs are handled as detailed in the *PSPO Change Process & Procedure* document.

PSPO project manager and/or designee will assign a priority level to all CRs received at PSPO.

Table 5. Priority Levels

Priority Level	Description	Migration to PROD	Examples
1 (Critical/ Emergency)	System capability is prevented or seriously degraded	As soon as possible	<ul style="list-style-type: none"> Program abends or brings the Production system down Program is contaminating data in the database There is no workaround function and the user is unable to perform his or her work There is a structural error, such as excessive I/Os Functional, statutory, regulatory, or executive order requirement for implementation occurs between regularly scheduled move dates
2 (High)	System capability is significantly degraded or the potential exists for serious degradation	Next available move date	<ul style="list-style-type: none"> Load program has inefficient name search routine resulting in unnecessary database reads
3 (Medium)	System capability is affected, but not a serious degradation in performance or usability	Next appropriate move date	<ul style="list-style-type: none"> Calls to an incorrect job are not causing any immediate problems, but will eventually have to be changed
4 (Low)	Cosmetic change to the system	Next appropriate move date	

11.1 Handling Problems Received From the Field

Problems are received from the field by a variety of methods including the Help Desk, Production Management, and e-mail. Daily, individuals designated by the PSPO director will check the status of the Remedy queue. Problems will be handled as follows:

- If the problem can be corrected by normal maintenance (e.g., update a table, clean up data, or answer a question), corrective action is taken. The Remedy ticket is assigned, updated to reflect the correct priority level, and closed.
- If further analysis and/or program changes are needed, the problem is referred to the project team lead for approval and processing.

11.2 Library Management

An integral part of configuration control is storing technical CIs and associated documentation artifacts in a centralized repository, thereby providing physical control. Dimensions is the tool by which such artifacts are managed.

11.3 Configuration Control Boards

Refer to the following documents:

- *PSPO Change Process & Procedure*
- *Engineering Review Board Charter*
- *Engineering Review Board Procedure*
- *Project CCB Procedure*

12. Configuration Status Accounting

The purpose of configuration status accounting (CSA) is to record, store, maintain, correlate, and report the status of an evolving CI through the system life cycle. CSA is the process of keeping records of all change actions. Dimensions is the tool that is used to track all change actions and to maintain all historical records of a CI.

12.1 Software Configuration Status Accounting

Software Configuration Status Accounting (SCSA) is knowing the current software inventory and the use of the components under configuration control. The CA-Librarian, LIBCTL, tool is used for SCSA. Refer to the *ESB Software Development Lifecycle Process* for more details.

13. Configuration Audits

A configuration audit is a formal review to assess compliance with the project CMP or *Project Plan* and associated processes and procedures. A configuration audit is performed to ensure the integrity of CIs and changes requested or implemented. These audits are performed at the end of each life cycle stage. When completed, they are used to establish a new baseline.

The following are examples of activities that are subject to configuration audits:

- Integrity of the software baseline is assessed and documented.
- Consistency of release information and modification information is ensured.
- Completeness and correctness of the documentation and software baseline library contents are verified.
- Action items are recorded and tracked to closure.

Below are the procedures for conducting configuration audits.

13.1 Project CM Representative Responsibilities

The project's CM representative is responsible for assisting the project with all CM issues, as well as conducting CM audits on the project. CM audits are conducted one day prior to each exit gate. Possible exit gates* through which the project may go are:

- Project Initiation Review and Authorization (PIRA)
- Project Definition Completion Review (PDCR)
- Critical Design Review (CDR)
- Test Readiness Review (TRR)
- Production Readiness Review (PRR)
- Operational Readiness Review (ORR)
- Post Implementation Project Review (PIPR)

*Note: The PSPO director determines which exit gates a project must go through.

13.2 Purpose of CM Audits

CM audits are held to:

- Ensure all project documentation required for a particular SLC stage has been created and stored in Dimensions. Documentation required for each stage is listed on the project's approved *Project Tailoring Document*.
- Ensure Dimensions is being used correctly. This includes making sure:
 - Project work request has been created correctly.
 - Dimensions directory structure has been set up correctly.
 - Tasks have been related to the appropriate project work request.
 - Tasks have been delegated to the appropriate team and TIST members.
 - Tasks have been actioned properly.
 - Tasks have been related to the appropriate design part.

13.3 QA_CM Audit Worksheets

The project CM representative uses the QA_CM audit worksheets to record results of the audit. There are six worksheets contained in an Excel file:

- QA / CM Audit of Stage 1 – Initiation and Authorization
- QA / CM Audit of Stage 2 – Project Definition
- QA / CM Audit of Stage 3 – System Design
- QA / CM Audit of Stage 4 – Construction
- QA / CM Audit of Stage 5 – Acceptance and Readiness
- QA / CM Audit of Stage 6 – Operations

The worksheets address issues specific to the particular stage of the project's life cycle

13.4 QA_CM Audit Findings Report

Results of each audit are recorded on the *QA_CM Audit Findings Report*. The CM representative ensures all completed *QA_CM Audit Findings Reports* are signed by the team lead, CM representative, and QA representative, then scanned and stored in the project's Dimensions directory.

There are four possible results of a CM audit:

- **Product/process is acceptable.**
- **Product/process is conditionally acceptable.**
The project may continue; however, the CM representative records unacceptable items as action items on the report. The CM representative follows up on the action items until closure.
- **Product/process is unacceptable.**
Work on the project stops. The CM representative records all unacceptable items as action items on the report. Progress on the project cannot resume until all action items are resolved.
- **Product/process unacceptable/team lead sign-off.**
The CM representative records all unacceptable items as action items on the report. The team lead signs the report authorizing acceptance of the listed action items. The team lead also provides the CM representative with a memo explaining the rationale behind team lead acceptance of the deficient items. The CM representative attaches the explanatory memo to the audit report.

Appendix A. Documents to be Managed in Dimensions

Listed below are those documents for which PSPO must manage within Dimensions, the OIT mandated CM tool.

1. Unless otherwise noted, all documents listed are managed by the project lead.
2. Scanned documents are noted. For all scanned documents, the project lead should give the document to the Project Support Team (PST) for scanning and storing in Dimensions. The PST will return the original document to the project lead.

Table 6. List of Documents to be Managed in Dimensions

Document	Notes
Acquisition Plan	
Action Item Database Report	
Architecture Alignment & Assessment (AAA) Report	
Architectural Review Board (ARB) Meeting Minutes	Scanned
Business Case / Cost Benefit Analysis	
Change Requests	
• Analysis & Design Form	
• Change Request Form	
• Document Change Request Form	
• Impact Analysis Form	
Concept of Operations	
Configuration Management Plan	Managed by PSPO CM
Contract Award	
Cost Analysis Requirements Document (CARD)	
Critical Design Review (CDR)	
• Pre-CDR Attendance	Scanned
• Pre-CDR Meeting Minutes	
• CDR Executive Summary	
• CDR Signoff	Scanned
Data Management Plan	
Database Request	
Deployment Plan	

Document	Notes
Functional Requirements	
<ul style="list-style-type: none"> • Functional Requirements Document 	
<ul style="list-style-type: none"> • User Request for Change to Certified Functional Requirements 	
<ul style="list-style-type: none"> • Functional Requirements Certification 	Scanned
Implementation Plans	
<ul style="list-style-type: none"> • Development 	
<ul style="list-style-type: none"> • Education 	
<ul style="list-style-type: none"> • Production 	
<ul style="list-style-type: none"> • QAX 	
Independent Testing	
<ul style="list-style-type: none"> • Peer Review Document 	Managed by I-TEST Team
<ul style="list-style-type: none"> • Test Acceptance Report 	Managed by I-TEST Team
<ul style="list-style-type: none"> • Test Cases 	Managed by I-TEST Team
<ul style="list-style-type: none"> • Test Plan 	Managed by I-TEST Team
<ul style="list-style-type: none"> • User Acceptance Signoff 	Managed by I-TEST Team
<ul style="list-style-type: none"> • User Verify 	Managed by I-TEST Team
Infrastructure Plan	
Interconnection Security Agreement	
Interface Control Document	
Investment Review Board (IRB) Decision Memo	
Lessons Learned	
Meetings	
<ul style="list-style-type: none"> • Agenda 	
<ul style="list-style-type: none"> • Attendance 	Scanned
<ul style="list-style-type: none"> • Minutes, with decisions & action items 	
Needs Analysis Document (NAD)	
Operations Manuals	
Operational Readiness Review (ORR)	
<ul style="list-style-type: none"> • ORR Executive Summary 	
<ul style="list-style-type: none"> • ORR Meeting Minutes 	
<ul style="list-style-type: none"> • ORR Signoff 	Scanned

Document	Notes
Peer Reviews	
<ul style="list-style-type: none"> • Checklists <ul style="list-style-type: none"> — Code — Critical Design — Functional Requirements — Preliminary Design — Unit Test Plan • Informal Peer Review Log • Meeting Minutes • Summary & Signoff 	Scanned
Preliminary COTS / GOTS Product Evaluation Results	
Privacy Threshold Analysis / Privacy Impact Analysis	
Project Definition Completion Review (PDCR)	
<ul style="list-style-type: none"> • PDCR Executive Summary • PDCR Meeting Minutes • PDCR Signoff 	Scanned
Preliminary Design Review (PDR)	
<ul style="list-style-type: none"> • PDR Executive Summary • PDR Meeting Minutes • PDR Signoff 	Scanned
Production Readiness Review (PRR)	
<ul style="list-style-type: none"> • Pre-PRR Attendance • Pre-PRR Meeting Minutes • PRR Executive Summary • PRR Signoff 	Scanned
Project Charter	
Project Configured Items List	Managed by PSPO CM
Project Initiation & Authorization Review (PIRA)	
<ul style="list-style-type: none"> • Pre-PIRA Attendance • Pre-PIRA Meeting Minutes • PIRA Executive Summary • PIRA Signoff 	Scanned

Document	Notes
Project Initiation Memo (PIM) / Notification of Funding Approval	Scanned
Project Measurement Plan	
Project Plan	
Project Staffing Plan	
Project Team Training / Development Plan	
Project Work Authorization (PWA) Memo	Scanned
Quality Assurance Plan	Managed by PSPO QA
Release Plan	
Request for Testing	
Requirements Traceability	
<ul style="list-style-type: none"> • Matrix 	
<ul style="list-style-type: none"> • Matrix Certification 	Scanned
Risks	
<ul style="list-style-type: none"> • Database Report 	
<ul style="list-style-type: none"> • Management Plan 	Managed by PST
ROM Cost Estimate or Budget Cost Estimate	
Security Documents	
<ul style="list-style-type: none"> • Accreditation Package 	Managed by Security Team
<ul style="list-style-type: none"> • Certification Package 	Managed by Security Team
<ul style="list-style-type: none"> • Contingency Plan 	Managed by Security Team
<ul style="list-style-type: none"> • Disaster Recovery Plan 	Managed by Security Team
<ul style="list-style-type: none"> • Security Design Document 	Managed by Security Team
<ul style="list-style-type: none"> • Security Features User's Guide 	Managed by Security Team
<ul style="list-style-type: none"> • Security Plan 	Managed by Security Team
<ul style="list-style-type: none"> • Security Risk Assessment 	Managed by Security Team
<ul style="list-style-type: none"> • Security Test Plan 	Managed by Security Team
Statement of Work / Request for Proposal	
Support Organization Meeting Minutes	
System Design Document	
Tailored Life Cycle	Scanned
Technical Compliance Review Results	

Document	Notes
Technical Requirements	
<ul style="list-style-type: none"> • Technical Requirements Document 	
<ul style="list-style-type: none"> • Technical Requirements Walkthrough Meeting Minutes 	
<ul style="list-style-type: none"> • Technical Requirements Certification 	Scanned
Technical Review Committee Approval	Scanned
Technology Insertion Request	
Test Readiness Review (TRR)	
<ul style="list-style-type: none"> • TRR Executive Summary 	
<ul style="list-style-type: none"> • TRR Meeting Minutes 	
<ul style="list-style-type: none"> • TRR Signoff 	Scanned
Training	
<ul style="list-style-type: none"> • Plan 	Managed by Training Team
<ul style="list-style-type: none"> • Requirements 	Managed by Training Team
<ul style="list-style-type: none"> • Training Materials 	Managed by Training Team
Trusted Facility Manual	
Unit Testing	
<ul style="list-style-type: none"> • Cases 	
<ul style="list-style-type: none"> • Plan 	
<ul style="list-style-type: none"> • Problem Report 	
Work Breakdown Structure and Project Schedule	