



FAA Configuration Management Program Plan

Final Draft
Version 2.0

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1 Introduction

1.1 Purpose

The NAS Configuration Management Authority is responsible for ensuring the conduct of effective configuration management (CM) practices for the Agency. This CM Program Plan (CMPP) sets forth the current initiatives designed to effect a CM discipline within the agency that:

- *supports planning, life cycle management and decision making for FAA systems;*
- *satisfies stakeholder needs with accurate, current information throughout the NAS life cycle;*
- *ensures subsystem traceability to the NAS architecture;*
- *results in reduction in the cost of developing, deploying, operating and maintaining ATC systems and FAA facilities; and*
- *is consistent with evolving FAA business practices.*

The CMPP provides a status on, and details the process improvement initiatives and the associated enhancement activities that must be performed in order to achieve the FAA CM vision and meet the associated ATS and ARA goals and outcomes. Additionally, it details the resources required to meet those goals and achieve the vision.

1.2 Scope

This plan outlines the enhancement activities required to develop a single, agency CM approach, integral to operations, maintenance and acquisition. It does not include a description of the day-to-day recurring CM tasks. These activities will be captured and released at a later date.

1.3 Management of Plan

The plan represents the tasks to be accomplished by the NAS Configuration Management (NAS CM) organization. The plan is developed by the NAS CM organization in coordination with the Configuration Management Core Team (CMCT). The CM Authority updates the plan annually to capture the changes in the planned activity.

1.4 Roles and Responsibilities

The following roles and responsibilities are specific to this CMPP. They apply to the information detailed herein and do not include day-to-day activities.

NAS CM Authority	Responsible for the approval of Agency CM Policy and Procedures; ensuring continued top-level management support of the NAS CM Program and associated initiatives; represent Agency CM at the NAS CCB.
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NAS CM Organization	<p>NAS Infrastructure CM, CM of Programs and Facilities: Implement and maintain the Agency CM program. Provide for Agency CM policy and procedures; provide guidance for CM planning, and plan and conduct CM training, practice CM Knowledge Management; develop, implement and maintain CM infrastructure and automated CM tool and tool suite operation; and monitor and oversee Agency CM activities.</p> <p>Provide process support to and serve as Executive Secretary for the Data Release Review Committee (DRRC).</p>
Integrated Product Team/Business Service	Participate in Agency CM initiatives and support CM information integration activities.
Configuration Management Steering Group	Participate in Agency CM initiatives and support CM integration activities.
Configuration Management Core Team	CM Practitioners share CM and related knowledge to enable an effective and cohesive Agency CM system.

2 NAS Configuration Management Vision

The role NAS Configuration Management plays in the agency’s organizational structure is that of enabling Business Service (BS)/Integrated Product Team (IPT)/Region operations through CM guidance, oversight and monitoring. This activity includes the communication of policy and procedures and provision of guidelines and templates for standard CM documentation.

In order to make the FAA CM vision a reality there must be a single, agency CM approach, that is integral to operations, maintenance and acquisition. A strong CM position within, and a monitoring and oversight function of the Air Traffic Organization (ATO) must also be realized in order to ensure a successful enterprise-wide CM program. The successful development and implementation of this single, agency CM approach hinges upon the realization of the following CM goals:

- Establish and operate a strong CM organization,
- Perform a consistent and balanced application of process and policy;
- Develop a skilled workforce and technology to effectively perform CM; and
- Obtain and maintain commitment from all levels of the organization.

To meet these goals and realize the CM vision, the NAS CM organization has set the following priorities. Detailed activities, including resource and schedule information are provided later in the document.

- CM Automation – WebCM deployment, infrastructure and website administration
- Core CM Functions – NAS CCB, DCC, Control Desk and Data Release Review Committee (DRRC) operations. Agency CM Policy – FAA Order 1800.66, CCB Charters, and CMPP maintenance
- CM Training
- CM Monitoring and Oversight
- Communications
- Process Description Document (PDD)

2.1 Accomplishments

This section provides status on enhancement activities detailed in the CMPP dated January 2000.

2.1.1 Establish and Operate a Strong CM Organization

The NAS CM organization now reports to the offices of Air Traffic Services and Research and Acquisition. Remaining activity to ensure strong agency CM includes, at least reaching resource goals identified in the CMPP dated January 2000 and detailed in Appendix A of this plan. In addition, maintaining a schedule of quarterly reviews with our parent organizations would support the communication required to promote a proactive CM culture within the agency and support a strong NAS CM organization. Additionally, quarterly newsletters and availability of CM related information on the CM website support the communication of CM related information and enable the CM community to provide feedback along with regional outreach initiatives.

2.1.2 Perform Consistent and Balanced Application of Process and Policy

The CM Authority has completed development and issuance of life cycle CM policy and processes, and provided a key vehicle for assuring consistent practice of the CM discipline. The National CM Procedures have been incorporated into FAA Order 1800.66. Continuous policy and process improvements are vital to the consistent and balanced application of CM. Policy work groups are established to address the needs of the CM community. The first work group for updating facility baseline policy and procedures has been conducted and the resulting updates to 1800.66 will be incorporated in the next release. Other work groups to be held include the establishment of “Class I/II” change categories, commercial-off-the-shelf, and operational CM.

2.1.3 Centralized Automated CM Information System

The groundwork for a centralized automated CM system has been established and core components and associated requirements have been identified. The CM Concept of Operation was finalized in August of 1999. The detailed schedule for the CM automation system is provided in Appendix B.

2.1.4 Strategy for incrementally designing and establishing the CM Information Architecture

The CM Information Architecture Concept of Operations and Design Strategy define the strategic direction and desired future FAA CM information management environment. It documents the “as-is” CM information environment, defines the vision, goals, objectives, links documented requirements to ongoing initiatives and provides a base context to meet corporate CM information needs.

3 Implementation Plan

This implementation approach builds on CM policy and processes, which includes the completed National CM Procedures. The primary focus is on achieving standardization and consistency of CM processes and products that will be performed and measured. To support performance and measurement, maintaining commitment from top-level management and implementing technology enhancements (including technology refresh) will serve as enablers to achieve a robust CM system.

Cross-functional teams similar to those used to develop the policy and processes have and will continue to contribute to the development of the procedures and support the requirements for the technology enhancements. The CM Core Team will continue to guide this development and integrate work products.

Further efforts in identifying and securing adequate resources, design of the overall information architecture and intensified education and training will ensure that the overall CM process and its application to individual programs and organizations has reached iCMM level 3 compliancy. This includes standardized process(es), use of defined and established process(es), and utilization of an established process improvement methodology.

3.1 Enhancement CM Activities

This section addresses the CM initiatives, which will create an effective CM culture, thus facilitating the achievement of the FAA CM vision. Section 4, Measuring Success, provides sample metrics and sample vehicles to be used for collecting measurements of progress and success.

3.1.1 Maintain and Operate a Strong CM Organization

In the constantly evolving environments of the Agency and Industry, CM must ensure top-level Agency management support and determine the process for maintaining that commitment to enable operation of a strong CM organization. The CM Authority plans to:

- Work towards ensuring CM is positioned at an effective level within the pending Air Traffic Organization/Performance – Based Organization (ATO/PBO)
- Ensure quarterly CM program status reviews with top-level management
- Continue effective communication of the CM discipline and its benefits across the Agency
- Standardize CM responsibilities and practices across the Agency

3.1.2 Plan for Consistent and Balanced Application CM

The performance of consistent and balanced application of process and policy is essential to ensure integrity of the NAS baseline and its related processes. Planning for CM throughout the lifecycle of NAS systems and products is key to achieving effective CM. An important means of accomplishing this is to ensure that CM requirements are instituted at the inception of new programs and remain in place throughout the lifecycle of those programs. To support CM planning activities, a single automated CM information system supporting the updated change management process must be implemented. Additionally, related processes and their relationship to the CM process have been identified to support planning and impact analysis for future enhancements (e.g., modification tracking, DRRC activity). To implement this enhancement, the following products are planned:

- Centralized CM Automation System
- CM Policy and Process Update/Improvement

- CM Procurement Replacement Guidance and Standard CM Templates (RD, SOW, CM CDRLs, CM Plans, Audit Plans)
- Standard Monitoring Criteria to Oversee Contractor Configuration Identification
- CM Metrics Strategy
- CM Effectiveness and Quality Measures Action Plan

3.1.3 Implement Known Process Improvements

There are a number of activities underway to address identified improvements in the current CM system. These initiatives will be integrated into the National Procedures upon completion. The initiatives include:

- Updating FAA Order 1800.66
- Providing standard CM templates
- Reviewing current operations for continued process improvement
- Identifying measures and metrics
- Supporting the Modification Tracking Initiative
- Updating the NAS Change Proposal (NCP) Form
- Developing New Requirements Process
- Clarifying relationship of NAS CCB and JRC

3.1.4 Develop Skilled Workforce

Developing a skilled workforce addresses the educational needs of CM stakeholders and is integrated with other agency initiatives. Business Service, IPT and Regional personnel benefit from this program because it supports an agency-wide understanding of NAS guidance, best practices, lessons learned, current processes, and technology solutions for configuration management.

This effort targets executives, management, CM practitioners and general users, including engineers. It consists of both formal and informal methods. Formal training includes the development and implementation of training modules or communication vehicles such as briefing materials. Commercial or government sources may be utilized to develop and conduct formal training. Informal training is accomplished through newsletters, teleconferences, WEB based information and CM migration assistance. This effort includes use of the CM web site maintained by ACM.

There are three levels of workforce CM training: (1) Awareness (beginning) and (2) Comprehension (intermediate), and Applied knowledge (advanced), defined as follows:

- | | |
|--|--|
| <p>(1) Awareness (beginning)</p> | <p>Provides a general familiarity with CM. For concepts, awareness is an overall appreciation of the meaning and major limitations; for methodologies, awareness is a knowledge of the output products and purposes. Geared toward managers, general users, and CM practitioners.</p> |
| <p>(2) Comprehension (intermediate)</p> | <p>Covers basic principles (configuration identification, configuration control, status accounting, CM planning, verification and audits, and data management) and best practices of CM process as outlined in FAA Policy, guidelines, and commercial practices. Geared toward CM practitioners and general users.</p> |

- (3) **Applied knowledge (advanced)** Provides detail on the basic principles of CM for on-the-job application, hands-on practice for the automated CM tool, writing CM plans, performing audits, and identifying configuration items etc. Geared toward CM practitioners.

3.1.5 *Develop Technology to Effectively Perform CM*

The FAA will establish and maintain a standards-based information architecture. The CM Information Architecture will be incrementally designed, built, and implemented in a modular fashion. The Architecture's components shall relate to the CM business functions, as defined in the FAA CM life-cycle process model of the FAA CM Policy and CM procedures.

Each architecture module will address all of the four major CM information architecture components, including an enterprise business model, data architecture, applications architecture and technology architecture.

- **Enterprise Business Model.** Identifies the functions of the CM business. Building on the National Procedures, to support further information modeling and analysis, that high-level process flow will be further decomposed to facilitate the documentation/analysis of information flows and the development of data models. Over time, the collection of workflow modules and the Life Cycle CM Process Diagram will form the FAA's CM Enterprise Business Model.
- **Data Architecture.** The CM data architecture will identify and define the major kinds of data that support the CM business functions documented in the Enterprise Business Model. The data architecture will consist of data entities, each of which has attributes and relationships with other data entities. This information will be published in the corporate CM data dictionary, which will serve as a critical information source for agency information system designers. It will define a core set of corporate CM data that will be maintained consistently in agency CM databases and systems to ensure data sharing across databases and systems. Issues such as the future role of the DCC and Program Support Libraries (PSLs), standard Contractor Deliverables and others will be addressed.
- **Applications Architecture.** The CM applications architecture will define the major kinds of system applications needed to manage CM data and support life cycle CM activities. This architecture defines what applications will do to manage data and provides information to CM stakeholders. Further analysis will be conducted to define/refine current applications, design/build new applications and design/build interfaces between applications to facilitate data access, processing and sharing.

As the Enterprise Business Model evolves, opportunities to leverage information systems and technology will be considered. Examples will include the tailoring of the automated tool (e.g., special input and output screens), metrics collection, status reporting and other applications. Data requirements from other supporting systems will be defined in detail, supporting the design of needed interfaces with the Modification Tracking activities, the Asset Supply Chain Management (ASCM) system, and the NAS Architecture database, and others as appropriate.

- **Technology Architecture.** The CM technology architecture defines the major kinds of technologies or platforms needed to provide an environment for CM applications that are managing data in a shared environment. The CM technology architecture will also leverage the existing FAA installed technology base, and approved FAA desktop and other systems standards where applicable.

- ***Implement an Automated CM Tool.*** WebCM has been selected as the automated CM tool for NCP processing. WebCM, after completion and validation of enhancements for national implementation, will be nationally deployed. WebCM will be a component of the CM Automation system.
- ***Enhance the CM Corporate Web Page.*** The CM web page enhancements will continue in order to improve information dissemination, prepare for automated tool interface and position the CM organization to leverage related web activities throughout the FAA. The CM Web Page is a vital component of the target technology architecture.
- ***Document management strategy.*** A CM document management corporate strategy will be developed that defines roles, responsibilities, desired outcomes and a vision of the future. The goal is to define and then establish a corporate, distributed infrastructure in the form of the vDCC and the CM data repository, which will ensure that CM documentation is properly maintained and that needed access is provided to CM stakeholders in a timely, cost effective manner.
- ***Ensure Integration with related FAA information management initiatives.*** Participate in and contribute to related agency initiatives (i.e., pb-ICE) to ensure that CM information requirements are addressed (i.e., facilitate integration with NAS CM-organization sponsored efforts), promote CM information management best practices and continue to contribute to the development of a corporate CM data dictionary and implementation of CM data standards.

3.1.6 Obtain Commitment from Associates and All Levels of the Organization

Obtaining commitment from the associates and all levels of the organization is an ongoing activity; however, this plan will focus on establishing the criteria and measures to assess FAA commitment to CM. The work is focused in three primary areas:

- (Day-to-Day) Management Procedures for the integrity of the CM process
- Resource Analysis and Modeling
- Commitment Measures

4 Measuring Success

Measuring the success of the enhancements described in this plan is a two-part activity. The initial success measures focus on the implementation of this plan. The initial success measures are:

- Approval of this plan by December 2003 and
- Ensure existing resources are available to support the activities outlined in this plan.

Once the tasking of this plan has been completed, success can be measured in terms of measurable improvements (quantity and quality) in the CM system. Specific effectiveness measures will be developed by the CMCT; however, *sample* CM measures are listed below to provide insight into the types of measures that could be collected:

CM Practitioners working in accordance with approved policy, process and procedures

- Percentage of Documented OPI Procedures/Variations Identified
- Acquisitions resulting in operationally suitable CM and CM related deliverables (standardized contract language)
- Reduced Time/Cost to Implement/Transition to Operations
- Percentage of Baselines (systems & facilities) established and maintained
- Percentage of changes processed without rework (quality casefiles/NCPs)
- Percentage of approved changes which can be traced to the technical architecture, to the implementing vehicle (system support modification (SSM), system document release (SDR), system technical release (STR), etc.), and implementation verified

Trained CM Practitioners and Management Support

- Percentage of CM Practitioners who have completed awareness, basic and advanced training
- CM included in performance plans of all lines of business (LOB) represented on the CMSG

Accurate CM information accessible

- Percentage of CM documentation online and accessible by the LOBs represented on the CMSG

The following details the key products and expected, measurable outcomes associated with the enhancement activities.

<i>Maintain and Operate a Strong CM Organization</i>	
Current Challenges (i.e., why is this enhancement activity necessary)	Key Products and Measurable Outcomes (i.e., what will it look like when its fixed)
<ul style="list-style-type: none"> • Placement of and role of the CM organization within the ATO is uncertain • Lack understanding of CM and its benefits at the management and practitioner level • Need to ensure Standardized Responsibilities • Promulgation of separate CM tools 	<ul style="list-style-type: none"> • Cross-functional Agency Direction • Implementation of CM Training Program • Life-cycle Approach to Issue Resolution and Product Integration • Quarterly Reviews of Agency CM
<i>Plan for Consistent and Balanced Application CM</i>	
Current Challenges (i.e., why is this enhancement activity necessary)	Key Products and Measurable Outcomes (i.e., what will it look like when its fixed)
<ul style="list-style-type: none"> • Lack of Baseline Integrity 	<ul style="list-style-type: none"> • Life Cycle Policy and Process (Completed)

<ul style="list-style-type: none"> • Lack of a Single Automated CM Information System • Need to Streamline and Simplify the Change Management Process • Lack of Planning for CM During the Operational Phase • Lack of Definition of Relationship between CM Process and Related Processes (i.e., JRC, Logistics, 2nd Level Ops, etc.) • Need Standardized Roles and Responsibilities 	<ul style="list-style-type: none"> • National CM Procedures (Completed) • CM Procurement Replacement Guidance and Standard CM Templates (RD, SOW, CM CDRLs, CM Plans, Audit Plans) • Standard Monitoring Criteria to Oversee Contractor Configuration Identification • Centralized Automated CM Information System • Strategy for Configuration Management of Technical Interfaces • CM Metrics Strategy • CM Effectiveness and Quality Measures Action Plan
<p><i>Develop and Maintain Skilled Workforce and Technology to Effectively Perform CM</i></p>	
<p>Current Challenges (i.e., why is this enhancement activity necessary)</p> <ul style="list-style-type: none"> • Need Responsible Experts • Need Complete and Integrated Information Source • Need On-line Access to Information • Status Accounting Information Doesn't Support all Organizational Needs • CM Tools are being Developed (Procured) and Implemented Without Assessing Agency Impacts and Agency CM requirements 	<p>Key Products and Measurable Outcomes (i.e., what will it look like when its fixed)</p> <ul style="list-style-type: none"> • Training Plan and Executable Modules (Completed) • CM Information Architecture Concept of Operations (Completed) • Workflow Design Documentation, including the NCP Workflow, Data Design and Functional Design Documents • Cradle-to-Grave Automated NCP Tool (Process Improvements Based on Pilot Operations) • CM Document Strategy • CM Corporate Web Page • CM Business Model • Data Architecture • Applications Architecture • Technical Architecture
<p><i>Obtain Commitment from Associates and All Levels of the Organization</i></p>	
<p>Current Challenges (i.e., why is this enhancement activity necessary)</p> <ul style="list-style-type: none"> • Lack understanding of CM and its benefits at the Management and Practitioner Level • Lack of Resources and Budget for CM • Need Responsible Experts 	<p>Key Products and Measurable Outcomes (i.e., what will it look like when its fixed)</p> <ul style="list-style-type: none"> • CM Management Procedures (including Monitoring, Oversight and Evaluation) • Performance Plan Criteria • Evidence of the Inclusion of CM in Performance Plans CM Cost Factor for Cost Estimating Under Investment Analysis • Life Cycle CM Position Descriptions

APPENDIX A RESOURCES AND RISKS

This section addresses the CM activities performed by NAS Configuration Management organization resources in support of NAS Infrastructure CM and associated enterprise data, and CM of Programs and Facilities. These activities support the initiatives that must be in place in order to implement enhancements detailed in Section 3.1.

1. ***NAS Infrastructure CM***: NAS Configuration Management organization, augmented by the CMCT and cross-functional working groups.
2. ***CM of Programs and Facilities***: BU/IPT Solution Providers, AT, AF, and Regional Offices performing CM.

An effective CM culture within the FAA is key to avoiding inconsistent performance of CM. Overall, CM is not being performed at an acceptable level, which has caused a lack of integrity of the baseline information and major degradation to the “agency” CM process. Upon successful implementation of enhancement activities the agency will execute CM as described in Section 3.

NAS Infrastructure CM

NAS Infrastructure CM is defined by the activities required to maintain the overall integrity of the CM process, maintain the NAS level baselines, provide visibility and traceability between the NAS level product and operational baselines, and ensure consistent application of the CM discipline throughout the FAA. Its functions are to manage the CM process for the Agency; develop/issue policy and standardize CM processes and procedures; monitor, evaluate, report, provide corrective guidance, and follow-up to ensure CM is meeting Agency needs; serve as focal point for resolution of CM issues; provide support to BS/IPTs through liaisons; and provide continuous improvement of CM for the Agency.

CM of Programs and Facilities

The role the NAS CM organization plays in the configuration management of programs and facilities is defined by the activities required to: ensure awareness of CM policy and procedures; provide training (policy, process, automated tool); create a liaison role to support, oversee and monitor BS/IPT and Regional CM activities; and develop and provide tools to promote standard CM practices (e.g., templates for standard CM documentation).

The resources currently in place to complete the recurring activities are described below in the following Table A.1-1 and Table A.1-2

**APPENDIX A
RESOURCES AND RISKS**

Table A.1-1: NAS Infrastructure CM

Activity	ACM CM Resources	Non-ACM CM Resources
Plan and Manage CM Activities <ul style="list-style-type: none"> • Plan/Coordinate Agency CM Activities • Report Agency CM Status • Execute ACM Outreach • Perform Product Integration and Quality Control 	NAS CM Organization	CMCT CMMSG
Maintain CM Infrastructure <ul style="list-style-type: none"> • Maintain Policy, Process and Procedures • Maintain Links to External Processes and Products • Maintain MCI • Operate Control Desk • Provide CCB Support • Operate DCC 	NAS CM Organization	
Operate ACM Information Systems <ul style="list-style-type: none"> • CM Automation Program Support • Maintain Website • Monitor Related Initiatives • Manage CM Information Architecture 	NAS CM Organization	
Perform Monitor and Oversight Activities <ul style="list-style-type: none"> • Assess Agency Needs (Education, Problem Areas, etc.) • Implement Process Improvement Findings • Plan, Manage and Execute Agency CM Training 	NAS CM Organization	

APPENDIX A RESOURCES AND RISKS

Table A.1-2: CM of Programs and Facilities

Activity	ACM CM Resources	Non-ACM CM Resources
Establish Training Program <ul style="list-style-type: none"> • Finalize CM Training Plan • Promote Training Program • Prepare Training materials • Conduct Training • Maintain training materials 	ACM Authority, NAS CM Organization	FAA Academy (proposed)
Support, Oversee and Monitor CM Activities <ul style="list-style-type: none"> • Establish Liaison role 	ACM Authority, NAS CM Organization	Program Evaluation Staff
Develop and provide tools to promote standard CM practices <ul style="list-style-type: none"> • Prepare standard templates: <ul style="list-style-type: none"> • CM Plan • Statement of Work • CDRLs,, etc. 	NAS CM Organization	

**APPENDIX A
RESOURCES AND RISKS**

The resources required to complete *the enhancement* activities (along with CMCT support) are listed in Table A.1-3 – these numbers **DO NOT** represent FAA day-to-day CM activities. With the exception of ACM, each of the organizations involved would expend .33 FTE in 2003, .25 FTE in 2004, and .25 FTE in 2005.

Table A.1.3 Resources Required to Enhance CM

Organization	Required Resources (FTE)		
	Automation Implementation & CM Infrastructure	Automation Full Operations	Automation Maintenance & Process Improvement
	2003	2004	2005
AAR	.33	.25	.25
ACM ¹	21.00	18.00	15.00
ACT (ACB, ACX)	1.00	.75	.75
AIR-500	.33	.25	.25
AIO-2	.33	.25	.25
AML	.33	.25	.25
AND (300, 500, 700)	1.00	.75	.75
ANI	.33	.25	.25
AFZ	.33	.25	.25
AOP (100, 1000)	.66	.50	.50
AOS (200, 500, 700)	1.00	.75	.75
AOZ-1	.33	.25	.25
ARS (ARN, ARU, ARX)	1.00	.75	.75
ASD-100	.33	.25	.25
AUA (200, 400,600)	1.00	.75	.75
ATB (2, 200, 300, 400)	1.20	1.00	1.00
Regions	3.00	2.25	2.25

A key risk to completing these tasks is the availability of the resources presented above. Additional risks to the success of this plan are:

- **Culture**
 - Ability of FAA to respond to an organization with dual accountability
 - Working group members may be unable to easily consider all issues objectively
 - Inconsistent management and CM stakeholder commitment
- **Procedural**
 - Legal/Contractual/Procedural barriers associated with implementing procurement standards
 - The deployment of a new CM tool may constrain other improvement initiatives
 - Lack of FAA methodology to resolve (and accept resolution) of process, policy, and procedures which conflict with existing FAA orders
- **Technology**
 - Continuing to spend funds on technology without an agency perspective (i.e., paying for duplicative capabilities, etc.)

¹ Resources in ACM include related task areas in CM Infrastructure, CM of Programs and Facilities, Process Improvement and Training

APPENDIX A RESOURCES AND RISKS

- Not having an integrated, automated CM Tool that the FAA would use
- The implementation of an appropriate CM Tool (or Tools)
- ***Cost***
 - Additional costs associated with developing and implementing procedures and guidance may not be fully appreciated as there is no current way to quantify the cost of not implementing
 - Moving to a standard identification system may impose extensive costs on replacing existing identification systems
 - Funding for contractor provided training

**APPENDIX B
SCHEDULES**

Table B-1.1: Implement Process Improvements Tasks

Start	Target Complete	Task Description	Participants
12/31/02	4/15/03	Conduct Policy/Procedure Improvement Working Groups <ul style="list-style-type: none"> • Class I/II Change types • COTS • Operational CM 	ACM, AUA, ATB, AOS, ACT, AOP, AFZ
04/01/03	06/30/03	Develop Standard CM Templates (including but not limited to) <ul style="list-style-type: none"> • FRD • SOW • CM CDRLs • CM Plan • Audit Plans 	ACM, AUA, AND ATB
07/01/03	08/15/03	Review Standard CM Templates	CMCT, AML, AFZ, AMA, Regions (3)
TBD	TBD	Develop Standard Monitoring Criteria to Oversee Contractor Configuration Identification <ul style="list-style-type: none"> • Part, revision and version numbers • Serial and lot numbers • Marking and labeling of items • Embedded identifiers in source, object, and firmware code • Superceding parts (non-interchangeable conditions) • Documentation and engineering release systems 	AOP, ACM, AML, AND, ATB, AUA, AOS, AFZ
12/31/03	02/28/23	Develop CM Link to Modification Tracking Program.	Mod Tracking Work Group CM Participants
TBD	TBD	Develop Strategy for Configuration Management of Technical Interfaces <ul style="list-style-type: none"> • NAS Interfaces, Technical Architecture, and JRC Decisions • Interface Control Documentation • Interface Control Working Groups • Requirements Traceability 	AOP, ACM, AFZ, AML, AND, ATB, AUA, Regions (3), AOS, ARS, ACT
TBD	TBD	Develop CM Effectiveness and Quality Measures Criteria	CMCT
TBD	TBD	Identify CM metrics	AFZ, AOS, AOP, ANI, AUA, AND, ATB AML, ARS, ACM, Regions (3), ACT
TBD	TBD	Assess Measures and Initiate Corrective Action Plans	CMCT

**APPENDIX B
SCHEDULES**

Table B-1.2: Develop and Maintain Skilled Workforce Tasks

Start	Target Complete	Task Description	Participants
	Ongoing	Attend applicable CM Training	Agency
01/15/99	Ongoing	Develop/Conduct CM Awareness Briefings	ACM
01/15/99	Completed	Develop/Conduct Basic CM Briefings	ACM
10/01/02	11/15/02	Develop Agency CM Training Program Plan	ACM
FY-03	FY-03	Implement Agency CM Training Program Plan	ACM
FY-03	FY-03	Develop Formal CM Training Modules	ACM
FY-04	Ongoing	Conduct Formal CM Training	ACM/FAA Academy

**APPENDIX B
SCHEDULES****Table B-1.3: Develop Technology Tasks**

Start Date	Target Complete Date	Task Description	Participants
4/2/02	12/30/03	Implement ACM LAN	ACM
4/2/02	4/12/02	Develop design of network architecture	
4/15/02	5/24/02	Define HW and SW requirements	
5/29/02	6/20/02	Conduct cost comparison analysis	
6/24/02	11/8/02	Procure HW & SW	
10/21/02	11/8/02	Have power receptacles installed	
11/12/02	12/9/02	Install & Test LAN	
12/10/02	4/22/03	Complete LAN SCAP	
1/24/03	1/27/03	In-Service Agreement for Pre-Deployment	
4/22/03	4/22/03	Deliver LAN SCAP	
4/22/03	4/22/03	Commence full operations and maintenance of LAN	
4/23/03	12/30/03	O&M to support deployment of other applications	
3/8/02	9/25/03	Implement WebCM	ACM, Charter Users²
3/8/02	4/26/02	Document Current Business Rules	
3/8/02	4/26/02	Document Data Definitions & Model	
3/8/02	8/16/02	Design DOCCON Interface	
9/3/02	2/28/03	Obtain Union Concurrence	
4/22/02	5/15/02	Demonstrate Development Platform Software	
8/20/02	8/20/02	Finalize new FAA contract with WebCM vendor	
8/26/02	8/29/02	Conduct TIM: Business Rules, W/F Gap Analysis, Admin Refresh Proposal & Mod. List"	
9/19/02	5/31/03	Complete WebCM SCAP (Deployment Rpt)	
1/27/03	1/27/03	Obtain In-Service Agreement for Pre-Deployment	
4/29/03	3/31/03	Deliver WebCM SCAP for Certification	
7/15/02	8/30/02	Finalize Modifications List	
8/26/02	10/25/02	Finalize Tech Refresh Proposal	
9/2/02	11/22/02	Complete Software Modifications	
9/13/02	10/17/02	Develop Implementation Strategy	
9/20/02	10/24/02	Develop Training Strategy	
11/18/02	12/20/02	Develop Test Strategy	
12/23/02	1/22/03	Define Software CM Strategy	
12/6/02	1/30/03	Create Training Materials	
11/26/02	12/6/02	Validate Software Modifications	
12/13/02	1/3/03	Achieve IOC	
12/16/02	12/27/02	Populate Database	
3/31/03	9/25/03	Implement Nationally	

² Charter Users are those organizations/users participating in the testing and implementation of WebCM. They include ATB, AGL, AOS, ANI, ACM, AUA and AND

**APPENDIX B
SCHEDULES**

Start Date	Target Complete Date	Task Description	Participants
1/3/03	1/3/03	Commence ongoing operation and maintenance	
4/23/03	11/25/03	Implement ACM Web Portal	ACM
4/23/03	5/6/03	Finalize Web Portal Requirements	
5/7/03	5/13/03	Obtain FAA approval of requirements	
5/14/03	6/24/03	Procure web portal software and vendor services	
6/25/03	11/25/03	Complete Web Portal SCAP	
11/25/03	11/25/03	Deliver Web Portal SCAP	
6/25/03	8/5/03	Install and test web portal software (Vendor)	
8/6/03	8/19/03	Convert ACM Web sites to portal infrastructure	
9/26/03	11/24/03	Integrate other CM Automation components into Web Portal	
9/26/03	10/9/03	Build and test interface to WebCM	
10/10/03	10/23/03	Build and test interface to vDCC	
10/30/03	11/12/03	Build and test interface to DOCCON replacement	
11/13/03	11/19/03	Test fully integrated web portal	
11/20/03	11/24/03	ACM acceptance of Web Portal	
11/24/03	11/24/03	Commence operations and support of integrated web portal	
3/8/02	12/23/03	Implement Virtual DCC - Phase 1	ACM
3/8/02	8/30/02	Define requirements and data conversion plan	
9/2/02	9/13/02	Obtain FAA approval of requirements and conversion plan	
9/16/02	2/28/03	Procure contractor services for conversion of hardcopy assets	
6/1/02	4/11/03	Convert hardcopy DCC assets to electronic format	
8/1/03	11/24/03	Procure and Install RMA Application	
4/14/03	6/30/03	Build NAS Product Data Module for Baselined Documents (incl. WebCM Interface)	
9/16/02	4/30/03	Complete vDCC SCAP	
4/30/03	4/30/03	Deliver vDCC SCAP	
7/1/03	7/7/03	Testing of initial phase of vDCC	
7/8/03	8/4/03	Build NAS Product Data Module for Non-baselined Documents	
10/10/03	11/30/03	Testing of final phase of vDCC	
10/10/03	12/10/03	ACM acceptance of vDCC	
8/18/03	8/18/03	Commence operations and support of vDCC	
10/7/02	10/29/03	Implement CM Data Repository	ACM
10/7/02	11/5/02	Define Requirements	
11/6/02	12/9/02	Define Interface	
10/7/02	1/3/03	DOCCON ISS Certification	

**APPENDIX B
SCHEDULES**

Start Date	Target Complete Date	Task Description	Participants
10/7/02	4/15/03	Complete Union Coordination	
12/10/02	1/9/03	Define Test Strategy	
1/10/03	2/10/03	Define Implementation Strategy	
2/11/03	3/14/03	Define Training Strategy	
3/17/03	4/21/03	Environment Setup	
3/17/03	5/13/03	Data Clean-Up	
12/10/02	3/3/03	Develop Application and Interface	
5/14/03	6/18/03	Data Migration	
6/19/03	7/9/03	Software Validation	
7/10/03	7/30/03	Deploy	
7/31/03	10/29/03	Conduct Training	
10/29/03	10/29/03	Commence operations and support of DOCCON Replacement	

APPENDIX C
ACRONYMS

AF - Airways Facilities
AMS - Acquisition Management System
ASCM - Asset Supply Chain Management
AT - Air Traffic
ATC - Air Traffic Control
ATO - Air Traffic Organization
B/Ls - Baselines
BS - Business Service
CCB - Configuration Control Board
CCD - Configuration Control Decision
CDRL - Contract Data Requirements List
CI - Configuration Item
CM - Configuration Management
CMCT - Configuration Management Core Team
CMPP - Configuration Management Program Plan
CMSG - Configuration Management Steering Group
CONOPs - Concept of Operations
DCC - Document Control Center
DOCCON - Document and Configuration Identification System
FAA - Federal Aviation Administration
FRD - Final Requirements Document
IA - Information Architecture
iCMM - Integrated Capability Maturity Model
iPG - Integrated Process Group
IPP - Integrated Program Plan
IPT - Integrated Product Team
JRC - Joint Resources Council
LOB - Line of Business
MCI - Master Configuration Index
NAS - National Airspace System
NCP - NAS Change Proposal
OPI - Office of Primary Interest
PC - Personal Computer
PSL - Product Support Library
RD - Requirements Document
Rev. - Revision
SDR - System Document Release
SETA - System Engineering and Technical Assistance
SME - Subject Matter Expert
SOW - Statement of Work
SSM - System Support Modification
STR - System Technical Release
VDCC - Virtual Documentation Control Center
WBS - Work Breakdown Structure
Wkgrp - Workgroup