Enterprise Configuration Management

Panel Discussion

NAS Lifecycle Traceability

(Relationship and Use of the EA in CM Policy and Implementation)

Moderator: Faye Jordan

Panel Members: Con Kenney, Scott McCluskey, Kimberly Gill, James Winbush, Donald J. Embt

Date: June 25, 2009

Federal Aviation Administration

Overview

- Background
- Problem Statement
- Goals
- Benefits
- Progress to Date
- Integrated Model
- Planned Activities
- Questions

Background

- **The Enterprise Architecture (EA) provides the basis for what is to be configuration managed in accordance with FAA Order 1800.66 Change 2**
- **FAA Order 1800.66 Change 2 requires that all configuration items be traceable to the EA**
- **To support implementation of revised CM policy, a working group was put together to investigate improvements for lifecycle traceability, configuration identification and subsequent procedure updates for 1800.66**

Background *continued*

The working group was established in early 2009 to identify, document and support implementation of improvements to affected policies, processes, practices and support technologies in a phased approach beginning at the NAS EA.

Group members include:

Jesse Wijntjes, NAS Chief Architect
Con Kenney, FAA Chief Architect
James Winbush, NAS CCB Exec Sec'y
Jerald Wolf, Dir, Logistics Center IT
Mike Anderson, FEQ/FMO
Don Embt, SETA II NAS EA Project Lead
Bruce Normann, SETA II M&O
Jane Austin, SETA II CM Policy & Procs
Faye Jordan, Mgr, Enterprise CM
Kimberly Gill, Mgr, Reqts & Interfaces
Mike McVeigh, Reqts & Interfaces
Avdesh Kaushiva, Enterprise CM Policy
Nicole Payne, PM, FSEP
John Thomas, SETA II CM Project Lead
Tony Eaton, SETA II MCI Lead

Other Stakeholder Participants:

James Pritchard, Mgr, National Airway systems Engineering
James Eck, Dir, ATC Communications
Scott McCluskey, ATC Communications Safety Lead

Problem Statement

ATO requires accurate information for effective decision-making across the lifecycle. There are inconsistencies in describing:

- NAS requirements (including SR, DD, SS-1000, hierarchy and structure);
- enterprise architecture products;
- configuration items;
- facilities information;
- NAS changes proposal development; and
- lifecycle naming conventions

These inconsistencies have made it difficult to manage NAS systems throughout the lifecycle

The consistent application of business rules enables effective transition to NextGen and lifecycle management

Goals

Can we provide effective System Engineering, Requirements Development and CM as we transition to NextGen?

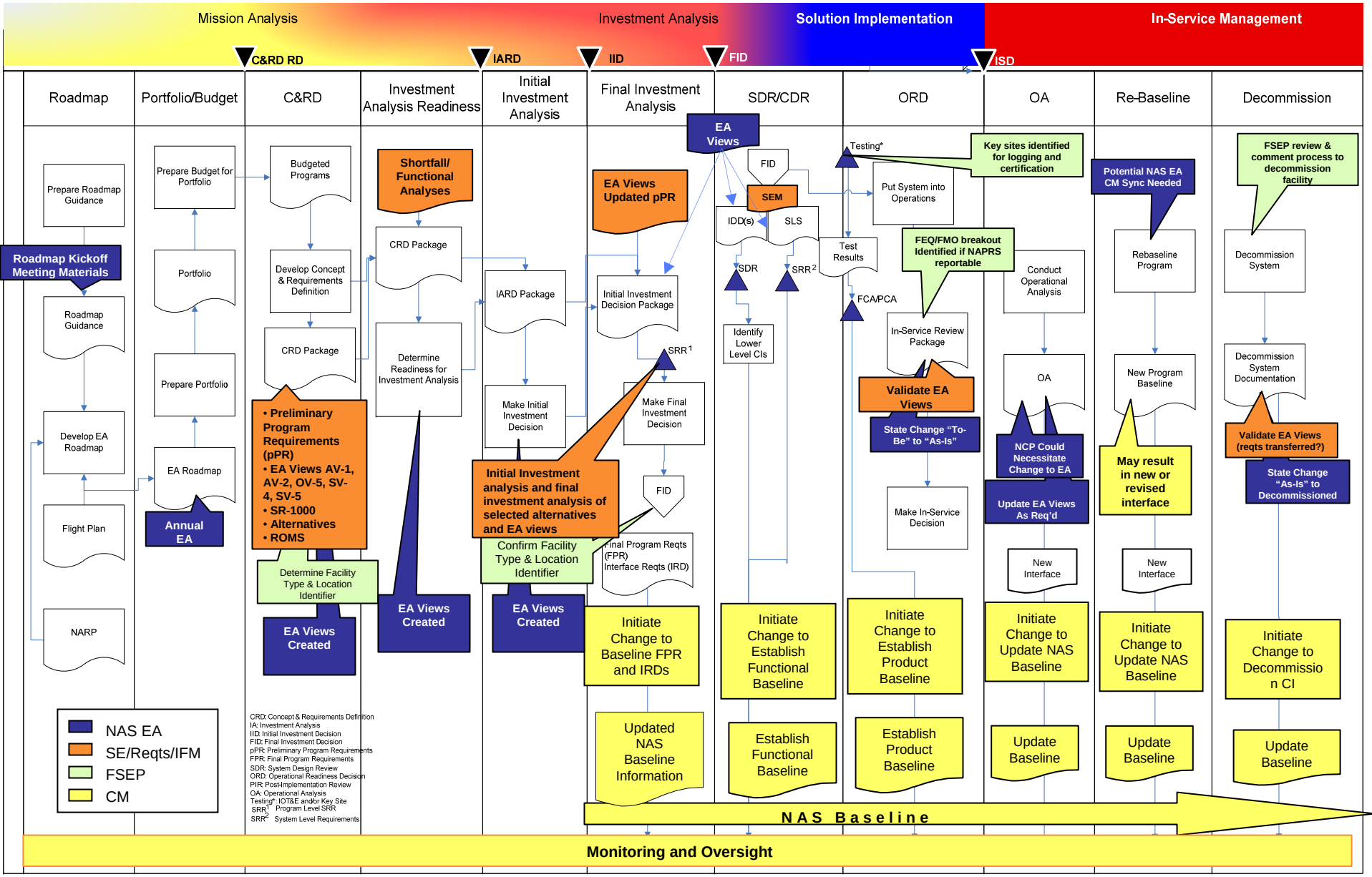
- Support alignment of key lifecycle policies, processes and data structures
- Enhance requirements development, maintenance and overall hierarchy
- Promote use of NAS EA as a primary data source for NAS information
- Develop guidance to support lifecycle traceability of NAS assets and investments
- Improve NAS change proposal development criteria through guidance, use of primary data sources (e.g., NAS EA, FSEP)
- Improve CCB decision-making through higher degree of confidence in change accuracy and better visibility into program status and CI activity
- Facilitate transition of processes and related data as the NAS environment evolves to NextGen

Benefits

- **Improve traceability and accuracy of NAS information**
- **Facilitate data sharing, traceability and visibility of the current status of NAS programs and configuration and related history information**
- **Reduce manual work, reconciliations, misunderstandings, and cycle time among groups that support acquisition program teams**
- **Provide improved visibility of primary data sources (NAS EA, MCI, FSEP) and their relationships to each other to the user community**
- **Leverage existing technologies and requirements to support related activities such as CM automation**
- **Provides a means of identifying process and data relationship shortfalls as the Agency's environment evolves to support NextGen**

Progress to Date

- **Initiated activity to align the NAS EA with the Master Configuration Index (MCI)**
  - The MCI represents the current NAS baseline. Top-level configuration items will be aligned with NAS systems in the NAS EA
- **Utilizing NAS EA information to validate change proposals against NextGen related activity, new configuration items and interface requirements**
- **Drafted an integrated lifecycle process model reflecting key AMS milestones and artifacts**
- **Continuing effort to align NAS requirements to EA views through 2025**
  - Creating a database to trace how requirements are being met in the up to 2025
- **Generated initial list of recommendations to improve traceability, visibility and communication of key data through the lifecycle**
- **Briefing stakeholders and obtaining input**


Mission Analysis
Investment Analysis
Solution Implementation
In-Service Management
C&RD RD
IARD
IID
FID
ISD
Roadmap
Portfolio/Budget
C&RD
Investment Analysis Readiness
Initial Investment Analysis
Final Investment Analysis
SDR/CDR
ORD
OA
Re-Baseline
Decommission
Prepare Roadmap Guidance
Roadmap Kickoff Meeting Materials
Roadmap Guidance
Develop EA Roadmap
Flight Plan
NARP
Prepare Budget for Portfolio
Portfolio
Prepare Portfolio
EA Roadmap
Annual EA
Budgeted Programs
Develop Concept & Requirements Definition
CRD Package
• Preliminary Program Requirements (pPR)
• EA Views AV-1, AV-2, OV-5, SV-4, SV-5
• SR-1000
• Alternatives
• ROMS
Determine Facility Type & Location Identifier
EA Views Created
Shortfall/ Functional Analyses
CRD Package
Determine Readiness for Investment Analysis
EA Views Created
IARD Package
Make Initial Investment Decision
Initial Investment analysis and final investment analysis of selected alternatives and EA views
Confirm Facility Type & Location Identifier
EA Views Created
EA Views
EA Views Updated pPR
Initial Investment Decision Package
SRR1
Make Final Investment Decision
FID
Final Program Reqts (FPR) Interface Reqts (IRD)
Initiate Change to Baseline FPR and IRDs
Updated NAS Baseline Information
FID
SEM
IDD(s)
SLS
SDR
SRR2
Identify Lower Level CIs
Initiate Change to Establish Functional Baseline
Establish Functional Baseline
Testing*
Key sites identified for logging and certification
Put System into Operations
Test Results
FEQ/FMO breakout Identified if NAPRS reportable
FCA/PCA
In-Service Review Package
Validate EA Views
State Change "To-Be" to "As-Is"
Make In-Service Decision
Initiate Change to Establish Product Baseline
Establish Product Baseline
Conduct Operational Analysis
OA
NCP Could Necessitate Change to EA
Update EA Views As Req'd
New Interface
Initiate Change to Update NAS Baseline
Update Baseline
Potential NAS EA CM Sync Needed
Rebaseline Program
New Program Baseline
May result in new or revised interface
New Interface
Initiate Change to Update NAS Baseline
Update Baseline
FSEP review & comment process to decommission facility
Decommission System
Decommission System Documentation
Validate EA Views (reqts transferred?)
State Change "As-Is" to Decommissioned
Initiate Change to Decommissio n CI
Update Baseline
NAS Baseline
Monitoring and Oversight
NAS EA
SE/Reqts/IFM
FSEP
CM
CRD: Concept & Requirements Definition
IA: Investment Analysis
IID: Initial Investment Decision
FID: Final Investment Decision
pPR: Preliminary Program Requirements
FPR: Final Program Requirements
SDR: System Design Review
ORD: Operational Readiness Decision
PIR: Post-Implementation Review
OA: Operational Analysis
Testing*: IOT&E and/or Key Site
SRR1: Program Level SRR
SRR2: System Level Requirements

Planned Activities

- **NAS EA/MCI Alignment – September 2009**
  - MCI configuration items are being mapped to systems in the NAS EA
  - A plan to detail alignment activity, implementation and maintenance is to be developed
- **NAS Change Process Improvements – September 2009**
  - CIs, NextGen related changes and new interfaces must be traceable to the NAS EA
  - Final program requirements will be included in the CM baseline (MCI) through the NAS change process
- **Update NAS CM Procedures – September 2010**
- **MCI/FSEP Alignment Plan – September 2010**
- **Identify appropriate mechanisms for continuing cross-functional group activity**

Questions