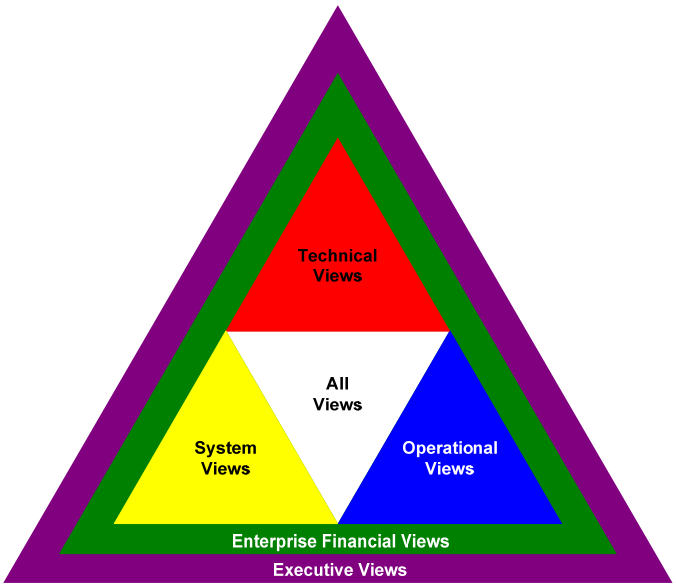
Federal Aviation Administration

National Airspace System Integrated Systems Engineering Framework (NAS ISEF)



Appendix B: Governance Overview

July 27 , 2012

Version Control

Version	Date	Author	Change Description
1.0	June 30, 2011	SE-2020	Initial document that summarizes the governance structure, roles and responsibilities (i.e., decision rights), and processes for managing and controlling the NAS EA and NAS Requirements.
2.0	July 27, 2012	SE-2020	This version includes updates to account for FAA re-organization, as well as Forms to support

Table of Contents

1 INTRODUCTION

1.1 Purpose and Scope

This document presents an overview of the governance structure, responsibilities, and key processes for approving the National Airspace System (NAS) Requirement Document (RD) series and NAS Enterprise Architecture (EA). The NAS Integrated Systems Engineering Framework (ISEF) describes the framework and processes for developing NAS EA and NAS RD, and the *NAS ISEF Appendix A*, provides additional detail to ensure the developed products are suitable for the intended purpose and abide by the principles of an integrated systems engineering environment. Furthermore, the *NAS Systems Engineering and Safety (SE&S) Configuration Management (CM) Plan* and *NAS CM Plan* outline the processes for managing and controlling changes to the NAS EA and NAS RD.

The designated authorities and established processes described in this document ensure the NAS EA and NAS RD effectively reflect operational and investment priorities, and support strategic resource planning, investment definition, prioritization, and consistency with desired mission capabilities, and performance monitoring.

1.2 Background

The Federal Aviation Administration's (FAA) established the Acquisition Management System (AMS) in response to several legislative drivers (e.g., Clinger-Cohen Act, Paperwork Reduction Act, etc.) requiring agencies to develop governance processes to improve acquisition, planning, and management of resources. The AMS serves as the agency's Capital Planning and Investment Control (CPIC) process and establishes agency-wide policy and guidance for all aspects of lifecycle acquisition management and defines how the FAA manages its resources to fulfill its mission. It also specifies the required lifecycle management planning and control documents, including the development of EA and Systems Engineering documentation (to include RD), for every FAA investment program going through the AMS.

1.3 Governance Structure

The governance structure depicted in Figure 1 illustrates the primary line of authority governing the development, approval, management, and control of the NAS EA and NAS RD to ensure ongoing and planned investments are consistent with the established principles, standards, and target architecture. The structure also ensures representation of all relevant stakeholder perspectives and interests and the incorporation of FAA strategic goals and objectives (i.e., Destination 2025) into decision-making processes.

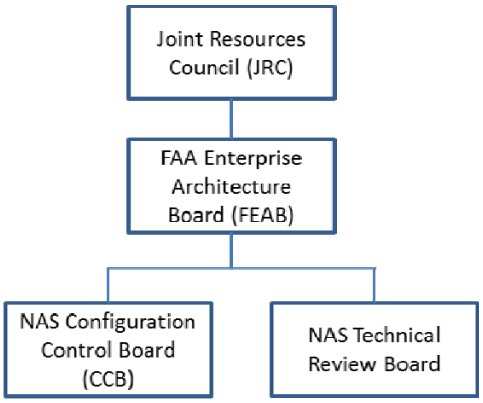


Figure 1: NAS EA and NAS Requirements Governance Structure

Table 1 provides the high-level description for each of the identified governance bodies. Charters detailing membership, specific responsibilities, and procedures for each body exist and establish the governance and authority for their execution.

Table 1: Governance Body High-level Description

Governance Body	High-level Description
Joint Resources Council (JRC)	The JRC is the FAA body responsible for making corporate-level decisions
FAA Enterprise Architecture Board (FEAB)	The FEAB is a standing board that ensures the FAA adheres to statutory and regulatory requirements by developing and implementing EA deliverables and to ensure compliance with agreed to principles, processes, standards, and target architecture.
Technical Review Board (TRB)	The TRB supports the FEAB in ensuring that the EA accurately reflects the current and desired technical content for standards, systems, and system infrastructure of the enterprise
NAS Configuration Control Board (CCB)	The NS CCB is responsible for identifying and controlling changes to the NAS baseline, including facilities, systems, equipment, hardware, software, and documentation, or components thereof

2 GOVERNANCE PROCESSES

This section identifies the processes for approving and reporting the status of the NAS EA and RD. Table 2 summarizes the roles and responsibilities for each of the governance processes described in the subsequent sections using a responsibility assignment matrix (a.k.a. RASCI or Responsible, Accountable, Support, Consulted, and Informed).

Table 2: Governance Process Responsibility Assignment

Governance Process	**Responsible** The individual or organization(s) assigned to do the work	**Accountable** The individual or organization(s) that has final approval authority	**Support** The individual or organization(s) that provide input or support the completion of the work	**Consulted** The individual or organization(s) that must be consulted before a decision or action is taken	**Informed** The individual or organization(s) that must be informed that decisions or actions have been made
Enterprise-level Requirements and EA Approval	• NAS Chief Architect (ANG-B2) • NAS Requirement Services Manager (ANG-B1)	• JRC (for To-Be) • NAS CCB (for As-Is)	• ATO PMO & Subject Matter Experts • NAS Advanced Concepts & Technology Development (ANG-C) • NAS Lifecycle Integration (ANG-D) • Systems Analysis & Modeling (ANG-31)	• TRB Must Evaluator • FEAB	• NAS Lifecycle Integration (ANG-D) • Systems Analysis & Modeling (ANG-31) • ATO Finance (AJF) • ATO PMO • Joint Planning and Development Office (JPDO)
Program-level Requirement Document and EA Approval	• ATO PMO	• NAS Chief Architect (ANG-B2) • NAS Systems Engineering Services Director (ANG-B)	• NAS EA & ConOps Services Group (ANG-B2) • NAS Requirements Services Group (ANG-B1)	• NAS Systems Engineering Services Director (ANG-B)TRB Must Evaluator	• JRC • ATO PMO
Infrastructure Roadmap Approval	• NAS Chief Architect (ANG-B2)	• JRC	• NAS EA & ConOps Services Group (ANG-B2) • NAS Advanced Concepts & Technology Development (ANG-C) • ATO PMO & Subject Matter Experts	• TRB Must Evaluator • FEAB	• ATO Finance (AJF) • ATO PMO • NAS Lifecycle Integration (ANG-D) • NAS Systems Engineering Services (ANG-B) • Joint Planning and Development Office (JPDO)
Infrastructure Roadmap Decision Point Status Reporting	• NAS Chief Architect (ANG-B2)	• Not Applicable	• JRC Secretariat (AJA-A2) • ATO Finance/IP&A • ATO PMO • NAS EA & ConOps Services Group (ANG-B2)	• ATO • Not Applicable	• TRB • FEAB • ATO Finance/IP&A • JRC Secretariat • Concept and Requirements Definition Group (ANG-B4) • NAS Lifecycle Integration (ANG-C)

2.1 Approval Processes

2.1.1 Enterprise-level Architecture and Requirements

The final drafts of the Enterprise-level To-Be (i.e., interim and target state) NAS EA and NAS RD series are jointly presented annually to the Technical Review Board (TRB) and then the FAA Enterprise Architecture Board (FEAB) for approval. Either board may submit comments to the NAS Chief Architect (ANG-B2) and/or NAS Requirement Services Manager (ANG-B1) for disposition and adjudication. Once the comments are resolved (following the NAS SE&S CM processes), the Joint Resources Council (JRC) establishes a new Enterprise-level baseline, which

represents the future state of the NAS. It also serves as the definitive context for integration with To-Be Program-level EA and requirements.

Updates to baselined or As-Is Enterprise-level NAS EA and NAS RD are subject to the NAS Change Control process and ultimately NAS Configuration Control Board (CCB) approval.

2.1.2 Program-level Architecture and Requirements

Drafts of the Program-level EA and Program Requirement Document (PRD) are reviewed independently by the NAS EA and Concept of Operations Services Group (ANG-B2) and the NAS Requirement Services Group (ANG-B1) for quality before they are presented to the TRB for review and comment. Once the comments are resolved by the respective Program Office, the final drafts are submitted to the NAS Chief Architect (ANG-B2) and Systems Engineering Services Director (ANG-B) for approval and signature. A signed Program-level EA Overview and Summary Information document (i.e., All View-1) becomes the official document representing the entire Program-level architecture, indicating to the JRC that requirements relevant to Program-level EA development have been met for the given phase of the AMS lifecycle. Similarly, a signed PRD indicates to the JRC that requirements relevant to Program-level requirements development are satisfied.

2.1.3 Infrastructure Roadmaps

The Infrastructure Roadmap review and approval process establishes the baseline for the NAS Infrastructure Roadmaps. Baseline establishment occurs on a regular annual cycle starting with the Roadmap update process described in the NAS ISEF. The NAS Chief Architect (ANG-B2) submits the draft Infrastructure Roadmaps to the TRB for review and acceptance, followed by briefs to the FEAB, and then as a final executive approval presentation to the JRC. The approval by the JRC establishes the Infrastructure Roadmap baseline for the next annual development and review cycle.

2.2 Status Reporting Processes

2.2.1 NAS Infrastructure Roadmap Decision Point Status

NAS Infrastructure Roadmap Decision Point[1] (DP) status reporting occurs in parallel with Infrastructure Roadmap development and continues throughout the year. Once a new baseline is established, the progress made toward achieving the DPs for that year is continuously tracked. DP status is solicited monthly from Program Offices and is then reviewed and vetted by the NAS Chief Architect (ANG-B2) prior to being published on the NAS EA Portal. The status of all DPs planned for the year, as well as those carried over from the previous year, if any, is also regularly reported to the JRC Secretariat and Air Traffic Organization (ATO) Finance Investment Planning and Analysis Group. The following two activities also serve as forums for reporting and communicating the status of NAS Infrastructure Roadmap DPs and any potential impacts caused by changes to DPs.

[1] The NAS Infrastructure Roadmaps identify key points in time that represent acquisition, strategy, policy, and executive decisions associated with a particular program/system. These Decision Points (DP) indicate the FAA's approval of a particular improvement/sustainment initiative; an investment decision that must precede implementation of an improvement initiative; or the research and/or analysis that must be conducted before an investment decision or solution implementation.

2.2.1.1 JRC Investment Decision Authority Readiness Review

The JRC Executive Secretariat manages the executive level acquisition decision-making process for Investment Decision Authorities (IDA). The Secretariat holds weekly IDA Readiness Review meeting to guide program representatives through the activities for obtaining IDA investment decisions. The guidance includes identifying and completing the requirements of the FAA AMS. The program's acquisition DP's "planned date" is used to determine which programs are reviewed during the meeting.

Meeting participation is dependent on the Acquisition Category of the program. Participants may include the NAS Chief Architect (ANG-B2), NAS Requirement Services Manager (ANG-B1), an ATO Finance representative, an ATO Program Management Office (PMO) representative, a Concept and Requirements Definition (CRD) representative, a NAS Lifecycle Integration Group representative, and the FEAB Secretariat.

2.2.1.2 EA Integration Meetings

The JRC Executive Secretariat leads a monthly EA Integration meeting to assess the progress and to obtain agreement on the status of each IDA Readiness checklist item for upcoming acquisition-related DPs. Meeting participants include the NAS Chief Architect, FAA Chief Architect, an ATO Finance representative, a CRD representative, a NAS Lifecycle Integration Group representative, and the FEAB Secretariat. If an agreement on DP status is not achieved, the ATO PMO is invited to the subsequent FEAB meeting to provide an informational briefing, at which point the FEAB grants final approval on the DP's status.

2.3 Program-level Architecture Product Development Agreement Process

As described in the ISEF, Program-level architecture development occurs during the Concept and Requirements Definition (CRD), Initial Investment Analysis (IIA), and Final Investment Analysis (FIA) phases of the AMS and programs are required to produce a minimum set of documentation during each phase to support the next AMS decision. The ISEF also identifies a minimum set of architecture products for each AMS phase and notes the following special consideration:

> *"The DoDAF contains additional products which may be prescribed for program-level development in addition to or as replacements for the products listed above. The decision to add, remove, or replace products is made jointly between the NAS Chief Architect and the Program Manager or designee. In addition, program-level architectures representing "legacy" system efforts (e.g., Baseline Change, SLEP, Technical Refresh, etc.) are generally limited to AV-1, AV-2, SV-1, SV-2, and SV-4 for As-Is only."*

At the Program architecture kick-off meeting, ANG-B2 Architects, the NAS Chief Architect, and Program-level Architect review the recommended product set and proposed schedule. To alleviate any confusion or misunderstanding of what architecture products are required to be developed for each AMS phase, the NAS Chief Architect and Program-level Architect agree on the schedule and product set, which is documented and signed by all parties.