U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Office of NextGen Policy

ORDER
NG 1100.172

Effective Date:
07/18/2018

SUBJ: Office of the Assistant Administrator for NextGen Organization

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1. Purpose of this Order. This Order describes the Office of NextGen (ANG) and its mission, responsibilities, supplemental relationships, and lines of succession at the director level.

2. Audience. This Order applies in general to the Federal Aviation Administration (FAA) and specifically to ANG employees.

3. Where can I Find This Order? You can find this Order on the My FAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices/ and on the public Web site at http://www.faa.gov/publications_polices/orders_notices/.

4. Explanation of Changes. This Order reflects the updated organizational structure, roles, and responsibilities for the Assistant Administrator for NextGen, the Deputy Assistant Administrator for NextGen and its Directors as of June 24, 2018.

5. Background. Provides updates to the organizational structure and clarification of roles and responsibilities for the Office of NextGen.

6. Mission. We lead the aviation community to evolve the National Airspace System for the future. We leverage the power of partnerships to set the course and build the future. We engage our stakeholders to realize aviation benefits.

7. Responsibilities.

  a. Assistant Administrator

(1) Executes the mission of the FAA and the evolution of the FAA to the NextGen environment. Establishes goals, safety and security of NextGen systems, long-term strategies, budgets, priorities, and resource allocations that improve service and achieve performance targets. Ultimately accountable for ensuring NextGen benefits realization throughout the National Airspace System (NAS) lifecycle.

(2) Develops long-term NAS plans and supports the agency in the scanning and assessment of potential new entrants to the NAS.

(3) Establishes and manages enterprise tools and services including the NAS Concept of Operations (ConOps), the Enterprise Architecture (EA), and the NAS Operational Portfolios to ensure they meet current and future service requirements.

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(4) Establishes and maintains NextGen plans, including the NextGen Implementation Plan and the NAS Segment Implementation Plan (NSIP) and supporting budget, planning, and portfolio management documentation. Works closely with all FAA staff offices and lines of business to ensure plans are executed. Informs internal and external stakeholders of NextGen status.

(5) Establishes enterprise-level requirements, manages, and implements technologies identified in the NSIP to transition the NAS to meet forecasted demand.

(6) Plans, analyzes, researches, and develops advanced concepts, new technologies, and prototypes. Manages NAS service analysis and systems engineering to support initial and final investment decisions.

(7) Executes the corporate NextGen planning, portfolio management and budget processes to ensure alignment between plans, annual budget requests and multi-year budget forecast.

(8) Maintains the enterprise view of progress against plans.

(9) Monitors and tracks execution of NextGen programs and supporting implementation initiatives.

(10) Executes the corporate research, engineering, and development planning and budget process for the Administrator.

(11) Manages and oversees the agency's research and development program.

(12) Conducts research aimed at increasing safety, flexibility, and sustainability of the future air transportation system.

(13) Manages the transfers of technology from research programs to FAA organizations or federal agencies with operational responsibilities and to the private sector, in order to optimize safety, capacity, and security, and reduce negative environmental impacts.

(14) Serves as the entry point for technology transferred to the FAA from other federal agencies or representative institutions (i.e. Federally Funded Research Development Center's [FFRDC's]).

(15) Ensures that laboratories, facilities, and support services of the William J. Hughes Technical Center are available and meet the requirements of the FAA staff offices and lines of business and external customers.

(16) Ensures that NAS systems and new acquisitions (equipment, hardware, and software) receive test, evaluation, verification, and validation services throughout their lifecyc1e.

(17) Ensures that NAS planning and implementation activities are synchronized with internal and external partners to support future operational requirements.

(18) Ensures the development of international/domestic standards for emerging technologies and new concepts.

(19) Facilitates the NextGen governance bodies and manages the associated work plans.

b. Deputy Assistant Administrator

(1) Executes the mission of NextGen. Establishes integrated goals, strategies, budgets, and priorities for NextGen at the enterprise-level. Allocates and manages resources, meets performance targets, and supplies services to meet requirements.

(2) Serves as back up in the execution of the duties above in the event that the Assistant Administrator for NextGen is not available.

(3) Manages specific NextGen Directorates or Offices as assigned by the Assistant Administrator. Duties include supervision of the Director of the Offices assigned.

(4) Serves and the NextGen lead for FAA Safety Management System (SMS) and represents the Office of NextGen on the SMS Executive Council.

(5) Serves as the Office of NextGen's authority for matters relating to the FAA's Acquisition Management System (AMS).

c. Chief Scientist -NextGen

(1) Executes the mission of NextGen. Establishes integrated goals, strategies, budgets, and priorities for NextGen at the enterprise-level. Allocates and manages resources, meets performance targets, and supplies services to meet requirements.

(2) Provides technical advice and expertise on all aspects of NAS lifecycle development, integration, and implementation to the Assistant Administrator for NextGen and other senior FAA executives. Serves as a senior advisor to the Assistant Administrator for NextGen and other senior executives in the assessment of the alignment of the annual budget request and NextGen plans, goals and priorities.

(3) Serves as a member of the FAA Enterprise Architecture Board and the technical expert for the NAS Enterprise Architecture. Leads the Technical Review Board.

(4) Leads NextGen's international coordination and supports development of international/domestic standards for emerging technologies and concepts.

d. Director, Management Services

(1) Executes the mission of the Office of NextGen. Establishes integrated goals, strategies, budgets, and priorities. Allocates and manages resources, meets performance targets, and delivers services to meet these mission requirements.

(2) Provides contracting, personnel, and financial services in support of NextGen and the Office of NextGen to enable efficient and effective operations.

(3) Ensures efficient and effective operation of the Office of NextGen by establishing, implementing, and maintaining internal administrative, business, and logistical processes, and ensuring adherence to policy.

(4) Establishes a portfolio of contract vehicles and provides contract administration to secure services for the Office of NextGen and other FAA offices, as required. Serves as the liaison to FAA senior executives responsible for acquisitions and support all NextGen directorates in determining the best-fit for the delivery of requirements. Establishes and maintains a contract tracking framework and applicable performance metrics.

(5) Develops and executes programs and business liaison services to fulfill the talent needs of the Office of NextGen; enhances employee engagement, performance and growth; and builds leadership capability and workforce agility for the future.

(6) Provides timely data, analyses, plans, justifications, and reports to the Office of Finance and Management for the NextGen budget to promote cost-efficient financial management in the FAA. Communicates FAA financial policies, processes, and requirements to the Office of NextGen.

(7) Develops, implements, and maintains integrated automation solutions that track and report resource activities across the NextGen enterprise.

e. Director, NAS Systems Engineering & Integration Services

(1) Executes the mission of NextGen. Establishes integrated goals, strategies, budgets, and priorities. Allocates and manages resources, meets performance targets, and supplies services to meet these mission requirements.

(2) Manages the NAS EA to define the operational and technical framework for all capital assets of the FAA, to describe the agency's current and target architectures, and to plan the transition strategy for moving from the current to the target architecture in an affordable manner.

(3) Monitors developing technologies relating to NAS new entrants, forecasts future operations and analyses impacts to NAS requirements, architecture, and operations.

(4) Ensures NAS Planning products, documents and tools such as NAS Enterprise Architecture and NSIP reflect current and future demands of the NAS by executing effective lifecyc1e planning.

(5) Develops and maintains NAS enterprise-level requirements across the lifecycle, including functional requirements, operational requirements and system requirements; and supports the development and maintenance of NAS operational requirements in coordination with appropriate stakeholders. Performs functional analysis and functional allocation of new NextGen capabilities.

(6) Provides configuration management of enterprise-level NAS systems engineering artifacts (e.g., NAS ConOps, NAS Enterprise Architecture, NAS requirements) and management and integration of system engineering information.

(7) Supports planning for future NAS cost efficiencies through integration, analysis, and standardization of data contained in various NAS Systems Engineering tools (e.g., Integrated Master Schedule, DOORS, System Architect, and the Systems Engineering Portal).

(8) Develops, implements, and oversees the Office of NextGen's Safety Management System ensuring compliance with agency requirements. Meets national and international safety and information security standards for programs within the purview of the Office of NextGen, ensuring a viable future for air transportation through comprehensive safety and security risk management.

(9) Integrates safety and security strategies for strategic investments to reduce the potential for accidents and incidents, while maintaining the safety and integrity of the NAS.

(10) Develops and maintains the NAS Information Architecture. Develops enterprise-level information system security requirements and architecture. Conducts information security risk assessments. Manages the information system security certification, accreditation, and training for the Office of NextGen.

(11) Analyzes the impact of NextGen technologies, procedures, and infrastructure on overall NAS performance and on the environment using simulation tools and techniques. Develops mathematical models to analyze the future operational performance of NextGen and the NAS.

(12) Leads/supports development of international/domestic standards for emerging technologies, as well as for harmonization activities.

(13) Manages the information systems, tools, and business processes required to support the roles and responsibilities of the directorate; and manages other information systems as requested by other NextGen directorates.

(14) Develops and maintains technical content for systems engineering, NextGen, and NAS EA training. Maintains the System Engineering Manual (SEM) and ensures SEM processes are well documented and communicated.

f. Director, Portfolio Management and Technology Development

(1) Executes the mission of NextGen. Directs the NAS Portfolio Management and Technology Development Directorate in formulating the NAS portfolios. Allocates and manages resources, meets performance targets, and supplies services to meet these mission requirements.

(2) Provides enterprise-level (legacy, current, and future) planning, programmatic tracking, integration, budget formulation and tracking, and implementation oversight that drives the evolution of the FAA into the NextGen environment. Leads the FAA planning in collaboration with aviation stakeholders including the NextGen Advisory Committee activities to meet agency goals and activities.

(3) Provides a conduit between NextGen and the operations community to ensure NextGen implementation efforts are harmonized with operations and stakeholder priorities and risks are addressed collaboratively to facilitate delivery of NextGen operational capabilities and benefits.

(4) Conducts shortfall analysis to identify gaps in NAS performance. Identifies strategies, develops integrated solutions, and coordinates investments to evolve and sustain a world-class aviation system. Coordinates across programs to ensure economies of scale with NextGen capability integration.

(5) Leads the execution of strategies required to effectively integrate portfolios of viable research (internal and external to the FAA) resulting in solutions that address key operational challenges, as well as improvements for integrating new entrants into the NAS. Manages and executes Unmanned Aircraft Systems (UAS) research and development that supports the integration of UAS in the NAS.

(6) Performs pre-implementation operational analyses of NextGen technologies, procedures, and infrastructure including studies and demonstrations to mature concepts. Collaborates with FAA lines of business, internal and external organizations that bring forward Operational Concepts for consideration. Manages the entry process of concepts into the NAS Operational Concepts.

(7) Engages in planning and implementation throughout the research and developmental process to support system of systems integration. Decomposes Operational Concepts into operational requirements and works with NAS Systems Engineering and Integration to reflect updates in Enterprise Architecture.

(8) Provides research, engineering and test support across the process flow.

(9) Facilitates partnerships with external research organizations. Manages the UAS Center of Excellence. Coordinates the transfer of Air Traffic Management (ATM) technology to FAA from U.S. government, industry, and international organizations.

(10) Leads/supports development of international/domestic standards for emerging technologies, as well as for harmonization activities.

(11) Provides concept development and engineering around Weather ATM integration.

(12) Manages the human factors research and developmental engineering program, focused on Air Traffic Control (ATC) and Technical Operations (Tech Ops) and aircraft/maintenance regulation and certification. Maintains the human-system integration roadmap and supports the human factors community of practice.

(13) Develops, enhances, and validates fast-time modeling tools to simulate and analyze airport/airspace capacities and overall NAS performance.

g. **Director, William J. Hughes Technical Center**

(1) Executes the mission of NextGen. Establishes integrated goals, strategies, budgets, and priorities. Allocates and manages resources, meets performance targets, and supplies services to meet these requirements.

(2) Manages, operates, maintains, and provides engineering services within the FAA's NAS laboratories. Supports research, development, testing, upgrades, and second-level field support of new, potential, and existing NAS systems.

(3) Maintains facilities and support services for all properties at the William J. Hughes Technical Center, including land, buildings, and infrastructure.

(4) Manages, formulates, and coordinates the FAA's research and development program including strategic planning and direction, policy formulation, program assessment and development, and acquisition.

(5) Establishes aviation research investment priorities, along with other agencies, advisory boards, and international organizations, to identify research gaps, reduce duplication of efforts, leverage available resources, and maintain United States leadership.

(6) Aligns research programs with the DOT and FAA strategic plans. On behalf of the Administrator, prepares the National Aviation Research Plan (NARP) for submission to Congress.

(7) Supports NextGen and other FAA goals by conducting applied research and development in collaboration with industry, academia, and government.

(8) Leads/supports development of international/domestic standards for emerging technologies, as well as for harmonization activities.

(9) Transfers technology to aviation industry partners in a timely and cost effective manner. Develops partnerships with academia, industry, government agencies, and professional societies to ensure smooth transition.

(10) Develops technologies, procedures, test methods, analytical tools and models, and technical data and criteria for the Associate Administrator for Aviation Safety (AVS) and the Associate Administrator for Airports (ARP) to support rule development for aircraft and airport safety.

(11) Supports rule development for aircraft, airport certification and operation, associated advisory materials and means of compliance.

(12) Tests, evaluates, verifies, validates, and monitors performance of FAA NAS and mission support systems work products, components, services, and procedures throughout the acquisition lifecycle. Performs these activities to verify and validate that products and operational improvements meet specifications, satisfy requirements, and are operationally suitable and effective for use in the NAS.

(13) Maintains test and evaluation methods, standards, and policies for the FAA. Provides test and evaluation oversight and approval for FAA policy changes, Joint Resource Council Decisions and In-Services Decisions.

(14) Conducts analyses and evaluations from comprehensive air transportation system, local airport, airspace, and user perspectives.

(15) Characterizes performance of current system and effects of proposed Next Generation Air Transportation System changes on pilots, controllers, aircraft, and related system components.

(16) Coordinates and supports cross agency technology research, development and test efforts with the state-of-the-art William J. Hughes Technical Center capabilities and resources.

h. Director, NextGen Collaboration and Messaging Office

(1) Executes the mission of NextGen. Establishes integrated goals, strategies, budgets, and priorities. Allocates and manages resources, meets performance targets, and supplies services to meet these requirements.

(2) Provides corporate leadership, advisory, and consultative support to the Assistant Administrator for NextGen and to the FAA on a wide variety of complex and often highly visible issues.

(3) Manages and builds relationships with all relevant NextGen stakeholders – including federal partners, industry, academia, users, and international – representing NextGen where appropriate.

(4) Conducts communication and outreach activities in collaboration with FAA lines of business and aviation community stakeholders to support agency goals and activities.

(5) Supports the NextGen Executive Board, NextGen Management Board, any other assigned collaborative forums and subordinate teams in setting strategy, vision, and by managing issue resolution and commitment assurance for key elements of NextGen.

(6) Supports the FAA-based NextGen Advisory Committee activities to meet agency goals and activities.

(7) Ensures coordination across other government agencies and assists in identifying opportunities for FAA to leverage various agencies' expertise, research, technologies, and funding to advance NextGen while avoiding duplication. Manages efforts for identifying and coordinating interagency NextGen issues.

(8) Coordinates NextGen's international program with stakeholders to support global harmonization and ensure Administrator's strategic initiatives and goals are accomplished.

(9) Provides strategic messaging and reports related to NextGen progress and plans. Works with FAA lines of business, staff offices and stakeholders to report performance metrics related to NextGen benefits.

8. Supplemental Relationships. Members of senior staff represent NextGen in the following groups:

a. Executive Council

b. Business Council

c. Accountability Board

d. Joint Resources Council

e. New Entrants/ UAS Board

f. Management Advisory Council

g. Aviation Advisory Committee

h. Drone Advisory Council

i. Safety Management System (SMS) Executive Council

j. Labor-Management Forum

k. NextGen Management Board

l. NextGen Executive Board

m. NextGen Executive Weather Panel

n. NextGen Advisory Council

o. FAA & European Commission, Executive Committee of the Memorandum of Cooperation on ATM Modernization, Civil Aviation R&D and Global Interoperability

p. Research, Engineering, and Development Advisory Committee

q. Acquisition Executive Board

r. Capital Investment Team

s. Acquisition Workforce Council

t. Cybersecurity Steering Committee

u. Enterprise Architecture Board

v. Representative for Department of Transportation on the Federal Committee for

w. Meteorological Science and Support Research (FCMSSR)

x. Representative to the Interdepartmental Committee for Meteorological Science and Supporting Research (ICMSSR).

9. Line of Succession. In the absence of the Assistant Administrator, the following individuals, in order, direct the Office of NextGen (This updates the Line of Succession listed in FAA Order 1100.1B, paragraph 3. g. (3)):

a. Deputy Assistant Administrator for NextGen

b. Director, Portfolio Management and Technology Development

c. Director, NAS Systems Engineering and Integration

d. Director, William J. Hughes Technical Center

e. Director, Stakeholder Collaboration and Messaging Directorate

f. Director, Management Services

10. Organizational Chart. See the attached Appendix A, The Office of NextGen Organizational chart.

11. Distribution. This order is available electronically as stated in paragraph 3.

Pamela Whitley
Acting Assistant Administrator for NextGen