FAA
STRATEGIC PLAN
FY 2019-2022

SAFETY   INNOVATION   ACCOUNTABILITY   INFRASTRUCTURE

Federal Aviation Administration

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MESSAGE FROM THE ACTING ADMINISTRATOR

For over 60 years, the Federal Aviation Administration (FAA) has served the Nation to ensure the American people can fly safely and efficiently through our National Airspace System and beyond. Over the last two decades, commercial aviation fatalities in the United States have decreased by 95 percent, at a time when our commercial aviation sector has thrived and is today a leading contributor to our Nation's economy. This amazing accomplishment has not been the result of FAA actions alone, but also of collaboration throughout government and within the aviation community at large.

We find ourselves today on the edge of the next great era of aviation: the age of autonomous and unmanned aircraft. The aerospace landscape as we have known it is undergoing dramatic changes. Unlike the previous era, ushered by the dawn of the jet age into relatively empty skies, the airspace of the 21st century is complex and is only getting more complicated. Today thousands of airliners crisscross the globe at any given moment, joined by everything from a 230-foot tall Falcon Heavy rocket to millions of drones.

Government and industry have worked hard to hone our present aviation system to become the premiere model throughout the world. However, to fully enable our industry and economy to thrive to its full potential in the coming years, our current system will not be enough.

Safety remains at the heart of the FAA's enduring mission, and the relationship that exists between the FAA and the industry it regulates is the epicenter behind our unprecedented safety record. In the coming years, we must leverage the same innovation that is driving the evolution of aircraft as the primary driver in the evolution of safety throughout our entire system. This must be a team effort among all stakeholders, both public and private. The FAA's commitment to reduce unnecessary burdens to innovation must be matched by an industry that strives to develop and share ideas to help us evolve the safety of our skies.

The FAA is committed to continuing the hard-earned accomplishments of the last several decades. As one of eight operating administrations within the United States Department of Transportation (DOT), we will work collectively to enable a vibrant economy, supported by a safe, reliable and efficient transportation system. This FY19-22 FAA Strategic Plan aligns with the Secretary of Transportation's key priorities, through an unwavering commitment to safety and focused efforts to improve our aviation infrastructure, embrace innovation, and hold ourselves accountable to the public that we serve.

It is my sincere commitment through this plan to continue the important evolution with our partners within our transportation and aviation communities, as well as the tireless efforts of our dedicated FAA employees in serving the citizens of this country.

Daniel K. Elwell
FAA Acting Administrator

INTRODUCTION

FAA MISSION

Our enduring mission is to provide the safest, most efficient aviation system in the world.

FAA VISION

We strive to reach the next level of safety and efficiency and to demonstrate global leadership in how we safely integrate new users and technologies into our aviation system. We are accountable to the American public and our aviation stakeholders.

PURPOSE OF STRATEGIC PLAN

This Strategic Plan establishes the Federal Aviation Administration's (FAA) strategic goals and objectives for fiscal years (FY) 2019 through 2022. It aligns with the U.S. Department of Transportation's (DOT) Strategic Plan published in February 2018, and describes four-year goals the agency will pursue and the yearly actions that will contribute to realizing these objectives.

FAA GOALS

FAA strategic goals reflect those of DOT with a focus on the aviation transportation mode. Each goal has overarching objectives and strategies defined by the Department, under which FAA will pursue aviation-specific activities and targets. Common objectives and end states are interwoven throughout each section.

- **SAFETY:** Reduce Civil Aviation and Commercial Space Transportation-Related Fatalities and Serious Injuries.

- **INFRASTRUCTURE:** Invest in Aviation Infrastructure to Ensure Safety, Mobility and Accessibility and to Stimulate Economic Growth, Productivity and Competitiveness for American Workers and Businesses.

- **INNOVATION:** Lead in the Development and Deployment of Innovative Practices and Technologies that Improve the Safety and Performance of the National Airspace System.

- **ACCOUNTABILITY:** Serve the Nation with Reduced Regulatory Burden and Greater Efficiency, Effectiveness and Accountability.

STRATEGIC FOUNDATION, DYNAMIC ANNEXES, AND EFFECTIVE EXECUTION

FAA has developed a three-layered approach to enable strategic direction while allowing flexibility for these strategies to evolve with changes in the aviation environment over the next four years.

1. The **FY 2019-2022 FAA Strategic Plan** outlines strategic areas of focus based upon the envisioned state of aviation in the next decade and in alignment with the DOT Strategic Plan.

2. The **Annual Priorities Annex** outlines yearly priorities identified by agency leadership each Spring in support of FAA strategic goals, based on trends, risks, and changes to the aviation environment.

3. Finally, FAA will measure and track our **Annual Priorities** within the agency's existing business planning activities. Metrics measuring our progress in achieving these objectives are described in the Program Evidence section of this document.

ENVISIONED STATE OF CIVIL AVIATION FY 2019-2022

Aviation is an integral component of the U.S. transportation system. Recent years have seen rapid growth of civil aviation in the United States and across the world, as well as an increasing pace in new technologies supporting both conventional and future aircraft. Aviation is a crucial element in connecting remote locations and international destinations, and it continues to be a key driver in the economic development of the United States. Aviation accounts for $1.6 trillion annually in total economic activity, supports 10.6 million jobs and contributes 5.1 percent of our U.S. gross domestic product[1]. Additionally, Unmanned Aircraft Systems (UAS) and commercial space transportation will continue their rapid evolution and serve as opportunities for robust economic growth, supporting the American people and global leadership for the United States.

From its inception, the aerospace field has been driven by innovation that produces opportunity and economic benefits. Significant trends predicted in civil aviation over the next four years include increased:

- Demand and volume for commercial passenger and cargo operations and aircraft

- Use of Unmanned Aircraft Systems and commercial space operations

- Steps to foster the return of supersonic flights

- Use of large data and automation

- Need for a growing skilled aviation workforce

- Competition from international competitors

GROWTH OF COMMERCIAL PASSENGER AND CARGO OPERATIONS AND AIRCRAFT

The 2018-2038 FAA Aerospace Forecast predicts U.S. airline passenger volume will increase by 400 million passengers over the next 20 years, from 880 million to just under 1.3 billion, with international markets growing faster than domestic markets. For U.S. airline cargo traffic, the FAA forecasts even faster growth, with traffic doubling over the next 20 years. Industry expects the global fleet of commercial aircraft to double in 20 years to keep up with the expected growth in demand[2].

Additionally, FAA anticipates increased activity growth and complexity with increasing numbers of regional and business jets operating in the Nation's skies, aircraft fleet mix changes, and air carrier consolidation of operations in large hubs.

[1] 2016 report issued by The FAA – The Economic Impact of Civil Aviation on the U.S. Economy.

[2] Boeing latest outlook to 2037 calls for worldwide fleet to grow from 24,400 aircraft in 2017 to 48,540 aircraft in 2037. Latest Airbus outlook to 2037 calls for worldwide fleet to grow from 21,450 in 2018 to 48,000 by 2037.

GROWTH OF UNMANNED AIRCRAFT SYSTEMS AND COMMERCIAL SPACE OPERATIONS

With ever-evolving uses, Unmanned Aircraft Systems have experienced robust growth in the United States and throughout the world. Among other benefits, UAS operations offer increasing opportunities to enhance connectivity and economic vibrancy of remote and rural locations within the United States.

The FAA forecasts the Small UAS (sUAS)[3] model fleet will likely more than double in size over the next five years, from the present 1.1 million units to over 2.4 million units. FAA projects that by 2022 the sUAS non-model fleet will likely grow from the current 110,604 registered aircraft to over 450,000.

Further examination and research are needed to more accurately forecast the future of large UAS. Currently, federal agencies, state and local governments, and national research organizations are primary users of these vehicles. However, as technology advances, the use of large UAS will expand to other sectors with more types of operations in the future.

In the 21st century, demand for U.S. commercial space transportation will increase to support the global satellite market, sustain human presence in Earth orbit, and facilitate the burgeoning outer space economy. To support these missions, the FAA projects an increase from 22 operations in 2017 to 39-61 operations in 2020, and continued growth thereafter. To meet the challenges of this increased demand for commercial space launch services, the FAA will streamline and update its regulatory process to incorporate performance-based requirements and pursue automating portions of the licensing process. These improvements will expedite licensing evaluations and promote innovation, enabling commercial space launch operators to invest in new technologies. FAA will also continue to invest in people, processes, and technologies to improve integration of commercial space into the National Airspace System (NAS), minimizing the impact on other NAS users and increasing overall system efficiency.

In recent years, many proponents have sought to establish a new era of supersonic passenger aircraft. In light of growing public and congressional interest, as well as new supersonic aircraft projects initiated by U.S. industry, FAA is taking steps to provide a regulatory framework that will facilitate the development and certification of new supersonic airplanes. The present focus of efforts comprises rulemaking activities intended to better enable supersonic flight testing and to establish certification requirements for landing and takeoff noise levels.

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[3] CFR Title 14, Chapter I, Subchapter F, Part 107: Small unmanned aircraft means an unmanned aircraft weighing less than 55 pounds on takeoff, including everything that is on board or otherwise attached to the aircraft.

INCREASED USE OF DATA AND AUTOMATION

Similar to other economic sectors, the information technology revolution, with the ability to collect and analyze large data sets, offers new opportunities for aviation to increase efficiencies and safety. The volume of data amassed today in a myriad of areas including operations, performance, geographic, and manufacturing, offers new opportunities for analysis and benefits. The use of algorithms and artificial intelligence to manage and exploit the data collected will continue as data analysis technologies advance.

The trend of advances in the collection and wireless transmission of digital data will continue to require improved utilization of the radio spectrum, as well as enhanced cybersecurity. As aviation applications evolve and are incorporated within an internet of things[4], efficient and secure methods of data transmission, collection and analysis will be necessary.

INCREASED COMPETITION FROM INTERNATIONAL CONTENDERS

Since the inception of the airplane, the United States has historically led the civil aviation sector. With economic development growing throughout the world, however, a global market once dominated by U.S. industry now faces increased competition in areas of commercial passenger and cargo operations, as well as manufacturing and the development of innovative aviation technologies. The formation of the European Union, and more recently the growth of countries such as China, India, and Brazil, have found the U.S. with strong international competitors that did not exist before the 21st century.

As the growth of global aviation increases, the United States will remain competitive by leading innovation and integration of new users and technology into the aviation system. Working cooperatively, it will provide leadership in the development of harmonized standards guiding aviation manufacturing and operations. Additionally, continued globalization will drive the aviation industry to utilize multinational supply chains for manufacturing and economies of scale to reduce costs and increase efficiency.

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[4] Internet of Things defined as the interconnection via the Internet of computing devices embedded in everyday objects, enabling them to send and receive data.

Table—FAA Goals, Strategic Objectives, and Strategies

Goals	Strategic Objectives	Strategies
Safety	Strategic Objective 1: Systemic Safety Approach	**Data:** Improve the collection, management, and integration of data on transportation-related fatalities and serious injuries, and their precursors, to enhance safety analysis **Identify Risks:** Identify the risk factors that contribute to fatalities and serious injuries and implement evidence-based risk elimination and mitigation strategies **Collaboration:** Collaborate with stakeholders to foster behavior and infrastructure changes that improve safety **Leadership:** Establish a Departmental commitment to continually improve transportation safety by fostering a positive transportation safety culture across the transportation sector **Performance:** Promote the use of performance-based safety standards and measures
Infrastructure	Strategic Objective 1: Project Delivery, Planning, Environment, Funding and Finance	**Streamlining and Stewardship:** Streamline the environmental review process to deliver transportation projects, both large and small, more quickly and efficiently to provide timely benefits to users while safeguarding our communities and maintaining a healthy environment **Prioritize:** Target federal investments toward transportation projects that address high-priority infrastructure and safety needs **Leverage Funding:** Leverage state and local funding and private sector investment **Partnerships:** Build partnerships with stakeholders to facilitate the financing, development, and implementation of multimodal transportation projects that improve connectivity, accessibility, safety, and convenience for all users
	Strategic Objective 2: Life Cycle and Preventive Maintenance	**Rebuild:** Restore transportation infrastructure and assets to a state of good repair through asset management planning and innovative maintenance strategies that take into account long-term operational and financial considerations **Risk Management:** Provide research, technical assistance, and targeted funding to ensure that transportation infrastructure is planned, constructed, and maintained using best operational and risk management practices
	Strategic Objective 3: System Operations and Performance	**System Reliability:** Improve the reliability and efficiency of passenger travel and freight movement on the Nation's transportation systems by working with state DOTs and other stakeholders to identify, collect, and analyze data sources and models to assess overall system reliability and implement strategies that target the sources of unreliable travel and freight movement **Performance:** Measure the performance of transportation systems and support targeted investments to improve the experience of the traveling public
	Strategic Objective 4: Economic Competitiveness and Workforce	**Global Competitiveness:** Increase international market access for America's products and services by eliminating transportation and international trade barriers **Workforce Development:** Support the development of appropriately skilled and prepared transportation workers, and develop strategies to meet emerging workforce challenges **Rural:** Encourage transportation investments that promote economic revitalization, job growth, and affordable transportation options in rural communities

Goals	Strategic Objectives	Strategies
Innovation	Strategic Objective 1: Development of Innovation	**Coordination:** Strengthen coordination across modes, stakeholders, jurisdictions, institutions, sectors, and international boundaries **Research:** Conduct research on advanced technology to promote transportation safety and efficiency **Partnerships:** Partner with the private sector, state, tribal, and local governments, and research organizations to encourage technology innovation **Data:** Facilitate development of data systems to support data-driven technologies, decision-making in real time, and data sharing **Cybersecurity:** Develop modal cyber threat models for transportation critical infrastructure to enhance integrated cybersecurity and safety research priorities
Innovation	Strategic Objective 2: Deployment of Innovation	**Technology Integration:** Advance the integration of new transportation technologies and practices into transportation systems to improve safety and performance
Accountability	Management Objective 1: Regulatory Reform	**Regulation:** Reduce regulations and control regulatory costs
	Management Objective 2: Mission Efficiency and Support	**Workforce:** Attract, develop, and retain employees who have the capabilities and competencies to help the Department achieve its goals **Program Performance:** Improve program performance by streamlining processes, improving systems, and maximizing employee performance, development, and engagement to make efficient and effective use of the Department's resources **Financial Management:** Improve the performance of financial systems **Procurement:** Improve the performance of procurement systems **Operational Efficiency:** Ensure sustainable facilities and efficient internal operations **Information Technology:** Advance the modernization of information technology solutions that will enhance mission performance and promote efficient operations

SAFETY

Reduce Aviation and Commercial Space Transportation-Related Fatalities and Serious Injuries in Commercial and General Aviation

SAFETY IS AT THE CORE OF THE FEDERAL AVIATION ADMINISTRATION'S MISSION.

Organizational goals across the planning spectrum address ways to achieve and increase operational safety. Supported by manufacturers, operators and other stakeholders, the FAA plays a significant role in providing regulatory oversight to mitigate safety risk and in promoting technological solutions and best practices to reduce aviation-related fatalities. FAA's unfaltering commitment to its safety mission has contributed to the current high level of safety, reinforcing the prevalence of aviation as an accessible and viable mode of transportation that the flying public enjoys today. Aviation has never been safer and exceeds the levels of safety found in other transportation modes.

> Maintaining and improving aviation safety in a rapidly evolving aviation environment requires extreme vigilance and new methods of oversight.

The FAA must continue to partner effectively with state, local, academic and industry partners to collect, analyze and utilize safety-related data to identify hazards and manage safety risk as part of our FAA Safety Management System (SMS). For example, using the SMS, the FAA has identified through data collection and analysis the need to address runway safety issues. We must also find ways to develop performance-based rather than prescriptive regulations to allow more flexibility and innovation in achieving our intended outcomes.

Aviation is an increasingly global enterprise, driven by diverse suppliers and service providers operating under increasingly complex and decentralized business models. This complexity introduces the potential for new safety risks which must be understood and managed, and may require new approaches to realize our safety goals.

STRATEGIC OBJECTIVE 1: SYSTEMIC SAFETY APPROACH:

Mitigate risks and encourage infrastructure and behavior change by using a data-driven systemic safety approach to identify risks, enhance standards and programs, and evaluate effectiveness.

The FAA is utilizing data-driven safety approaches as part of the U.S. State Safety Program and FAA SMS. With data analysis, the FAA seeks to identify causes of accidents and fatalities, mitigate risks, and encourage positive and progressive infrastructure and behavioral changes.

The efficacy of data-driven safety approaches is enhanced through continued improvements in the quality of data collected and shared with manufacturers and operators. Also significant are improvements in aviation safety analysis used to identify hazards and finding more effective means to mitigate risk.

The FAA has established the following multi-year strategies using data-driven analysis and programs to reduce commercial and general aviation-related fatalities and serious injuries:

- Increase sharing of harmonized and secure data across all stakeholders to include industry and international partners through joint development of a quantified Integrated Safety Assessment Model with FAA, other DOT modes, NASA, and Eurocontrol.

- Improve surface safety by reducing runway incursions and wrong surface operations caused by vehicle/pedestrian deviations or by pilot error as well as improve Runway Safety Areas.

- Address the risks to aircraft operations caused by unsafe cargo loading practices through intra- and inter-agency coordination and industry outreach.

- Safely integrate Commercial Space Transportation launch and reentry activities, as well as increasingly more complex UAS operations, into the NAS. The FAA will develop and disseminate safety enhancements to mitigate any added safety risks posed by unmanned operations through partnerships with industry, such as the Unmanned Aircraft Safety Team.

- Focus on continuous improvement of safety oversight capabilities in countries or regions with strategic importance, as well as underserved rural areas, by developing and enhancing partnerships with mature countries where the U.S. can leverage resources to enhance shared oversight obligations and maintain proportionate levels of safety.

Envisioned End State - 2022

By 2022, the volume of aviation operations will have increased for both commercial and general aviation, with a relative decline in both incident and accident rates. Although the NAS has more traffic and complexity, aircraft are safely arriving at their destinations with less delay through utilization of NextGen infrastructure. Successes realized through various FAA unmanned aircraft pilot programs have enabled the safe expansion of small UAS operations into various commercial and public services. The FAA has led the aviation community in establishing an earnest dialogue on integrating larger unmanned aircraft into the Nation's airspace along with measured gains toward allowing operations involving Beyond Visual Line of Sight, nighttime, and flight operations over people. Commercial space launches have increased with the use of reusable launch vehicles and are growing in part through the initiation of space tourism operations. Through all these changes, the FAA has increased its global influence on safety standards to enable efficiencies for stakeholders that operate internationally.

Aviation safety within the Federal Aviation Administration will be enhanced by reducing the number of regulations, and focusing on the achievement of performance standards. Increased partnerships between the agency and all stakeholders will maximize FAA resources by effectively identifying, analyzing and mitigating risks through use of data. As the aviation industry continues to utilize 'big data' to improve efficiency, the FAA will seize opportunities to engage data analytics that proactively identify and mitigate contributing factors to future incidents and accidents.

By 2022, the FAA will have developed the infrastructure and governance needed to enable safety data reporting and analysis for new entrants and traditional users who are expanding their operations. FAA will also refine ways to streamline data sharing agreements, in coordination with other federal agencies, to improve access to data. Targeted efforts to reduce safety risks on runways, within air cargo, and throughout UAS and commercial space operations, will allow these segments to continue safe growth in a sustainable manner. Globally, the FAA will collaborate with international partners to encourage the adoption of FAA performance standards, guidance and policy. Finally, to enhance oversight and regulatory functions, the FAA will achieve improved efficiency through standardization of processes which will foster proactive collaboration between the FAA and regulated parties.

INFRASTRUCTURE

Invest in Infrastructure to Ensure Safety, Mobility and Accessibility and to Stimulate Economic Growth, Productivity and Competitiveness for American Workers and Businesses.

The airspace above our busy cities and rural towns is no different in importance than the infrastructure for the roads, bridges, and railways that crisscross our country.

The Nation is experiencing a period of tremendous opportunity and change in aviation. To support this growth and evolution, we must maintain and modernize the physical, technological and human infrastructure that enables flexibilities in our air and space transportation systems to respond to shifting needs. Our infrastructure must ensure that an increasingly diverse mix of air transportation users, such as unmanned aircraft and commercial space vehicles, are able to safely integrate within our National Airspace System (NAS). With communities and the aviation industry, we are working to develop approaches and solutions that will be safe, secure and efficient, producing a strong return on investment and supporting unhindered growth and access.

In common with other land and sea transportation modes, aviation shares many of the problems of outdated or inadequate infrastructure. Accordingly, the FAA has taken significant steps to address critical infrastructure capacity issues. Based on the development of new technologies, the agency initiated the modernization of the NAS in 2007 by migrating infrastructure away from ground-based systems. The Next Generation Air Transportation System (NextGen) effort will enable greater transformation, which will allow the NAS to be robust and resilient in the face of the increased volume of operations. This ongoing modernization effort will resolve existing bottlenecks and increase airspace capacity, while also addressing aircraft noise and emissions issues.

As the aviation industry grows, it will require a skilled Science, Technology, Engineering and Math (STEM) workforce to ensure technologies are developed and used safely.

A recent industry estimate projected the aviation field will require 790,000 new civil aviation pilots, 754,000 new maintenance technicians, and 890,000 new cabin crew to fly and maintain the world fleet over the next 20 years.[5] To meet this demand, the FAA will increase efforts with other government agencies, industry, and educational organizations to create awareness, develop coordinated strategies, and design pathways for today's students.

[5] Boeing - Pilot & Technician Outlook 2018-2037

STRATEGIC OBJECTIVE 1: PROJECT DELIVERY, PLANNING, ENVIRONMENT, FUNDING AND FINANCE

Facilitate expanded aviation infrastructure development, modernization, and construction in both rural and urban communities by fostering more efficient and collaborative planning and construction techniques, accelerating project approval, leveraging all sources of funding, and promoting innovative financing while maintaining environmental stewardship.

The FAA has focused its efforts on ensuring that aviation system infrastructure can support the current and future needs of the NAS. The agency has centralized its modernization efforts in NextGen, comprising numerous interdependent systems in various stages of lifecycle management, from research and installation to technical upgrades and maintenance. These systems will work collectively to foster a more efficient and streamlined NAS. The FAA will evolve its processes, procedures and guidance to support changes to aviation infrastructure. These enhancements will account for system resiliency in the face of disruptions from weather or security events, as well as decommissioning of legacy facilities and equipment. New capabilities of the modernized system are expected to translate into streamlined procedures for operators. As the modernization of aviation infrastructure continues, the FAA will actively engage with communities regarding noise and other environmental impacts.

FAA has established the following multi-year strategies to facilitate expanded infrastructure development, modernization, and construction:

- Install NextGen Distance Measuring Equipment (DME), in addition to Very High-Frequency Omni-directional Range (VOR) Minimum Operational Network (MON), to enhance infrastructure resiliency of Performance-Based Navigation (PBN) operations during Global Positioning System (GPS) outages.

- Improve airport infrastructure through the application and efficient blending of multiple financial tools available to airports. These include the Airport Improvement Program (AIP), Passenger Facility Charge program, privatization, public-private partnerships, airport revenue and traditional airport financing tools focused on delivering airport safety, modernization and supporting development of capabilities. Outreach and access to federal grant opportunities will also increase along with programs serving small and disadvantaged business enterprises.

- Develop and deploy a modern information network to assess and transfer data easily and securely in a usable format. This network will be required to transform existing tools and operations to meet unique requirements in support of space operations mission planning and efficient NAS integration.

- Promote public/private partnerships to foster and develop world-leading Commercial Space Transportation infrastructure.

Envisioned End State - 2022

By 2022, a designated segment of radar-based aviation systems and infrastructure will have been phased out as a primary means of air traffic management. Operations will rely on advanced GPS-enabled technologies and increased NextGen infrastructure, enabling greater density and volume of civil aviation operations throughout the NAS. Newer systems will be robust through FAA initiatives promoting the secure collection, transmission, and analysis of data to improve safety and reliability. Many of these technologies will also be integrated into unmanned aircraft, as well as commercial space operations. Through successful fielding of new aviation infrastructure, the FAA will have increased global interoperability by sharing its modernization approaches with its domestic and international stakeholders.

## STRATEGIC OBJECTIVE 2: LIFE CYCLE AND PREVENTIVE MAINTENANCE

Keep the Nation's transportation infrastructure secure and in a state of good repair by maintaining and upgrading existing systems in rural and urban communities.

Aviation poses unique challenges in comparison with other transportation modes in terms of maintenance and infrastructure upkeep. Moving forward, the FAA will focus on ensuring the aviation system is resilient enough to withstand extreme weather and security events (including cybersecurity) which could otherwise disrupt the NAS. By doing this, the FAA strives to reduce cost and foster continuous modernization and enhancement. Airport sustainment and improvement in rural areas is a priority focus. Migration away from ground-based systems will enable more satellite-based capabilities beneficial to rural communities. Additionally, decommissioning of legacy equipment and facilities will redirect resources to support other agency priorities, such as:

- Focus Airport Improvement Program funds on improving national airport infrastructure, which supports system-wide impacts while leveraging state and local funding and private sector investment. This will support the ability of rural airports to use AIP funds to restore and sustain their infrastructure.

- Optimize access to airport development funds and effective land use at constrained airports, through risk-based decision-making that involves airport operators, air traffic systems and aircraft manufacturers.

- Promote the Airport Privatization Pilot Program as a means of generating access to private capital for airport improvement and development.

- Decommission legacy infrastructure to reduce rental as well as operations and maintenance costs.

- Streamline public instrument flight procedures by canceling those no longer needed as part of cost savings.

Envisioned End State - 2022

By 2022, the FAA will have significantly reduced maintenance costs of legacy systems through the migration of many operators to upgraded aviation infrastructure, and has reallocated resources to field and maintain its newer assets. This transition will also have achieved lower maintenance and operation costs for operators, promoting increased economic growth in the aviation sector. In addition, the FAA has also contributed to the improved economic vibrancy of rural communities through targeted programs to maintain and improve the condition of their airports and other aviation infrastructure.
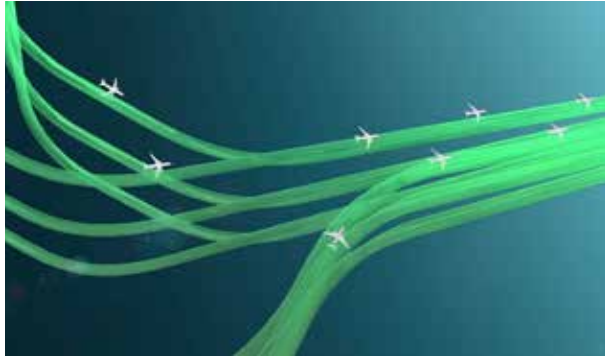
STRATEGIC OBJECTIVE 3: SYSTEM OPERATIONS AND PERFORMANCE

Enhance reliable and efficient movement of people and goods by promoting effective management and ensuring leadership in securing data and in sharing information across the transportation system.

The FAA is targeting resources to offer more efficient air traffic services in areas that are chokepoints in our current air transportation system. Focus on increasing the throughput capacity of airports and congested air corridors, through fully realizing the implementation of Trajectory Based Operations (TBO) by 2025, will deliver the integration of time-based management data and tools. Subsequently, the dynamic implementation of TBO by 2030 will provide even more flight-specific time-based solutions to include advanced rerouting.

TBO is an air traffic management method for strategically planning, managing, and optimizing flight operations using time-based management, information exchange between air and ground systems, and an aircraft's ability to fly precise paths in time and space.

Operational Priority - The Northeast Corridor. The airports and associated airspace above Washington DC/Baltimore, Philadelphia, New York and Boston comprise the most complex air traffic environment in the Nation. While geographically small, approximately 50 percent of flight delays and commercial airline schedule interruptions throughout the country originate, either directly or through downstream effects, because of congestion within the Northeast Corridor. A targeted effort begun in 2017 to reduce delays in this airspace remains a key priority for the agency over the next four years.

Working collaboratively with the aviation community, and in consultation with industry through the NextGen Advisory Committee (NAC), the FAA has undertaken a variety of near-term tactical actions to leverage already-deployed NextGen technologies within the Northeast Corridor. These efforts, augmented with larger initiatives focused on airport infrastructure, airspace and procedures streamlining and the further deployment of decision-making tools and technology, represent a collaborative priority among all stakeholders to deliver benefits in efficiency, predictability and capacity to this region and the Nation overall.

In addition to initiatives within metropolitan areas, the agency is also providing air navigation services to previously underserved areas through advanced decision-making tools and other catalysts to infrastructure development. Automatic Dependent Surveillance-Broadcast technology will support aircraft-to-aircraft transmission of position and vector data across the NAS, effectively streamlining surveillance capabilities and transitioning from legacy radar coverage. FAA will streamline processes and funding flexibility while leveraging private sector investment.

Similar to other emerging uses, the FAA is employing more robust data and analytics to create better modeling of demand and congestion. This provides gains in efficiency and gives customers increased lead time to plan for weather delays and ensure flight data remains updated and accurate.

While using more data-driven systems, the FAA will also develop strong relationships with external commercial and government partners to enable a more informed threat and defense capability. This will help leverage information and defense actions needed to protect FAA systems and networks.

The FAA has established the following multi-year strategies to improve transportation reliability and efficiency:

- Automate and streamline the data sharing process for non-NAS users through new technologies, such as cloud storage.

- Use data to develop and execute clear plans to prepare for weather events and other disruptions, and use operational forecasting, shared with operators.

- Reduce errors in delivering precise routes on both the ground and in the air, as well as sharing surface safety information between air traffic controllers and pilots by using digital communication.

- Minimize the volume and length of time airspace is restricted by integrating real-time spaceflight data into the NAS management structure, reducing time and fuel costs to users.

- Sustain and improve cybersecurity in the aviation ecosystem through relationships with external partners in government and industry.

Envisioned End State - 2022

By 2022, FAA will have improved on-time performance of operations within the NAS through the implementation of Trajectory Based Operations. Operations within the Northeast Corridor will have been streamlined through the targeted application of NextGen technologies and will have yielded measured improvements in operations throughout the country. Controllers and pilots will benefit from improved decision-making capabilities using TBO automation tools, which integrate data enabling enhanced airspace and airport throughput, and improved demand and capacity balancing in our busiest airspace. These enhancements will also have yielded reduced surface taxi time, fuel burn, carbon dioxide emissions, as well as more flight opportunities and better reliability and predictability for the traveling public, even in poor weather conditions. The improved efficiencies achieved through TBO will continue to accommodate increased user demands while lowering cost for service delivery.

STRATEGIC OBJECTIVE 4: ECONOMIC COMPETITIVENESS AND WORKFORCE

Promote transportation policies and investments that bring lasting economic benefits to the Nation by harmonizing and leading regulatory practices and by meeting the ation's transportation workforce needs.

The FAA will promote efforts to improve the competitiveness of the U.S. aviation economic sector by streamlining regulatory processes and promoting improvements to multi modal connectivity. The FAA will also promote the development of a robust aviation workforce to support a growing and evolving aviation system. This includes the ability of the workforce to fill traditional positions and to address the need for skills and competencies required to integrate new technologies. Current and projected shortages in certain professions, such as pilots and technicians, require a focus of efforts to develop a pipeline for the development of these professionals, in partnership with both schools and industry. The FAA is also a consumer of this workforce and has a considerable stake in the availability of a robust pool of aviation professionals. The FAA will accomplish this through the following:

- Promote internship opportunities; develop partnerships with academia, industry and government stakeholders, as well as further programming for science, technology, engineering and math (STEM), and aviation and space education (AVSED) programs.

- Streamline the certification process for industry and reiterate the importance of a safety culture through all phases of the process. This includes engaging industry early to prepare for the introduction of new technologies.

- Promote policies that will ensure multimodal infrastructure connectivity, while increasing foreign market access and opportunities for American business, services and the U.S. workforce.

- Increase the international competitiveness of the U.S. transportation industry by advocating the global adoption of U.S. policies, FAA regulations and best practices.

- Work effectively with international partners and private industry to guide standards that stimulate frameworks for harmonization and economic growth, improving efficiency of the global aviation infrastructure, and enabling the safe movement of people and goods.

- Provide international guidance, technical assistance, and research and development that accelerate harmonization with U.S. systems, regulations, procedures and policies. By using strategic and innovative forms of global leadership, through multilateral and bilateral relationships, FAA can maximize the returns to the Nation's economy and people.

Envisioned End State - 2022

By 2022, harmonized regulatory practices necessary for multimodal infrastructure connectivity will have been established through interagency partners in other transportation modes. The level of global standards that align with U.S. law, FAA regulations and best practices has improved, leading to reduced barriers to the competitiveness of the U.S. transportation industry. In 2022, the pipeline for a qualified and highly skilled aviation workforce will have expanded through established FAA collaboration initiatives with industry, government, and education partners. The FAA will have developed and implemented programs to promote professions in the aviation sector, through the involvement of FAA in national and regional promotional and partnership activities.

INNOVATION

Lead in the Development and Deployment of Innovative Practices and Technologies that Improve the Safety and Performance of the Nation's Aviation System.

The pace of innovation continues to increase throughout the world, and our Nation's aviation system is no exception. New technologies and business models are reshaping who interacts with the National Airspace System and how aircraft operate within it. At the forefront of these changes are a host of new entrants in non-traditional areas, such as commercial space, unmanned aircraft, and the potential reintroduction of supersonic flights. The aviation sector is on the cusp of significant changes to operations as it moves towards systems that rely more heavily on automation and the use of data. In the face of these challenges, the FAA will work proactively on the domestic and international levels to maintain and improve the current level of safety in civil aviation. The effective development and deployment of innovative practices will be challenging, due to the sheer number of current and potential new entrant operators, as well as the increasing sophistication of data use and automation.

> Our ability to address the effective and secure use of
> new technologies will have a significant impact on the pace
> of innovation and improvements in safety.

The FAA must embrace the innovation that is reshaping our skies as a key driver that will continue to build upon our hard-earned level of aviation safety. This approach will require improved applications and use of underlying data to support safety analytics, while at the same time identifying and mitigating cybersecurity vulnerabilities. The FAA will support development and deployment of innovative technologies by investing in targeted research, facilitating coordination and information sharing, partnering with industry and other stakeholders, assessing existing regulatory approaches to address potential barriers, and providing opportunities to expedite the testing and adoption of beneficial technologies. Coordination of this multifaceted approach will require a dedicated cross-agency effort which will be undertaken with the standup of a dedicated new entrants and Innovation Office within the agency in 2019.

STRATEGIC OBJECTIVE 1: DEVELOPMENT OF INNOVATION

Encourage, coordinate, facilitate, and foster world-class research and development to enhance the safety, security, and performance of the Nation's transportation system.

The FAA, working with its stakeholders, will identify emerging technologies and opportunities, as well as identifying gaps. In addition, the agency will leverage complementary research performed by partners in industry, academia, international players, and the federal government to enhance the safety, security, and performance of the Nation's aviation system. We will develop measures to enhance safety-enabling technology and analytical capabilities, while also ensuring the security of data and its use. The FAA has identified the following strategies to develop technologies that improve the safety and performance of the U.S. aviation system:

- Focus on research and development in improving the safety and performance of airport infrastructure and operations, air traffic, and airspace management capabilities to include working with both domestic and international stakeholders.

- Develop tools and processes to continue improvements in the integration of UAS and commercial space operations into the NAS, in partnership with other government agencies and industry. Through programs such as the UAS Integration Pilot Program, the FAA will partner with state, local, and tribal governments to develop the processes that will enable complex UAS operations by government and industry stakeholders in the NAS.

- To reduce aviation critical infrastructure risk, the FAA and transportation ecosystem stakeholders have adopted the National Institute of Standards and Technology Cybersecurity Framework. Additionally, the agency will continue to mitigate risks to our mission and services by improving the protection of FAA information, information system, and networks.

- Promote FAA cyber community engagement with the public sector, intelligence community, private sector, and international partners.

- Develop improved cybersecurity capabilities for secure collection, transmission, management and analysis of data in coordination with interagency, industry and international stakeholders.

- Complete assessment of the evolution of the spectrum market and estimate values for spectrum bands and scenarios of interest.

Envisioned End State - 2022

By 2022, new entrants and new technologies will have been integrated into the NAS effectively, due to FAA partnerships with innovators in academia and industry. These relationships will have been leveraged to pilot, and ultimately adopt, new technologies that improve safety and efficiency in the NAS. They will also be active in expanded integration of UAS, commercial space activities and supersonic transport, as well as data collection and management. In addition to these collaborative partnerships, many FAA resources will be focused on key areas of research necessary for the development of robust cybersecurity applications in civil aviation.

STRATEGIC OBJECTIVE 2: DEPLOYMENT OF INNOVATION

Accelerate and expand the deployment of new technologies and practices by reducing barriers to innovation and actively promoting innovations that enhance the safety and performance of the Nation's transportation system.

The FAA has a long record of innovation and the deployment of new technologies and practices that enhance safety and performance throughout the National Airspace System. NextGen efforts outlined in this document are an example of a multifaceted deployment of innovation in the modernization of airspace infrastructure. As part of NextGen, new systems provide operational data to FAA stakeholders and the public, enabling use and review of operational performance metrics to ensure accountability. Collaboration within the agency, driven by a cross-cutting focus on new entrants and innovation, will examine the transformational potential of these metrics across major FAA functions. Deployment of new tools and technologies further facilitate our efforts to integrate new entrants into the NAS and to provide needed services to rural and remote communities. We will:

- Leverage new technology to increase the amount of data we share with stakeholders in a more cost-effective way.

- Improve our own utilization of radio spectrum, and make it available for shared use through means such as consolidating surveillance radars. Relevant initiatives include the Spectrum Efficient National Surveillance Radar (SENSR) effort, which has the goal of providing up to 50 MHz of spectrum in the 1300-1350 MHz band for Federal Communications Commission (FCC) auction, in support of the 2015 Spectrum Act.

- Complete the integration of over 600 ADS-B[6] ground stations into air traffic separation services and continue to promote the January 1, 2020 ADS-B Out mandate for operations in rule airspace. This will enhance safety through use of more accurate aircraft surveillance technology.

- Implement the FAA's Concept of Operations for Integrating Commercial Space Operations Integration into the NAS. This will achieve improved NAS efficiency through reductions in delays, route deviations, fuel burn and emissions.

- Deploy tools to provide automated assessments by scoring proposed launch sites and launch vehicle types/missions, analyzing data across a host of air and ground safety hazards.

- Increase access, capacity and safety at airports by certifying remote towers. Remote towers will use personnel located in a facility other than a traditional control tower. Cost savings are realized through the use of video-based situational displays, radio communication, surveillance technologies and other decision-support tools.

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[6] Automatic Dependent Surveillance–Broadcast (ADS-B) is the successor to radar that uses onboard avionics to broadcast an aircraft's position, altitude and velocity to a network of ground stations, which relays the information to air traffic control displays and to nearby aircraft equipped to receive the data via ADS-B In.

Envisioned End State - 2022

Harnessing innovation, as a key element of safety and efficiency, must be a priority for the aviation sector and the FAA over the next four years. By 2022, the deployment of new concepts and technologies will have yielded benefits in the National Airspace System for all stakeholders. Unmanned aircraft operating in new and increasingly autonomous profiles will share skies previously dominated by manned platforms with increased flexibility. Programs supporting innovative uses of spectrum will have enabled effective data transmission in aviation operations while also providing potential revenue streams by vacating other frequencies within the radio spectrum. Greater efficiency in commercial space operations will have been realized through established processes on spaceport categorization and airspace access. Finally, the completion of pilot programs in remote tower technologies will have allowed the FAA to codify guidance and performance metrics of this virtual service, providing options to rural and remote locations in need of air navigation services.

ACCOUNTABILITY

Serve the Nation with Reduced Regulatory Burden and Greater Efficiency, Effectiveness and Accountability.

WE SERVE THE AMERICAN PEOPLE

Overly burdensome rules and regulations hinder the performance of the federal workforce, impede development and deployment of technologies, and slow the implementation of programs designed to support new entrants to the aviation sector.

The FAA will improve effectiveness within our agency operations through a reduction in low-value, obsolete, or duplicative regulations.

We will also pursue efforts to streamline and improve requirements within our business processes to facilitate greater clarity and flexibility in support of a rapidly evolving industry.

STRATEGIC OBJECTIVE 1: REGULATION

Reduce current regulatory burdens and bureaucracy to ensure a safe, efficient, accessible, and convenient transportation system for people and commerce.

A core accountability objective for the FAA is to reduce regulatory burdens while preserving safety within the National Airspace System (NAS). To reduce the regulatory burden on society, the FAA will continue to identify regulations that should be repealed, replaced, or modified. The FAA's specific strategies include:

- Streamlining regulatory processes to improve government efficiency and reduce impediments to innovation, project delivery, and program implementation. Specifically, the FAA will continue to refine rulemaking prioritization and seek early engagement of stakeholders to assist with policy development.

- Applying a portfolio-based approach to reducing regulatory burdens by developing an annual rulemaking plan that considers future years and potential cost savings.

- Promoting performance-based regulations, which provide additional flexibility to regulated entities and avoid "one-size-fits-all" approaches.

- Identify and implement processes to address strategic rulemaking objectives, such as Unmanned Aircraft Systems, commercial space, and supersonic.

- Improve accountability efforts to support increasingly global business models and worldwide travel of U.S. passengers. Ensure focus on key communication, navigation, surveillance, and infrastructure needed to support U.S. carriers operating outside the NAS.

Envisioned End State - 2022

By 2022, the FAA will have identified regulations that can be repealed, replaced, or modified, as well as strategies to reduce regulatory burden while maintaining safety. Improved and proactive approaches for rulemaking will have been established with stakeholders to support technological innovation and accommodate new entrants to the NAS. In coordination with the Department of Transportation, the FAA will have leveraged input from industry leaders as a vehicle for collaboration and mutual goal alignment supporting the U.S. economy. Finally, the FAA will have promoted performance-based regulations, both domestically and internationally, to maintain safety while enabling industry and promoting innovation.

STRATEGIC OBJECTIVE 2: EFFICIENCY AND SUPPORT

Support mission requirements by efficiently and effectively planning for and managing human capital, finances, procurement, sustainable operations, information technology, emergency preparedness, and other mission support services.

The FAA will support mission requirements by planning for and managing human capital, information technology, financial infrastructure and financial accounting necessary to support programs that drive safety goals. As part of this effort, the FAA is working to identify smarter and more efficient ways to provide agency-wide support to include the increased use of shared services where they make sense.

The FAA will improve efficiency and effectiveness by recruiting, training and retaining the right employees with key technical skills, qualifications and competencies necessary to achieve the agency's goals. As effective stewards of taxpayer funds, we will ensure our workforce can successfully deliver services to our users and enhance customer experiences in alignment with our safety mission.

The agency will align its workforce skills with evolving technologies, operating models, and strategic priorities. The FAA will maximize employee performance and transform the workforce by enhancing the systems and structures currently in place to manage talent, drive performance and execute programs and policy.

We will collaborate with the Department of Transportation and other federal agencies to establish shared services models for the delivery of crucial processes and systems to improve customer service and experience, and to align business processes more effectively. These actions may also reduce overall costs for services by leveraging areas in which FAA excels, to include:

- Ensuring that the FAA has the human resources needed to accomplish its safety mission through robust strategic workforce planning, leadership development, succession planning, performance management and Total Rewards programs.

- Improving processes, systems and structures to enhance human resources service delivery. This can be realized by implementing process automation improvements, leveraging internal communications, facilitating internal collaboration and labor partnerships, and enhancing policy dissemination and compliance oversight to meet organizational needs.

- Aligning FAA's internal organizations to maximize efforts toward workforce development, cyber, shared services ideals, and overall philosophy.

- Implementing solutions that are integrated with other DOT modal systems and processes.

Envisioned End State - 2022

By 2022, the FAA will have realized expanded capabilities to conduct its mission support services through more efficient use of human capital resources. The agency will have expanded its alignment with DOT as well as shared services and personnel reform goals. More efficient use of resources will have led the FAA to improve its use of taxpayer funds in continued support for American industry and increased economic opportunities. Internal process and automation improvements will have resulted in a more streamlined and efficient shared service environment within the FAA, and will factor in the reduction of regulatory costs to regulated parties. The FAA workforce will be prepared for the future through best-in-class approaches that identify, recruit, train, and retain a diverse workforce with the skills necessary to ensure that the U.S. has the world's safest and most productive aviation sector.

PROGRAM EVIDENCE

This section describes the types of evidence the FAA uses to assess the effectiveness of programs and inform management actions to enhance performance. In the context of the Strategic Plan, the results we seek are the FY 2019–2022 Department of Transportation strategic goals and objectives, pursued through aviation-focused programs. The Office of the Secretary of Transportation will monitor progress using performance measures included in the DOT Annual Performance Plan, as well as by FAA senior management team review of additional agency-specific measures. We derive program evidence from both performance measurement and evaluation studies.

PERFORMANCE MEASUREMENT: AGENCY-WIDE MEASURES

Overview

Performance measurement provides a view of progress toward achieving the strategic goals and objectives established in the FAA Strategic Plan. The FAA identifies performance indicators that align with these goals and objectives and sets targets based on historical trends. Each year, the FAA contributes to the DOT Annual Performance Plan and Annual Performance Report, which describe progress toward meeting current targets and establish targets for the year ahead. FAA submits these reports to the Office of Management and Budget (OMB) and makes them available to Congress, stakeholders, and the public. In addition to these annual reports, on a quarterly basis, the DOT Deputy Secretary holds Performance Management Review meetings with the FAA Administrator and other senior leaders to review progress toward meeting targets for the performance indicators. These discussions inform DOT leadership about recent developments, promote greater program transparency, and may lead to follow-up actions to address barriers to implementation.

Historically, the FAA has drawn performance indicators from a variety of data sources. The agency tracks and reports on a specific set of performance measures relating to safety, efficiency, capacity, environment, and cost-effectiveness. In addition, in support of DOT, the FAA complies with the Fixing America's Surface Transportation Act requirements for data reporting on the Permitting Dashboard. The Dashboard is an online tool for federal agencies, project developers, and interested members of the public to track the federal government's environmental review and authorization processes for large or complex infrastructure projects. The Dashboard is part of a government-wide effort to improve coordination, transparency, and accountability, in order to accelerate project delivery and achieve improved outcomes.

To document procedures, the FAA Portfolio of Goals provides technical information on the methodology by which progress is measured for the various FAA corporate goals. Information for each goal's Performance Measure Profile includes the metric definition, scope, and methodology, as well as the data sources used to measure progress.

The FAA Office of Policy and Plans (APO) facilitates management of the agency's strategic and corporate business planning. In addition, APO is leading the development of an improved enterprise reporting database tool for business, strategic, and corporate planning to replace the legacy system. This upgrade will enable seamless data access across the agency and improve efficiencies, while reducing cost in managing agency performance.

Types of Measures

- **Organizational Success Increase/Measure (OSI/M):** Every fiscal year, the FAA collectively selects a series of goals (usually 30) to serve as the backbone of performance-based pay. OSI/OSM goals are aggressive but achievable and provide eligible employees with a line of sight between their work and the FAA's goals.[8]

- **Short-Term Incentive (STI):** Every fiscal year, each FAA executive is assigned a series of goals that determine a portion of performance-based incentive compensation. An STI may be held by one executive (Individual STI) or shared among several executives (Group STI).

  ○ **Corporate Short-Term Incentive (CSTI):** Every fiscal year, FAA senior leadership nominates a series of goals for all executives to carry as CSTIs. These assignments facilitate collaboration across agency organizations and aid in reducing siloed efforts.

- **Agency Priority Goals (APG):** Every two years, DOT in consultation with the FAA develops a Performance Plan, which includes a set of DOT goals to report to OMB and on the Performance.gov website. These metrics represent DOT's highest priority goals and are automatically included in both the DOT and FAA Strategic Plans.

- **Modal Performance Measures (MPM):** Also included in the DOT two-year Performance Plan is a set of measures specific to each DOT Operating Administration (mode), including an aviation-related set for the FAA.

Compliance with OMB Circular A-123 directing the establishment of an Enterprise Risk Management (ERM) structure within each agency is coordinated at the Department of Transportation level. Annually, each DOT Operating Administration creates its own risk register, focused on assessment and mitigation of the mode's highest priority risks. DOT summarizes and integrates the modal risks to create a DOT risk profile. To administer the FAA's ERM compliance program, FAA senior leadership designated the FAA Performance Committee to act as a Risk Management Council (RMC) with the Chair acting as the Chief Risk Officer. The RMC reviews and approves the FAA's risk profile in consultation with FAA leadership, before submission to DOT.

PERFORMANCE AND ACCOUNTABILITY REPORT (PAR)

The FAA produces an annual Performance and Accountability Report, presenting key financial and organizational performance information in a manner designed to maximize readability for external stakeholders and the public. As a DOT mode, the FAA presents performance, management, and financial information, using the same statutory and guidance framework as used by the Department. In some cases, the agency may depart from the reporting formats prescribed for agencies subject to the Chief Financial Officers Act.

[8] Unlike federal employees within the General Schedule, a significant portion of the FAA workforce is not eligible for "Step" increases based on longevity and instead is compensated within "Pay for Performance" parameters.

PROGRAM EVALUATION

In FY 2019, the FAA conducted a self-assessment of 10 FAA programs to evaluate program purpose and design, strategic planning and performance measures, program management and administration, and program performance and accountability. The DOT-led evaluation baselines program operations, documents program performance within and across programs, and helps encourage and implement program improvements and efficiencies. The process is intended to support evidence-based decision-making, inform budget decisions, and help establish actions to improve results.

LIST OF ACRONYMS

ACRONYM	DEFINITION
ADS-B	Automatic Dependent Surveillance- Broadcast
AIP	Airport Improvement Program
APG	Agency Priority Goals
APO	FAA Office of Policy and Plans
AVSED	Aviation and Space Education
CRO	Chief Risk Officer
CSTI	Corporate Short-Term Incentives
DME	Distance Measuring Equipment
DOT	Department of Transportation
ERM	Enterprise Risk Management
FAA	Federal Aviation Administration
FAST	FAA Acquisition System Toolset
FCC	Federal Communications Commission
FY	Fiscal Year
GPS	Global Positioning System
MHZ	Mega Hertz
MPM	Modal Performance Measures
MON	Minimum Operational Network
NAS	National Airspace System
NextGen	Next Generation Air Transportation System
NIST	National Institute of Standards and Technology
OMB	Office of Management and Budget
OSI/M	Organizational Success Increase/Measure
OST	Office of the Secretary of Transportation
PAR	Performance and Accountability Report
PBN	Performance Based Navigation
PC	Performance Committee
RMC	Risk Management Council
SENSR	Spectrum Efficient National Surveillance Radar
SBM	Strategic Business Module
SMS	Safety Management System
SPIRE	Simplified Program Information, Reporting, and Evaluation System
SSP	State Safety Program
STEM	Science, Technology, Engineering and Math
STI	Short-Term Incentive
sUAS	Small Unmanned Aircraft System

ACRONYM	DEFINITION
TBO	Trajectory Based Operations
UAS	Unmanned Aircraft System
U.S.	United States
VOR	Very High Frequency Omni-directional Ranging

ANNEX: FY19 STRATEGIC PRIORITIES

SAFETY GOAL: SYSTEMIC SAFETY APPROACH OBJECTIVE

1. **Safety Management System Initiative:** Build on safety management principles to proactively address emerging safety risk by using consistent, data-informed approaches to make smarter, system-level, risk-based decisions.

   ° **Activity 1: Potential/Emerging Safety Issues:** Facilitate potential safety/emerging issues through the appropriate FAA Safety Risk Management process.

   ° **Activity 2: U.S. State Safety Program Update:** Revise the U.S. State Safety Program to align with International Civil Aviation Organization (ICAO) requirements outlined in Annex 19.

   ° **Activity 3: Integrated Oversight Policy Implementation:** Implement the FAA Integrated Oversight Order, by evolving safety oversight models to become risk-based, inter-operable, and data-driven.

2. **Data Standardization Initiative:** Improve the collection, management, and integration of safety data on transportation-related fatalities and serious injuries, and their precursors, to enhance safety analysis across the agency.

   ° **Activity 1: Aviation Safety Data Governance Standardization Team:** Establish agency-wide, aviation safety data governance requirements.

   ° **Activity 2: Hazard Library Tactical Team:** Provide the agency with a centralized point of reference for hazard identification information and safety-related work products.

3. **Cargo Safety Risks Initiative:** Mitigate safety risks introduced by the carriage of air cargo through collaboration, data collection, industry risk-based decision-making, and adoption of industry policy and guidance.

   ° **Activity 1: Process in place to carry cargo as designed:** Develop tools and information to enable operators to evaluate their cargo operations for known and anticipated risks.

   ° **Activity 2: Coordinated approach to research and standards:** Develop a research plan for providing tangible information related to fire risks aboard aircraft.

4. **Ground-Based Safety Initiative:** Reduce the risk of runway incursions and wrong surface operations through infrastructure improvements, technology, information sharing, education and the development of site-specific procedures.

   ° **Activity 1: Improve infrastructure and technology to reduce the risk of runway incursions:** Reduce the risk of runway incursions by implementing improvements and mitigations.

   ° **Activity 2: Collaborate with industry to develop strategies to address wrong surface events:** Reduce the risk of wrong surface events by collaborating with industry and implementing mitigations.

INFRASTRUCTURE GOAL: PROJECT DELIVERY, PLANNING, ENVIRONMENT, FUNDING AND FINANCE OBJECTIVE

5. **NextGen Initiative:** Support National Airspace System (NAS) modernization and evolution through infrastructure improvements, technology, information sharing, and community engagement.

   ° **Activity 1: Exploration of Northeast Corridor (NEC) Procedural and Traffic Management Capabilities:** FAA will support two pre-implementation Northeast Corridor (NEC) NextGen Advisory Committee (NAC) priorities through concept exploration and operational assessment activities. These activities will cover procedural solutions and traffic flow management solutions to achieve the goal of deconflicting airports and improving throughput in the NEC.

   ° **Activity 2: Action plan to minimize risk to the ADS-B mandate:** Ensure operational readiness for the ADS-B Airspace Rule effective date of 1/1/2020.

   ° **Activity 3: Develop strategy to improve infrastructure through Airport Improvement Program (AIP) for rural communities:** Provide support to sustain and improve the safety and operability of rural airports.

   ° **Activity 4: Noise and Community Involvement:** Develop a procedural communication campaign that results in better coordination and collaboration across lines of business, staff offices and stakeholders to address a wide range of concerns, including aircraft noise.

   ° **Activity 5: Performance-Based Navigation:** Develop additional procedures relying on Required Navigation Performance (RNP) to reduce the track miles and increase the efficiency for arrivals at multiple runway airports. The next Established on Required Navigation Performance (EoR) procedure to be developed will undergo modeling, simulation and analysis activities to study the use of EoR, with a transition to an Instrument Landing System (ILS). In addition, the EoR program will coordinate all activities required to commence EoR Radius-to-Fix (RF) duals and triples operations at George Bush Houston Intercontinental Airport (IAH).

   ° **Activity 6: Environmental Review Processes:** Streamline and improve the environmental review process to make informed decisions more quickly and efficiently and provide for a more predictable, transparent, and timely federal review and authorization process.

6. **Ground-Based Navigation Initiative:** Sustain and optimize of Ground-Based Navigation Aids to support performance-based navigation.

   ° **Activity 1: Very High Frequency Omni-directional Range (VOR) Minimum Operational Network (MON):** The VOR MON program is designed to remove 30 percent of the current VORs from the contiguous United States by 2025 to enable aircraft to continue to navigate and land during Global Positioning System (GPS) outages.

   ° **Activity 2: Distance Measuring Equipment/VHF Omnidirectional range/Tactical Air Navigation System (VOR/DME/TACAN or DVT) navigation aids sustainment:** Explore the ability to sustain the DME/VOR/ TACAN (DVT) navigation aids and enter into contracts or partnerships with industry to provide the navigation services.

   ° **Activity 3: Area navigation 1 (RNAV 1) capability for aircraft to continue Performance-Based Navigation (PBN) operations during Global Positioning System (GPS) outages:** Install 124 Distance Measuring Equipment by 2035 to enable RNAV 1 capability for aircraft to continue PBN operations during GPS outages.

INFRASTRUCTURE GOAL: LIFE CYCLE AND PREVENTIVE MAINTENANCE OBJECTIVE

7. **Runway Pavement Maintenance Initiative:** Ensure airport infrastructure is kept in a safe and serviceable condition through capital improvements and airport inspections.

    ° **Activity 1: Ensure runway pavement is kept in a safe and serviceable condition:** Ensure runway pavement is kept in a safe and serviceable condition through capital improvements and airport inspections.

    ° **Activity 2: Runway Type Usage – Incorporate runway categorization (primary, secondary, crosswind, additional) and Airport Improvement Program (AIP) runway eligibility data into System of Airport Reporting (SOAR):** Create a more systematic, consistent and reliable mechanism for identifying and tracking runways that are eligible for AIP funding.

INFRASTRUCTURE GOAL: SYSTEM OPERATIONS AND PERFORMANCE OBJECTIVE

8. **Global Leadership Initiative:** As the global leader in aviation, the FAA must engage internationally to increase compliance with international standards and enhance aviation safety and efficiency. With the U.S. economy and traveling public relying so heavily on global air transportation, we are more committed than ever to strengthening our global leadership and engagement. The FAA's global leadership is critical to achieving U.S. aviation goals and supporting broader national priorities.

    ° **Activity 1: Post-Brexit Seamless Transition of Cooperative Activities:** Mitigate against projected disruption and safeguard an efficient exchange of aviation products and services between the United States and the United Kingdom (UK) when the UK leaves the European Union (EU).

    ° **Activity 2: Advance U.S. standards and safety culture through development of strategic plans to support the U.S. Government Goals and Priorities for International Engagement:** Advance U.S. standards and safety culture and help U.S. industries be more competitive through execution of strategic global and regional plans. The FAA International Strategy focuses on both global and regional engagement. This approach is informed by data and involves collaboration across the agency to make decisions about how it engages globally and how it can better target resources.

    ° **Activity 3: Exert global leadership at ICAO:** Work through the International Civil Aviation Organization (ICAO) to align global direction and priorities with U.S. policy and positions. The FAA promotes development of performance-based technical standards and guidance materials that are harmonized with U.S. concepts, rules and procedures to the maximum extent possible. The FAA communicates and coordinates within ICAO on regional or bilateral venues to help ensure ICAO dedicates appropriate resources to FAA's priority technical activities.

9. **Cybersecurity in the Aviation Ecosystem Initiative:** The FAA will develop strong relationships with external commercial and government partners to enable a more informed threat and defense capability, and leverage information and defense actions needed to protect FAA systems and networks.

    ° **Activity 1: Cybersecurity in the Aviation Ecosystem:** Build and maintain relationships with external partners in government and industry to sustain and improve cybersecurity in the aviation ecosystem.

INFRASTRUCTURE GOAL: COMPETITIVENESS AND WORKFORCE OBJECTIVE

10. **Aviation Workforce Initiative:** We will work with industry stakeholders and educational organizations to create awareness in Science, Technology, Engineering and Math (STEM) programs, leverage and coordinate existing programs, and develop pathways to meet the growing demand for a skilled aviation workforce.

    ° **Activity 1: Strategic Partnerships:** Strengthen existing, and build new, partnerships to create awareness of aviation-related careers and opportunities with various entities including industry, academia, and other federal agencies.

    ° **Activity 2: Science, Technology, Engineering, and Math (STEM) Aviation & Space Education (AVSED):** Enhance and expand existing STEM/AVSED offerings to engage external stakeholders and support development of future aviation workforce.

    ° **Activity 3: Internship Program:** Enhance existing intern experience, and expand, FAA's Internship Program by collaborating with key stakeholders.

    ° **Activity 4: Address Demand for a skilled aviation workforce:** Implement follow-up action plan from the Aviation Workforce Symposium.

INNOVATION GOAL: DEVELOPMENT OBJECTIVE

11. **UAS and Integrated Pilot Program Initiative:** The FAA will enable the safe and secure integration of Unmanned Aircraft Systems (UAS) into the National Airspace System (NAS).

    ° **Activity 1: UAS Integration Pilot Program:** Through the UAS Integration Pilot Program (UAS IPP), the FAA will partner with state, local, and tribal governments to undertake projects that will provide the necessary data to inform future rulemaking activities, processes and procedures.

    ° **Activity 2: UAS Traffic Management (UTM):** The FAA, in partnership with NASA and industry, will work to develop a framework that enables the automation of traffic management for unmanned aircraft.

    ° **Activity 3: Safety Risk Management in Support of Operations Now:** The FAA will create a process to perform safety risk management for specific UAS operations enabling the approval of complex waivers and precedent-setting exemptions.

12. **Data Access and Management Initiative:** Effective management of enterprise data will enable the seamless flow and accessing of timely, reliable, and relevant information, which supports evidence-based decision-making and innovation for the FAA workforce and aviation stakeholders.

    ° **Activity 1: Improve access to, and quality of, FAA data assets:** Collaborate with data stewardship communities of practice (SCoP) to baseline and catalog existing data assets within the respective domains to improve data access and expand data sharing. Identify data gaps, if any, and develop a roadmap and plan of action to address data shortfalls to improve data quality.

    ° **Activity 2: Provide enterprise capabilities to enable rapid development:** Provide enterprise data platforms and technology, as well as training for FAA employees for rapid development of business solutions.

    ° **Activity 3: Accelerate adoption of transformational technologies to enhance innovation:** Accelerate adoption of advanced analytical methods, machine learning and artificial intelligence, to bring innovative solutions to business problems throughout the FAA.

13. **Research and Development (R&D) Initiative:** A vibrant aviation sector relies heavily on a safe, efficient, and economical aviation system. To ensure FAA's research activities align with these expectations, the FAA must characterize the value and role (to lead, contribute, or monitor) of its research. To determine the minimum, if any, research the FAA must lead, the FAA will leverage the Research, Engineering & Development Advisory Committee to assess research landscapes within the aviation and broader R&D community. Assessment results will include identifying aviation drivers, issues, requirements, and influencing technologies and understanding the level of research investment the industry is making or is willing to make.

   ° **Activity 1: Research and Development Activity:** Develop comprehensive view of R&D required to support a vibrant aviation sector.

   ° **Activity 2: New Entrant Focused Research and Development:** Develop a comprehensive research plan for the integration of new entrants into the National Airspace System. Unlike previous new entrants, these latest fliers in airspace above 60,000 feet do not use the current communications, navigation, surveillance (CNS) that the FAA provides. This effort establishes a cooperative research plan for establishing the performance and roadmap for industry-provided CNS.

14. **Cybersecurity – Vulnerability Management Processes Initiative:** Evolve mitigation strategies to safely secure FAA infrastructure, reducing cybersecurity risks by determining the likelihood of a security breach and potential impacts to networks and systems.

   ° **Activity 1: Vulnerability Management Processes:** Protect and defend FAA information, information systems and networks to mitigate risks to the FAA mission and services.

   ° **Activity 2: NAS Global Information Security Standards:** Collaborate with ICAO, Industry, Eurocontrol, Single European Skies ATM Research (SESAR) and other international partners to plan and develop a cybersecurity proof of concept to secure information integrity.

INNOVATION GOAL: DEPLOYMENT OBJECTIVE

15. **Spectrum Initiative:** As part of a cross-agency team, the FAA will assess the feasibility of making bandwidth available for reallocation for non-federal use through the Spectrum Efficient National Surveillance Radar (SENSR) program.

   ° **Activity 1: Execute SENSR program:** Assess the feasibility to improve utilization of radio spectrum and make it available for shared or non-federal use through means such as consolidating surveillance radars through initiatives, such as the Spectrum Efficient National Surveillance Radar (SENSR), whose goal is to provide up to 50 MHz of spectrum in the 1300–1350 MHz band for FCC auction in support of the 2015 Spectrum Act.

16. **Commercial Space Initiative:** The FAA will engage with internal and external commercial space transportation stakeholders to develop, assess, and recommend appropriate processes, procedures, and infrastructure for the integration of commercial space transportation into the NAS.

   ° **Activity 1: FAA Spaceport Categorization and Airspace Access Aviation Rulemaking Committees (ARCs):** The FAA Spaceport Categorization and Airspace Access ARCs will develop and identify recommendations for improvements to processes and, procedures, and infrastructure to integrate commercial space transportation into the NAS.

17. **Remote Tower Services Initiative:** Using innovative public-private partnerships, the FAA will work with commercial vendors to support certification of their Non-Federal Remote Tower Systems. Once certified, these systems will potentially provide more cost-effective solutions to traditional brick and mortar towers, especially for smaller rural communities.

   ° **Activity 1: Overarching Remote Towers:** Develop a strategy for long-term Remote Tower integration into the NAS and continue the evaluation and assessment of remote tower projects at Leesburg (sponsored by Saab-Sensis) and Fort Collins (sponsored by Colorado DOT).

   ° **Activity 2: Develop draft standards and advisory circulars for remote towers:** The FAA will develop a documented process to achieve the Type Certification of remote tower systems.

ACCOUNTABILITY GOAL: REGULATION OBJECTIVE

18. **Regulation Reform Initiative:** Reduce the Regulatory Burden on the Transportation Industry & Public While Still Achieving Safety Standards.

   ° **Activity 1: Issue Commercial Space Notice of Proposed Rulemaking (NPRM):** In accordance with Space Policy Directive-2, no later than February 1, 2019, the FAA will publish, for notice and comment, proposed rules to streamline the licensing of commercial space launch and reentry vehicles.

   ° **Activity 2: Positive Executive Order 13771 implementation (2 for 1):** Review guidance versus rules and grant assurance policies.

   ° **Activity 3: Unmanned Aircraft Systems (UAS) Rulemakings:** Deploy critical steps in enabling complex UAS operations.

   ° **Activity 4: Supersonic Aircraft Noise Rulemakings:** Address environmental challenges to enable future supersonic flight.

ACCOUNTABILITY GOAL: EFFICIENCY AND SUPPORT OBJECTIVE

19. **Workforce Transformation – Talent Management Initiative:** Ensure that the skills of the FAA workforce evolve as the technologies, operating models or strategic priorities of the organization change. The FAA will shape the human resources needed to accomplish its safety mission through enhancement of strategic workforce planning, leadership development and succession planning initiatives. These will promote a high-performing workforce, identify and close senior manager skill gaps and implement and maintain programs to attract, acquire, develop, promote, and retain quality and diverse talent.

   ° **Activity 1: Succession Planning:** Promote the use of succession planning principles to assist FAA organizations in developing strategies to fill key roles, starting at the executive level.

20. **Workforce Transformation – Program Effectiveness Initiative:** FAA will strengthen service delivery to FAA organizations, and streamline the execution of human resource functions across the employee lifecycle. This will be accomplished by implementing process automation improvements, leveraging internal communications, facilitating internal collaboration and labor partnerships and enhancing policy dissemination and compliance oversight to meet internal targets and organizational needs.

   ° **Activity 1: Recruiting & Hiring:** Measurably improve or maintain day-to-day execution of HR by implementing tactical initiatives to operate efficient and effective hiring and onboarding processes.

   ° **Activity 2: Benefits & Worklife:** Enhance the quality, efficiencies, and awareness of FAA Benefits and WorkLife Services by improving communications through an expanded number of seminars, briefings and resources that address needs throughout the employee lifecycle.

   ° **Activity 3: Policy Compliance & Program Review:** Conduct program reviews to evaluate compliance with policy and applicable regulations, as well as to identify opportunities for improvement.

21. **Workforce Transformation – Drive Performance Initiative:** Promote efficiency and effectiveness of the FAA workforce by evaluating and implementing systems and structures that engage, develop and inspire a diverse, capable workforce by creating, implementing and maintaining effective performance management strategies, practices and activities that support mission objectives.

   ° **Activity 1: Total Rewards:** Develop an overall Total Rewards vision and strategy for FAA workforce, and evaluate program options (existing, new or planned) to best meet the strategy and vision.

   ° **Activity 2: Performance Management:** Create, implement and maintain effective performance management strategies, practices and activities to foster an efficient and effective workforce.

22. **Shared Services – Workforce Initiative:** Work internally and in collaboration with DOT and other federal agencies on efforts to establish shared service models for the delivery of crucial processes and systems to improve customer service and reduce redundancy, resulting in workforce efficiencies and cost savings.

   ° **Activity 1: Business Partner Review:** Refine model for delivery of Human Resources (HR) activities across the agency to improve the efficient utilization of resources.

   ° **Activity 2: DOT Shared Services Proposals:** When beneficial, establish ourselves as the Human Resources (HR) shared service provider of choice by preparing and maintaining plans to enact as appropriate based on needs and priorities of administration.

23. **Shared Services – Finance, Technology & Infrastructure Initiative:** Promote cost and process efficiency through the adoption of shared service strategies supporting agency operations and administrative services.

   ° **Activity 1: Category Management:** Promote efficient acquisition and financial management strategies through enterprise-wide Category Management practices and contract vehicles.

   ° **Activity 2: Mission Efficiency – Opportunities Analysis:** Identify opportunities that benefit the FAA and other federal users (e.g., cost sharing, enterprise license agreements, enterprise solutions, fee for service).

U.S. Department of Transportation
Strategic Plan for FY 2018-2022

SAFETY

INNOVATION

INFRASTRUCTURE

ACCOUNTABILITY

U.S. Department of Transportation

February 2018

Further information on U.S. Secretary of Transportation's priorities for achieving DOT's mission is available in the U.S. Department of Transportation Strategic Plan for FY 2018-2022.