DEPARTMENT OF TRANSPORTATION
INSPECTOR GENERAL
TOP MANAGEMENT CHALLENGES
FOR FISCAL YEAR 2018

FEDERAL AVIATION ADMINISTRATION

ACTION PLANS

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MANAGEMENT CHALLENGE

Enhancing interagency communication and working with stakeholders to improve cockpit safety and security

Why is this issue significant?	Incidents in 2012 and 2015 in the United States and abroad[1] have drawn attention to flight deck safety and security, including securing cockpit doors.
Actions Planned for 2018	• The FAA began an effort to develop a relationship between the Transportation Security Administration (TSA) Principal Security Inspector (PSI) workforce and FAA's Aviation Security Inspector (ASI) workforce in July of 2017. The FAA invited the TSA to our Principal Operations Inspector (POI) conference to exchange briefings on what each agency is responsible for and how we execute our responsibilities. The FAA has scheduled more briefings for 2018. • The FAA will publish an Order that requires Principal Inspectors (PIs) to meet with TSA PSIs at least once a year to ensure enhanced interagency communication and coordination. Completion date: June 2018 • In an effort to work with stakeholders to improve cockpit safety and security, the FAA will meet with a flight attendants union in to discuss concerns with flight deck security. Completion date: October 2017 • The FAA will also meet with other stakeholders (A4A, Regional Airlines Association) to discuss DOT OIG Flight Deck Security recommendations. Completion date: July 2018

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[1] On March 24, 2015, Germanwings Flight 9525 crashed in the Alps, killing all 150 people onboard. The crash was determined to have been caused by the deliberate and planned action of the co-pilot. In March 2012, JetBlue Airways Flight 191 was diverted after the first officer locked the captain out of the cockpit due to the captain's erratic behavior

MANAGEMENT CHALLENGE	
Keeping pace with a dynamic and evolving regional airline industry	
Why is this issue significant?	Regional air carriers have been a growing industry segment over the last several years and now operate over 10,000 flights a day and serve approximately 20 percent of all airline passengers.[2] These carriers operate in a unique and competitive environment and present a multifaceted oversight challenge for FAA. While they must meet the same safety standards as mainline carriers, they operate under a business model that requires them to keep costs low, yet they do not benefit from upward trends in ticket prices, additional revenue from baggage fees, or passenger enplanements. Therefore, their operations are strongly impacted by changes such as service expansion, airline consolidations,[3] or new pilot requirements—all of which have taken place in recent years.
Actions Planned for 2018	- The FAA will update the scoring system and instructions in the Financial Condition Assessment Decision Aid[4] to reflect that ten characteristics are being evaluated. Completion date: July 2018 - The FAA will develop and provide additional guidance in the FAA Order 8900.1[5] to clarify the differences in the choices provided in the decision aids.[6] Completion date: August 2018 - The FAA will re-evaluate the decision aids used by FAA inspectors to assess risks specifically related to financial condition, and rapid growth or downsizing at regional air carriers. Decision aids must include the appropriate areas of focus during reviews of the financial condition and transition or growth; and the weighting of the focus areas

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[2] According to the Regional Airline Association, the average plane size flown by regional carriers grew from 24 seats in 1990 to 61 in 2015, and the average trip increased from 194 miles in 1990 to 478 miles in 2015.

[3] Regional airlines have purchased other airlines to expand operations. For example, SkyWest Inc. purchased ExpressJet in 2011. Airlines also merge their operating certificates to streamline operations. For example, in 2014, Republic Airways Holdings merged its Chautauqua Airlines certificate with Shuttle America's certificate.

[4] The Financial Condition Assessment Decision Aid evaluates the degree of financial distress being experienced by the certificate holder.

[5] FAA Order 8900.1 directs the activities of aviation safety inspectors (ASI) responsible for the certification, technical administration, and surveillance of air carriers, certain other air operators conducting operations in accordance with the appropriate part of Title 14 of the Code of Federal Regulations (14 CFR), certificated airmen, and other aviation activities.

[6] Decision aids are used to assess the condition of certificate holders with respect to financial distress, significant growth or downsizing, and/or off-hour stressors.

	correlates to their potential impact on risks associated with financial distress or rapid growth or downsizing. Completion date: August 2018
	• The FAA will revise the guidance in the FAA Order 8900.1 to emphasize the importance of completing decision aids periodically for baseline comparisons and implement a retention policy for completed decision aids so they will be available to inspectors for comparison and analysis during risk assessments Completion date: July 2018
	• The FAA will develop and provide guidance and training to show inspectors how to detect triggers that require the completion of a decision aid, as well as the importance of using decision aids to adjust surveillance. Completion date: August 2018
	• The FAA continues with initiatives underway that improve the effectiveness of the safety data analysis capabilities and expanding the dissemination of data to support the risk-based oversight of regional air carriers and other certificate holders. The planned completion date for these prototypes and any necessary policy reference(s) is September 30, 2018
	• The FAA will acquire Tableau Desktop business intelligence software for identified safety analysts during the first quarter of FY 2018. This state of the art tool will be used to analyze and visualize AFS's safety data. It will provide a tool for presenting critical data effectively for use in risk-based decision-making. Completion date: December 2017
	• The process re-engineering and user interface design to incorporate risk models for prioritizing certificate holders and individual assessments will be completed by November 2017. Field use of the risk models will begin with Initial Operating Capability beginning February 2020.
	• The FAA will review inspector guidance on risk-management processes and recommend adjustments to surveillance and documentation. Completion date: August 2018
	• The FAA will review inspector guidance to establish or validate that received external inputs (such as complaints) are being acted upon by the inspector, and that any planned surveillance based on those inputs is actually performed. Completion date: September 30, 2018

MANAGEMENT CHALLENGE

Strengthening the Investigative Process and Proactively Removing Suspected Unapproved Parts from the Aviation Supply Chain	
Why is this issue significant?	The traveling public depends on the FAA and the aviation industry to ensure that U.S. aircraft are properly maintained and airworthy. Part of this responsibility is to detect and monitor for Suspected Unapproved Parts (SUP)—aircraft parts that may have been manufactured without FAA approval, including counterfeit parts.

Actions Planned for 2018	• The FAA will create two management controls to evaluate if SUP cases that were reported to local FAA offices were also reported to the FAA Hotline as is required by Order 8120.16A. Completion date: June 2018
	• The FAA will create two management controls to evaluate if Unapproved Part Notices (UPN) were issued in all cases where local inspection offices found unapproved part(s) that could not be contained. Completion date: June 2018
	• The FAA will develop an internal review (audit) of the SUP Program based on FAA Order 8120.16, *Suspected Unapproved Parts Program*, to evaluate how inspectors at each Manufacturing Inspection District Office adhere to guidance when conducting SUP investigations. Completion date: June 2018
	• The FAA will develop a process to document the forwarding of all SUP reports that have been classified as Improper Maintenance cases to the OIG. Completion date: June 2018
	• The FAA will develop a management control to ensure that inspectors follow current guidance when SUP investigations discover unapproved parts in the possession of operators/airlines. Completion date: June 2018
	• The FAA is working to review and clarify policy on SUPs. Specifically, the Agency will:
	    o Standardize policy to ensure that investigations are conducted thoroughly and completely;
	    o Ensure management is aware of all investigations and potential outcomes, including the mitigation for any parts that are considered unapproved after the investigation is complete; and

	o Initiate internal and public comment periods for the changes to Order 8120.16 by September 30, 2018.

MANAGEMENT CHALLENGE	
Addressing Reports of Increased Runway Safety Incidents	
Why is this issue significant?	Reducing the risks posed by surface accidents and other surface safety events is a top priority for the FAA. To monitor this risk, multiple data sources are used and data are weighted with fatalities and injuries to people being the most severe, followed by damage to property, and finally precursor events where there was no damage or injury but the risk was detected. This data showed: • the number of accidents has remained relatively consistent; • the number of reported runway and surface-safety events has increased considerably, which is consistent the FAA's policies establishing the value of precursor information instead of accident investigations. These policies allow more events to be reported to better inform the safety mitigation activities; • NAS runway safety risk has decreased as a result of more informed mitigation activities. While the FAA has achieved significant reduction in risk to people in airplanes on the Nation's runways and taxiways, the runway safety metrics have not been updated publically to reflect the current risk based safety performance. The existing runway metric focuses only on Runway Incursions (RIs). As a result, any increase in the number of runway safety incidents is perceived as a negative indicator of risk. Monitoring the reported events and the quantifiable metrics of the risk to people enables the FAA to develop the most effective strategies for lowering overall risk rather than simply lowering the number of reported incidents.
Actions Planned for 2018	The FAA Runway Safety Program has developed a separate commercial and non-commercial metric and performance targets. Current measures for Runway Incursions are not risk based, reflecting instead a simple count of reported incidents. • This metric incorporates all types of relevant surface safety events (accidents and incidents) in the runway environment including Runway Collisions (RCs), RIs, Runway Excursion (RE) accidents, RE incidents, Surface Collisions (SCs), and Surface Incidents (SIs). By incorporating every type of runway safety event, the RSM reflects the overall safety of the NAS in the runway environment. This metric is currently going through the FAA and DOT Performance Plan and Management Review process. In addition, the appropriate updates to include the current Runway Incursion metric's performance and introduction of the concept of a new surface safety risk based metric have been included in the DOT Strategic Plan FY 2018-FY 2022.

- The FAA will continue to advance runway safety technologies at different airports such as the Airport Surface Surveillance Capability (ASSC), Runway Status Lights (RWSL), Closed Runway Operation Prevention Devices, and Airport Surface Detection Equipment ASDE-X enhancements throughout 2018 and beyond.
  - ASSC ORD at Cincinnati/Northern Kentucky International Airport occurred on May 24, 2018
  - ASSC IOC at Kansas City targeted for September 2018 with ORD targeted in October 2018
  - RWSL operational at Dallas/Ft. Worth in March 2018 and Boston Logan in May 2018
  - ASDE-X Enhancements Runway Arrival Prediction (RWAP) Alert and Taxiway Arrival Prediction (TWAP) Alert functioning at Seattle/Tacoma (SEA) in May 2018
  - ASDE-X Enhancements RWAP and TWAP target 6 additional airports by end of December 2018: BOS, SLC, ATL, EWR, and FLL

- Every year, the FAA's Runway Safety Council will collaboratively analyze surface event data to develop and share focused outreach materials and efforts primarily for the pilot community. The next quarterly Runway Safety Council meeting is scheduled on August 22, 2018.

- The FAA's runway safety education and outreach activities will promote new training and conduct summits to improve runway safety
  - Pilot Simulator Situational Awareness Video Clips target roll out in July 2018
  - Wrong Surface General Aviation Situational Awareness Video for display at Experimental Aircraft Association AirVenture in July 2018
  - Wrong Surface Safety Summit to be held in August 2018

MANAGEMENT CHALLENGE	
Mitigating Risks With High-Priority NextGen Investments and Delivering Benefits to Airspace Users	
Why is this issue significant?	FAA has successfully worked with industry to identify and launch key NextGen priorities. In 2013, FAA tasked the NextGen Advisory Committee (NAC) with reviewing FAA's NextGen plans and recommending priorities for investment. That same year, the NAC identified four top priorities critical to delivering near-term benefits and advancing NextGen: (1) advancing Performance Based Navigation (PBN), (2) improving access to closely spaced parallel runways (known as Multiple Runway Operations or MRO), (3) enhancing airport surface operations, and (4) developing data communications (Data Comm) for controllers and pilots.
Actions Planned for 2018	The FAA completed 100 percent of its commitments for FY17 and since 2014 has successfully completed NextGen priorities, on time, at a rate of 97.5 percent. 1. FAA manages risk at both the Program and Portfolio levels. NextGen Priorities established in collaboration with FAA and industry stakeholders via the NAC are included in this overall risk management framework. Time frame: On-going 2. Moreover, the FAA published an updated Joint Implementation Plan Oversight Process in October 2017. The new oversight process requires joint risk management on NextGen Priorities. The NextGen Integrated Working Groups are currently implementing FAA's new guidance. Time frame: On-going a. Internal to the FAA, responsible leaders meet regularly with portfolio and program managers to understand the status of the priority initiatives and to identify risks and mitigations. In addition to the internal discussions, FAA leadership meets with NAC members and working group representatives to understand industry risk and potential mitigation strategies. Time frame: Monthly b. This combination of risk identification activities creates early awareness for both the NAC participants and FAA

| | leadership. The FAA risk management process assigns the risk to either a program or a portfolio for mitigation. Risks and Mitigations are reported monthly to internal FAA Leadership and externally via Quarterly Reports to the NAC Sub Committee in October, December, April, and August of 2018.

Time frame: Quarterly

3. NextGen Priorities are tracked in the agencies business plans and status is updated monthly.

Time frame: Monthly

4. The NextGen Management Board (NMB) serves as the primary internal FAA governance body for the leadership engagement necessary for the success of NextGen. This includes taking a more hands-on approach to managing risk at the enterprise level, identifying risk mitigation strategies and overseeing the NextGen Enterprise Risk Board, which identifies, validates and monitors potential risks to the NextGen enterprise. In 2018, the NMB will focus on the highest-level risks that affect successful implementation of NextGen priority commitments: aircraft equipage, noise and end-to-end trajectory based operations.

Time frame: Monthly |

MANAGEMENT CHALLENGE
Keeping Key Air Traffic Infrastructure on Track

	As FAA works to deliver NextGen capabilities, it also faces the challenge of maintaining and upgrading key air traffic control infrastructure, including the $2.7 billion En Route Automation Modernization (ERAM) system that air traffic controllers rely on to manage high-altitude traffic nationwide. FAA has embarked on a series of overlapping technical refresh and enhancement programs for ERAM that will impact all the system's hardware, including elements of the main operating system, and introduce new capabilities. Completing these ERAM-related efforts presents risk and challenges to FAA given the critical role the automation system plays in supporting new Performance Based Navigation (PBN) routes and Data Communications—both high-priority NextGen investments for FAA and industry. Unanticipated problems with ERAM efforts will have a direct impact on FAA's ability to deliver NextGen benefits to airspace users between now and 2020.
	• As of March 27, 2015, En Route Automation Modernization (ERAM) replaced the 40-year-old En Route Host computer and backup system used at 20 FAA Air Route Traffic Control Centers (ARTCCs) nationwide. The transition to ERAM was one of the most complex, challenging, and ambitious programs deployed by FAA. In effect, this transition represented a live transplant of the "heart" of today's air traffic control system while maintaining safe and efficient flight operations for the flying public. • New capabilities are added to the ERAM baseline either via internal ERAM Capital Investment Plan programs, e.g., ERAM Enhancements, ERAM Sustainment; or through working with other Program Offices that need ERAM software or interface to execute their baselines. o ERAM's software is not being replaced; instead, new NextGen capabilities, e.g., Data Communications (Data Comm), are being added. • The ERAM Program Office is in the initial implementation of a planned phased approach for a technical refresh of its hardware, known as ERAM Sustainment. This phased approach allows for cost

efficient replacement of the hardware components that are approaching end of life/end of service, while permitting the flexibility of metering the effort to avoid conflicts with other program deployments. At the completion of ERAM Sustainment in 2025, we will have provided all the necessary replacement hardware for the entire ERAM system.

- In FY 2018, the ERAM Sustainment 2 Program will continue the replacement of ERAM system equipment that has become obsolete. This upgrade will ensure the continued use of ERAM to control air traffic in the en route domain. The upgrade will also enable the ERAM system to meet its operational availability and performance requirements by replacing obsolete hardware with modern, sustainable hardware platforms. The projected completion date for the current phase of ERAM Sustainment is Sept 2020.

  o In FY 2018, the FAA will complete installation of new processors in the Radar Assistant Controller D Position consoles at the ARTCCs. These "Early D" equipment components will be installed at 15 of 20 FAA installations by July 31, 2018 (APB Milestone).

- The ERAM Enhancements Capital Investment Program is structured in segments to permit new controller functionality to be introduced in intervals that are cost efficient but do not overload the program software/test capabilities. The Enhancements capabilities are packaged into ERAM software releases to meet the requirements of the program while avoiding conflict with other NAS Programs during implementation. The first segment of these enhancement capabilities is scheduled for April 2019, with the last capability scheduled for 2025. In FY 2018, the following ERAM Enhancements 2 Activities have been accomplished or are planned:
  o Adaptation Enhancements software complete – scheduled for deployment in spring 2019.
  o Nav Canada handoffs and point outs requirement finalization.

- ERAM has established the New Program Integration (NPI) process, which provides the foundation and structured approach for integrating new capabilities and

external programs into the ERAM platform. The scope of the NPI process encompasses all activities from receipt of request for integration (e.g., a new program requesting a change in ERAM hardware, interface and/or software requirements) to establishing ERAM commitment for the schedule and lifecycle cost estimates of the requesting program. Additionally, it includes implementing new program requirements into the ERAM platform. In FY 2018 ERAM is working with the following FAA programs in a pre-baseline status to identify future commitments required of ERAM:

- o STARS Enhancement
- o AIMMS3
- o ADSB-Fusion Display Mode
- o CSS-Flight Data
- o TBFM-WP4
- o Data Comm

- The ERAM Program Office in collaboration with Air Traffic Systems En Route & Oceanic Second Level Engineering team established the ERAM Strategic Release Planning Process in FY 2017 to analyze the demands of new capabilities against the projected plan for ERAM software deployment and implementation. The Release Planning Team integrates requirement and schedule projections for internal ERAM programs, as well as external NPI programs, into a software deployment plan. This plan provides the basis for the ERAM Program commitment to implement NextGen high priority investment baselines (such as Data Comm or Time Based Flow Management enhancements), while completing ERAM Program baselines.

  - o In FY 2017-18 the Strategic Release Planning team, incorporating lessons learned from Data Comm S1P1 Tower Services deployment, adjusted the planned ERAM software deployment schedule for 2018 and 2019. The change reduces risk by adding pre-planned software releases for DataComm deployment, as well as supporting the de-confliction of ERAM Sustainment and Data Comm deployment waterfalls.

  - o In FY 2018, the Strategic Release Planning Team mapped out a release schedule for the 2020-2021 timeframe that accommodates multi-phase

	deployments of ERAM Sustainment 3, ERAM Enhancements 2 (NavCanada), and DataComm Full Services. The plan reduces risk by balancing the competing resource requirements for software development, test and deployment of the various programs.
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MANAGEMENT CHALLENGE	
Strengthening the Resiliency of the NAS	
Why is this issue significant?	Unexpected events and emergencies that disrupt air traffic control can have a long-lasting and significant impact on the Nation's economy, airlines, and passengers. While FAA has taken steps to improve the effectiveness of its operational contingency plans since the Chicago incident, work is still underway. For instance, many of the new technologies and capabilities that can improve the continuity of air traffic operations, such as the new NAS Voice System are still under development with availability anticipated in the next several years. The Agency is developing plans to meet newly established requirements for transferring airspace and managing air traffic control responsibilities to other facilities in the event of an incident. In 2017, the update to this management challenge described what the FAA, Air Traffic Organization had done to stand up an organization focused on Contingency, under the Director of Operational Readiness (AJR-X). Since 2017, the FAA has continued to staff that office and approved goals and resources to make progress on closing many gaps for Contingency operations.
Actions Planned for 2018	The FAA has established goals and activities to address three major focus areas for Contingency improvements – operational viability of the plans, facility familiarity with the plans, and a continuous improvement to contingency capabilities. The FAA has been providing updates on progress via other open OIG audits and findings. Some of the accomplishments in 2017 and early 2018 include: • Regarding improving the viability of existing Operational Contingency Plans (OCPs), the FAA is deploying better guidance and support to work hand-in-hand with operational facilities to aid them in improving their plans. The FAA is working to complete development of three versions of an OCP improvement guide book: one for Air Route Traffic Control Centers (ARTCCs), one for Terminal Radar Approach Control Facilities (TRACONs) and one for Air Traffic Control Towers (ATCTs). All three drafts should be completed by March 2018. The FAA will solicit feedback from our field offices and will also pilot those guides with operational facilities. Three site visits will be completed by May 2018, with a goal of completing ten before the end of the calendar year. Following those sites, and after improving the guide books based on facility feedback, the FAA will continue deploying to sites to assist them in building improved OCPs in 2019 and beyond. A goal of updating 54 OCPs has been set for 2019.

	• In order to assist in improving facility familiarity with the OCPs, the FAA will kick off development of a Table Top Exercise (TTX) Strategy and TTX Standard Operating Procedure (SOP). These improvements will build upon the existing requirement for all sites to complete an annual comprehensive walk-through of procedures and an annual exercise that validates the facility contingency procedures. The SOP will provide guidance for how to conduct the exercises and provide realistic scenarios that are geographically and operationally relevant to specific facilities based on lessons learned from previous events nationwide. The FAA expects to have the draft TTX Strategy and TTX SOP complete by the end of March 2018 and will coordinate with the field offices and three sites to solicit facility feedback on the SOP through TTX pilot program. The feedback from those site visits will be used to update the TTX SOP and further inform the TTX rollout strategy. The FAA will baseline a version of the SOP for field use by July 2018. • An additional objective to improve facility familiarity is developing right-sized outreach and training for operational and support offices. The FAA is developing long-term requirements for, and then conduct of, necessary training for OCPs. Once requirements are determined, draft goals will define a follow-on schedule for development and deployment of necessary training improvements. The FAA will provide the Office of the Inspector General (OIG) an update on this activity by August 2018. • Improving the operational capabilities during contingency operations can be enhanced by integrating contingency improvements with new technology as it is deployed. It should be noted that improvements are possible–and are being explored–by leveraging technology already in place, including ERAM, ADS-B, FTI, and other technology. For example, it is possible to leverage the improvements in ERAM to provide better flight data capability, or to leverage the additional capability introduced in automation with ADS-B fusion radar processing to provide better surveillance from neighbors and build airspace plans for divestment that can leverage these existing technologies. As the FAA works with facilities to improve their OCPs, the opportunities to leverage existing technology are being integrated. For example, with improvements in numbers of radars ERAM can process, the ARTCCs can be used to provide wider coverage for neighboring sites, as well as underlying TRACONs. This

	analysis and effort must be conducted site-by-site and is part of the new guidance material going to operational sites in order to improve OCPs. This is one of many examples where exiting technology can be leveraged to improve contingency operations.
	• The FAA is improving existing OCPs that leverage current technology across the country in a priority order. Additionally, after deploying an improved SOP for TTX, the FAA will continue to conduct nationally-led TTX at top tier facilities on an annual, rotational basis. Also in 2018 and 2019, we are developing outreach and training materials to address national, service area, and facility familiarity on operational contingency planning.
	• In addition to each site's requirements for annual exercises, the FAA will be conducting exercises at approximately 10 sites per year on a rotational basis, implementing a national approach for capturing and sharing lessons learned, as well as continuously improving capabilities and standards.

MANAGEMENT CHALLENGE	
Meeting the Regulatory Challenges of an Evolving and Diverse Commercial UAS Industry	
Why is this issue significant?	FAA recently forecast that the number of UAS in the United States is likely to be about 4 million by 2021, increasing from 1.1 million in 2016. The growing demand for commercial UAS presents new regulatory challenges for FAA, which must develop rules to govern UAS use while maintaining safety.
Actions Planned for 2018	• In December 2017, the Administrator will sign the AFS NPRM "*Operations of Small Unmanned Aircraft Over People*". Release of the NPRM has been delayed due to concerns and requests to address security through an ID and tracking rule prior to enabling more UAS operations. Completion date: December 2017 • The Administrator will sign the AFS ANPRM "*Safe and Secure Operations of Small Unmanned Aircraft Systems*" to address the needs of the UAS security community. Completion date: December 2017 • AFS leads an FAA-wide pre-rulemaking analysis team (*New Entrant Think Tank [NETT]*) that will work throughout FY2018 to plan amendments to 14CFR to accommodate all new entrant aircraft and operations using a performance-based standard. Ongoing • AFS will continue to enable current operations by waiving and exempting regulations to facilitate UAS operations. So far, AFS has exceeded its exemption process standard (90 percent of applications for waiver from Part 107 within 90 days of receipt) at 94 percent, and it efficiently processes petitions for exemption from 14 CFR 107, 91, 135, and other parts to continue to enable new UAS operations. Ongoing

MANAGEMENT CHALLENGE
Developing Strategies for Overseeing Operations and Mitigating Risks as UAS Integration Continues

Why is this issue significant?	The growing number of UAS operators presents significant oversight and risk mitigation challenges for FAA, and FAA is only in the early stages of developing a risk-based oversight process for commercial UAS operators
Actions Planned for 2018	• The FAA will continue its ongoing weekly General Aviation Safety Assurance outreach (formerly called Flight Standards District Offices outreach) for aviation safety inspectors to stay up to date on UAS issues and guidance. Completion Date: Ongoing • The FAA developed the Mission Logging System (MLS) to capture data from the seven UAS test sites. FAA will use this information to help gather the information needed to facilitate safe UAS integration into the NAS. Completion Date: The MLS was developed and implemented in May 2015 and will remain operational until September 30, 2019. A report to Congress with the Test Sites findings and conclusions is due on December 31, 2019. • The FAA established metrics in the FY18 UAS Implementation Plan, which was published on December 14, 2017. The metrics are used to track progress in meeting UAS implementation milestones for reporting to congress. Completion Date: December 2017 • The FAA recently developed the DroneZone Portal, which launched on January 5, 2018 and is a "one-stop shop" for the public to register a drone, learn where to fly, apply for a part 107 waiver, request a waiver or authorization, check the status of a waiver/authorization request, or submit a UAS accident report. • The FAA developed and implemented a consistent process to review and respond to applications for Certificates of Waiver or Authorization (COAs). The Certification for Authorization Processing System (CAPS) was deployed on October 14, 2017 and currently has over 700 users. CAPS improves on previous processes by automating the workflow, which streamlines the application review process, allowing the

	applicant to receive the COA in a shorter amount of time. Specialists processing COAs are fully trained and CAPS is updated monthly to improve performance and gain efficiencies. The updates are collected during biweekly stakeholder meetings and the final decisions are made in the monthly Change Control Board (CCB) meetings.

MANAGEMENT CHALLENGE
Managing commercial space launch activities as the industry grows and expands

| Why is this issue significant? | The growing demand for commercial space launch capabilities presents a significant new oversight challenge for FAA. Since the retirement of the space shuttle fleet in 2011, the United States has started to rely on private, commercial providers to transport satellites and other cargo into space. For example, the National Aeronautics and Space Administration (NASA) has been using commercial providers such as SpaceX and Orbital ATK to carry cargo to the International Space Station. This industry has grown over the last decade. According to FAA, the U.S. commercial space launch industry had estimated revenues of $1.2 billion in 2016—compared with $617 million in 2015—and FAA has licensed 37 commercial space launches from October 2014 through August 2017 compared to 26 the previous three years. Additionally, as noted by the Government Accountability Office last year, private companies and states have been developing spaceports to support the continued growth of the commercial launch industry. In addition, several U.S. companies are developing launch vehicles that will carry passengers into space; this "space tourism" industry will require licensed launch facilities as well as licensed launch operations.

FAA's current oversight of the industry includes regulating commercial launches, reentries, and the operation of launch and reentry sites; and issuing licenses and permits.

Regardless of the pace of industry growth, FAA and the Department of Transportation will continue to face policy challenges that will need to be addressed. These include safely integrating commercial space launches with other aircraft operating in the National Airspace System, aligning commercial space related procedures and technologies with NextGen modernization plans, and coordinating the evolution of oversight and regulatory approaches with other Federal agencies, including but not limited to NASA, the Federal Communications Commission, and the Departments of Commerce and Defense. |

Actions Planned for 2018	• The FAA will progress a comprehensive rulemaking effort that will transform the current launch and re-entry licensing regime to a single license for all types of launch and re-entry vehicle operations; this will be accomplished largely through moving from a prescriptive regulatory framework to a performance-based regime.
	• The FAA will engage commercial space and aviation industry stakeholders for recommendations on developing the performance-based regulatory approach and for potential criteria that may be used to consider competing requests for airspace access.
	• Similarly, the FAA will enlist industry to ascertain if it is possible to "operationally categorize" current and planned launch and reentry sites. This effort is intended to provide initial awareness of public safety, security, and environmental issues associated with commercial space operations.
	• The FAA will review the Office of Commercial Space Transportation's organizational structure to ensure resources are aligned to meet United States government goals.
	• The FAA will develop a multi-year resource plan to enable more strategic focus on current and future needs in terms of technical and operational expertise to support increased licensing activities.
	• The FAA will continue to develop the Space Data Integrator – a new capability that will automate the FAA's ability to monitor and respond to launch and reentry operations in the NAS
	• The FAA will ensure that the research activity undertaken by the Center of Excellence for Commercial Space Transportation prioritizes work on innovations that will facilitate safe and efficient integration of commercial space transportation into the National Airspace System.

MANAGEMENT CHALLENGE	
Increasing FAA's ability to withstand cyberattacks and enhancing DOT coordination with FAA	
Why is this issue significant?	FAA has expanded its use of technology, its vulnerability to cyberattacks has expanded. For example, FAA's cyberattack surface—the set of ways in which an adversary can enter a system and cause damage—now includes: • Global Positioning System (GPS) technology—FAA is transitioning from radar to GPS technology to monitor and control aircraft. However, GPS can be jammed or "spoofed" to send incorrect information. • Connections between air traffic control information systems and networks—Some air traffic control systems are legacy systems that lack required security controls, and they may be particularly vulnerable to cyberattacks when connected to new networks. FAA has conducted its security-related efforts separately from the Department • Operating the National Airspace Systems Cyber Operations—which monitors the cybersecurity of the National Airspace System • Tracking security weaknesses outside the Department's central system. • Deploying information security continuous monitoring products. • Developing common control procedures. • Department of Transportation's (DOT) recent enterprise-wide network assessment did not include FAA networks Despite the increase in the cyberattack surface in its systems and those of its users, FAA has not resolved longstanding cybersecurity issues.
Actions Planned for 2018	To enhance coordination with the DOT, the following activities have been completed: • As part of the adoption of the National Institute of Standards and Technology's Risk Management Framework (RMF), the FAA has updated cybersecurity roles and responsibilities to align with the RMF. Since 2014, the Risk Executive function is carried out by the FAA Cybersecurity Steering Committee (CSC) to oversee the execution of the FAA Cybersecurity Program and strengthen FAA's overall

cybersecurity posture. The FAA CSC identifies and agrees upon the cybersecurity priorities, strategies, operational guidelines needed in support of an integrated approach to protecting the FAA. Committee members includes members from the three domains (i.e., Mission Support, National Airspace System (NAS), and Research & Development), as well as Aviation Safety, and the DOT Chief Information Security Officer (CISO). The DOT CISO ensures that Departmental and National Security Staff perspectives are considered during discussions and formulation of recommendations.

- FAA Air Traffic Organization (ATO) established the NAS Cyber Operations (NCO) to integrate with NAS services, programs, and infrastructure. The NCO is the focal point for all coordination of NAS cyber security activities. When NCO validates that a US-CERT reportable cybersecurity incident has occurred, NCO will notify the FAA SOC within a timeframe that ensures compliance with US-CERT Federal Incident Notification Guidelines.   This reporting structure allows for the protection of the NAS domain. Additionally, the FAA conducts an annual cyber exercise to assess and improve NCO and DOT SOC coordination.

- The Departmental and Agency level are participants in the Department of Homeland Security (DHS) Continuous Diagnostics and Mitigation Program for the deployment of information security continuous monitoring products, such as Big Fix and ForeScout CounterAct.   These tools will integrate and correlate the information from the sensors into a dashboard reporting solution that summarizes and filters information at the FAA, DOT, and federal level. These products were implemented and expanded in the R&D and Mission Support domains.

For FY 2018, the FAA developed a Common Control Catalog and a Common Control Provider Agreement documenting the common controls available for inheritance by AIT managed systems to address the Office of the Inspector General's (OIG) recommendation to develop and finalize policy, procedure, and other guidance regarding Inherited Controls process and agreements with internal/external service provider

	for inherited controls. Both documents will be provided to DOT CISO before September 30, 2018 for review and approval prior to closure submission the OIG. The OIG Federal Information Security Management Act audit reports also identified issues with tracking Government Accounting Office (GAO) technical recommendations outside of Cyber Security Assessment and Management; ATO managing Plan of Action and Milestones (POA&Ms) in their SMART tool; and increased number of unresolved POA&Ms. Two initiatives are in progress to resolve longstanding cybersecurity issues. - Efforts are underway to migrate ATO's POA&Ms into CSAM from the ATO's SMART tool with an estimated completion date of December 31, 2018. - The FAA is performing an analysis of open POA&Ms within CSAM to identify and evaluate potential enterprise solutions to address FAA information systems' security requirements. Identify any required areas for improvement and brief results to the FAA CSC by September 30, 2018. With regard to the tracking the GAO audit recommendations, FAA and DOT reported that it is impractical to treat and manage each technical vulnerability as a POA&M to be entered into the Department's central system (i.e., CSAM) due to the number of technical vulnerabilities identified. The platform is not designed for that, and the database and reporting capabilities would be quickly overwhelmed and become unusable. Instead, the FAA CSC receives regular updates on the remediation status of the GAO audit recommendations.

MANAGEMENT CHALLENGE	
Increasing Management Attention to Federal Aviation Administration (FAA) Acquisitions – the Department's Largest Buyer	
Why is this issue significant?	FAA has the largest acquisition office within the Department of Transportation (DOT), obligating almost $5 billion annually for goods and services supporting the National Airspace System (NAS). Effective acquisition practices and transparent reporting are tenants of FAA's unique Acquisition Management System (AMS), resulting in FAA meeting mission need faster, continually improving competition (80-90 percent) and one-bid rates (below 2 percent) and maintaining meaningful small business participation. Major FAA programs have experienced drastic improvement in performance, reducing cost growth by 34 percent and schedule delay by 15 percent since 2004. To maintain and promote further success within the FAA acquisition process, it must continue effective acquisition planning, have appropriate governance and oversight over its investment process and promote transparency in its reporting of spend to internal and external stakeholders.
Actions Planned for 2018	• FAA will continue governance and oversight processes over proposed and approved investment programs using its Joint Resources Council (JRC). • FAA will maintain oversight of proposed acquisition actions using its Chief Financial Officer (CFO) Review and Acquisition Strategy Review Board (ASRB), as applicable. • Complete at least one lifecycle acquisition review of an FAA program by September 30, 2018, as identified by the JRC. • Initiate a Quarterly Federal Procurement Data System (FPDS) Quality Report by July 31, 2018, detailing results from National Acquisition Evaluation Program (NAEP) reviews of FPDS records and a reconciliation of data between FAA PRISM and FPDS entries.

Enhancing Oversight of Multiple –Award Contracts and Other Types of Agreements to Successfully Manage Risk	
Why is this issue significant?	Multiple-award contracting programs present opportunities for FAA to streamline acquisition processes for services and supplies, reduce administrative costs and satisfy requirements in a timely manner. Other Transaction Agreement (OTA) authority was granted by Congress to eleven (11) Federal Agencies, to include FAA allowing each broader authority and flexibility to establish legally binding instruments with industry and academia for research and prototyping activities. While Congress did not require agencies to enact policies for the use of OTAs, FAA established provisions in its unique Acquisition Management System (AMS) to promote standardization towards their issuance and administration. While multi-awards programs and OTAs present multiple opportunities for meeting mission to FAA, like all acquisition tools they also present unique risks to the agency it must mitigate through effective policies and appropriate oversight.
Actions Planned for 2018	• Establish a best practices guide for the award and administration of multi-award contracts by September 30, 2018. • Revise current AMS Policy and Guidance governing the award and administration of OTAs by September 30, 2018, enhancing provisions for when an OTA should be used, how it should be documented and who has authority to issue the agreement. • Leveraging recording capabilities deployed through FAA's PRISM 7.2 upgrade, establish a quarterly report of OTAs issued by July 31, 2018. • Incorporate OTAs into National Acquisition Evaluation Program (NAEP) acquisition reviews by July 31, 2018.