DEPARTMENT OF TRANSPORTATION
INSPECTOR GENERAL
TOP MANAGEMENT CHALLENGES
FOR FISCAL YEAR 2013

FEDERAL AVIATION ADMINISTRATION
YEAR END PROGRESS REPORTS

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2013 IG Management Challenges
Actions Taken Report

Management Challenge:
Ensuring the Next Generation Air Transportation System Advances Safety and Air Travel.

Issue:
Realizing benefits from NextGen capabilities at congested airports in the near term

Section I: Why is this issue significant?
The Office of the Inspector General (OIG) states that there is concern among stakeholders that the Optimization of Airspace and Procedures in the Metroplex (METROPLEX) program may be late, and may not deliver all desired benefits, "since FAA has focused on limited airspace and procedure improvements rather than maximizing new technologies and advanced procedures." FAA does not agree with OIG's assessment of benefits since the original purpose of the RTCA recommendations was to redesign navigation procedures without an extensive process or need for equipage.

Section II: Actions taken in FY 2013:
The enactment of the FY13 Budget Sequester and associated furlough in spring 2013 required the return of NATCA Article 48 local and national Subject Matter Experts (SMEs) to their facilities. Although the actual FAA furlough was brief, these controllers had been integrated into facility schedules and returning them to OAPM duties took up to six weeks. Because the success of Metroplex depends on collaboration, the OAPM projects were effectively on hold from mid-April through May.

This delay was compounded in August/September when the ERAM schedule was readjusted, andagain came into conflict with the established OAPM Program Schedule at Ft. Worth, Washington, Charlotte, and Atlanta. OAPM originally deconflicted its schedule from ERAM's schedulein 2011. The FAA deemed ERAM to be the higher priority program and OAPM procedure implementation was delayed so as not to increase implementation risk for ERAM. This deconfliction of programs resulted in the schedules at the Washington DC, North Texas, Charlotte, and Atlanta Metroplexes being delayed for up to 18 months.

The Washington and North Texas Metroplexes were well into Implementation Phase activities when the schedules were adjusted in September 2013. Washington procedures that were to begin implementation in December 2013 were delayed until 2015 and implementation will not be complete until September 2015. North Texas will not complete Implementation until October 2014. The Houston Metroplex is also in the Implementation Phase, with procedures to be implemented in May 2014. The Phoenix Metroplex completed the Study Phase. The Southern California Metroplex is mid-way through its Design Phase. The Atlanta and Charlotte Metroplexes are concluding the Evaluation Phase, but completion of the Implementation Phase will be delayed due to Atlanta ARTCC ERAM Implementation until August 2016. Northern California Metroplex is mid-way through the Evaluation Phase. In Washington DC, user benefits are increasing through the utilization of PBN procedures implemented as part of the Metroplex Tri-Flow Project.

Metroplex initiated the deliberative process to address the *RTCA NextGen Advisory Committee (NAC) June 2013 Recommendations for Increased utilization of PBN in the NAS* report. This process will also address issues regarding PBN field implementation that have been identified by interval FAA processes.

Section III: Actions remaining and expected completion date
- Complete implementation of Washington DC Metroplex by 9/22/2015
- Complete implementation of North Texas Metroplex by 10/30/2014

- Complete implementation of Houston Metroplex by 5/29/2014
- Complete implementation of Atlanta Metroplex by 8/30/2016
- Complete implementation of Northern California Metroplex by 6/15/2015
- Complete implementation of Charlotte Metroplex by 8/30/2016
- Complete implementation of Southern California Metroplex by 9/16/2016
- Complete implementation of Phoenix Metroplex in FY16
- Complete implementation of Florida, Cleveland/Detroit, Memphis, Chicago, and Boston Metroplexes in FY17

Section IV: Results or expected results:

The initial objective of implementing PBN procedures and airspace optimization in all 13 Metroplexes, by the end of fiscal year 2017, has been adjusted to the end of calendar year 2017. However, the magnitude and type of benefits expected remain unchanged. Addressing the issues and recommendation raised in the NAC June 2013 report, in a collaborative and participatory manner with all stakeholders, should ease stakeholders' concern.

Management Challenge:
Ensuring the Next Generation Air Transportation System advances safety and air travel.

Issue:
Mitigating risks that delays with the En Route Automation Modernization program pose to critical NextGen initiatives.

Section I: Why is this issue significant?
Originally planned for completion in 2010, the En Route Automation Modernization (ERAM) program has experienced delays due to software-related problems. These problems have had a significant impact on the overall schedule and program budget. The ERAM program is working to resolve these issues as cost and schedule challenges have an impact on the maintenance of legacy systems and associated resources and workforce-training requirements. It is important that the ERAM program office mitigate the risks these delays pose on critical NextGen initiatives, such as Data Communications (DataComm), Automatic Dependent Surveillance – Broadcast (ADS-B), Time-Based Flow Management (TBFM) and Ground-based Interval Management for Spacing (GIM-S). If ERAM were to experience further delays, the benefits associated with the NextGen initiatives identified above would potentially be delayed. In addition, it would increase the risk to programs dependent on ERAM's deployment.

Section II: Actions taken in FY 2013
The program office has implemented a deep-dive architecture review of the system. This work focuses on areas of system stability, reliability, and interoperability with other NextGen systems. The recommendations and monitoring data from the ERAM architecture review demonstrate the system is either meeting or exceeding performance levels for availability in its system and sub-system components.

The program office continues to apply its processes and standards for packaging and deploying builds using a collaboratively-managed process between the program office, second level engineering, the National Air Traffic Controllers Association (NATCA), and site teams to deploy software. This process ensures upstream planning beginning more than three months in advance of software test dates to ensure that the necessary plans, resources, and sites are aligned to ensure robust verification and validation of software in 'like-operational' conditions.

The program office initiated recurring pre-operational review meetings with the sites that have not yet begun initial operations with ERAM. While this process is typical of any site that would be planning to transition to ERAM-based operations, starting it this far in advance is not typical. This early start is aimed at better understanding any potentially new and specific downstream needs and proactively addressing them.

The ERAM program continues to use the standing work group within the construct of the contract between the FAA and NATCA, as well as PASS, to collaborate on program strategy, software content, site implementation needs, and a range of other activities. This improves transparency and communication for developing buy-in to the program, and has enhanced the ability of the program to successfully achieve key programmatic milestones.

The ERAM program has renegotiated the ERAM contract with the prime vendor for FY 2012 efforts and beyond. This renegotiation included a reexamination of multiple components including contractor incentive structure(s), the relationship between software milestones and the triggering of those incentive(s), and Agency controls to strengthen processes around software acceptance.

The initial analysis and recommendations stemming from the ERAM IV&V project have confirmed the adequacy and stability of the underlying code base to support the anticipated needs of NextGen programs. In addition, the analysis and recommendations from the ERAM software planning and issues analysis process improvement project have yielded communication, data flow, and integration improvements to better ensure that the program's software planning forums are efficiently and effectively aligned.

Finally, FY 2013 implementation plans were impacted by the sequestration, especially at the five sites that achieved initial operations immediately prior to sequestration (Cleveland, Boston, Memphis, Washington, DC, and New York). At the three sites in continuous operational runs in FY 2013, the necessary re-training was started to support operational runs later in this fiscal year. The Washington and New York Centers, whose re-training requirements were more severe, could not begin any level of re-training prior to September of 2013 (a seven month delay from their prior operational runs in March 2013). The remaining 4 sites (Fort Worth, Miami, Atlanta and Jacksonville) will

now initiate operations later than originally planned. As a result, the program must be extended longer than was originally anticipated, with a planned last-site ORD date in the second quarter of FY 2015. This creates a seven month delay in the program. This increases the total cost to deliver ERAM because of the overhead associated with the program office, Lockheed Martin Corporation, and service life extension, to deploy ERAM at sites extends 7 months as well, on the order of approximately $42 million.

Section III: Actions remaining and expected completion date

Many actions planned in FY13 have been completed. Moving forward, the following strategies are planned for FY14:

- Through the implementation of a new schedule waterfall strategy, the program is focused on achieving operational runs at the most complex of the remaining sites as early as possible. This will allow the program to facilitate any potential early software discovery at these sites while affording time in the schedule to address these needs.
- The program is seeking to implement a System Enhancements and Technical Refresh (SE/TR) program baseline beginning in FY14, which will further facilitate capturing and planning for implementation of enhancements. This will help ERAM implementation sites and stakeholders focus on fixes needed to complete the waterfall and defer enhancements to the system into later releases.
- The program will be assessing alternative implementation strategies of some software code from other NextGen programs to facilitate sharing of test and deployment costs.

Section IV: Results or expected results

Based on the approach outlined above, the ERAM program is expecting to see improvements in schedule and cost performance, thus addressing the issues raised in the report. The program has seen a decline in software and technology related issues (such as high reliability and a drastic reduction in discrepancies and trouble tickets from the sites), and is expect to see more improvements.

The coordination with NextGen initiatives such as TBFM (Work Package 2 and Work Package 3), TFMS, ADS-B, and DataComm has been facilitated through PMO portfolio construct (ATS directorate) and best practices. Capability managers identify early risks and issues that have aligned programs to deliver NextGen initiatives with integration into ERAM software build processes and collaboration with the user community.

Management Challenge:
Ensuring the Next Generation Air Transportation System advances safety and air travel

Issue:
Making decisions on facility consolidation and modernization

Section I: Why is this issue significant?
FAA's NY ICF Initiative: In 2011, the FAA formalized an initial plan for consolidating Air Route Traffic Control Centers (ARTCC) and Terminal Radar Approach Control facilities (TRACON) into large, integrated facilities. The program was impacted by external factors affecting program scope and direction, which narrowed the focus to the integration of New York ARTCC (ZNY) and New York TRACON (N90) into a New York Integrated Control Facility (ICF). The NY ICF is a multi-year effort contingent upon steady funding levels. Budget cuts are affecting the program's ability to meet key project milestones, creating a delay in building design, construction, and PME acquisition.
FAA's Section 804 Collaborative Workgroup: As highlighted by Section 804 of the FAA Modernization and Reform Act, the FAA was required to develop a National Facilities Realignment and Consolidation Report to support the transition to NextGen, and to reduce costs without affecting safety. As a separate effort from the NY ICF initiative, the FAA established a collaborative workgroup in September 2012, chartered to develop criteria and the process for future realignment decisions. The workgroup finalized the process and briefed FAA and DOT leadership. Due to sequestration, the Agency has delayed presenting the process to Congress.

Section II: Actions taken in FY 2013
FAA's NY ICF Initiative: The FAA established the goal to issue a land Request for Information (RFI) of properties in NY State for the NY ICF. The FAA issued an RFI for sites for the NY ICF in December 2012. The RFI closed Jan 31, 2013. The FAA is in the process of evaluating the offers received, including low-cost and no-cost sites. While the long-term plan is to proceed with a full ICF, due to financial constraints, the full ICF option is not viable at this time. In the near-term, the FAA is conducting an Options Analysis to inform FAA leadership on possible NY facility solutions.
FAA's Section 804 Collaborative Workgroup: The FAA's workgroup finalized the process for evaluating facility realignments. FAA leadership planned to brief Congress on the workgroup's progress and activities in the spring of 2013. However, due to sequestration, FAA leadership has not yet briefed Congress on the process for facility realignments. Additionally, the workgroup activities are aligned with ATC facilities sustainment, replacement, and modernization efforts, as well as the TAMR waterfall.

Section III: Actions remaining and expected completion date
FAA's NY ICF Initiative: The Options Analysis report on possible NY facility solutions will be presented to FAA leadership in the fall 2013.
FAA's Section 804 Collaborative Workgroup: The FAA plans to brief Congress on the process for facility realignments in late 2013. Then, the FAA will begin evaluating facilities scenarios; expected start date: FY14.

Section IV: Results or expected results
FAA's NY ICF Initiative: Once an option has been selected for the NY facility solution, the FAA will develop the associated cost estimates to move forward with the decision.
FAA's Section 804 Collaborative Workgroup: The workgroup plans to initiate its work in FY14 and complete evaluation of the first set of realignment scenarios by the end of FY15. Additional time and funding will be required to implement recommendations and ensure full facility, service, and staff transitions. Per the current labor contracts, an employee realignment notification is required at least one year prior to any staff realignments.

Management Challenge:
Ensuring the Next Generation Air Transportation System advances safety and air travel

Issue:
Completing an Integrated Master Schedule (IMS) for NextGen transformational programs

Section I: Why is this issue significant?
The FAA has not yet developed an IMS to assess progress, establish priorities, and make trade-off decisions between various programs. Decision makers in Congress and the Department lack sufficient information to assess progress as requirements evolve. Without a master schedule the FAA will continue to be challenged to assess progress with NextGen efforts, establish priorities, and make necessary trade-offs between programs.

Section II: Actions taken in FY 2013
The FAA's NextGen Management Board (NMB) ratified the final version of the National Airspace System (NAS) Segment Implementation Plan (NSIP), Version 5, on December 3, 2012. The updated version of NextGen Implementation Plan (NGIP) was published on June 13, 2013.
During 2013, the NSIP was virtualized and integrated into the NAS Enterprise Architecture (EA) enabling a more efficient three phase update process that includes: Service Roadmap revalidation; Infrastructure Roadmap revalidation; and Portfolio Revalidation. With the completion of the service and infrastructure roadmap reviews, the initial draft of NSIP 2014 (formerly NSIP 6.0) was completed on September 30, 2013. The NSIP Portfolio Revalidation began on August 8, and resolution and adjudication of comments started on September 9, 2013.

The FAA continues to align the Integrated Master Schedule (IMS) with the NSIP. High level Segment Bravo schedules are currently being incorporated.

NextGen increments are currently being linked to their respective programs/systems. On September 30, 2013, the FAA completed linking for the Separation Management Portfolio: ATOP and Data Comm.

Quarterly Portfolio Management Reviews (PfMRs) for each NSIP Portfolio were conducted starting the first month after the end of the fiscal quarter: in January 2013 (1st QTR FY13); April 2013(2nd QTR FY13); and July 2013 (3rd QTR FY13). Milestone dates, key activities, accomplishments and challenges such as sequestration impacts were discussed and statused. Mitigation strategies were identified/ implemented.

Section III: Actions remaining and expected completion date
- Portfolio Management Reviews will occur November 2013 (1st QTR FY14)
- The updated NSIP will be presented for approval to ANG's management in January 2014
- Ratification of updated NSIP by the NMB is planned for February 2014
- NSIP 2014 (virtual version) will be published in the NAS EA Portal in February 2014

***Due to the government shutdown all the activities related to the update of the 2014 NSIP were interrupted. Consequently, there was no presentation for approval to ANG's management.

We have developed a shutdown recovery plan, which includes a new schedule that was presented to the NextGen Management Board on November 6.

Section IV: Results or expected results
When completed in 2014, the FAA expects to align planning, reduce the number of data calls, increase access to information, and improve the quality of portfolio details and timelines.

The NextGen IMS tool, when fully populated, should capture and track portfolio-level activities and milestones, including dependencies between multiple programs and the impacts to the overall NextGen implementation timeline. The agency is still further defining implementation activities and their related schedules for 2015 through 2020, which will be required before it can use this tool to track program interdependencies and identify potential risks.

Management Challenge:
Ensuring the Next Generation Air Transportation System advances safety and air travel

Issue:
Achieving expected outcomes from reorganization to improve NextGen management

Why is this issue significant?
Many of FAA's difficulties with implementing NextGen stem from underlying management challenges, such as assigning responsibility, accountability, and authority. In 2011, FAA commissioned an internal study to examine how the Agency's internal structure, processes, and management culture could be improved to support NextGen. Based on the study's recommendations, FAA announced a major reorganization in 2011 to better position NextGen for success. FAA elevated the former NextGen office—creating an Assistant Administrator for NextGen who reports directly to the FAA Deputy Administrator—and established a new Program Management Office. This new office will also work to bridge the gap between strategic requirements and program implementation. FAA is still in the early stages of this reorganization, and work remains to establish best practices and institutionalize changes.

Section II: Actions taken in FY 2013

- Program Management Office (PMO) Charter and Strategic Plan: Both a charter and a strategic plan were developed in 2013. The charter defines the PMO's mission, responsibilities, supplemental relationships, and lines of succession" within the PMO. The charter complements the PMO strategic plan which encompasses four focus areas: organizational alignment and leadership, policies and processes, human capital, and information management and stewardship.
- Define Workplan for Future National Airspace System (NAS) Segment Implementation Plan (NSIP): NSIP workplans are now being integrated into the NAS Enterprise Architecture framework. In doing so, the NSIP was virtualized, making it accessible in a web-based environment. This resulted in the merger of three independent re-validation processes: Infrastructure Roadmap, Service Roadmap, and NSIP.
- Institutionalizing Idea to In-service (i2i): The Idea to In-service (i2i) process defines the collaboration, structure, and coordination required of FAA lines of business (LOBs) and staff offices to ensure the successful implementation of NextGen, while simultaneously maintaining the current National Airspace System (NAS). i2i was approved by the agency and its key components were integrated into the Acquisition Management System (AMS) to ensure that Operational Concepts are fully vetted before they are included in the NAS Concept of Operations (ConOps).
- PMO Program Reviews: The Air Traffic Organization (ATO) conducts bi-weekly program reviews to ensure critical information relative to program status and related activities are provided to program management executives, NextGen, Air Traffic Operations, and shared service stakeholders. The review sessions cover topics such as, risks issues and mitigation strategies, program status, major accomplishments, key assumptions, goals, objectives, and interdependencies.
- Portfolio Management Reviews (PfMRs): The PfMRs are a process the agency uses to help manage and implement the contents of the NSIP. Significant changes in the content and execution of the PfMRs over the course of the last year are as follows: inclusion of risk management material, assessing increment performance based on cost schedule and technical assessments. These reviews also include pre-implementation work, such as, descriptions, schedules, funding, and linkage to portfolio increments resulting in a well-defined line of sight between pre-implementation activities and implementation work in progress.
- NextGen Management Board (NMB) Reporting of NSIP Progress: NMB reporting has evolved over the past year from being a quarterly report which focused solely on the status of targeted milestones to the most current format, which is a monthly review of all milestones, planning activities, cross-cutting issues and implementation results.
- NextGen Performance Snapshots (NPS) Website: The NextGen performance snapshots website was launched in March 2012. It is a reporting tool designed to show performance at locations where NextGen programs and initiatives have been implemented. It is updated quarterly, with six releases published as of July 2013. The website provides information on NextGen efforts and accomplishments, as well as data on performance at the 30 Core airports, the city pairs recommended by the NextGen Advisory Committee, and on airspace such as the Gulf of Mexico.

Section III: Actions remaining and expected completion date

Fiscal Year 2014 (4th QTR)

- PMO Strategic Plan: Facilitate VP/DVP/Director "Brown Bags", quarterly all-hands discussions, and lessons learned/peer review feedback sessions; develop standards for program management (PM) certification and contracting officer's representatives (CORs), PMO strategic staffing plan, and PMO human capital plan; increased PMO website/knowledge services network (KSN) functionality and complete integration of program schedules
- Institutionalization of i2i: Updates to guidance documents are underway, i2i-AMS integration outreach sessions will be offered to share changes in the policy with the greater community, and NextGen is underway to develop a post implementation review at the operational capability level.
- PMO Program Reviews: Continued monitoring for future improvements
- NPS Website: Future releases which include information on the metroplexes representing selected metropolitan areas with conflicting flight paths from primary and secondary airports in close proximity.

Section IV: Results or expected results

- Common understanding of the portfolios status
- Common understanding of risks and issues that may impact the success of the portfolio
- Common understanding of increment performance
- Identification of required action items necessary to promote the continued success of the portfolio, and effective management of issues and risk
- Greater collaboration across the agency
- More defined line-of-sight (pre-implementation to implementation)
- More accurate and relevant reporting, resulting in stronger decision making and improved consensus.

Management Challenge:
Ensuring the Next Generation Air Transportation System advances safety and air travel

Issue:
Integrating Unmanned Aircraft Systems (UAS) in the National Airspace System

Section I: Why is this issue significant?
This issue is significant because the FAA is required to integrate UAS into the National Airspace System (NAS)by 2015, per the *FAA Modernization and Reform Act of 2012* (FMRA). In addition, it is forecast that UAS integration will have significant positive direct economic benefits for the U.S. economy.

Section II: Actions taken in FY 2013

Publication of UAS Roadmap

- This action has been completed. The first edition of the UAS Roadmap was released and published on November 7, 2013. The UAS Roadmap will provide (initial) necessary stakeholder guidance for the path to UAS integration. The Roadmap will be updated and published annually, and will include lessons learned, progress and accomplishments from the previous year. As part of the development of the UAS Roadmap, the FAA received detailed recommendations on integration related tasking from the UAS Aviation Rulemaking Committee (ARC). The FAA considered these UAS ARC recommendations in the development of the UAS Roadmap.

Execution of Research Activities as Defined by the UAS Integration Office

- This action is ongoing. The FAA has been executing on planned research requirements and is coordinating research activities with other Federal agencies, including National Aeronautics and Space Administration and the Department of Defense. Research focus areas include Sense and Avoid (SAA) and Command and Control (C2). In conjunction with the RTCA, the FAA launched a new Special Committee (SC-228) which will focus on standards development for SAA and C2 systems.

Commencement of the six UAS Test Site selection process

- This action has been completed. The solicitation (Screening Information Request) for the test site selection process was publically released on February 14, 2013.

Actual selection of the six UAS Test Sites

- This action is in progress. The selection of the six test sites by the FAA Administrator is expected by the end of 2013.

Initial flight testing activities in support the expansion of small UAS in the Arctic

- This action has been completed. Initial flight tests were conducted in the Arctic using small UAS on September 12, 2013.

Release of the small UAS Notice of Public Rulemaking

- This action is pending. The FAA continued work with the Department of Transportation on development of language to be included in the small UAS Rule. The release of the Small UAS Notice of Proposed Rulemaking (NPRM) for public comment is planned for 2014.

Section III: Actions remaining and expected completion date

- Begin annual UAS Roadmap revision process and include additional inputs (by December 2013)
- Announce selection of UAS test sites (by December 2013). This date was clarified to specify the end of the calendar year 2013 vs. the end of the fiscal year.
- Release small UAS Notice of Proposed Rulemaking (2014). The delay in the release of this document is due to ongoing editing and coordination. While we don't have a final schedule at this time for release of the small UAS rule, this remains a key initiative for introducing commercial UAS operations safely into the NAS.
- First UAS test site operational (4Q FY2014)

Section IV: Results or expected results

Integration of UAS into the NAS will be incremental. It is important to note that the integration of UAS is not a destination but a continuous journey. As the NextGen systems come on-line in the National Airspace System (NAS), higher and higher levels of UAS integration will be possible. The NAS is constantly evolving and changing and with those changes aircraft will also evolve, allowing even greater integration and utilization.

Management Challenge:
Enhancing FAA's oversight and use of data to identify and mitigate safety risks.

Issue:
Identifying trends in operational errors and determining their root causes.

Section I: Why is this issue significant?
The OIG identified areas where the FAA should enhance its oversight of its use of safety data, improve methods of identifying root causes of safety problems, and mitigation of risk. Additionally, the FAA needs to fine tune its approach to how it collects, verifies, and uses safety data.

Section II: Actions taken in FY 2013
The FAA Air Traffic Organization (ATO) is conducting its largest and most significant safety improvements regarding the way air traffic control risk, safety performance, and analysis of safety risks are managed in the United States. From implementation of voluntary reporting, to new electronic separation loss detection programs, the development of standardized risk assessment and validation processes and the establishment of a proactive safety management system, the FAA has greatly enhanced its ability to identify precursors, root causes, and trends of safety risks system-wide rather than reacting to single incidents. Following our Safety Management System which requires continuous improvement of our processes, the ATO is making improvements to our safety programs, such as Quality Assurance (QA) and Quality Control (QC), as well as sharing the ATO's safety data with Aviation Safety Information Analysis and Sharing (ASIAS) for analysis of air traffic control and aircraft safety data. Combining air traffic and aircraft data offers opportunities, never available before, to improve aviation safety.

The ATO Quality Assurance Group has developed Standard Operations Procedures (SOP) and validation training for QA Specialists who review Mandatory Occurrence Report /Electronic Occurrence Report at the ATO Safety and Technical Training Service Area Offices. The QA SOP became effective in January 2013 and was revised in May 2013. A QA SOP training course was developed to standardized methods for identifying high risk hazards, trends, and systemic issues within the National Airspace System (NAS). The initial training course was delivered to the service area leads and specialists between February 26 and March 29, 2013. Individual assessments and certification recommendations were completed by each service area manager and approved by the group manager during February and March. As a follow up, a QA management team led onsite internal reviews to assess SOP guidance effectiveness during April and May. An SOP revision was completed in May and subsequent training was held in June.

In order to comply with OIG recommendations, the FAA fully implemented the Traffic Analysis and Review Program (TARP) which electronically captures quantitative data relating to the vast majority of occurrences involving losses of separation. TARP was fully implemented in terminal radar facilities in September 2012 and in En Route facilities in May 2013. Full TARP implementation has proven effective by generating a greater amount of separation data than previously available and consolidating valuable safety information into a common database available to all facilities.

Standardized Safety Guidance (ATO –SG-12-05), dated January 7, 2013, clarified frequently asked questions related to the implementation of new quality assurance, quality control, safety occurrence reporting, and Individual Performance Management processes. A collaborative Quality Assurance Validation Board, which meets quarterly, was established to improve application of safety standards, risk analyses, and identification of root causes. The ATO continues to analyze aggregate data and identify significant and common hazards through its Risk Analysis Program (RAP). RAP identifies contributing factors where less than 2/3 of standard separation was maintained. RAP findings contribute to NAS-wide mitigation efforts as part of the ATO Top 5 initiatives to improve overall safety in air traffic service delivery.

Fair and objective principles, efficient processes, and logical/timely responses to voluntary safety reports are emphasized in training for ATO employees. In April 2013, the Air Traffic Safety Action Program (ATSAP) Office developed audit guidance and checklists to establish critical process checkpoints and evaluation steps. ATSAP will conduct internal audits and has realigned its workflows to facilitate quality reviews within the program, including the effectiveness of the Event Review Committee. This effort promotes continuous improvement as part of implementing Quality Management Systems.

Section III: Actions remaining and expected completion date
The FAA has completed all the previous described actions by its targeted dates in Fiscal Year 2013.

Section IV: Results or expected results

The FAA continues to implement enhancements in training, risk analyses and loss validation processes, procedures, and technology based on its use of a dramatically improved reporting systems. ATO processes and metrics will continue to evolve as we mature our risk-focused safety baseline.

Management Challenge:
Enhancing FAA's Oversight and Use of Data To Identify and Mitigate

Issue:
Advancing oversight by implementing the Airline Safety Act of 2010

Section I: Why is this issue significant?
In August 2010, Congress passed the Airline Safety and FAA Extension Act, which directed the FAA through legislation to change requirements to improve pilot rest requirements, establish better processes for managing safety risks and advance voluntary safety programs. Although the Office of the Inspector General acknowledges the progress that the FAA has made, it noted missed deadlines and overdue milestones. Specifically, the agency has not met the Act's timelines for raising pilot training standards, implementing safety management systems, or providing enhanced leadership skill to captains. FAA also missed the Act's deadline to substantially raise airline pilot qualifications by August 2012. The Act directed the FAA's rulemaking activities, but it did not exempt the FAA from the statutory requirements of rulemaking such as regulatory evaluation, economic analysis and approval by other Federal agencies.

The Act also directs FAA to establish a "FAA Pilot Records Database" (PRD) that must contain information collected by the FAA, air carriers and other employers of pilots, and the National driver register records. Air Carriers will be required to access and evaluate a pilot's record before allowing an individual to begin service as a pilot. This will improve upon the timeliness of the existing paper based share data instituted by the Pilot Record Improvement Act (PRIA) of 1996.

Section II: Actions taken in FY 2013:
The FAA has utilized multiple tools to accomplish several requirements of the Airline Safety and FAA Extension Act, including rulemaking and the publication of guidance to inspectors and operators in the form of Notices, Information for Operators (INFO), Safety Alerts for Operators (SAFO), and Advisory Circulars (ACs).

Specifically, the FAA published AC 120-109, *Stall and Stick Pusher Training*, which details best practices and guidance for training, testing, and checking for pilots to ensure correct and consistent responses to unexpected stall warnings and stick pusher activations; and a final rule on Pilot Certification and Qualification Requirements which created new minimum requirements for pilots in air carrier operations;

Additionally the FAA continued to work on the final rule for *Qualification, Service and Use of Crewmember and Aircraft Dispatchers*. The final rule entered executive review in June 2013. This rule is designed to enhance training requirements for all air carrier pilots.

The FAA continues to make progress on the Pilot Records Database (PRD) despite the complexity associated with this project (as noted in DOT OIG Report AV-2013-037 dated January 31, 2013). In March 2013, a Rulemaking Action Plan was approved, which outlines key issues associated with implementation of this rule. The PRD rulemaking team is currently drafting the Notice of Proposed Rulemaking (NPRM) document.

Current rulemaking projects are in various stages of the process. The rulemaking process is complex and lengthy as the FAA considers all aspects of impact and the input of stakeholders. The FAA was challenged in completing the requirements of the Airline Safety and FAA Extension Act by short timelines, requirements between sections, and the need for coordination with industry and other agencies before proposing a final rule.

Section III: Actions remaining and expected completion date

- The FAA intends to publish its final rule for Safety Management Systems for Part 121 Certificate Holders in November 2013 (Sec. 215)
- The FAA intends to publish the NPRM for Flight Crewmember Mentoring, Leadership and Professional Development, which is currently undergoing interagency coordination (Sec. 206)
- The FAA intends to continue annual random, onsite inspections of air carriers that provide air transportation pursuant to a contract with a part 121 air carrier. (Sec. 211)
- FAA continues to review and accept/reject required updates to Fatigue Risk Management Plans (every 2 years) (Sec. 212)
- FAA continues to complete annual reports to Congress/National Transportation Safety Board (NTSB) regarding NTSB recommendations related to part 121 carrier operations (Sec. 202)

Section IV: Results or expected results:

The U.S. air transportation system continues to be among the safest in the world, due in part to the efforts of the FAA and aviation industry. The FAA is making steady progress towards completion and enhancement of safety through improved qualification standards and training for pilots in part 121.

Management Challenge:
Enhancing FAA's oversight and use of data to identify and mitigate safety risks

Issue:
Providing more rigorous risk-based oversight of repair stations

Section I: Why is this issue significant?
The OIG report titled "FAA Continues To Face Challenges In Implementing A Risk-Based Approach For Repair Station Oversight", dated May 1, 2013, identifies FAA's risk based oversight system ineffective in targeting surveillance to areas of higher risk. It states FAA's oversight does not include accurate and timely risk assessments of domestic and foreign repair stations. The report indicates the FAA has yet to provide inspectors with comprehensive data needed for analytic reviews of repair stations performance. Instead, FAA inspectors rely on their personal knowledge of repair stations to conduct oversight, rather than using comprehensive and standardized procedures for conducting and communicating the results of inspections. Thus, FAA's oversight lacks consistency necessary to identify deficiencies and verify corrective actions.

Section II: Actions taken in FY 2013
The FAA recognizes OIG concerns and taking action to rectify performance gaps that contributed to the issues identified in the OIG report. In the interim of implementing the new certification and surveillance system called Safety Assurance System (SAS), the Aircraft Maintenance Division (AFS-300) established a team to review and focus on improvements to the current FAA risk-based oversight system, and inspector guidance and training, based on the OIG recommendations. In August 2013, AFS-300 personnel conducted a briefing to the Flight Standards Regional branch managers on OIG concerns and each recommendation detailed in their report. FAA's oversight system and its application in FAA's oversight of part 145 repair stations was briefed to re-familiarize the use of FAA oversight system as it was intended and to completely convey the expectations that all International Field Offices (IFO) are required to use the protocols. The problems and causes of each issue along with the next steps to occur were discussed in the briefing. The regional branch managers briefed all the field office managers and inspectors in September 2013. The team began drafting revisions to FAA Order 8900.1 and repair station course to include the changes necessary that will provide more comprehensive and standardized procedures for conducting inspections and reporting findings. A recurrent training course is under development requiring airworthiness inspectors to complete annually, titled "Assessment and Planning Tools (APT) Transition Training for Airworthiness Inspectors". The course provides instructions on the use of the risk-based oversight system tools and processes currently in place. It emphasizes the necessity to act upon identified risks until mitigation is complete. A standardized checklist has been developed for inspectors to use and ensure a complete inspection is performed.

Section III: Actions remaining and expected completion date
- New FAA Course "APT Transition Training for Airworthiness Inspectors." The expected completion date is December 2013
- Revision to FAA repair station course. The expected completion date is February 2014
- Revision to repair station guidance in FAA Order 8900.1. The expected published date is March 2014.
- Begin use of a standardized checklist to conduct a complete comprehensive inspection. The expected completion date March 2014
- Deployment of the new risk-based oversight system - Safety Assurance System (SAS). The expected completion date is FY 2015.

Section IV: Results or expected results
FAA will achieve a risk-based oversight system that is more refined and provides a comprehensive and effective oversight for all U.S. repair stations. This will be accomplished through the use of revised guidance and oversight tools; improved inspector training; and standardized procedures for reporting audit findings. These enhancements will result in more consistent inspection practices that will improve the detection of systemic deficiencies and increase

the effectiveness of repair station safety oversight of those facilities most at risk. Positive changes will be more apparent through the completion of each inspection cycle.

Management Challenge:
Enhancing FAA's oversight and use of data to identify and mitigate safety risks

Issue:
Identifying the effects of air traffic controller scheduling on safety, cost efficiency, and controller performance

Section I: Why is this issue significant?
A series of high-profile incidents in early 2011 involving controllers who were sleeping on duty sparked public concern about controller fatigue. In April 2011, FAA instituted a series of policy changes including placing an additional air traffic controller on the midnight shift at certain facilities and mandating a minimum of nine (9) hours off between evening and day shifts.

Section II: Actions taken in FY 2013
The Air Traffic Organization (ATO) formally established a Fatigue Risk Management System (FRMS) to identify potential controller cognitive performance and safety related effects due to human fatigue. The Fatigue Risk Management Team (FRMT) provides fatigue research, comparative analyses, and other educational material to the Fatigue Safety Steering Committee (FSSC), consisting of senior ATO, National Air Traffic Controllers Association (NATCA), and Professional Aviation Safety Specialists (PASS) representatives, on a quarterly basis for their consideration.

In mid-2012, FAA implemented quality controls to ensure a minimum of 9 hours between the evening and day shift: (1) periodic quality control checks to identify facilities and individuals that are not in compliance; (2) facility management follow-up to ensure compliance; and, (3) any obstacles to compliance are briefed to senior ATO leadership for resolution. The quality control checks implemented were effective and remained in place through FY 2013. FAA continued to track compliance with periodic compliance checks accomplished quarterly during FY 2013. ATO reached total compliance by the end of FY 2013.

Section III: Actions remaining and expected completion date
The FAA is conducting initial assessment of the NASA Air Traffic Control fatigue research study under the charter of the ATO Fatigue Risk Management System (FRMS) to identify potential fatigue hazards and appropriate development of fatigue risk mitigation. Pending completion of this review and assessment by the FRMS Fatigue Safety Steering Committee, the report is being held to internal, pre-decisional use.

ATO expects all facilities to be in compliance by September 30, 2013. Periodic compliance checks have been done quarterly beginning in January 2013.

Section IV: Results or expected results
FAA expects that all personnel requiring 9 hours off between an evening and day shift will remain in compliance and be monitored via periodic checks. The agency believes the FRMS will continue to identify potential controller cognitive performance and safety related effects due to human fatigue.

Management Challenge:
Ensuring effective management of DOT's acquisitions to maximize value and program performance

Issue:
Strengthening DOT's acquisition planning, oversight, and workforce

Section I: Why is this issue significant?
Modernizing the complex, highly sophisticated National Airspace System depends on FAA's acquisition workforce professionals and requires that they be of the highest caliber. Acquisition professionals are instrumental in successfully acquiring the technologies and systems that make possible the necessary gains in safety and efficiency. Looming retirements, competition for acquisition talent inside and outside of government, increasing budget constraints and the growing complexity of technology and related system requirements all contribute to the challenge of maintaining an adequately staffed, highly capable acquisition workforce.

Section II: Actions taken in FY 2013
FAA completed every step it had targeted for FY2013.

The Agency published the FY 2013 update to the Acquisition Workforce Plan. The Plan is the primary tool for identifying, implementing and report the initiatives and accomplishments FAA has taken and made to address this management challenge.

FAA collected and tracked information about the professionals who comprise the acquisition workforce, including gains and losses. FAA uses this information to develop and maintain profession-specific competency models and track progress toward the achievement of mandatory and voluntary certification levels. We collected this information on an ongoing basis.

FAA initiated two new certification programs – for Test & Evaluation professionals and for Systems Engineering professionals – in FY 2013.

FAA met all of its business plan goals for the certification of professionals in the workforce, including program managers, contracting officer/specialists and contracting officer's representatives (CORs).

Section III: Actions remaining and expected completion date
No planned actions remain to be completed. Ensuring effective management of acquisitions is an ongoing process. Along with managing the day-to-day training, development and certification of FAA's acquisition professionals, the agency continues to execute against the strategies and initiatives outlined in the Acquisition Workforce Plan.

Section IV: Results or expected results
Results in FY 2013 include:

- 90% of Program Managers managing Acquisition Category (ACAT) programs meet certification requirements for their positions
- 80% of entry level contracting specialists achieved level 1 certification within 15 months of hire
- Increased by 9% the number of Contracting Officers who have level 2 or higher certification
- Increased by 5% the number of Contracting Officer's Representatives (COR)s who have a level 2 or higher certification
- Enhanced FAA's Contracting Officer's Representative (COR) certification program and certified over 1,000 employees
- Provided over 200 acquisition-related training courses for over 3,800 students.