Office of Inspector General

TOP MANAGEMENT CHALLENGES
FOR FISCAL YEAR 2012

Department of Transportation

Report Number: PT-2012-006

Date Issued: November 15, 2011

U.S. Department of Transportation

Office of the Secretary
of Transportation

Office of Inspector General

Memorandum

Subject:	<u>INFORMATION</u>: DOT's Fiscal Year 2012 Top Management Challenges Department of Transportation Report Number PT-2012-006	Date:	November 15, 2011
From:	Calvin L. Scovel III Inspector General	Reply to Attn. of:	J-1
To:	The Secretary Deputy Secretary		

As required by law, we have identified the Department of Transportation's (DOT) top management challenges for fiscal year 2012. The Nation's economy and the quality of life for all Americans rely heavily on a safe transportation system. The Department spends over $78 billion annually on a wide range of programs and initiatives to meet this objective, and we continue to support its efforts through our audits and investigations.

Improving safety remains the Department's top priority, and it undertook several initiatives in fiscal year 2011 that reflect this commitment across various modes of transportation. These include issuing new regulations to keep unsafe drivers off highways, undertaking new bridge safety efforts, and pursuing rulemakings to address pilot professionalism and training. However, recent safety incidents demand renewed focus across several key areas for fiscal year 2012 and beyond. These include doing more to ensure controllers maintain safe separation between aircraft, addressing pilot fatigue issues, identifying and addressing vehicle safety defects, and improving pipeline safety oversight at the state and Federal levels.

The Department must address these challenges in an austere budget environment while also executing new infrastructure efforts across the Nation and handling longstanding management issues. For example, many highway and transit projects funded by the American Recovery and Reinvestment Act are still under construction and require vigilant oversight to maximize those investments. Budget constraints and problems with existing projects are also forcing the Department to rethink investments and priorities for the Next Generation Air Transportation System—which

is critical to meet future air travel demands. The Department must also better balance and prioritize resources to achieve its vision for intercity passenger rail.

Moreover, expanding and supporting our Nation's transportation infrastructure translates to billions of dollars on contracts for goods and services. Careful stewardship of every taxpayer dollar is critical given current fiscal pressures and the growing demand for improvements. The Department continues to face management challenges to strategically plan and oversee acquisitions and must adequately prepare its workforce to ensure each project achieves mission results. Finally, supporting all of the Department's programs and efforts are hundreds of information systems that will require resources to ensure security programs mitigate emerging cyber threats and vulnerabilities.

We continue to build a body of work to assist the Department with its critical mission; improve the management and execution of programs; and protect the Department's resources from fraud, waste, abuse, and violations of law.

We considered several criteria in identifying the following nine challenges, including their impact on safety, documented vulnerabilities, large dollar implications, and the ability of the Department to effect change in these areas:

- Enhancing the Department's Oversight of Highway, Bridge, and Transit Safety
- Ensuring Effective Oversight on Key Initiatives That Can Improve Aviation Safety
- Ensuring Effective Oversight of Hazardous Liquid and Natural Gas Pipeline Safety
- Ensuring Effective Oversight of ARRA Projects and Applying Related Lessons Learned To Improve DOT's Infrastructure Programs
- Managing the Next Generation Air Transportation System Advancement While Controlling Costs
- Managing DOT Acquisitions in a More Strategic Manner To Maximize Limited Resources and Achieve Better Mission Results
- Improving the Department's Cyber Security
- Defining Clear Goals To Guide the Federal Railroad Administration in Its Transformation
- Utilizing Department Credit Programs To Leverage Limited Federal Transportation Infrastructure Resources

We are committed to keeping decision makers informed of emerging and longstanding issues identified through our audits and investigations. We appreciate the Department's responsiveness to our findings and recommendations and the commitment to taking prompt corrective action.

This report and the Department's response will be included in the Department's Annual Financial Report, as required by law. The Department's response is included in its entirety in the appendix to this report. If you have any questions regarding the issues presented in this report, please contact me at (202) 366-1959. You may also contact Lou E. Dixon, Principal Assistant Inspector General for Auditing and Evaluation, at (202) 366-1427.

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cc: Martin Gertel, M-1

Table of Contents

Enhancing the Department's Oversight of Highway, Bridge, and Transit Safety

Sources: (From left to right): National Highway Traffic Safety Administration, Missouri Department of Transportation, and New Jersey Transit

Surface transportation safety statistics have improved in recent years—especially those related to motor vehicles. From 2005 to 2009, fatalities and injuries related to motor vehicle crashes declined by 22 percent and 18 percent, respectively. Large truck and bus fatalities dropped by 29 percent between 2007 and 2009. To maintain these positive trends, the Department must work with its state and local partners to tackle persistent challenges, build on key initiatives, and address longstanding concerns with motor carrier, vehicle, bridge, and transit safety.

Key Challenges

- Strengthening the Federal Motor Carrier Safety Administration's (FMCSA) oversight of the motor carrier industry to remove unsafe operators

- Improving National Highway Traffic Safety Administration (NHTSA) processes for identifying and addressing vehicle safety defects

- Following through on new Federal Highway Administration (FHWA) initiatives to enhance bridge inspections and maintenance

- Enhancing the Federal Transit Administration's (FTA) oversight of rail transit safety

Strengthening FMCSA's Oversight of the Motor Carrier Industry To Remove Unsafe Operators Despite the recent decrease in large truck and bus fatalities, FMCSA must take additional actions to remove unsafe commercial drivers and motor carriers from our Nation's highways. A key focus for FMCSA is to follow through on its commitments to strengthen the Commercial Driver's License (CDL) program. Program

weaknesses continue to allow individuals and third-party testers to exploit the program, resulting in hundreds of fraudulently issued CDLs. Since 2006, our office has opened 28 CDL fraud investigations in 16 states, often with the coordination and support from other law enforcement agencies and FMCSA.

In 2011, FMCSA issued new regulations to tighten controls over CDL testing. However, our work has shown that it will be difficult for FMCSA to ensure that states swiftly and effectively implement new regulations. Therefore, it must provide sustained management attention to achieve success. For example, FMCSA has made limited progress implementing its 2005 standards for timely communication of serious traffic convictions among states. Such action would help remove CDLs, when appropriate, from drivers who commit these violations.

FMCSA has also taken action to address congressional and National Transportation Safety Board (NTSB) concerns about passenger carrier safety, an issue which received increased attention this year after several fatal bus crashes. For example, FMCSA hosted a nationwide summit on motor coach safety in September 2011 that identified stakeholder concerns over delays in issuing new regulations, such as one from NHTSA requiring seatbelts on motor coaches. Our ongoing work on FMCSA's response to NTSB recommendations on new entrants[1] shows that FMCSA implemented a more stringent safety assurance process that new entrants must complete. FMCSA also initiated a new vetting process to identify reincarnated carriers[2] applying to transport passengers and household goods. However, before FMCSA expands the vetting process to all new motor carrier applicants, it will need to develop a risk-based approach to better target its limited resources.

Improving NHTSA's Processes for Identifying and Addressing Vehicle Safety Defects
A tragic crash in 2009 involving a Toyota vehicle that accelerated out of control and killed four occupants brought significant public, media, and congressional attention to NHTSA's oversight of vehicle safety. Our review of NHTSA's Office of Defects Investigation (ODI)[3] found that ODI followed established processes in conducting investigations of both Toyota and non-Toyota vehicles. However, ODI needs to improve its processes for identifying and addressing potential safety defects. We also found that ODI needs to assess whether it has sufficient staff and expertise to operate effectively. Further, while ODI's processes are well-respected internationally, its limited information sharing and coordination with foreign countries may reduce opportunities to identify safety defects or recalls in an increasingly global automobile industry. By taking steps to improve its processes and international relationships, ODI can more effectively meet its mission of saving lives and preventing injuries from motor vehicle crashes.

Following Through on New FHWA Initiatives To Enhance Bridge Inspections and Maintenance
According to FHWA, about one-fourth of the Nation's

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[1] New entrants are newly registered motor carriers, including passenger carriers.

[2] Reincarnated carriers are those that FMCSA has put out of service but who have tried to evade the law by applying for new operating authority under new names.

[3] ODI is responsible for carrying out NHTSA's oversight of vehicle safety.

more than 600,000 bridges have major deterioration, cracks in their structural components, or other deficiencies. Given the enormity of the problem, and the limited funding available to address such deficiencies, our reports and testimonies over the past 2 decades have emphasized the need to improve the quality of inspection data and implement data-driven, risk-based oversight to prioritize bridge safety risks. This year, FHWA announced an initiative to help states identify and target higher priority bridge problems. This initiative uses risk-based metrics and detailed criteria and clarifies the minimum requirements that states must meet to comply with National Bridge Inspection Standards. However, FHWA still needs to adopt recently updated standards for data that will help better diagnose bridge problems and continue to support the states most in need of improved systems to manage their bridges.

Enhancing FTA's Oversight of Rail Transit Safety In 2009, transit rail crashes, including the Washington Metropolitan Area Transit Authority crash, killed 9 people and injured 159 others. These crashes raised concerns about the effectiveness of safety oversight of the Nation's transit systems and increased congressional and media attention on transit safety.

Our ongoing work is seeking to highlight actions FTA can take now to enhance rail transit safety oversight. Key areas we are examining include whether the National Transit Database captures sufficient information to allow FTA to fully identify safety trends and risks across the country. We made recommendations to FTA for improving available safety data and developing and implementing safety goals and performance measures. FTA is considering our recommendations and ongoing actions to implement them.

Related Products The following related reports, testimonies, and correspondence can be found on the OIG Web site at http://www.oig.dot.gov.

- Process Improvements Are Needed for Identifying and Addressing Vehicle Safety Defects, October 6, 2011

- Statement for the Record: FMCSA Is Strengthening Motor Carrier Safety Oversight but Further Action and Attention Are Needed, July 21, 2011

- Letter to Chairmen Rockefeller and Pryor Regarding Whether Former NHTSA Employees Exerted Undue Influence on Safety Defect Investigations, April 4, 2011

- Letter to Chairmen Murray and Olver and Ranking Members Bond and Latham Regarding FHWA's Actions in Response to OIG's January 2009 Bridge Report, October 18, 2010

- FHWA Has Taken Actions but Could Do More To Strengthen Oversight of Bridge Safety and States' Use of Federal Bridge Funding, July 21, 2010

- FHWA Oversight of the Highway Bridge Program and National Bridge Inspection Program, January 14, 2010

- Audit of the Data Integrity of the Commercial Driver's License Information System, July 30, 2009

- National Bridge Inspection Program: Assessment of FHWA's Implementation of Data-Driven, Risk-Based Oversight, January 12, 2009

For more information on the issues identified in this chapter, please contact Joseph W. Comé, Assistant Inspector General for Highway and Transit Audits, at (202) 366-5630.

Ensuring Effective Oversight on Key Initiatives That Can Improve Aviation Safety

Source: Federal Aviation Administration

The United States continues to operate the world's safest air transportation system. However, our audit and investigation work and recent incidents underscore the need for the Federal Aviation Administration (FAA) to take additional actions to improve safety. With tightening budgets, it is also important for FAA to strategically position itself to use its oversight resources wisely.

Key Challenges

- Identifying and addressing the causes of recent increases in operational errors

- Maintaining momentum in addressing pilot training and fatigue

- Advancing risk-based oversight of repair stations and aircraft manufacturers

- Enhancing air carrier collaboration and making domestic code share arrangements more transparent to consumers

- Implementing Airline Safety and FAA Extension Act of 2010 requirements

Identifying and Addressing the Causes of Recent Increases in Operational Errors A top priority for FAA is to accurately count and identify trends that contribute to operational errors—events where controllers fail to maintain safe separation between aircraft. FAA statistics indicate that between fiscal years 2009 and 2010, operational errors increased by 53 percent, from 1,234 to 1,887. However, it is

unclear whether this reported increase is due to more operational errors being committed or to improved reporting.

According to FAA, the Air Traffic Safety Action Program[4] has encouraged controllers to report operational errors. However, our ongoing work shows that a number of other factors may also be contributing to increases in reported operational errors. These include the lack of a baseline of the true number of errors and a new automated system for detecting losses of aircraft separation near airports.[5] FAA is in the early stages of implementing the System Risk Event Rate tool, which is designed to track and evaluate system-wide risk when aircraft fly closer together than separation standards permit. Implementing systems and processes that capture accurate and complete data is critical for FAA to determine the true magnitude of operational errors, assess their potential safety impacts, identify their root causes, and develop actions to effectively address and mitigate them.

Maintaining Momentum in Addressing Pilot Training and Fatigue The February 2009 fatal crash of Colgan Air flight 3407 underscores the importance of addressing longstanding concerns about pilot training and fatigue. In January 2009, FAA issued a Notice of Proposed Rulemaking (NPRM) revising crew training requirements to incorporate more realistic training scenarios, use flight simulators, and work with new special hazard practices for pilots and crew members. Extensive industry comments on the proposed rule prompted FAA to issue a Supplemental Notice of Proposed Rulemaking (SNPRM) in May 2011 to address the comments. The revised proposal requires ground and flight training to teach pilots how to recognize and recover from stalls, as well as remedial training for pilots who perform poorly in training. Congress gave FAA until October 1, 2011, to issue a final rule; however, FAA has yet to complete this action.

FAA also published a NPRM in September 2010 that, if adopted, would significantly change existing flight, duty, and rest regulations for commercial carriers by basing them on scientific factors—such as time of day flown and sleep considerations—rather than on type of flight operations. However, it will be difficult for FAA to address this issue or finalize new rest rules given the significant opposition the proposed rule faces from the aviation industry. In addition, the NPRM does not impose requirements on carriers to track pilot domicile or commuting factors that can contribute to fatigue even though many pilots reside hundreds or thousands of miles from their assigned duty locations. As part of its investigation into the 2009 Colgan Air accident, NTSB concluded that both pilots were impaired because of fatigue and that both had commuted hundreds of miles before the flight. Following the crash, and at the request of Congress, the National Academy of Sciences completed a study noting that there were not enough available data to determine the role commuting plays in contributing to fatigue or whether commuting should be regulated. While FAA's proposed rules could significantly enhance pilot training and fatigue programs, our work shows that FAA still faces challenges tracking pilots with poor performance and training deficiencies, overseeing air carrier programs aimed at improving

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[4] A voluntary, non-punitive safety reporting program approved by the Administrator in September 2009.
[5] In January 2008, FAA began implementing the Traffic Analysis and Review Program, which automatically identifies when operational errors or other losses of separation between aircraft occur at terminal facilities.

pilot skills, and improving its awareness of the extent of pilot commuting and fatigue within the air carrier industry.

Advancing Risk-Based Oversight of Repair Stations and Aircraft Manufacturers

According to FAA, there are over 4,800 FAA-certified repair stations worldwide that perform maintenance for U.S. air carriers. Since 2003, we have repeatedly highlighted weaknesses in FAA's oversight of aircraft repair stations, such as the need for FAA to target its surveillance to those facilities with the greatest risks. FAA implemented a new risk-based system for repair stations in 2007, which we are currently reviewing. In addition, our criminal investigations have identified significant improprieties by repair station personnel. For example, our investigation of an FAA-approved repair station led to the sentencing of the president, owner, and chief inspector for having made false representations to a customer concerning the calibration of a tool used in repairing and certifying the airworthiness of turbine parts. We also investigated a former FAA-licensed mechanic, who was found guilty by a Federal jury for fraudulently altering the historical service record for helicopter blades he sold to obscure that the blades had been rejected and should have been scrapped. In another investigation, two FAA-certificated employees at a repair station were sentenced for making false statements in connection with repairs made to helicopter drive train components and for improperly performing required inspections of helicopters. Given air carriers' increasing reliance on repair stations, it is imperative that FAA provide more rigorous oversight of this industry.

FAA's oversight of aircraft manufacturers also remains a concern—due primarily to weaknesses in its Organization Designation Authorization (ODA) program and Risk-Based Resource Targeting (RBRT) system. FAA created ODA in 2005 to standardize its oversight of organizational designees—organizations that supplement FAA's safety inspector and engineer workforce.[6] However, FAA has not adequately trained engineers on their new enforcement responsibilities under ODA, and some FAA certification offices have not effectively tracked or addressed poorly performing ODA personnel. In addition, ODA significantly reduced FAA's role in approving individuals who perform work on FAA's behalf. FAA's implementation of RBRT—a system for identifying higher risk aircraft certification projects—has not been effective for measuring risk and directing FAA engineers' oversight efforts to high-risk projects because it relies on subjective input from engineers, does not contain detailed data, and has experienced repeated technical difficulties. In response to these findings, which we reported in June 2011,[7] FAA is working to establish and improve ODA and RBRT policy, training, and tools to ensure that ODA organizations comply with safety requirements and that the Agency targets its limited engineering resources to the highest risk projects.

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[6] Organizational designees are aircraft manufacturers and other companies that FAA has approved to perform certain functions on its behalf, such as determining compliance with aircraft certification regulations. The organization is responsible for overseeing the employees who perform the delegated functions.

[7] OIG Report Number AV-2011-136, "FAA Needs To Strengthen Its Risk Assessment and Oversight Approach for Organization Designation Authorization and Risk-Based Resource Targeting Programs," June 29, 2011.

It is also critical that FAA place its approximately 4,300 aviation safety inspectors where they are most needed. A 2006 National Research Council study conducted at the direction of Congress concluded that FAA's methodology for allocating inspector resources was ineffective and recommended that FAA develop a new approach.[8] In response, FAA completed a new staffing model in October 2009. While FAA used the model to assist in preparing its fiscal year 2012 budget request, it must further refine this tool so that it more effectively allocates inspector resources.

Enhancing Air Carrier Collaboration and Making Domestic Code Share Arrangements Transparent to Consumers

To meet passenger demands, major and regional air carriers use domestic code share agreements—a marketing arrangement in which one air carrier sells and issues tickets for another carrier's flight. While such agreements can reduce carrier costs and enhance customer service, FAA faces several challenges in ensuring code share partners work together to improve safety programs. Likewise the Office of the Secretary (OST) could improve transparency of code sharing for consumers. FAA's 2009 Call to Action plan for airline safety encourages mainline and regional carriers to address a wide range of safety and operating concerns, including code sharing issues. While some progress has been made, FAA has not issued guidance to operators involved in these arrangements to encourage safety collaboration. Oversight of code share agreements is also important to ensure that they do not have unintended consequences that could impact the margin of safety, such as the inclusion of financial incentives and penalties for performance that may be counter to safety efforts.

Implementing Airline Safety and FAA Extension Act of 2010 Requirements

In August 2010, Congress enacted the Airline Safety and FAA Extension Act, which contains measures intended to improve safety and address longstanding pilot concerns, such as fatigue, training, and professionalism. In addition to mandating completion dates for pilot training and fatigue rules, the law requires mentoring programs and a more focused FAA approach to increase air carriers' adoption of voluntary safety programs. FAA is also required to establish and maintain a database of pilot performance records from FAA, prior employers, and the National Driver Register that air carriers must access and review during the pilot hiring process. Continued management attention will be needed to ensure these safety improvements are implemented in a timely and effective manner.

Related Products

The following related reports and testimonies can be found on the OIG Web site at http://www.oig.dot.gov.

- Progress and Challenges With FAA's Call to Action for Airline Safety, February 4, 2010

- Letter to Senator Claire McCaskill Regarding FAA's Progress in Implementing Past OIG Recommendations To Improve Oversight of Outsourced Maintenance, January 11, 2010

- Air Carriers' Outsourcing of Aircraft Maintenance, September 30, 2008

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[8] National Research Council Report: "Staffing Standards for Aviation Safety Inspectors," September 20, 2006.

- Review of Air Carriers' Use of Aircraft Repair Stations, July 8, 2003

- FAA Needs To Strengthen Its Risk Assessment and Oversight Approach for Organization Designation Authorization and Risk-Based Resource Targeting Programs, June 29, 2011

- FAA and Industry Are Taking Actions To Address Pilot Fatigue but More Information on Pilot Commuting Is Needed, September 12, 2011

For more information on the issues identified in this chapter, please contact Jeffrey B. Guzzetti, Assistant Inspector General for Aviation and Special Program Audits, at (202) 366-0500.

Ensuring Effective Oversight of Hazardous Liquid and Natural Gas Pipeline Safety

Source: Department of Transportation

The Nation's aging oil and gas pipeline infrastructure is vulnerable to ruptures caused by corrosion and other pipe defects. In 2010, a 54-year old gas pipeline in San Bruno, California, exploded, killing 8 people and destroying 38 homes. In the same year, a leaking pipeline spilled nearly a million gallons of crude oil into a tributary of the Kalamazoo River in southwest Michigan. In July 2011, a pipeline under the Yellowstone River in Montana ruptured and leaked hundreds of barrels of oil. Given the significant safety, environmental, and economic consequences of such accidents, it is critical that the Pipeline and Hazardous Material Safety Administration (PHMSA) effectively oversee pipeline operators and ensure that states carry out their pipeline safety responsibilities.

Key Challenges

- Strengthening pipeline operators' integrity management programs
- Ensuring state pipeline safety partners effectively execute their pipeline safety responsibilities
- Addressing human factors in pipeline control rooms
- Facilitating the successful implementation of the Secretary's Call to Action

Strengthening Pipeline Operators' Integrity Management Programs

Federal regulations require that pipeline operators develop Integrity Management (IM) programs, which include conducting inspections, identifying and repairing defects, and continually evaluating risks to pipeline integrity. Over the last decade, effective IM programs have become a key component of PHMSA's national strategy to improve pipeline safety and reduce pipeline accidents—especially in densely populated or environmentally sensitive areas. According to PHMSA, this program has resulted in the discovery and repair of almost 40,000 anomalies that later could have resulted in accidents. PHMSA or its state partners regulate and inspect these IM programs. Despite PHMSA's efforts to oversee and strengthen operator IM programs, there has not been an appreciable reduction in significant IM-detectable hazardous liquid pipeline accidents[9] in high-consequence areas.

The National Transportation Safety Board's (NTSB) recent investigation of the San Bruno accident raises a number of concerns regarding Federal and state oversight of gas pipeline operators' IM programs. Specifically, NTSB recommended that PHMSA expand the use of meaningful IM metrics; revamp its inspection protocols to validate operator IM data; ensure pipeline operators' leak, failure, and incident data are incorporated into their risk models; and establish performance goals for operators.

While PHMSA has several efforts underway to enhance its IM inspection program, such as focusing on the quality and number of field visits, the Agency faces challenges in accomplishing these improvements while meeting its other inspection activities. These include inspecting pipeline construction, control room management, gas IM, and other programs.

Ensuring State Pipeline Safety Partners Effectively Execute Their Pipeline Safety Responsibilities
Under PHMSA's statutory authority, states are allowed to assume all or part of the regulatory and enforcement responsibility for *intrastate* hazardous liquid and natural gas pipelines. Most states have supported the concept of common stewardship in pipeline safety.[10] According to PHMSA, this cooperative relationship between the Federal Government and states forms the cornerstone of the Nation's pipeline safety program. State pipeline safety regulators currently oversee about 90 percent of the 2.5 million miles of our Nation's pipeline infrastructure. PHMSA distributes Federal grant funds to encourage states to take on more responsibility for overseeing pipeline safety and to improve states' program performance. These grants increased from $19.5 million in 2008 to $30.2 million in 2010.

Despite these investments, the San Bruno explosion and other recent accidents call into question the effectiveness of states' oversight of pipeline operators as well as PHMSA's monitoring of state oversight programs. In its August 2011 investigation report on the San

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[9] PHMSA defines "IM-detectable" as significant incidents that are caused by internal corrosion, pipe seam welds, and other factors that are potentially detectable by integrity assessments under the hazardous liquid IM rule.

[10] All states, except Alaska and Hawaii, have assumed oversight and enforcement responsibilities over *intrastate* natural gas pipelines, with nine states acting as PHMSA's agents overseeing safety of i*nterstate* natural gas pipelines. Fifteen states have assumed safety oversight and enforcement of the *intrastate* hazardous liquid pipelines, with 6 states acting as PHMSA's agents overseeing safety of *interstate* hazardous liquid pipelines.

Bruno accident, NTSB[11] cited the California Public Utilities Commission for failure to detect inadequacies in the Pacific Gas and Electric Company's IM program. The report also cited weaknesses in how PHMSA monitored state oversight programs—a longstanding NTSB concern. One such weakness is the lack of meaningful metrics that allow PHMSA to assess the effectiveness of state oversight programs. These weaknesses undermine PHMSA's efforts to ensure that states fully execute their responsibilities. Effective PHMSA oversight is particularly critical given the expansion of Federal pipeline safety initiatives in recent years, with corresponding increases in state oversight responsibilities in high-risk areas. The latest initiative—implementing the Distribution Integrity Management Program—went into effect February 12, 2010. Under this initiative, which originated from our 2004 recommendation, states will be responsible for overseeing more than 1,400 operators of local gas distribution systems—where the highest rates of pipeline-related fatalities and injuries occur—as they establish IM programs. Operators were given until August 2, 2011, to develop and implement their programs.

Addressing Human Factors in Pipeline Control Rooms A 2005 NTSB study found that some aspects of an operator's pipeline control system influenced the severity of 10 of 13 hazardous liquid pipeline accidents. In many cases, the problems were aggravated when controllers monitoring the systems failed to quickly recognize and respond to leaks. For example, controllers in Michigan misdiagnosed Supervisory Control and Data Acquisition (SCADA)[12] alarms and chose to ignore them, continuing the flow of product into the Kalamazoo River. Pacific Gas and Electric's SCADA systems were not sufficient to quickly identify the location of the failure. In each of these incidents, the consequences of the accidents were exacerbated because controllers failed to implement procedures to quickly shut down the flow of product in the pipelines.

In December 2009, PHMSA issued a rule requiring operators that use SCADA systems to develop and implement control room management procedures by February 2013. However, the Agency moved the implementation timeframe up by 16 months, to October 2011, for most of the required procedures due to growing concerns about operator control room management. As with operator IM programs, the challenge for PHMSA will be ensuring operators develop and implement effective control room management procedures, while also meeting its current oversight priorities.

Facilitating the Successful Implementation of the Secretary's Call to Action In response to several recent serious pipeline accidents in 2010 and 2011, Secretary LaHood issued a "Call to Action" for improving pipeline safety. In doing so, the Secretary and the PHMSA Administrator challenged the pipeline industry and key regulatory agencies—including the Federal Energy Regulatory Commission, the National Association of Regulatory and Utility Commissioners, and state public utility commissions—to increase efforts to identify and repair or replace high-risk pipelines. Of particular concern are

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[11] NTSB Pipeline Accident Report NTSB/PAR-11/01; "Pacific Gas and Electric Company Natural Gas Transmission Pipeline Rupture and Fire, San Bruno, California, September 9, 2010;" August 30, 2011.

[12] SCADA systems collect real-time data from pipeline sensors and display it to controllers, who in turn can react to abnormal or emergency situations by remotely operating pipeline pumps and valves.

pipelines constructed with cast iron, bare steel, and other material that may have a higher risk of leaking or exploding. Moreover, in support of the Secretary's initiative, PHMSA convened a pipeline safety forum, issued additional pipeline safety guidance, and requested that Congress increase the maximum civil penalties for pipeline violations.

However, achieving the Secretary's Call to Action will not be easy. First, PHMSA lacks the authority to require operators to accelerate the repair or replacement of high-risk pipelines. Second, PHMSA relies heavily on its state pipeline safety partners to oversee much of this work. Third, PHMSA must rely on key Federal and state regulatory agencies that play important roles in achieving the Secretary's program. Given this limited authority and the sizable resources needed to achieve the Call to Action, the Secretary and PHMSA will be significantly challenged to ensure corrective steps are taken and that high-risk pipelines no longer pose a threat.

Related Products   The following related reports and testimonies can be found on the OIG Web site at http://www.oig.dot.gov.

- Pipeline Safety: Progress and Remaining Challenges, March 16, 2006

- Integrity Threats to Hazardous Liquid Pipelines, September 18, 2006

- Notification of Reviews of PHMSA's Oversight of Pipeline Safety, October 27, 2010

For more information on the issues identified in this chapter, please contact Jeffrey B. Guzzetti, Assistant Inspector General for Aviation and Special Program Audits, at (202) 366-0500.

Ensuring Effective Oversight of ARRA Projects and Applying Related Lessons Learned To Improve DOT's Infrastructure Programs

Source: South Dakota Department of Transportation

The American Recovery and Reinvestment Act (ARRA) infused more than $48 billion for transportation infrastructure projects, including high-dollar and complex projects. Many projects are still under construction and require vigilant oversight. At the same time, the Department may have significantly less Federal funding available to address growing demands, including addressing the Nation's aging surface infrastructure. The American Society of Civil Engineers graded both the Nation's road and transit infrastructures as "D-" and "D," respectively.[13] Using lessons learned from the oversight of ARRA infrastructure investments, the Department can stretch Federal dollars by keeping projects within budget; on schedule; and free from fraud, waste, and abuse.

Key Challenges

- Maximizing the return on highway and transit investments by improving use of oversight mechanisms

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[13] American Society of Civil Engineers, "2009 Report Card for America's Infrastructure," March 25, 2009.

- Strengthening financial oversight of grantees through Single Audits and detecting improper payments

- Providing vigilant oversight of the Transportation Investment Generating Economic Recovery (TIGER) Program to ensure effective execution of grants

- Preventing and detecting transportation fraud through proactive measures

Maximizing the Return on Highway and Transit Investments by Improving Use of Oversight Mechanisms

The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) have taken significant actions to improve oversight of highway and transit projects but remain challenged to ensure ARRA funds are appropriately spent and maximize the return on limited Federal dollars. FHWA is responsible for overseeing more than half of DOT's ARRA funds, which have been obligated to over 13,000 highway projects. As of August 2011, FHWA reported that almost 70 percent of these projects were completed with 78 percent of ARRA funds expended. FTA received a smaller amount of ARRA funds but has directed these funds to a number of major projects.

To oversee these expenditures FHWA has taken several actions, such as using National Review Teams (NRT), enhancing programs for monitoring states' oversight of local public agency (LPA) projects, and updating the policy requiring Value Engineering (VE) studies. However, FHWA faces significant challenges in carrying out these actions. First, FHWA must monitor states' efforts to address management weaknesses identified during NRT reviews to ensure effective oversight of both ARRA and non-ARRA projects and more rigorously analyze NRT results to better understand emerging risks. Second, FHWA has yet to enhance states' LPA programs or adequately address the associated risks, which impact both ARRA and non-ARRA projects. These risks include a lack of state resources to adequately oversee LPAs and insufficient LPA resources for administering contracts and assessing quality, noncompliance with Federal labor requirements, and improper processing of contract changes. FHWA must follow through on promised actions, such as establishing uniform procedures and criteria for Division Offices to use when assessing states' ability to ensure LPAs meet Federal requirements. Finally, FHWA has not completed its update of the VE regulations, as required by Congress more than 5 years ago.[14] FHWA plans to publish its final rule on VE requirements by the end of 2011. Opportunities to improve project performance, cost, and quality may be lost for ARRA and non-ARRA projects if FHWA fails to ensure states conduct VE studies.

FTA has a large portfolio of major projects in New York City—some of which received ARRA funds—that require sustained management attention to prevent further cost increases or schedule delays. For example, after experiencing significant cost increases and years of schedule delays on FTA's $1.4 billion Fulton Street project, increased project oversight, risk assessments, and robust recovery plans have prevented additional cost increases and delays. However, years of complex work remain, and FTA will need to sustain a high level of oversight to mitigate risks.

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[14] The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, Pub. L. No. 109-59 (2005).

Strengthening Financial Oversight of Grantees Through Single Audits and Detecting Improper Payments

We continue to identify vulnerabilities in DOT Operating Administrations' financial oversight of ARRA grantees and their compliance with the Office of Management and Budget's (OMB) ARRA accountability requirements. For example, FAA's approach to Airport Improvement Program (AIP) grant oversight is inadequate to effectively prevent or detect improper payments. While FAA took several actions to increase oversight of AIP grantees—including adding technical expertise and conducting site visits—a national consulting firm FAA hired to test its controls over ARRA grants determined that 14 of 24 ARRA-recipient airports did not meet FAA requirements to have adequate documentation to justify their ARRA payment requests.

Full compliance with OMB's Single Audit[15] requirements would help the Department and its Operating Administrations prevent or detect improper payments.[16] Since May 2010, we have issued 135 Single Audit action memorandums on deficiencies in grantees' procedures or in their operations in overseeing ARRA funds, such as improper reporting and inadequate monitoring of subrecipients. Our ongoing audit of DOT's implementation of Single Audit recommendations found that for some grantees, Operating Administrations frequently issued late or incomplete management decisions on Single Audit findings, failed to include evaluations of grantees' corrective action plans, and did not confirm that grantees implemented corrective actions. Our evaluation of DOT Operating Administrations' tracking systems for identifying grantees with unresolved findings and problematic Single Audit histories determined that the tracking systems at FHWA, FAA, and the National Highway Traffic Safety Administration were ineffective. The Federal Railroad Administration (FRA) did not have a tracking system.

Providing Vigilant Oversight of the TIGER Program To Ensure Effective Execution of Grants

In February 2010, the Office of the Secretary (OST) awarded $1.5 billion in ARRA funding for TIGER discretionary grants to 51 recipients across the Nation. These multimodal surface transportation projects are expected to support economic recovery. As of September 2, 2011, 14 percent of these funds had been expended. Congress provided additional $528 million in fiscal year 2010 and $527 million in fiscal year 2011 non-ARRA funds for the TIGER Discretionary Grant Program. The additional and continued funding of discretionary grants underscores the need for strong oversight controls.

OST relies heavily on four Operating Administrations—FHWA, FTA, FRA, and the Maritime Administration (MARAD)—to carry out the program and ensure recipients meet ARRA requirements. OST and these Operating Administrations must coordinate to oversee TIGER

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[15] The Single Audit Act requires state or local grantees to maintain a system of internal control over Federal programs to demonstrate compliance with pertinent laws and regulations. Independent single audits are conducted annually, in accordance with OMB Circular A-133, to determine whether grantees are complying with these requirements.

[16] An improper payment is any payment that should not have been made or that was made in an incorrect amount (including overpayments and underpayments) under statutory, contractual, administrative, or other legally applicable requirements. It includes payment to an ineligible recipient, payment for an ineligible service, duplicate payments, payment for services not received, and payments that do not account for credit for applicable discounts. OMB instructs agencies to report payments for which insufficient or no documentation was found as improper payments.

program performance and ensure efficient use of the ARRA funds. While FHWA and FTA have longstanding procedures in place to administer grant programs, FRA and MARAD are still developing their capabilities. In addition, OST and DOT Operating Administrations must have sound mechanisms to track and monitor individual projects. Such mechanisms include consistent and accurate reports from grantees, current program risk assessments, and performance measures to assess whether projects are meeting program goals. OST needs to ensure effective oversight of ARRA-funded TIGER projects because the policies and procedures established in the initial TIGER program will serve as the model for managing non-ARRA TIGER projects.

Preventing and Detecting Transportation Fraud Through Proactive Measures

ARRA funding and significant construction activity emphasize the need for DOT and our office to continue to aggressively pursue counter-fraud efforts so that limited Federal dollars are not wasted. Our office has worked with DOT to deter fraud schemes through ongoing outreach, targeted assessments of projects with fraud risk indicators, and investigations of criminal and civil complaints. As of August 2011 we have 59 open ARRA investigations (see table 4-1)—46 of which the Department of Justice is reviewing for potential prosecution. These investigations illustrate the need for DOT to take action to deter fraudulent activity on all DOT-funded projects.

Table 4-1. Open Investigations Into Allegations of ARRA Fraud, by Operating Administration, as of August 31, 2011

Allegation	FHWA	FAA	FTA	DOT	MARAD
False Statements, Claims, Certifications	18	2	2	1	1
Anti-Trust Violations, Bid Rigging, Collusion	4	1	1	0	0
Disadvantaged Business Enterprise Fraud	11	4	2	0	0
Conflict of Interest	0	0	0	0	0
Embezzlement	0	0	1	0	0
Prevailing Wage Violations	7	0	1	0	0
Other	0	0	0	0	0
Kickbacks	0	0	0	0	0
Corruption[a]	1	1	0	0	0
ARRA Whistleblower	0	0	1	0	0
Total	**41**	**8**	**8**	**1**	**1**

Source: OIG

[a] This type of investigation involves allegedly dishonest or fraudulent conduct by individuals who are responsible for overseeing ARRA-funded projects.

DOT Operating Administrations' role in outreach is critical to ensuring recipients of Federal grants and contracts have meaningful ethics programs and sound internal controls. To date, our office has provided 291 fraud awareness and prevention presentations to over 20,000 DOT officials, state department of transportation officials, local transit authority staff, and aviation authorities. Another valuable tool in identifying and stopping fraud is the

use of independent risk assessments. For example, we are examining whether some projects were intentionally underbid, allowing contractors to make up the lost revenues in fraudulent change orders and false claims. DOT's Operating Administrations could conduct similar analyses as part of their oversight activities.

Related Products   The following related reports, testimonies, and correspondence can be found on the OIG Web site at http://www.oig.dot.gov.

- New York City Fulton Street Transit Center: FTA's Sustained Focus on Key Risk Areas Will Be Needed Until the Project Is Completed, August 15, 2011

- Federal Highway Administration's Oversight of Federal-Aid and Recovery Act Projects Administered by Local Public Agencies Needs Strengthening, July 15, 2011

- Ensuring ARRA Funds Are Spent Appropriately To Maximize Program Goals, May 4, 2011

- FAA Fulfilled Most ARRA Requirements in Awarding Airport Grants, February 17, 2011

- Actions Needed To Strengthen the Federal Highway Administration's National Review Teams, January 6, 2011

- Improper Payments Identified in FAA's Airport Improvement Program, December 1, 2010

For more information on the issues identified in this chapter, please contact Joseph W. Comé, Assistant Inspector General for Highway and Transit Audits, at (202) 366-5630 or Timothy Barry, Principal Assistant Inspector General for Investigations, at (202) 366-1967.

Managing the Next Generation Air Transportation System Advancement While Controlling Costs

Source: Federal Aviation Administration

The National Airspace System (NAS) handles almost 50,000 flights per day and more than 700 million passengers each year. To reduce congestion and meet airspace demands, the Federal Aviation Administration (FAA) is developing the Next Generation Air Transportation System (NextGen)—a multibillion-dollar program that is expected to move today's system, from ground-based to satellite-based air traffic management. NextGen is the most complex effort FAA has embarked on and will require investments from both the Government and the airline industry.

Key Challenges

- Setting realistic plans, budgets, and expectations for NextGen in a fiscally constrained environment
- Advancing NextGen's near-term goals and realizing benefits at already congested airports
- Resolving problems with the En Route Automation Modernization (ERAM) program that have cost and schedule implications for critical NextGen initiatives
- Completing an integrated master schedule for NextGen's transformational programs
- Controlling operating costs that could crowd out NextGen capital investments

Setting Realistic Plans, Budgets, and Expectations for NextGen in a Fiscally Constrained Environment The Department and FAA have struggled with defining NextGen and setting realistic expectations for what can reasonably be accomplished in the near, mid, and long term. FAA currently plans to spend almost $5 billion on all NextGen programs between fiscal years 2012 and 2016—a significant investment but billions less than FAA projected a year ago. The current constrained budget and problems with existing projects are forcing FAA to rethink its capital investments and NextGen priorities. Therefore, FAA will face challenges in sustaining existing projects and facilities while introducing new NextGen-related capabilities. Figure 5-1 illustrates FAA's current spending plans for its capital account.

Figure 5-1. FAA Capital Funding for Fiscal Years 2008 through 2016, dollars in billions
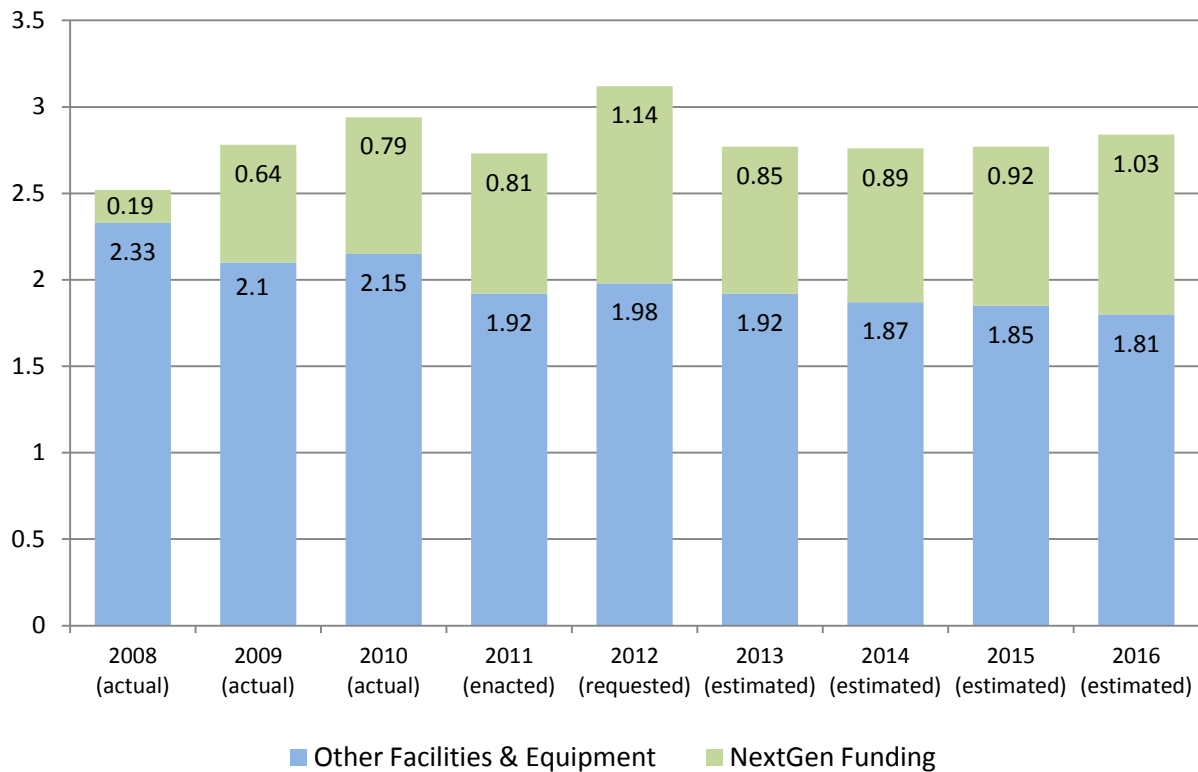
Source: FAA

FAA's most recent NextGen implementation plan provides a vision for NextGen in the 2015 to 2018 timeframe and broadly outlines linkages between FAA and stakeholder investments. However, FAA has yet to make critical decisions regarding (1) what new capabilities will reside in aircraft or in FAA's ground-based automation systems, (2) the level of automation for controllers that can realistically and safely be achieved, and (3) the number and locations of air traffic facilities needed to support NextGen. Finally, FAA has not identified clear goals for performance capabilities or metrics for NextGen initiatives.

Advancing NextGen's Near-Term Goals and Realizing Benefits at Already Congested Airports

While FAA is addressing recommendations from a Government-industry task force[17] on NextGen, most efforts are still in the planning, study, or design phases. In response to the task force's most critical recommendations, FAA launched its "metroplex" initiative—a 7-year effort to improve the flow of traffic and reduce delays at 21 congested airports in major metropolitan areas. FAA has completed studies[18] at 5 of the 21 metroplex locations and has 2 more sites underway. However, it has not established detailed milestones to complete initiatives at high-activity locations or a mechanism to integrate its metroplex initiative with other important initiatives, such as improving airport surface operations. As a result, airspace users are concerned about the pace and execution of the metroplex effort thus far as well as the lack of clearly defined expected benefits. FAA is working with industry to resolve these issues.

Enhancing capacity at already congested airports also depends on the timely deployment of more efficient flight procedures to alleviate congestion. However, as we noted in December 2010,[19] FAA's flight procedures have been mostly overlays of existing routes. Airlines advocate that FAA should develop procedures that achieve maximum benefits, such as shorter flight paths and fuel savings. FAA's metroplex initiative focuses primarily on adding area navigation (RNAV)[20] procedures and optimizing climb and descent profiles for existing routes. However, FAA's plans do not focus on the more advanced required navigation performance (RNP)[21] procedures to achieve maximum capacity enhancements.

Resolving Problems With the ERAM Program That Have Cost and Schedule Implications for Critical NextGen Initiatives

FAA's long-term goals for NextGen depend on the successful implementation of the ERAM program—a $2.1 billion system for processing flight data. ERAM will replace all existing hardware and software at FAA's facilities that manage high-altitude traffic. FAA originally planned to complete ERAM by the end of 2010. However, ERAM continues to experience software-related problems that have pushed schedules well beyond original completion dates and increased costs by hundreds of millions of dollars. Although ERAM passed testing at FAA's Technical Center and was accepted by the Government,[22] testing at initial sites revealed significant software problems related to system core capabilities for safely managing and separating aircraft. These problems include errors that display incorrect flight data to controllers. FAA formally rebaselined the program in June 2011 and now plans to complete ERAM in 2014—a

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[17] NextGen Mid-Term Implementation Task Force Report, September 9, 2009.

[18] FAA is using a two-phased approach to metroplex using study and design and implementation teams at each site.

[19] OIG Report Number AV-2011-025, "FAA Needs To Implement More Efficient Performance-Based Navigation Procedures and Clarify the Role of Third Parties," December 10, 2010.

[20] RNAV is a method of navigation in which aircraft use avionics, such as global positioning systems, to fly any desired flight path without the limitations imposed by ground-based navigation systems.

[21] RNP is a form of RNAV that adds on-board monitoring and alerting capabilities for pilots, thereby allowing aircraft to fly more precise flight paths.

[22] Government acceptance (GA) of ERAM by the FAA Technical Center requires meeting specific criteria established for the project baseline. These criteria include successfully completing developmental testing activities per the Statement of Work, listing all problem trouble reports, demonstrating that all contractual requirements are satisfied, and completing both functional and physical configuration audits. At GA, the Government (i.e., FAA and ERAM) assumes full responsibility of the system.

schedule slip of 4 years. FAA estimates that delays with ERAM will translate to an additional $330 million to complete deployment. However, if problems persist, the total cost growth could be as much as $500 million with potential delays stretching to 2016.

Delays with ERAM have required FAA to maintain aging systems longer, reprogram funds from other projects to cover the total cost overruns, and retrain controllers and maintenance technicians who must operate and maintain two different systems. Prolonged problems with ERAM will directly impact the overall cost and pace of NextGen. Without ERAM, the key benefits of several other programs, such as new satellite-based surveillance systems and data communications[23] for controllers and pilots, will not be possible.

Completing an Integrated Master Schedule for NextGen's Transformational Programs Between fiscal years 2012 and 2016, FAA plans to spend $2.3 billion on NextGen's six transformational programs,[24] including Automatic Dependent Surveillance-Broadcast (ADS-B), a new satellite-based system,[25] and System Wide Information Management (SWIM), a new information sharing system. However, FAA has not yet developed an integrated master schedule for implementing these programs or established total program costs, schedules, or performance baselines. In addition, the Agency has opted to approve these programs in shorter, more discrete segments to minimize risk. While FAA's approach of baselining smaller segments of larger programs may reduce risk in the short term, programs are left with no clear end-state, and decision makers in Congress and the Department lack sufficient information to assess progress as requirements continue to evolve. Moreover, the transformational programs have complex interdependencies and integration issues with automated systems that controllers rely on to manage traffic and FAA communications networks. Although FAA recognizes the need for an integrated master schedule to manage NextGen, it remains incomplete. Without a master schedule, FAA will continue to be challenged to assess progress with NextGen efforts, establish priorities, and make the necessary trade-offs between programs.

Controlling Operating Costs That Could Crowd Out NextGen Capital Investments On October 1, 2009, FAA entered into a 3-year collective bargaining agreement with the National Air Traffic Controllers Association (NATCA). FAA estimated that the agreement with NATCA would cost the Agency $669 million more than it would have cost to extend the work rules established in 2006 for 3 more years. However, costs have exceeded estimates, in part because fewer veteran controllers retired than anticipated. With fewer newly hired controllers—whose salaries and benefits are lower than veterans'—FAA's pay and benefits costs were $14 million higher than initially estimated for the first year of the contract.

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[23] Data Communications (DataComm) will provide comprehensive data connectivity, including ground automation message generation and receipt, message routing and transmission, and aircraft avionics requirements.

[24] FAA's NextGen Transformational Programs are Automatic Dependent Surveillance-Broadcast, Collaborative Air Traffic Management-Technologies, System Wide Information Management, DataComm, NextGen Network Enabled Weather, and NAS Voice Systems.

[25] ADS-B offers surveillance, like radar, but with more precision. ADS-B provides air traffic controllers and pilots with more accurate information to help keep aircraft safely separated in the sky and on runways.

FAA's negotiated memoranda of understanding (MOU) may also incur additional costs. FAA has had problems managing its MOUs in the past, resulting in millions of dollars in cost overruns. While FAA has established controls that it believes will prevent additional costs with MOUs associated with the 2009 agreement, some local air traffic managers and regional managers are not fully complying with these controls. It is critical that FAA consider these issues as well as its budgetary constraints when negotiating its next collective bargaining agreement—especially since these uncontained increases in operating costs could crowd out capital investments.

Related Products The following related reports and testimonies can be found on the OIG Web site at http://www.oig.dot.gov.

- FAA Oversight Is Key for Contractor-Owned Air Traffic Control Systems That Are Not Certified, August 4, 2011

- FAA's Approach to SWIM Has Led to Cost and Schedule Uncertainty and No Clear Path for Achieving NextGen Goals, June 15, 2011

- FAA Needs To Strengthen Controls Over the 2009 FAA/NATCA Collective Bargaining Agreement, June 9, 2011

- FAA Must Improve Its Controller Training Metrics To Help Identify Program Needs, March 30, 2011

- FAA Needs To Implement More Efficient Performance-Based Navigation Procedures and Clarify the Role of Third Parties, December 10, 2010

- FAA Faces Significant Risks in Implementing the Automatic Dependent Surveillance – Broadcast Program and Realizing Benefits, October 12, 2010

For more information on the issues identified in this chapter, please contact Jeffrey B. Guzzetti, Assistant Inspector General for Aviation and Special Program Audits, at (202) 366-0500.

Managing DOT Acquisitions in a More Strategic Manner To Maximize Limited Resources and Achieve Better Mission Results

Source: istockphoto.com

In fiscal year 2010, the Department obligated approximately $5.8 billion on contracts for goods and services to build and support a transportation system that meets vital national interests.[26] Our audits continue to find weaknesses in how DOT plans, administers, and oversees its contracts and manages its acquisition workforce, resulting in missed opportunities for improving program performance and saving millions in taxpayer dollars. Severe budget constraints emphasize the need for DOT to approach acquisitions in a more strategic manner.

Key Challenges

- Strengthening DOT's acquisition functions and planning processes to manage acquisitions more strategically

- Equipping DOT to perform effective management oversight of its acquisitions

- Strengthening the acquisition workforce to manage DOT's contracts for goods and services

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[26] DOT's fiscal year 2011 data were not available at the time of this report.

- Maintaining programs to help ensure high ethical standards among DOT's contractors, employees, and grant recipients

Strengthening DOT's Acquisition Functions and Planning Processes To Manage Acquisitions More Strategically

The Office of the Secretary of Transportation (OST) and DOT Operating Administrations have not implemented an effective acquisition and planning framework—an essential element for achieving mission results. A key concern is that DOT's acquisition leaders and contracting officers do not have enough input into program planning and decision making to help ensure that the billions of dollars DOT spends on contracting each year are cost effective and tied to mission success.

OST's organizational structure diminishes the Senior Procurement Executive's (SPE) ability to effectively lead acquisition initiatives or play a significant role in the Department's senior management. Specifically, DOT's SPE reports to the Deputy Chief Acquisition Officer (CAO)—not directly to the CAO as envisioned by major acquisition reform legislation.[27] At the same time, the Office of the Senior Procurement Executive's (OSPE) strategic plan does not link its goals to DOT's strategic plan and therefore fails to place OSPE's work in a long-term strategic context. A challenge for DOT will be ensuring that the momentum created by its recently reestablished Strategic Acquisition Council is focused and fully leveraged to ensure the Department's acquisitions contribute to the success of its mission.

Similarly, organizational weaknesses within DOT Operating Administrations' acquisition functions hinder their ability to serve a strategic role in carrying out agency missions. For example, in 2010 we reported[28] that the Federal Motor Carrier Safety Administration (FMCSA) lacks the organizational alignment and leadership needed for an effective acquisition function. FMCSA's program officials viewed the acquisition function as administrative support rather than as a strategic partner for implementing the Agency's mission. Such deficiencies contribute to FMCSA's poor contracting award, administration, and oversight practices and challenge its ability to manage its contracts.

DOT also faces challenges in effectively planning its acquisitions, a critical part of the procurement process. For example, in 2011, we reported that the Federal Aviation Administration's (FAA) lack of planning in awarding sole-source, noncompetitive contract actions—which accounted for $541 million in fiscal year 2009 obligations—provided little assurance that prices were consistently fair and reasonable for the contracts we reviewed. In 2010, we similarly reported that because FAA did not take fundamental acquisition planning steps to properly design and execute its Air Traffic Controller Optimum Training Solution (ATCOTS) Program, acquisition contract costs and fees exceeded baseline estimates by 35 percent in the first year of the contract—from $81 million to $109 million.

A lack of planning to inform DOT's selection of contract type and resources needed to manage the chosen contract has also created risks. For example, DOT has used cost-plus

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[27] Service Acquisition Reform Act of 2003, Public Law 108-136, Section 1421(c).

[28] OIG Report Number ZA-2010-093, "Federal Motor Carrier Safety Administration Lacks Core Elements for Successful Acquisition Function," August 24, 2010.

award fee contracts without sufficient knowledge of their appropriateness for specific requirements. While these contracts can provide incentives to spur innovation and reduce costs, they require greater agency effort to document contractor performance and mitigate cost risks to the Government. In 2010, we estimated that DOT paid over $140 million in fees on these types of contracts without properly justifying their cost-effectiveness. Acquisition planning deficiencies have also created significant risk in FMCSA's contracts. FMCSA spends about 40 percent of its procurement dollars on contract types that tie contractor profits to the number of hours worked—an arrangement that imposes the risk of cost overruns on the Government.[29]

To ensure effective stewardship of taxpayer dollars, DOT needs to elevate the importance of its acquisition function and focus on improving its acquisition planning. OST has begun steps to strengthen its acquisition function, but the challenge is institutionalizing procurement reforms across the Department.

Equipping DOT To Perform Effective Management Oversight of Its Acquisitions

Weaknesses in DOT's contract oversight and surveillance also limit its ability to achieve desired contract results and save taxpayer dollars. For example, during the first year of its $859 million ATCOTS contract, FAA authorized payment for 11 invoices totaling $45 million without verifying whether the services billed were actually provided. Weaknesses in FAA's oversight of its En Route Automation and Modernization program contract also led to poor contract outcomes. For example, FAA lacked acquisition assessments to verify whether contractor performance baselines were achievable, did not implement Earned Value Management[30] processes capable of identifying schedule and cost variances that plagued the program, relied on untrained technical representatives at a key implementation site, and accepted developmental software without sufficient testing to ensure it would successfully interface with existing systems at field locations. As a result, numerous errors during software implementation resulted in increased costs and schedule delays.

A lack of an effective workforce and reliable data underlie many of these weaknesses. DOT has not developed adequate training for performance monitors and other personnel involved in the award-fee process and has not ensured adequate separation of duties in evaluating contractor performance and awarding fees.[31] Poor data systems also undermine DOT's efforts to manage its acquisitions in the short and long term. Roughly one-third of OST's fiscal year 2008 and 2009 data in the Government-wide procurement information system[32] were inaccurate due to a lack of management controls. In some cases, DOT Operating Administrations cannot accurately account for all of their active contracts. For example, FAA cannot accurately account for its noncompetitive contract awards because of

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[29] These include Time and Materials and Labor Hour contracts, as defined in Federal Acquisition Regulation Part 16. Government-wide, these types of contracts comprise only about 5 percent of agency contract dollars.

[30] Earned Value Management (EVM) is a project management technique that combines measurements of scope, schedule, and cost in a single integrated system for measuring project performance and progress in an objective manner.

[31] FAA has since established responsibilities for its evaluation team that prohibited the same official from performing multiple duties.

[32] Federal Procurement Data System-Next Generation

insufficient internal controls and its failure to fully implement Office of Management and Budget requirements that it have a contract writing system capable of electronically transferring its procurement data directly to the Government-wide procurement information system.

Oversight weaknesses compounded by poor acquisition data management systems hinder DOT's ability to strategically manage its contracts and contract spending, meet reporting and transparency requirements, and ensure the billions of dollars it spends on contracting each year are used efficiently and effectively. Sustained focus on developing reliable information and data management systems will position DOT to conduct more strategic acquisitions.

Strengthening the Acquisition Workforce To Manage DOT's Contracts for Goods and Services

DOT relies on its acquisition workforce to negotiate and administer thousands of complex contracts valued at over $5 billion annually to ensure they provide maximum value and benefit to the Department. However, DOT has not made sufficient progress in implementing the strategies and goals in its Acquisition Workforce Strategic Human Capital Plan to increase the capability of the acquisition workforce through fiscal year 2014. To fulfill its procurement and contracting functions, it is critical that DOT adequately staff and train its acquisition workforce.

Between fiscal years 2008 and 2018, the percentage of DOT's contracting employees eligible to retire will more than triple to 63 percent—a rate about 10 percent higher than the average for civilian agencies. OST has been challenged in strengthening its acquisition workforce and needs to sustain recent improvements in this area. During the October 2009 to July 2010 timeframe, OSPE's attrition was almost 30 percent higher than the average attrition rate of the other offices that make up the Office of the Assistant Secretary for Administration.[33] DOT Operating Administrations also face challenges in strengthening their acquisition workforces. For example, FMCSA's April 2009 acquisition workforce succession plan found it lacked enough employees to carry out its duties and responsibilities. We found these weaknesses in FMCSA's acquisition workforce contributed to the poor contracting practices we reported in 2010.

Similarly, gaps in FAA's staff hiring and development processes contributed to poor contract administration—and substantial cost overruns—on critical FAA programs. FAA's billion-dollar Next Generation Air Transportation System program significantly increased FAA's acquisition workload and will require new skills and additional resources to ensure best value contracts. While FAA reported it met 99 percent of its overall acquisition workforce hiring target for fiscal year 2009, the percentage is misleading because three of its seven Air Traffic Organizations exceeded their overall hiring targets, while the remaining four fell short. Further, neither its 2009 nor its 2010 Acquisition Workforce Plan included contractor

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[33] In particular, the Office of the Senior Procurement Executive (OSPE) previously had several senior management vacancies which hindered the effectiveness of OSPE's acquisition function. Based on OIG recommendations, the OSPE has permanently filled the Chief of Contracting Office (COCO) position and anticipates filling the FPDS-NG Administrator position by March 30, 2012.

and Federal staff that perform acquisition functions. FAA's lack of adherence to its workforce plan—combined with inaccurate hiring data—suggests additional controls are needed to ensure it has a fully staffed acquisition workforce to smartly manage its contracts for goods and services, which totaled $3.7 billion in fiscal year 2010.

Addressing workforce challenges will help the Department provide the vision and direction necessary to have a strategic acquisition function and ensure planned improvements are sustainable.

Maintaining Programs To Help Ensure High Ethical Standards Among the Department's Contractors, Employees, and Grant Recipients

Our audits and investigations identified the need for more vigilant oversight to detect and prevent procurement and grant fraud, waste, and abuse within DOT and among its fund recipients. Grant and procurement fraud cases currently comprise about 50 percent of active OIG investigations. Between October 2010 and July 2011, procurement and grant fraud investigations resulted in 36 indictments, 22 convictions, and $239 million in recoveries. For example, in June 2011 top-level officials of a New York City area Disadvantaged and Minority Business Enterprise (DBE) pled guilty to using a "front" company on projects that received DOT grant funds, knowing their company lacked the required labor, equipment, and financial resources. Similarly, in 2011, Skanska USA Civil Northeast, Inc. paid $9.8 million each to the U.S. DOT and the New York Metropolitan Transit Authority as settlement for claims that it had engaged in DBE fraud since 1997.

In 2010 we reported and testified to Congress that DOT's ability to safeguard against awarding contracts and grants to improper parties was limited by delays in its suspension and debarment (S&D) decisions and reporting. Deficiencies in DOT's S&D policies, procedures, and internal controls compounded these risks. While DOT and FAA have initiated several actions in response to our recommendations—such as revising their S&D policies to require timely action on S&D decisions—sustained focus and demonstrated progress in this area are still needed. Until DOT fully implements an efficient and effective S&D Program, it will continue to risk awarding contracts and grants to parties that have been suspended or debarred. An additional challenge facing DOT is maximizing the protections of its S&D program for fund recipients. For example, our ongoing audit of FHWA's oversight of state contracting practices for projects funded by the American Recovery and Reinvestment Act (ARRA) has identified opportunities for FHWA to strengthen division office controls to ensure states do not make awards to improper parties. DOT's oversight of over $40 billion in ARRA funds heightens the importance of safeguarding against awarding funds to those with a record of wrongdoing and abuse.

Related Products   The following related reports, testimonies, and advisories can be found on the OIG Web site at http://www.oig.dot.gov.

- FAA Policies and Plans Are Insufficient To Ensure an Adequate and Effective Acquisition Workforce, August 3, 2011

- Weaknesses in the Office of the Secretary's Acquisition Function Limit Its Capacity To Support DOT's Mission, May 25, 2011

- FAA Must Strengthen Its Cost and Price Analysis Processes To Prevent Overpaying for Noncompetitive Contracts, May 19, 2011

- FAA's Air Traffic Controller Optimum Training Solution Program: Sound Contract Management Practices Are Needed To Achieve Program Outcomes, September 30 2010

- Improvements in Cost-Plus-Award-Fee Processes Are Needed To Ensure Millions Paid in Fees Are Justified, August 25, 2010

- Federal Motor Carrier Safety Administration Lacks Core Elements for a Successful Acquisition Function, August 24, 2010

- Weaknesses in DOT's Suspension and Debarment Program Limit Its Protection of Government Funds, March 18, 2010

- DOT's Suspension and Debarment Program Does Not Safeguard Against Awards to Improper Parties, January 7, 2010

For more information on the issues identified in this chapter, please contact Mary Kay Langan-Feirson, Assistant Inspector General for Acquisition and Procurement Audits, at (202)-366-5225 or Timothy Barry, Principal Assistant Inspector General for Investigations, at (202) 366-1967.

Improving the Department's Cyber Security
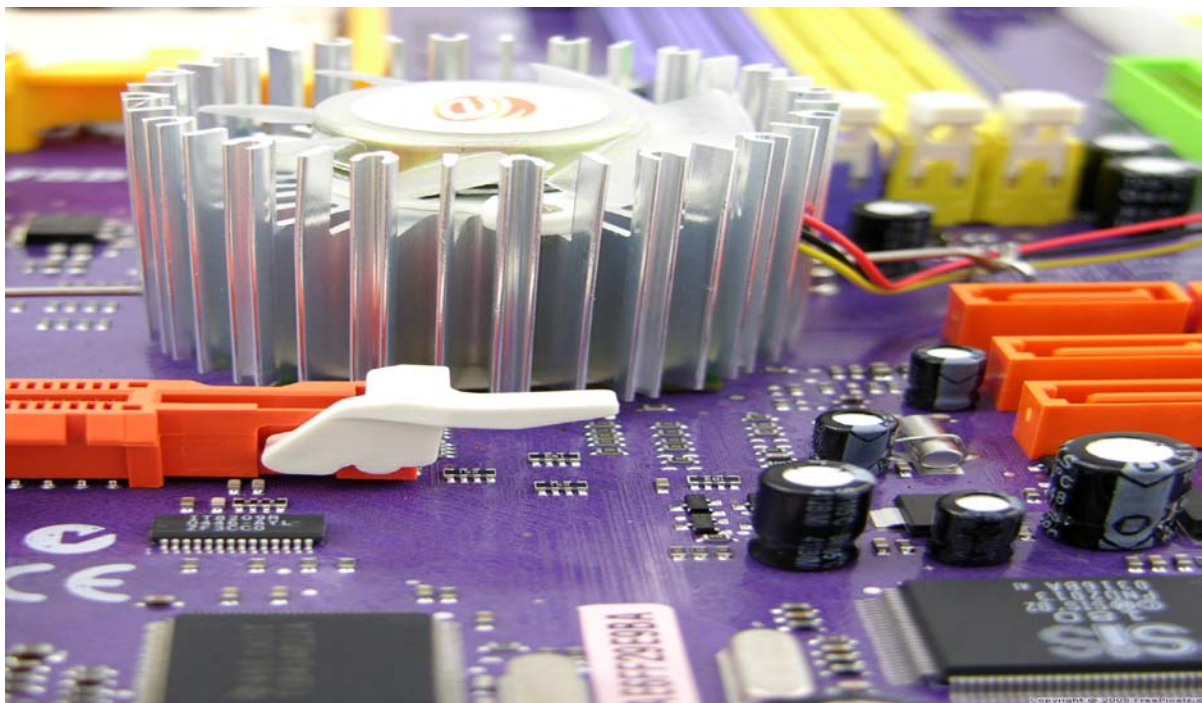
Source: freepixels.com

In this year alone, computer hackers have placed a number of major entities at risk, including the Central Intelligence Agency and Google. DOT's operations rely on more than 400 information systems—nearly two-thirds of which belong to the Federal Aviation Administration (FAA). These systems represent an annual investment of approximately $3 billion. To protect these systems from increasingly aggressive and technically proficient cybercriminals, the Department is working to incorporate new technologies and meet the Administration's cyber security goals.

Key Challenges

- Establishing a robust information security program

- Strengthening air traffic control system protections

- Increasing protection of personally identifiable information (PII)

- Creating an effective Department-wide enterprise architecture(EA) program

Establishing a Robust Information Security Program Last year, we reported that the Department's information security program did not meet key Office of Management and Budget (OMB) and Federal Information Security Management Act (FISMA) requirements to establish an information security program to protect agency information and systems. As a result, DOT declared its information security deficiencies a

material weakness in its annual assurance statement, as required by the Federal Managers' Financial Integrity Act (FMFIA).

DOT made limited progress toward correcting these weaknesses during fiscal year 2011, and security deficiencies still exist in key control areas. These include management of information security weaknesses, contingency planning, software configuration, system controls testing, and network user accounts. To build a strong information security program, the Department must continue to address these deficiencies in a sustainable and flexible manner so it can quickly adapt to and avert new cyber threats.

The Department's Office of the Chief Information Officer (OCIO) could do more to guide and oversee DOT Operating Administrations in building and sustaining strong information security practices. In 2011, OCIO revamped its information security policy for all Operating Administrations except the Office of the Secretary (OST). The next steps for OCIO are to finalize the OST policy and issue Department-wide procedural guidance. In addition, OCIO needs to improve its quality assurance reviews of modal cyber security efforts and assess the use of technology to facilitate timely management of the Department's cyber security. At present, the Department does not have central, automated systems to enable the timely assessment of its information security program. Until OCIO can better guide and oversee Operating Administrations' information security, the Department cannot verify that its policy is properly implemented or deploy automated tools to quickly and continuously monitor its cyber security state.

Strengthening Air Traffic Control System Protections FAA's planned Next Generation Air Transportation System (NextGen) relies on a number of new technologies to achieve its goals—which may introduce significant cyber security risks. For example, NextGen's use of satellite-based surveillance technologies to provide precise aircraft tracking makes some DOT agencies vulnerable to certain types of cyber attack. To efficiently facilitate air traffic control services, NextGen also relies on the use of Internet Protocol-based commercial products and web applications, which are inherently more vulnerable to security risks than proprietary software.[34] In addition, FAA is outsourcing more of its operations to contractors. NextGen's Automatic Dependent Surveillance-Broadcast system is the first operational air traffic control system to be owned and operated by a contractor. Because FAA only owns the data, not the system, it may have little control over security challenges that could arise.

A separate OIG report of the FAA's Air Traffic Control System addressed FAA's mission-support network and identified weaknesses, including an information disclosure vulnerability, inadequate system patch levels, unsupported operating systems, improper network configurations, and communication system vulnerabilities.

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[34] Internet Protocol is a system of digital message formats and rules for exchanging messages over the internet. It is used in conjunction with a separate protocol to enable the sending of messages between a source and a destination over the Internet.

As FAA develops NextGen, it must continue to protect its current air traffic control and related systems, located at hundreds of operational facilities.

Increasing Protection of Personally Identifiable Information

To safeguard against PII breaches, OMB requires agencies to reduce the volume of information collected and maintained, restrict access, and implement other security controls such as encryption to prevent unauthorized access. The main goal of information security management is to protect the confidentiality, availability, and integrity of information, of which PII is a critical piece. As such, nearly any weakness in security controls on systems containing PII increases the risk of sensitive data being exposed. Failure to properly protect PII for unauthorized uses would be detrimental to the Department's mission and credibility.

In fiscal year 2011, the Department provided plans for reducing PII and the use of Social Security numbers and is still working to establish the required privacy protections. Although the Department is committed to providing privacy protections by securing personally identifiable information, the associated reductions in the volume of PII will not be complete until 2013.

Our ongoing audit of the United States Merchant Marine Academy's (USMMA) network identified and exploited a critical vulnerability providing full access to the network, including databases containing sensitive midshipmen information. While USMMA corrected this identified vulnerability, we also identified numerous internal administrative and technical control deficiencies that continue to place staff and midshipmen PII at risk of unauthorized access.

Creating an Effective Department-Wide Enterprise Architecture Program

An agency's EA program is necessary to assist management in understanding its current technology infrastructure, defining what its future infrastructure should be to accomplish its mission, and developing a plan to transition from the current to the future infrastructure. This process should incorporate the necessary planning and related spending to ensure that information systems remain protected at all times. Despite its $48 million investment and years of effort, DOT has no program to establish a Department-wide EA and relies on each Operating Administration to develop its own EA. Therefore, the Department has only limited oversight in this area. In response to an OMB request, the Department recently began efforts to plan for the development a DOT-wide EA. However, until OCIO can better guide and oversee Operating Administrations' EA programs, the Department cannot verify that security controls are properly considered in acquisition of new technology or identify information technology redundancies that exist or may occur as a result of the absence of this program.

CHAPTER 7

Related Products The following related reports can be found on the OIG Web site at http://www.oig.dot.gov.

- Quality Control Review on the Vulnerability Assessment of FAA's Operational Air Traffic Control System, April 15, 2011

- Timely Actions Needed To Improve DOT's Cyber Security, November 15, 2010

- ARRA Websites Vulnerable to Hackers and Carry Security Risks, October 22, 2010

For more information on the issues identified in this chapter, please contact Louis King, Assistant Inspector General for Financial and Information Technology Audits, at (202)-366-1407.

Defining Clear Goals To Guide the Federal Railroad Administration in Its Transformation

Source: AMTRAK 2010 Annual Report

The 2008 Rail Safety Improvement Act (RSIA) and Passenger Rail Investment and Improvement Act (PRIIA) dramatically realigned and expanded the Federal Railroad Administration's (FRA) roles and responsibilities. In addition, the American Recovery and Reinvestment Act (ARRA) infused an unprecedented amount of new capital into new passenger rail programs and drastically accelerated timeframes for implementation. However, 3 years later, FRA has yet to establish specific goals to guide its transformation and measure progress.

Key Challenges

- Completing a National Rail Plan with clearly defined national goals and roles for stakeholders in the vision for intercity passenger rail

- Balancing and prioritizing resources to address responsibilities by using established goals for measuring program performance

Completing a National Rail Plan With Clearly Defined National Goals and Roles for Stakeholders in the Vision for Intercity Passenger Rail FRA has yet to complete a long-range National Rail Plan as required by PRIIA. A complete rail plan—one that is consistent with approved state plans—would provide a blueprint for an efficient

national system of passenger and freight rail corridors. While FRA has issued a Preliminary National Rail Plan and Progress Report—in October 2009 and September 2010, respectively—neither defines specific goals to guide states' intercity passenger rail planning and encourage private sector support of state programs. Instead, they include broad themes and potential goals, such as establishing community connections in areas where population densities and competitive trip times create strong high-speed and intercity passenger rail markets. Even to achieve these broad goals, however, states need criteria for identifying population densities and trip times.

At the same time, the roles various stakeholders will play in intercity passenger rail remain unclear. Although FRA's progress report states that successfully implementing high-speed intercity passenger rail requires participation from a number of industry stakeholders—from equipment manufacturers to service operators—it does not specify what their roles will be. Rail industry stakeholders have expressed optimism about increased public investment in intercity passenger rail, but without a complete National Rail Plan there is uncertainty about how effectively private stakeholders can participate in the intercity passenger rail market.

Balancing and Prioritizing Resources To Address Responsibilities by Using Established Goals for Measuring Program Performance FRA has been challenged to implement PRIIA and RSIA requirements and tasks while continuing to carry out its traditional responsibilities. According to FRA officials, delays in finalizing certain rulemakings, policies, and procedures—including many associated with the High Speed Intercity Passenger Rail program (HSIPR)—are primarily due to the Agency's need to focus on safety, FRA's top priority. Safety initiatives, including rulemakings, have had first claim on FRA resources.

Consequently, as of August 2011 FRA had obligated $7.4 billion to 102 projects without final guidance or regulations for application procedures and qualification requirements. Although FRA has developed interim guidance that describes possible factors for the evaluation of applications—such as organizational capacity, thoroughness of management plans, and reasonableness of project completion schedules—these factors are largely qualitative, which make it difficult to compare potential benefits across project proposals. The interim guidance also lacks information on how the factors should be weighted, increasing the subjectivity of the evaluation process. Without more quantitative metrics and specific grant-related regulations, FRA cannot be sure that its award decisions are based on sound ridership and revenue forecasts, public benefits valuations, and operating cost estimates. Moreover, it cannot ensure that its investments are based on competing projects' relative value.

According to FRA staff, the lack of a complete National Rail Plan has also delayed FRA's efforts to develop a schedule for achieving specific, measurable performance goals that include estimated funds and staff resources needed to accomplish each goal. PRIIA requires FRA to submit the schedule to Congress with the President's budget each fiscal year starting with fiscal year 2010, along with an assessment of progress towards achieving the

performance goals. Completing the schedule could provide the basis for FRA to prioritize its ongoing and outstanding responsibilities, such as completing policies and procedures related to HSIPR; help allocate resources to accomplish the work planned; and report on progress.

Related Products The following related reports and testimonies can be found on the OIG Web site at http://www.oig.dot.gov.

- Federal Railroad Administration Progress Implementing the Passenger Rail Investment and Improvement Act, September 14, 2011

- The Federal Railroad Administration Faces Challenges in Carrying Out Expanded Role, April 29, 2010

- DOT's Implementation of the American Recovery and Reinvestment Act: Continued Management Attention Is Needed To Address Oversight Vulnerabilities, November 30, 2009

- American Recovery and Reinvestment Act of 2009: Oversight Challenges Facing the Department of Transportation, March 31, 2009

For more information on the issues identified in this chapter, please contact Mitch Behm, Assistant Inspector General for Rail, Maritime, and Economic Analysis, at (202)-366-9970.

Utilizing Department Credit Programs To Leverage Limited Federal Transportation Infrastructure Resources

Source: Federal Highway Administration

The National Surface Transportation Infrastructure Financing Commission[35] estimates that nearly $100 billion in Federal investments is needed annually to preserve and enhance our Nation's surface transportation infrastructure. However, the Highway Trust Fund (HTF) typically devotes less than $45 billion per year on roadways and transit systems. In recent years, HTF receipts have fallen significantly short of HTF outlays, further straining the Nation's ability to meet its increasing surface transportation infrastructure needs. Given the current fiscal environment, it is critical that the Department maximize the effectiveness of its credit programs and expand the use of innovative financing techniques such as public private partnerships (PPP), where appropriate, to ensure the viability of our surface transportation infrastructure.

Key Challenges

- Increasing participation in credit programs with significant excess capacity
- Expanding the capacity of credit programs that are oversubscribed

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[35] Paying Our Way: A New Framework for Transportation Finance, Report of the National Surface Transportation Infrastructure Financing Commission, February 26, 2009.

CHAPTER 9

Increasing Participation in Credit Programs With Significant Excess Capacity
To date, only a small percentage of authorized funds for the Department's Railroad Rehabilitation and Infrastructure Financing (RRIF), Title XI Federal Ship Financing (Title XI), and Tax-Exempt Private Activity Bond (PAB) credit programs[36] have been utilized. The significant excess lending capacity of these programs could help finance surface transportation infrastructure improvements.

Since RRIF was established in 1998, the Federal Railroad Administration (FRA) has made loans to railroads totaling approximately $1.6 billion—roughly 4.5 percent of RRIF's total authorization of $35 billion. Application costs and lengthy application review periods appear to contribute to RRIF's underutilization. Historically, loan recipients have had to pay a credit risk premium (CRP),[37] ranging between 2 percent and 8 percent of total loan value.[38] In addition, applications can take as long as 14 months to process.

The Title XI Loan Guarantee Program (Title XI), established in 1936, currently has over $60 million in appropriations available that can be leveraged as much as twentyfold to guarantee up to an additional $1.2 billion in loans.[39] However, the program has a history of borrowers defaulting on their loans. Specifically, between February 1998 and April 2002, five Title XI borrowers defaulted on nine loan guarantees totaling roughly $490 million. Between fiscal years 2008 and 2010, an additional six borrowers defaulted on loan guarantees totaling $305 million. After our 2003 and 2004 reports outlined concerns about potential increases in defaults due to program administration weaknesses, Congress cut off program funding from fiscal year 2003 through fiscal year 2007. In 2010 and 2011, Congress provided only $5 million for new loan guarantees. In December 2010, following up on the Maritime Administration's (MARAD) implementation of our recommendations arising from the prior audits, we raised continued concerns regarding MARAD's oversight and monitoring of the Title XI program.

The Department's PAB obligations total $15 billion, but only $2.2 billion in bonds have been issued to date, with an additional $2.4 billion approved but not yet issued. Even though the opportunity for low-cost, tax-exempt financing under the PAB credit program is intended to increase private sector investment in transportation infrastructure projects, demand for PAB financing remains relatively low for surface transportation projects. As with RRIF, the cost associated with issuing PABs may be contributing to the program's underutilization. PAB borrowers have to pay underwriting fees averaging just under 0.6 percent of the total

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[36] RRIF provides direct Federal loans and loan guarantees to finance the development of railroad infrastructure; Title XI provides loan guarantees to promote the growth and modernization of the U.S. merchant marine fleet and U.S. shipyards; and PABs authorize state and local government authorities to issue bonds on behalf of private entities that will invest the proceeds of the bond issue in highway and freight transfer infrastructure projects.

[37] CRP equals the net present value of expected losses due to default, delinquency, or prepayment. The CRP is based primarily on two factors: the financial viability of the applicant and the value of the collateral provided to secure the debt.

[38] The average RRIF loan to date is approximately $53 million.

[39] Under the Federal Credit Reform Act of 1990, the Title XI program must have funds on hand for each loan guarantee it issues equal to the estimated long-term cost of that guarantee to the Federal Government if the borrower defaults. Because the Maritime Administration estimated this loan loss reserve to approximate 5 percent, the program's current authorized balance of $62.2 million would support loans of $1.24 billion ($62.2 million ÷ 5 percent).

bond issuance proceeds.[40] PABs are also subject to the Alternative Minimum Tax, which makes them less attractive to municipal bond investors because the interest income they receive through PABs may in some circumstances be taxable.

Reducing the application timeline for RRIF and properly monitoring the Title XI program could result in expanding the use of these programs and further leverage Federal support of surface transportation infrastructure projects.

Expanding Capacity of Credit Programs That Are Oversubscribed The Transportation Infrastructure Finance and Innovation Act (TIFIA) credit program, established in 1998, uses innovative financing mechanisms to provide loans, loan guarantees, and lines of credit to support surface transportation projects, making them more appealing to private investors. Unlike the Department's other credit programs, TIFIA funds infrastructure projects across surface transportation modes, including highways, transit, railroads, intermodal freight, and port access. TIFIA received an annual appropriation of $122 million—as authorized by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. Unlike other programs, such as RRIF, the Department has used these funds to pay 100 percent of the CRP—the most significant component of the application cost—associated with TIFIA financing. To date, TIFIA has provided credit assistance totaling $8.3 billion for 22 highway and transit projects through 21 loans and 1 loan guarantee and has provided funding for projects totaling $30.7 billion. Additionally, beginning in fiscal year 2008, the total credit requests have exceeded the program's available annual CRP appropriation. Presently, TIFIA has a backlog of 34 applications for projects totaling $48.2 billion.

Recognizing the significant demand for TIFIA, both the House and Senate versions of the next surface transportation authorization propose an increase in TIFIA's annual CRP appropriation to $1 billion from the current $122 million. Furthermore, regulations[41] permit the Department to accept a fee from applicants to reduce the CRP associated with their projects. This would allow the Department to expand the breadth of the program by shifting a portion of the CRP expense to borrowers. However, doing so would increase the need for upfront capital, which may deter certain applicants. Increasing TIFIA's program capacity could also strain the administrative resources to monitor and manage the program.

TIFIA provides a platform that combines PPPs with a number of other Federal and state funding sources in a manner that makes PPPs more financially attractive to private investors. TIFIA's ability to leverage Federal spending[42] makes it a powerful tool for channeling future Federal investment in the Nation's surface transportation infrastructure.

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[40] The average PAB amount to date is approximately $565 million.

[41] In any given year, if there is insufficient budget authority to fund the credit instrument for a qualified project that has been selected to received assistance under TIFIA, 49 CFR 80.17 permits the Department and approved applicant to agree upon a supplemental fee to be paid by the applicant to reduce the CRP associated with that project.

[42] Every Federal dollar spent under the program could provide up to $10 in TIFIA credit assistance and be leveraged into $30 in transportation infrastructure investment.

CHAPTER 9

Related Products   The following related reports and testimonies can be found on the OIG Web site at http://www.oig.dot.gov.

- Financial Analysis of Transportation Related Public Private Partnerships, July 28, 2011

- Title XI Loan Guarantee Program: Actions Are Needed To Fully Address OIG's Recommendations, December 7, 2010

- Letter to Senate Budget Committee Ranking Member Gregg Regarding DOT's Projections of Highway Trust Fund Solvency, June 24, 2009

- Growth in Highway Construction and Maintenance Costs, September 26, 2007

- Report on Highway Administrations Oversight of Load Ratings and Postings on Structurally Deficient Bridges on the National Highway System, March 21, 2006

- Title XI Loan Guarantee Program, September 28, 2004

- Title XI Loan Guarantee Program, March 27, 2003

For more information on the issues identified in this chapter, please contact Mitch Behm, Assistant Inspector General for Rail, Maritime, and Economic Analysis, at (202)-366-9970.

Comparison of Fiscal Year 2012 and 2011 Top Management Challenges

Fiscal Year 2012 Challenges	Fiscal Year 2011 Challenges
• Enhancing DOT's Oversight of Highway, Bridge, and Transit Safety	• Maintaining Momentum in the Department's Oversight of Highway, Motor Vehicle, Hazardous Materials, and Transit Safety
• Ensuring Effective Oversight on Key Initiatives That Can Improve Aviation Safety	• Maintaining Momentum in Addressing Human Factors and Improving Safety Oversight of the Aviation Industry
• Ensuring Effective Oversight of Hazardous Liquid and Natural Gas Pipeline Safety	• Improving the Department's Oversight of Highway, Transit, and Pipeline Infrastructure
• Ensuring Effective Oversight of ARRA Projects and Applying Related Lessons Learned To Improve DOT's Infrastructure Programs	• Ensuring Transparency and Accountability in the Department's Recovery Act Programs • Improving the Department's Oversight of Highway, Transit, and Pipeline Infrastructure
• Managing the Next Generation Air Transportation System Advancement While Controlling Costs	• Advancing the Next Generation Air Transportation System While Ensuring the Safe and Efficient Operation of the National Airspace System
• Managing DOT Acquisitions in a More Strategic Manner To Maximize Limited Resources and Achieve Better Mission Results	• Implementing Processes To Improve the Department's Acquisitions and Contract Management
• Improving the Department's Cyber Security	• Improving the Department's Cyber Security
• Defining Clear Goals To Guide the Federal Railroad Administration in Its Transformation	• Transforming the Federal Railroad Administration To Address Significantly Expanded Oversight Responsibilities
• Utilizing Department Credit Programs To Leverage Limited Federal Transportation Infrastructure Resources	• Identifying Sufficient Funding Sources To Support Future Federal Investment in Surface Transportation Infrastructure

APPENDIX. DEPARTMENT RESPONSE

U.S. Department of Transportation
Office of the Secretary
of Transportation

Memorandum

Subject: **ACTION**: Management Response to OIG Draft Report on Top Management Challenges

Date: November 2, 2011

From: Christopher P. Bertram
Assistant Secretary for Budget and Programs,
and Chief Financial Officer

Reply to
Attn. of:

To: Calvin L. Scovel
Inspector General

The Department has strengthened its processes for reviewing and responding to Office of Inspector General (OIG) reports to ensure that findings are carefully reviewed, differences are identified, and commonalities addressed so that policies are effectively developed, programs produce positive and meaningful results, and taxpayer funds are invested wisely. Thanks to this process, management has had an opportunity to weigh in on most of the issues identified in the OIG's report as top management challenges. Similarly, because we have effective systems and communicate thoroughly and regularly with the OIG, there are no surprises here. We are particularly pleased to note that this year, the OIG report cites not only the findings from its reporting, but also recognizes the actions taken by management to address challenges throughout the Department.

Transportation safety is our absolute priority. The Department's efforts are broad in scope from new approaches to optimizing the use of safety inspectors by the Federal Aviation Administration to ensuring that the Federal Highway Administration has sound processes for working with states to identify bridges in need of attention. We are working to ensure the Pipeline and Hazardous Materials Safety Administration has effective policies and procedures for guiding its workforce and operating with its state partners. This Administration is also working to provide a more effective system to provide consistent oversight for rail transit systems that makes best use of state and Federal resources as described in pending legislation. These efforts are guided by the common theme of making the transport of people and goods, so vital to this Nation's economy, as safe as is humanly possible.

Ensuring that every dollar spent on airports, roads, and transit is used to the maximum benefit of the taxpayer is also a top priority. While it has always been a priority to ensure that Federal funds are used wisely, the need to make every dollar count in these challenging economic times is more important than ever. We are strengthening procurement systems using comprehensive strategic intermodal approaches to build better, stronger, faster systems. FAA's efforts to keep its air traffic control system up to date, safe and efficient is a constant challenge that requires vigilant and judicious investment in its infrastructure.

The Department has also taken on the difficult challenge of bringing high speed intercity passenger rail to the Nation at an accelerated timescale. While still early in the process, FRA has demonstrated its commitment to establishing and fulfilling clear investment criteria. Finally, we continue to innovate with new approaches to leveraging Federal investment in transportation infrastructure. The National Infrastructure Bank (I-Bank) is a particularly important new approach that can leverage Federal dollars and focus on investments of National and regional significance that often fall through the cracks between the traditional transportation programs. The I-Bank would encourage private, state, and local entities to invest capital in projects that are most critical to our economic progress. It would also base its investment decisions on clear analytical measures of performance, competing projects against each other to determine which would produce the greatest return for American taxpayers.

Gaining constructive input from the OIG's oversight is critical to our efforts across the Department. While the challenges identified in the OIG report are known and well recognized, solutions continue to evolve along with the world around us. The OIG's constructive insights, offered from an informed, yet arms-length perspective, provides important information that can be extremely useful to helping ensure that we are effective as possible.