

GAO

Testimony

Before the Subcommittee on Transportation,
Housing and Urban Development, and
Related Agencies, Committee on
Appropriations, House of Representatives

For Release on Delivery
Expected at 10:00 a.m. EDT
Thursday, March 29, 2012

TRANSPORTATION

**Key Issues and Management
Challenges**

Statement of Phillip R. Herr, Managing Director,
Physical Infrastructure Issues



G A O

Accountability * Integrity * Reliability

Mr. Chairman and Members of the Subcommittee:

I appreciate the opportunity to participate in this hearing to discuss key issues and management challenges facing our nation's transportation system, as well as the Department of Transportation (DOT), as Congress deliberates transportation policy and funding issues. A safe and efficient transportation system is critical to our economy and affects the daily life of most Americans. Our nation has built vast systems of roadways, airways, railways, transit systems, pipelines, and waterways that help move people and goods. However, these systems are under growing strain, and the cost to repair and upgrade them to meet current and future demands is estimated in the hundreds of billions of dollars. Yet, calls for increased investments in the systems come at a time when traditional funding sources are eroding. Funding is further complicated by the federal government's financial condition and fiscal outlook. GAO's long-term simulations show that, absent policy changes, the federal government faces unsustainable growth in deficits and debt.

The challenges facing DOT and Congress regarding transportation priorities and funding cannot be addressed by simply spending more money. Despite large increases in expenditures for transportation in recent years, system performance has not commensurately improved. Congestion continues to grow, particularly in urban areas, and looming problems from the anticipated growth in travel are not being adequately addressed. As performance degrades and the system grows increasingly unreliable, the economic and environmental implications are significant, including wasted fuel and lost time, as cars idle in traffic, airline passengers confront delays, and businesses incur increased costs. As always, safety remains a primary concern, and improving information security is critical to DOT's mission.

Although our nation's transportation system is owned and operated by multiple levels of government and the private sector, DOT is the principal federal agency responsible for implementing national transportation policy and administering most of the federal transportation programs. DOT has multiple missions—primarily focusing on mobility and safety—that are carried out by its various operating administrations (such as aviation, highways, transit, railroads, and others). For fiscal year 2013, the President's budget has requested \$74.5 billion to carry out its activities.

My statement today focuses on five key issues and management challenges that DOT and Congress face. These areas are

-
- funding the nation's transportation system,
 - refocusing and restructuring surface transportation policies and programs,
 - improving transportation safety,
 - implementing the Next Generation Air Transportation System (NextGen), and
 - improving information security.

My statement is based on a body of work that we have completed from March 2008 through March 2012, including recommendations we have made to both DOT and Congress. This body of work was conducted in accordance with generally accepted government auditing standards. A list of related GAO products is included with this statement, along with references to these products throughout the statement.

Funding the Nation's Transportation System

Funding Highways and Transit

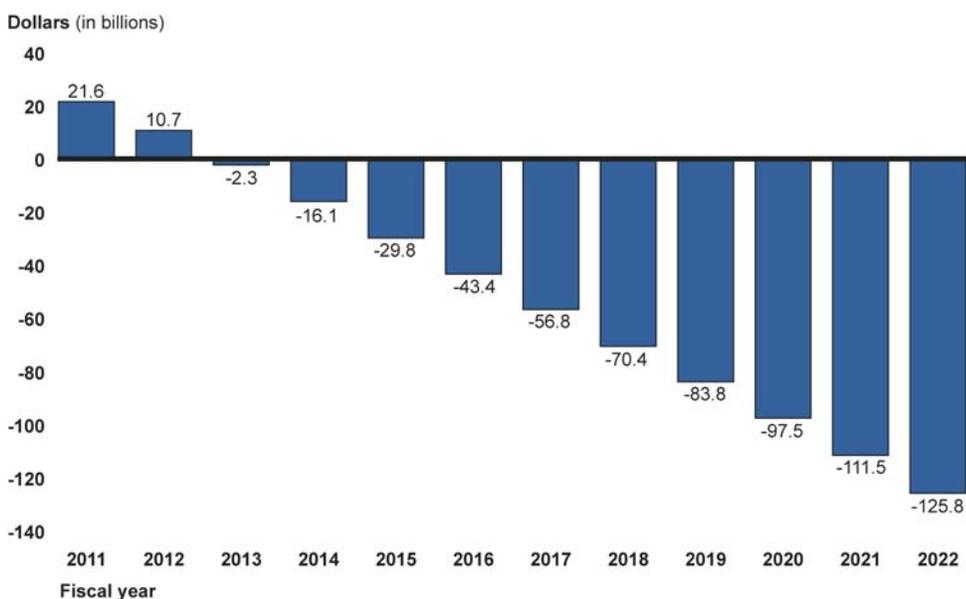
The major source of federal surface transportation funding is the Highway Trust Fund,¹ but the revenues that make up that fund are eroding. The federal motor fuel tax rate has not increased since 1993, meaning that the 18.4 cent per gallon tax on motor fuels enacted in 1993 is worth about 11.5 cents today. This trend will continue with the introduction of more fuel-efficient and alternative-fuel vehicles that have the potential through fuel savings to decrease motor fuel purchases and associated tax receipts. The Congressional Budget Office estimates, as of March 2012, that to maintain current spending levels plus inflation between 2013 and 2022, the Highway Trust Fund will require over \$125 billion more than it is expected to take in over that period.² (See fig. 1.) For this and other

¹The Highway Trust Fund is an account established by law to hold and distribute federal highway user taxes (e.g., federal excise taxes on fuel) that are dedicated for highway and transit related purposes. It is composed of two accounts: the Highway Account and the Mass Transit Account.

²*Congressional Budget Office—March Fiscal Year 2012 Baseline Projections for the Highway Trust Fund.*

reasons, funding surface transportation remains on GAO's High-Risk List.³ Long-term reauthorization of surface transportation provides an opportunity for Congress to fund the program on a sustainable basis.

Figure 1: Projected Highway Trust Fund Balance, Fiscal Years 2011 through 2022



Source: CBO.

The President's fiscal year 2013 budget proposes increasing surface transportation funding levels, including a 34 percent increase over the next 6 years for highways and bridges—funded in part through general revenue transfers. These transfers would be in addition to the more than \$30 billion Congress transferred from general revenues to the Highway Trust Fund since 2008. Augmenting transportation funding through general revenues would move away from the “user pays” principle and might not be sustainable in the long term given the federal government's growing fiscal challenge.

Congress and the administration are considering various proposals to expand federal financing tools to help leverage investment in transportation infrastructure:

³[GAO-11-278](#).

-
-
- *Expanding the Transportation Infrastructure Financing Innovation Act (TIFIA) program.* The TIFIA program provides federal credit assistance in the form of direct loans, loan guarantees, and lines of credit to finance surface transportation projects, including highway, transit, rail, and intermodal projects. In recent years, TIFIA has been in high demand in part because of the tightening of commercial credit markets and low federal treasury rates. Reauthorization proposals contain various changes to TIFIA, including a significant expansion of the program, increasing the eligible federal share of the program, and modifying the federal nonsubordination clause.⁴ DOT will face challenges in balancing a broader portfolio, with the increased exposure and risk to the federal government that these changes might produce. Additionally, although such changes might help augment funding, DOT will face challenges in ensuring that adequate staff and expertise exist to efficiently manage an expanded program.
 - *Creating a National Infrastructure Bank.* As envisioned in legislative and administration proposals, a National Infrastructure Bank would make direct loans, loan guarantees, and offer credit enhancements to eligible applicants for transportation and other projects (including those in the water and energy sectors) in an attempt to stretch limited federal funds. The creation of such an entity would create numerous challenges inherent in the start-up of any new program or government entity. One such challenge would be ensuring that any new program or entity does not duplicate or overlap any existing financing programs and tools, such as TIFIA, state infrastructure banks, and others. Another challenge would stem from seeking a balance between financing projects that yield the highest public benefit—but that potentially concentrate funds in one region—with a desire for an equitable distribution of federal investment in infrastructure across the country.
 - *Continuing and expanding federal bonding mechanisms.* These mechanisms include Grant Anticipation Revenue Vehicles, which allow states to issue bonds backed by expected future federal-aid

⁴The nonsubordination clause or “springing lien” means that the TIFIA lien on project revenues can be subordinated to those of senior lenders except in the event of bankruptcy, insolvency, or liquidation of the obligor. In such an instance, the TIFIA lien would rise to parity with senior creditors. This provision can be effected through a master trust agreement, an intercreditor agreement, or other agreement entered into at the time of execution of the credit agreement.

highway formula grants, and Private Activity Bonds, which are debt instruments issued by state or local governments whose proceeds are used to construct projects with significant private involvement. Several bills have been introduced in Congress that would increase investment in the nation's infrastructure through bonding. Although bonds can provide up-front capital for infrastructure projects, accelerate construction, and potentially reduce construction costs, they can be more expensive for the federal government than traditional grants. The higher expense would result, in part, because the government would have to compensate the investors for the risks they assume.

While these tools have promise to help meet increasing transportation demands, they are forms of debt that must be repaid, not new revenues. New revenues for transportation infrastructure investments can come only from two sources: new taxes or new fees. Ultimately, raising new revenues or reducing transportation spending or both will be needed.

Funding Aviation

The Federal Aviation Administration's (FAA) expenditures are budgeted to continue to exceed forecasted revenues from the Airport and Airway Trust Fund in future years.⁵ FAA operation expenditures not covered by trust-fund revenues are projected to be paid for by general revenues from the U.S. Treasury.⁶ According to the President's fiscal year 2013 budget, roughly 20 percent of FAA's total annual expenditures for about the next 10 years might have to be paid for by general revenues. As the federal budget continues to be constrained, Congress may face difficult choices regarding reducing FAA's appropriations, which could increase FAA's

⁵FAA is primarily funded by appropriations from the Airport and Airway Trust Fund, which is financed by various excise taxes paid by passenger and cargo airlines and general aviation operators.

⁶In comparison, the general revenue contribution to FAA was about 33 percent and 31 percent in fiscal years 2010 and 2011, respectively. As the Congressional Research Service (CRS) has reported, there has been general acceptance that there is a public interest component to the operation of the national aviation system, which is appropriated from the Treasury's general revenues. This compensates for what the military, government, and nonuser beneficiaries (also known as societal users) might have contributed if they had actually paid into the trust fund.

total costs and delay the benefits associated with investments such as NextGen.⁷

Funding High-Speed Rail

The President's budget for fiscal year 2013 requests \$2.5 billion for high-speed and intercity passenger rail—part of a proposed \$47 billion for passenger rail projects over the next 6 years. However, Congress has not provided funding for high-speed rail since appropriating over \$10 billion through the American Recovery and Reinvestment Act (Recovery Act) of 2009 and the fiscal year 2010 DOT Appropriations Act.⁸ We recently reported that the Federal Railroad Administration (FRA) essentially followed good grant making practices as it awarded Recovery Act funds,⁹ but we have also identified several challenges facing these projects as they move forward.¹⁰ For example, project sponsors find it difficult to secure the up-front investment for construction costs and indicated that they have or will need some federal funding to develop their projects.

Refocusing and Restructuring Surface Transportation Policies and Programs

Long-term reauthorization provides an opportunity for Congress to fundamentally re-examine surface transportation programs as we have recommended—another reason why funding surface transportation is on GAO's High-Risk List—and to expand on recent efforts to reform the highway program. From the standpoint of state and local governments, re-examining surface transportation programs could reduce fragmentation and the administrative expenses states face complying with myriad federal statutory and regulatory requirements. This re-examination could include the following:

- *Clearly define the federal role in relation to other levels of government and, thus, create a more targeted federal role focused around evident national interests.* For issues in which there is a strong national

⁷We recently reported on the revenue forecast accuracy for the Airport and Airway Trust Fund and the extent to which revenues into the Airport and Airway Trust Fund might cover planned FAA expenditures. See [GAO-12-222](#).

⁸Congress subsequently rescinded \$400 million from the 2010 DOT Appropriations Act through the 2011 DOT Appropriations Act. Congress has also provided approximately \$1.4 billion annually to fund Amtrak operating and capital costs.

⁹[GAO-11-283](#).

¹⁰[GAO-09-317](#).

interest, ongoing federal financial support and direct involvement could help meet federal goals. Where national interests are less evident, other stakeholders could assume more responsibility, and some programs and activities may better be devolved to the states or other levels of government.

- *Ensure accountability for entities receiving federal funds, for example, by moving to a performance-based program.* Current programs lack links to transportation system performance or of grantees receiving federal funds. Most highway, transit, and safety grant funds are distributed through formulas that have only an indirect relationship to needs, and many have no relationship to performance or outcomes. Funds for highways, in particular, are distributed to return revenues to their state of origin and states have considerable flexibility to reallocate them among highway and transit programs. Legislation passed by the Senate—Moving Ahead for Progress in the 21st Century (MAP-21)—would direct DOT to develop performance targets for pavement on the Interstate Highway System and many of the nation’s bridges. If a state were not to meet the minimum condition levels for two consecutive reporting periods, it would be required to commit a specific percentage of its highway funding to the deficient area.¹¹ For other areas, MAP-21 directs states to develop performance targets related to national priorities, as well as link investment priorities to these targets.
- *Employ the best approaches and analysis to direct federal funds to infrastructure with clear national interests.* There is a natural tension between providing funding based on merit and performance and providing funds on a formula basis to achieve equity among states. Consequently, meritorious projects of national or regional significance, in particular those connecting multiple transportation modes or those that cross geographic boundaries, may not compete well at the state level for formula funds. We have recommended to Congress that a criteria-based selection approach be used to direct a portion of federal funds in programs designed to select transportation projects with national and regional significance.¹²

¹¹S. 1813, § 1106, 112th Cong., as adopted by the Senate March 14, 2012.

¹²[GAO-08-400](#) and [GAO-11-234](#).

Congress developed a merit-based approach in the Transportation Investment Generating Economic Recovery (TIGER) grant program, now in its fourth round of competitively awarding grants, based on criteria such as the potential for a project to improve the state of repair of critical infrastructure and reduce fatalities and injuries. The first round of the TIGER grants under the Recovery Act gave preference to projects that could be completed within about 2 years of the award announcement;¹³ that had substantial co-investments from other funding partners and where TIGER funds would complete that package of funding; and that would fund an operable project when completed.¹⁴ This approach has the potential to ensure that federal funds produce useful and functional projects in a timely fashion. Going forward, evaluating whether completed TIGER projects have met these goals will be important to assessing this program's potential for investing federal funds in projects of regional and national significance.

Should Congress move toward a more performance-based system for highways, DOT's Federal Highway Administration (FHWA) would need to work with the states to develop performance goals, measure states' progress, and take corrective action should states not meet performance targets. We have reported weaknesses in FHWA's oversight of statewide and metropolitan area planning processes that prevents FHWA from effectively measuring and tracking performance outcomes. FHWA's oversight focuses on process, rather than outcomes,¹⁵ and, as such, FHWA cannot assess whether states' investment decisions are improving the nation's transportation system's condition and performance. We recommended that FHWA more closely review states' transportation improvement programs to assess whether states' investments are achieving intended outcomes.¹⁶ In addition, FHWA would need to improve its ability to collect national level data on highway performance across many of the programs it oversees. We have made numerous

¹³The American Recovery and Reinvestment Act of 2009 required that, in making the final award selections, priority be given to projects that were expected to be completed within 3 years of enactment of the act on February 17, 2009. Pub. L. No. 111-5, div. A, title XII, 123 Stat. 115, 204. Awards for the first round of TIGER grants were made on February 17, 2010.

¹⁴[GAO-11-234](#).

¹⁵[GAO-09-898](#) and [GAO-11-77](#).

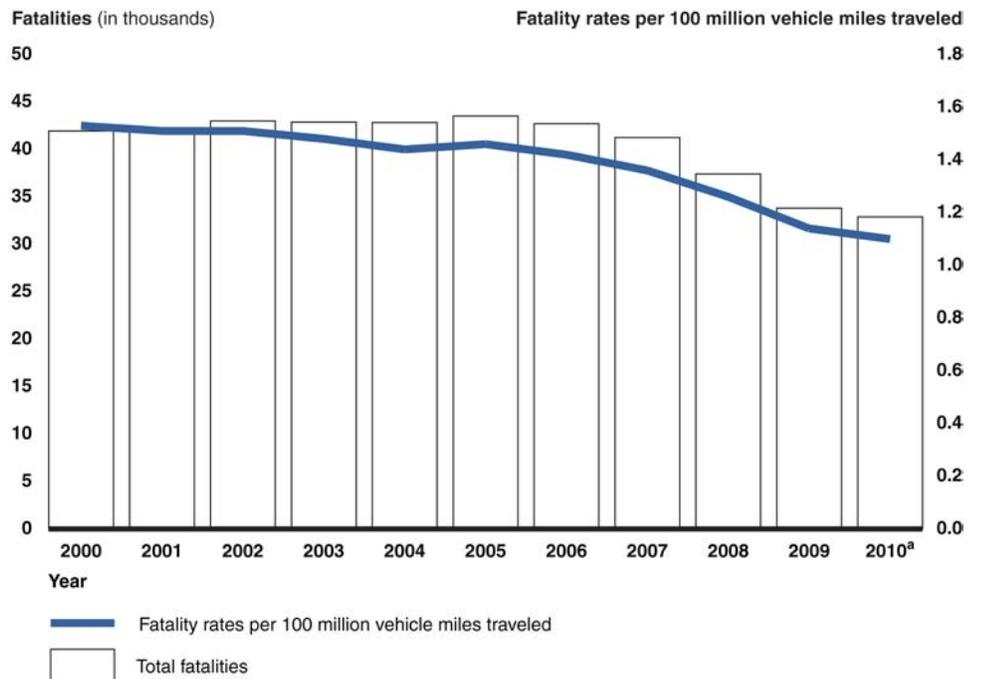
¹⁶[GAO-11-77](#).

recommendations to DOT related to the need for accurate and reliable national-level data.

Improving Transportation Safety

Another continuing challenge facing DOT pertains to improving transportation safety. In recent years, we have seen a remarkable decline in transportation-related fatalities and injuries, the vast majority of which occur on our nation's roads. Traffic fatalities decreased more than 20 percent over the last decade, from nearly 42,000 in 2000 to less than 33,000 in 2010, the lowest level since 1949. (See fig. 2.) Traffic injuries decreased approximately 30 percent, from about 3.2 million in 2000 to about 2.2 million in 2010. These encouraging trends are likely due in part to federal and state DOT efforts. However, even these reduced numbers of fatalities and injuries are still too many.

Figure 2: Traffic Fatality Rates and Total Number of Fatalities, 2000-2010



Sources: NHTSA and FHWA.

^aFatality rate for 2010 is based on estimated vehicle miles traveled data.

Other modes of surface transportation are relatively safe. Still, high-profile accidents have raised concerns, such as the collision of two trains in

Washington, D.C., in 2009 that resulted in 9 fatalities and 52 injuries. A less visible—but important—mode of freight transportation is the nation’s more than 2.5 million mile natural gas and hazardous liquid pipeline network. From 2004 to 2010, an average of about 16 fatalities per year for all pipeline incidents was reported to DOT. While pipelines are relatively safe, incidents can have dire consequences. For example, a natural gas pipeline explosion in San Bruno, California, in September 2010 killed 8 people and damaged or destroyed over 100 homes.

Turning to aviation, the U.S. system is one of the most efficient and safest in the world. However, from 1999 to 2010, over 450 aviation-related fatalities occurred annually. The vast majority of these fatalities were in the general aviation sector, which includes all forms of aviation except commercial and military operations. Specifically, this sector consists of over 220,000 aircraft—including airplanes, helicopters, and balloons—and composes over 90 percent of the U.S. civilian aircraft fleet engaged. Over the same time period, approximately 70 percent of fatal general aviation accidents occurred in the personal flying segment. In addition, a growing proportion of amateur-built aircraft are involved in accidents.

Our recent work on transportation safety has highlighted room for improvement in three areas: data, performance measurement, and oversight. High-quality safety data are vital to allocating resources and targeting programs effectively. High-quality data are also essential to implement performance measures to identify progress and ensure accountability. The National Highway Traffic Safety Administration (NHTSA) has made good progress toward establishing such performance measures, but within other DOT administrations, there remains room for improvement. As DOT moves closer to a data-driven, performance-based structure, a robust oversight approach is critical to ensure that states are establishing appropriate goals and making sufficient progress toward those goals.

- For traffic safety data, states maintain six core types of data systems that are used to identify priorities for highway and traffic safety programs.¹⁷ In 2010, we reported that NHTSA’s periodic assessments designed to help states identify quality issues with their data systems were in some cases incomplete or inconsistent. We recommended

¹⁷The six core types of systems are vehicle, driver, roadway, crash, citation and adjudication, and injury surveillance.

measures for DOT to make those assessments more useful for states, and DOT is implementing those measures.¹⁸

- For years, some commercial motor carriers have registered under a new identity to evade detection for previous safety violations. Currently, the Federal Motor Carrier Safety Administration (FMCSA) examines a small number of the tens of thousands of new motor carrier applicants that register annually—including only 2 percent of approximately 66,000 applicants in 2010—to identify carriers operating illegally under new identities. We recently recommended that FMCSA develop a data-driven approach to target new carriers attempting to disguise their former identities and expand this new oversight approach to examine all motor carriers.¹⁹
- The Federal Transit Administration (FTA) has created plans and other tools to help guide and manage its transit safety efforts but has not fully adopted leading practices to set clear performance goals and related measures. Performance goals can help prioritize efforts and make the best use of available resources, which is essential for FTA, given the relatively small number of staff it has devoted to safety and state of good repair efforts. To ensure that the agency targets resources effectively, we recommended that FTA use leading practices to set clear and specific goals and measures to guide and track the performance of its rail transit safety efforts.²⁰ FTA concurred in part with our recommendation but reported that it was premature to act before the passage of legislation that provides FTA with sufficient and appropriate rail transit safety authority. However, it is unclear why waiting to fully adopt leading practices is necessary since FTA already has efforts underway to assist transit agencies in addressing safety challenges.
- FTA oversees state safety agencies that are responsible for providing direct oversight for transit agencies, but safety standards, expertise, staffing levels, and enforcement authority vary among these agencies. DOT has proposed legislation that would give FTA authority to set uniform safety standards for transit agencies and enforce them, in

¹⁸ [GAO-10-454](#).

¹⁹ [GAO-12-364](#).

²⁰ [GAO-11-199](#).

cooperation with the states, and FTA has requested funds to set up such a new rail transit safety oversight program. In 2009, we raised some issues for Congress to consider in deciding whether or how to act on DOT's proposal, including determining what level of government has the best capacity to oversee transit safety, ensuring that FTA and state oversight agencies would have adequate and qualified staff to carry out the envisioned program, and understanding the potential budgetary implications of the program.²¹

- Regarding pipeline safety, part of the nation's pipeline network consists of more than 200,000 miles (estimated) of onshore "gathering" pipelines, many of which are not federally regulated because they have generally been located away from populated areas and operate at relatively low pressures. We recently recommended that the Pipeline and Hazardous Materials Safety Administration (PHMSA) collect data on these pipelines to assess safety risks because urban development is encroaching on existing pipelines and the increased extraction of oil and natural gas from shale deposits is resulting in new gathering pipelines that can be larger in diameter and operate at higher pressures.²²
- With regard to aviation, FAA lacks data to accurately assess the safety performance of certain industry sectors, such as general aviation, and to more fully assess the trends in certain types of events, such as for runway excursions and ramp accidents. FAA has concurred with, but has not yet implemented, several of our recommendations aimed at improving its capability to use data for aviation safety oversight.²³ Similarly, we could not determine whether FAA completed the required inspections for pilot examiners or the reasons that the discretionary inspections of flight instructors were conducted. We recently recommended that FAA develop a comprehensive system to measure performance for meeting annual inspection requirements for pilot schools and better understand the nature and scope of discretionary inspections for flight instructors.²⁴

²¹[GAO-10-314T](#). The Senate has adopted legislation that would expand FTA's role in some of these areas. See S. 1813, § 20021.

²²[GAO-12-388](#).

²³[GAO-10-414](#) and [GAO-12-24](#).

²⁴[GAO-12-117](#).

Implementing the Next Generation Air Transportation System

An additional challenge that I would like to address pertains to the implementation of the Next Generation Air Transportation System (NextGen)—a complex multiagency undertaking intended to transform the current radar-based system into an aircraft-centered, satellite-based system by 2025.²⁵ FAA has taken some steps to improve NextGen implementation and is continuing to address critical issues that we, stakeholders, and others have identified over the years.²⁶ For example, FAA has made progress in streamlining its processes and improving its capacity to develop new flight procedures that have led to measurable benefits, such as fuel savings.²⁷ FAA has also set NextGen performance goals through 2018.²⁸ However, as our recent and ongoing work has shown, FAA faces several challenges in keeping key NextGen acquisitions within cost estimates and on schedule, delivering NextGen benefits, and addressing changes in management and governance, including vacancies in key leadership positions.

- *Timely delivery of key acquisitions.* As we recently reported, FAA continues to face challenges in assuring that acquisitions are within cost and on schedule.²⁹ In our review of 30 major air traffic control acquisition programs, including those critical to the NextGen implementation, we found that costs for 11 of the 30 programs have increased from initial estimates and that 15 programs experienced delays.³⁰

²⁵Along with the Department of Transportation and FAA, the Departments of Defense, Commerce, and Homeland Security, the National Aeronautics and Space Administration, and the White House Office of Science and Technology Policy are involved in NextGen development.

²⁶See the end of this statement for a list of related GAO products on NextGen.

²⁷For example, FAA reports thousands of gallons of fuel savings from the performance-based navigation routes in operation at Atlanta and the continuous descents being used into Los Angeles and San Francisco.

²⁸These goals include improving the throughput of air traffic at key airports by 12 percent over 2009 levels, reducing delays by 27 percent from 2009 levels, and achieving a 5 percent reduction in average taxi-time at key airports.

²⁹[GAO-12-223](#).

³⁰See [GAO-12-223](#) for more information on the specific air traffic control programs that have experienced cost increases or schedule delays.

Cost increases and schedule delays occurred due to (1) additional or unanticipated system requirements; (2) insufficient stakeholder involvement (such as air traffic controllers' input) throughout system development; (3) underestimating the complexity of software development; and (4) unanticipated events, including funding shortfalls or work stoppages. These challenges, if they persist, will impede the implementation of NextGen, especially given interdependencies among many acquisition programs in which cost increases or delays in one program can affect the costs and schedules of others. We recommended that FAA further incorporate best practices into its acquisition processes by requiring cost and schedule risk analysis, independent cost estimates, and integrated master schedules.³¹

- *Delivery of NextGen benefits:* To maintain credibility with aircraft operators, FAA must deliver systems, procedures, and capabilities on time, so that operators can realize benefits from investments they have already made in avionics equipment and have incentives to continue to invest in the equipment necessary for NextGen to operate as planned. For example, a large percentage of the current fleet is equipped to fly more precise performance-based navigation procedures. Although FAA has begun implementing new flight procedures to allow for more precise navigation under NextGen, aircraft operators have raised concerns that, to date, FAA has not produced procedures that are most effective in delivering such benefits as reduced flight time, congestion, and fuel consumption. The NextGen Advisory Committee has made recommendations to help FAA identify and prioritize improvements that could provide more immediate benefits, including recommending that FAA focus NextGen capabilities at metroplexes that have the greatest impact on aviation

³¹For our report, we selected and analyzed four programs—the Automatic Dependent Surveillance-Broadcast (ADS-B) system, the Collaborative Air Traffic Management Technologies (CATMT) system, the System Wide Information Management (SWIM) system, and the Wide Area Augmentation System (WAAS)—in depth and found that FAA is not consistently following the characteristics of high-quality cost estimates and scheduling best practices that GAO previously identified.

system performance.³² To help address industry concerns, FAA has initiatives under way or planned in 21 metropolitan areas across the country, including completing initial work to identify improvements in 7 metroplexes, including Washington, D.C.; Charlotte, North Carolina; and Atlanta, Georgia—focusing on routes and procedures that will produce benefits for operators.³³

While some operational improvements can be made with existing aircraft equipment, realizing more significant NextGen benefits requires a critical mass of properly equipped aircraft. Reaching that critical mass is a significant challenge because the first aircraft operators to purchase and install NextGen-capable technologies will not obtain a return on their investment until many other operators do. FAA estimates that the avionics needed on aircraft to realize significant NextGen capabilities will cost private operators about \$5 billion to \$7 billion through 2018. The recently passed FAA Modernization and Reform Act of 2012 created a program to facilitate public-private financing, such as loan guarantees and other credit assistance tools, for equipping general aviation and commercial aircraft with NextGen technologies.³⁴ However, no decisions have been made on how to incentivize this transition.

- *Changes in management and governance:* FAA is working to abolish and merge a number of committees to improve decision making and reduce time requirements of senior FAA executives. It also moved the NextGen organization under the responsibility of the Deputy Administrator (who is currently serving as the Acting Administrator) and created a new head of program management for NextGen-related

³²The NextGen Advisory Committee is comprised of aviation stakeholders from the government and industry. The committee works to develop a common understanding of priorities in the context of overall NextGen capabilities and implementation constraints, with an emphasis on the near term and midterm. The committee primarily focuses on implementation issues, including prioritization criteria at a national level, joint investment priorities, and location and timing of capability implementation.

³³In addition, the FAA Modernization and Reform Act of 2012, Pub. L. No. 112–95, § 213, 126 Stat. 11, 46-50, requires FAA to certify, publish, and implement procedures that maximize the fuel efficiency and airspace capacity of NextGen commercial operations at each of the 35 operational evolution partnership (OEP) airports by June 30, 2015.

³⁴Pub. L. No. 112–95 § 221, 126 Stat. 11, 54.

programs to ensure improved oversight of NextGen implementation.³⁵ Additionally, the recently passed FAA authorization act redesignated the Director of the Joint Planning and Development Office to directly report to the FAA Administrator and created a new leadership position—the Chief NextGen Officer—that will also report to the administrator but has not yet been filled. While elimination of duplicative committees and a focus on accountability for NextGen implementation are positive steps, it remains to be seen whether this latest reorganization will produce the desired results without the necessary leadership positions filled. As we have previously reported, leadership is a critical element of success for large-scale systems integration efforts like NextGen.³⁶

Improving Information Security

DOT relies on more than 400 computerized information systems to carry out its financial and mission-related operations. Effective information security controls are required to ensure that financial and sensitive information is adequately protected from inadvertent or deliberate misuse; fraudulent use; and improper disclosure, modification, or destruction. Ineffective controls can also impair the accuracy, completeness, and timeliness of information used by management. The need for effective information security is further underscored by the evolving and growing cyber threats to federal systems and the dramatic increase in the number of security incidents reported by federal agencies, including DOT. From fiscal years 2007 to 2011, the number of incidents reported to the United States Computer Emergency Readiness Team (US-CERT)³⁷ by DOT increased by more than 140 percent.

DOT has been challenged to effectively protect its computer systems and networks. Our analysis of agency and OIG reports shows that the department has not consistently implemented effective controls, such as

³⁵As part of FAA's restructuring efforts, the Air Traffic Organization will be divided into two branches: operations and NextGen program management. Operations will focus on the day-to-day management of the national air space system and the program management branch will be responsible for developing and implementing NextGen programs while working with operations to ensure proper integration.

³⁶[GAO-10-824](#).

³⁷US-CERT is a component of the Department of Homeland Security and is responsible for analyzing and addressing cyber threats and vulnerabilities and disseminating cyber-threat warning information. Federal agencies, including DOT, are required to report security incidents to US-CERT.

those intended to prevent, limit, and detect unauthorized access to its systems or manage the configuration of devices to prevent unauthorized access and ensure system integrity. We have reported on the need for federal agencies, including DOT, to improve implementation of information security controls, such as those for configuring desktop computers and wireless communication devices.³⁸ For example, we recommended that DOT complete deployment of a National Institute of Standards and Technology (NIST)-validated security tool to monitor compliance with the U.S. Government Configuration Baseline (USGCB) and ensure that language is included in contracts to ensure new acquisitions include USGCB settings and products of information technology providers operate effectively using them. DOT agreed with our recommendations. Until DOT strengthens information security controls, it has limited assurance that financial and sensitive information is adequately protected from inadvertent or deliberate misuse, fraudulent use, and improper disclosure, modification, or destruction.

In conclusion, we have ongoing work examining many of the topics discussed in this statement. For example, we are conducting work for this subcommittee on the viability of supplanting or replacing fuel taxes with a system of charging vehicle owners a user fee based on vehicle miles traveled. We also have ongoing work examining California's high-speed rail program, participation in the TIFIA program, and implementation of the Next Generation Air Transportation System.

We look forward to supporting this committee's oversight activities on these and many other issues. Chairman Latham, Ranking Member Olver, and Members of the Subcommittee, this concludes my prepared statement. I would be pleased to answer any questions you have at this time.

GAO Contact and Staff Acknowledgments

For further information on the statement, please contact Phillip R. Herr at (202) 512-2834 or herrp@gao.gov. Contact points for our Congressional Relations and Public Affairs offices may be found on the last page of this statement. Individuals making key contributions to this statement were Paul Aussendorf, Matt Cail, Steve Cohen, Matt Cook, Kathryn Crosby,

³⁸[GAO-11-43](#) and [GAO-10-202](#).

Lynn Filla-Clark, Holly Dye, Colin Fallon, Susan Fleming, Judy Guilliams-Tapia, Brandon Haller, Robert Heilman, David Hooper, Joah Iannotta, Bert Japikse, Heather Krause, Joanie Lofgren, Ed Laughlin, Heather MacLeod, Sara Vermillion, Pamela Vines, Andrew Von Ah, and Susan Zimmerman.

Related GAO Products

Pipeline Safety: Collecting Data and Sharing Information on Federally Unregulated Gathering Pipelines Could Help Enhance Safety. [GAO-12-388](#). Washington, D.C.: March 22, 2012.

Motor Carrier Safety: New Applicant Reviews Should Expand to Identify Freight Carriers Evading Detection. [GAO-12-364](#). Washington, D.C.: March 21, 2012.

Air Traffic Control Modernization: Management Challenges Associated with Program Costs and Schedules Could Hinder NextGen Implementation. [GAO-12-223](#). Washington, D.C.: February 16, 2012.

Airport and Airway Trust Fund: Factors Affecting Revenue Forecast Accuracy and Realizing Future FAA Expenditures. [GAO-12-222](#). Washington, D.C.: January 23, 2012.

Highway Emergency Relief Strengthened Oversight of Eligibility Decisions Needed. [GAO-12-45](#). Washington, D.C.: November 8, 2011.

Initial Pilot Training: Better Management Controls Are Needed to Improve FAA Oversight. [GAO-12-117](#). Washington, D.C.: November 4, 2011.

Disadvantaged Business Enterprise Program: Assessing Use of Proxy Data Would Enhance Ability to Know if States Are Meeting Their Goals. [GAO-12-78](#). Washington, D.C.: October 13, 2011.

Next Generation Air Transportation System: FAA Has Made Some Progress in Implementation, but Delays Threaten to Impact Costs and Benefits. [GAO-12-141T](#). Washington, D.C.: October 5, 2011.

Enhanced Oversight and Improved Availability of Risk-Based Data Could Further Improve Safety. [GAO-12-24](#). Washington, D.C.: October 5, 2011.

Information Security: Weaknesses Continue Amid New Federal Efforts to Implement Requirements. [GAO-12-137](#). Washington, D.C.: October 3, 2011.

NextGen Air Transportation System: Mechanisms for Collaboration and Technology Transfer Could be Enhanced to More Fully Leverage Partner Agency and Industry Resources. [GAO-11-604](#). Washington, D.C.: June 30, 2011.

Surface Transportation: Competitive Grant Programs Could Benefit from Increased Performance Focus and Better Documentation of Key Decisions. [GAO-11-234](#). Washington, D.C.: March 30, 2011.

Intercity Passenger Rail: Recording Clearer Reasons for Awards Decisions Would Improve Otherwise Good Grantmaking Practices. [GAO-11-283](#). March 10, 2011.

High-Risk Series: An Update. [GAO-11-278](#). Washington, D.C.: February 2011.

Rail Transit: FTA Programs Are Helping Address Transit Agencies' Safety Challenges, but Improved Performance Goals and Measures Could Better Focus Efforts. [GAO-11-199](#). Washington, D.C.: January 31, 2011.

Statewide Transportation Planning: Opportunities Exist to Transition to Performance-Based Planning and Federal Oversight. [GAO-11-77](#). Washington, D.C.: December 15, 2010.

Transportation: Integration of Current Implementation Efforts with Long-term Planning for the Next Generation Air Transportation System. [GAO-11-132R](#). Washington, D.C.: November 22, 2010.

Recovery Act: Opportunities to Improve Management and Strengthen Accountability over States' and Localities' Uses of Funds. [GAO-10-999](#). Washington, D.C.: September 20, 2010.

Next Generation Air Transportation System: FAA and NASA Have Improved Human Factors Research Coordination, but Stronger Leadership Needed. [GAO-10-824](#). Washington, D.C.: August 6, 2010.

NextGen Air Transportation System: FAA's Metrics Can Be Used to Report on Status of Individual Programs, but Not of Overall NextGen Implementation or Outcomes. [GAO-10-629](#). Washington, D.C.: July 27, 2010.

Recovery Act: States' and Localities' Uses of Funds and Actions Needed to Address Implementation Challenges and Bolster Accountability. [GAO-10-604](#). Washington, D.C.: May 26, 2010.

Aviation Safety: Improved Data Quality and Analysis Capabilities Are Needed as FAA Plans a Risk-Based Approach to Safety Oversight. [GAO-10-414](#). Washington, D.C.: May 6, 2010.

Next Generation Air Transportation System: Challenges with Partner Agency and FAA Coordination Continue, and Efforts to Integrate Near-, Mid-, and Long-term Activities Are Ongoing. [GAO-10-649T](#). Washington, D.C.: April 21, 2010.

Traffic Safety Data: State Data System Quality Varies and Limited Resources and Coordination Can Inhibit Further Progress. [GAO-10-454](#). Washington, D.C.: April 15, 2010.

Information Security: Agencies Need to Implement Federal Desktop Core Configuration Requirements. [GAO-10-202](#). Washington, D.C.: March 12, 2010.

Rail Transit: Observations on FTA's State Safety Oversight Program and Potential Change in Its Oversight Role. [GAO-10-314T](#). Washington, D.C.: December 10, 2009.

Transportation Worker Identification Credential: Progress Made in Enrolling Workers and Activating Credentials but Evaluation Plan Needed to Help Inform the Implementation of Card Readers. [GAO-10-43](#). Washington, D.C.: November 18, 2009.

Next Generation Air Transportation System: FAA Faces Challenges in Responding to Task Force Recommendations. [GAO-10-188T](#). Washington, D.C.: October 28, 2009.

Metropolitan Planning Organizations: Options Exist to Enhance Transportation Planning Capacity and Federal Oversight. [GAO-09-868](#). Washington, D.C.: September 9, 2009.

High Speed Passenger Rail: Future Development Will Depend on Addressing Financial and Other Challenges and Establishing a Clear Federal Role. [GAO-09-317](#). March 19, 2009.

Surface Transportation: Principles Can Guide Efforts to Restructure and Fund Federal Programs. [GAO-08-744T](#). Washington, D.C.: July 10, 2008.

Surface Transportation: Restructured Federal Approach Needed for More Focused, Performance-Based, and Sustainable Programs. [GAO-08-400](#). Washington, D.C.: March 6, 2008.

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.

GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's website (www.gao.gov). Each weekday afternoon, GAO posts on its website newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to www.gao.gov and select "E-mail Updates."

Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, <http://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

Connect with GAO

Connect with GAO on [Facebook](#), [Flickr](#), [Twitter](#), and [YouTube](#). Subscribe to our [RSS Feeds](#) or [E-mail Updates](#). Listen to our [Podcasts](#). Visit GAO on the web at www.gao.gov.

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Website: www.gao.gov/fraudnet/fraudnet.htm

E-mail: fraudnet@gao.gov

Automated answering system: (800) 424-5454 or (202) 512-7470

Congressional Relations

Katherine Siggerud, Managing Director, siggerudk@gao.gov, (202) 512-4400, U.S. Government Accountability Office, 441 G Street NW, Room 7125, Washington, DC 20548

Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800 U.S. Government Accountability Office, 441 G Street NW, Room 7149 Washington, DC 20548

