United States General Accounting Office

GAO

Testimony

Before the Committee on the Budget and the Subcommittee on Transportation, Committee on Appropriations, U.S. Senate

To Be Released on Delivery
Expected at 10:00 a.m. EST
Thursday
February 3, 2000

FEDERAL AVIATION ADMINISTRATION

Challenges in Modernizing the Agency

Statement for the Record by
Gerald L. Dillingham, Associate Director,
Transportation Issues, Resources, Community, and
Economic Development Division

GAO/T-RCED/AIMD-00-87

Messrs. Chairmen and Members of the Committee and Subcommittee:

We appreciate the opportunity to provide our perspective on the challenges the Federal Aviation Administration (FAA) faces in continuing to provide for the safe, orderly, and expeditious flow of air traffic in U.S. airspace. The nation's airspace carries by far the largest volume of air traffic in the world, a volume that is projected to increase significantly within the decade. If not managed effectively, this projected growth could affect safety and cause aviation gridlock. This situation creates a limited window of opportunity, which is prompting FAA to undertake numerous initiatives to improve performance and the Congress to provide FAA with greater flexibility in procurement and personnel matters. However, continuing dissatisfaction with FAA's efforts has given rise to proposals on alternative organizational structures for the entire agency or for its air traffic service function.

Our testimony today highlights some key areas we and others have identified that have hampered FAA's ability to achieve desired outcomes. We will also discuss various proposals for restructuring FAA and talk about next steps for FAA and the Congress to take to ensure that the agency can address its challenges effectively and efficiently.

In summary:

- FAA's efforts to implement initiatives in five key areas—air traffic control modernization, procurement and personnel reform, aviation safety, aviation and computer security, and financial management—have met with limited success. For example, FAA has established an acquisition management system to reduce the time and cost of fielding new products and services. However, in many of the five areas, FAA has frequently not developed comprehensive plans, thus underestimating the complexity involved in developing new systems, and has often not adequately overseen the development and implementation of these systems. As a result, although progress has been made in each of these areas, cost overruns, delays, and/or performance shortfalls have occurred.

- The proposals to restructure FAA, although significantly different from one another, have a common objective—the more efficient and effective modernization of the air traffic control system. These proposals include creating a government-owned or private corporation or emphasizing performance for air traffic control through a new performance-based structure within FAA. In addition, one proposal would establish FAA as an independent agency to better achieve its mission, including its efforts to modernize the air traffic control system. However, to be effective, restructuring will need to address the fundamental problems affecting the modernization of the air traffic control system, such as the lack of a complete systems architecture, a sophisticated process for acquiring software acquisitions, sound financial management practices, and an effective organizational culture.

- As we have indicated, while FAA's initiatives have met with some success, our work shows that many of these initiatives have been undertaken without paying enough attention to factors critical to achieving the desired results—establishing baseline data, priorities, a game plan for addressing root causes, and an evaluation plan to measure progress. These deficiencies need to be addressed promptly because, with the projected growth in air travel, FAA has a limited window of opportunity for making the changes we and others have recommended.

- With this pressing need for improved FAA performance, overseeing FAA's implementation of its initiatives and critical management reforms is of paramount importance. For this reason, we believe continuing congressional oversight is critical to ensure that FAA successfully meets the challenges of maintaining safety and improving efficiencies in light of the expected growth in air travel.

Progress and Problems With Implementing Efforts in Key Areas

Over the years, reviews by us and others have identified problems in five key areas: (1) modernizing the air traffic control system, (2) implementing procurement and personnel

reform, (3) ensuring the safe operation of aircraft, (4) improving the security of both aviation and critical computer systems, and (5) implementing the financial systems and controls needed to effectively manage the agency. Overall, FAA has agreed with the problems identified and has undertaken initiatives to mitigate these problems, as we and others have recommended. However, these initiatives have often fallen short because FAA establishes overly ambitious implementation schedules, proceeds without adequate plans, and does not adequately oversee their implementation. I would like to highlight some of the progress and problems we have identified with FAA's implementation of efforts in these five key areas.

Modernizing the Air Traffic Control System

Faced with rapidly growing volumes of air traffic and aging equipment to control this traffic, FAA initiated an ambitious 10-year, $12 billion program in 1981 to modernize its air traffic control system. This effort—which involves acquiring a vast network of radar and automated data-processing, navigation, communications equipment, and air traffic control facilities—has been expanded and is now expected to cost $40 billion through fiscal year 2004.[1]

Despite this investment, the air traffic control modernization program has not measured up to expectations. It has experienced cost overruns, delays, and performance shortfalls of large proportions. For example, in 1994, FAA restructured its Advanced Automation System,[2] which was intended to be the centerpiece of the air traffic control modernization program, after the estimated cost to deploy the system had tripled, capabilities were shown to be significantly less than promised, and delays were expected to run nearly a decade.

[1] The total cost of modernization includes appropriations for all actual and projected facilities and equipment from fiscal year 1982 through fiscal 2004 for projects in FAA's financial plan.

[2] This system was designed to provide, among other things, new work stations for controllers and related computer hardware and software.

We found that FAA's problems with the Advanced Automation System and other modernization projects were caused primarily by design and implementation factors, such as underestimating the complexity of developing systems and inadequate management oversight. Because of the program's size, complexity, cost, and problem-plagued past, we designated it as a high-risk information technology initiative in 1995.[3]

In addition, we identified four specific implementation issues—root causes—of the modernization program's problems. These include the lack of

- a complete systems architecture, or overall blueprint, to guide the program, which has resulted in unnecessarily higher spending to buy, integrate, and maintain hardware and software;

- reliable cost-estimating processes and cost-accounting practices, which puts the agency at risk of making ill-informed decisions on procuring air traffic control systems;

- an effective approach for acquiring software, which places the agency at greater risk of not delivering promised software capabilities on time and within budget; and

- an effective organizational culture to assist the acquisition process by encouraging staff to work cooperatively within the agency and with the aviation community.

FAA has taken a number of steps to address these root causes. For example, it has initiated activities to develop a complete air traffic control systems architecture, cost-estimating processes and cost-accounting systems, and to improve software acquisition capabilities and organizational culture. However, it will take several years for these efforts to reach fruition. Additionally, in January 1999, FAA appointed a Chief

[3] FAA's modernization program is one of four high-risk system development and modernization efforts. See *High-Risk Series: An Overview* (GAO/HR-95-1, Feb. 1995); *High-Risk Series: Information Management and Technology* (GAO/HR-97-9, Feb. 1997); and *High Risk Series: An Update* (GAO/HR-99-1, Jan. 1999).

Information Officer, who reports directly to the FAA Administrator. This action is consistent with the Clinger-Cohen Act of 1996, which requires each executive agency to have a chief information officer in order to establish an effective structure for managing information technology investments. Furthermore, FAA has moved away from its prior practice of taking on large, complex projects all at once and is now acquiring new systems by using a more incremental approach. Finally, the agency is no longer making unilateral decisions about air traffic control modernization. Instead, it has been working actively with the aviation community—airlines, unions, and equipment manufacturers—to make decisions more collaboratively.

Nevertheless, problems remain. For example, we recommended that FAA disclose the inherent uncertainty in projects' cost estimates in order to increase the estimates' decision-making value and credibility. We recommended that in providing cost estimates to the Congress, FAA not provide simply a single cost estimate for a project but instead estimate a cost range and indicate the level of confidence it had in that range. Although FAA agreed with this recommendation, it does not always report estimates in this way; consequently, congressional decisionmakers cannot be confident in the estimates FAA provides. Furthermore, FAA often begins acquisition projects without establishing baseline data and an evaluation plan to measure progress.

Reforming Procurement and Personnel Practices

As problems with the air traffic control modernization program mounted in the early 1990s, FAA attributed the delays with implementing air traffic control projects, at least in part, to burdensome federal acquisition regulations and governmentwide personnel rules that impeded its ability to acquire equipment and systems and to hire, train, and deploy the personnel involved in the modernization effort. In response to these claims, the Congress exempted FAA from many federal acquisitions and personnel-related regulations, and the agency began implementing procurement and personnel reforms in

1996.[4] Nevertheless, external reviews have found problems with FAA's implementation of both the procurement and personnel reforms.[5]

Procurement Reform

FAA introduced an acquisition management system to reduce the time and cost to field new products and services. The agency established three broad objectives for the system: (1) the development of a new procurement system that provides flexibility in selecting and managing contractors, (2) the development of a new investment management system that spans the entire life cycle of an acquisition, and (3) organizational and cultural reform that supports the new investment and procurement systems. FAA has had the most success with the first objective. Booz-Allen & Hamilton found that FAA has reduced by 50 percent the time it needs to award contracts, awarded a greater percentage of contracts competitively, and awarded more contracts on the basis of best value rather than on the basis of the lowest bid. It appears the new policy on contracting has been successful because FAA's offices and regions across the country have adapted it to their specific missions.

Achievement of the acquisition management system's second objective—the life cycle investment management system—includes acquiring, deploying, maintaining, and replacing equipment in the air traffic control modernization program. This process is to result in more timely and cost-effective acquisitions. FAA has made some progress on this objective. For example, for its investment management system, FAA has developed a set of policies, procedures, and reporting requirements to analyze mission needs; assess the affordability of proposed projects; and establish cost, schedule, and

[4] Department of Transportation and Related Agencies Appropriations Act of 1996 (P.L. 104-50).

[5] For reviews of acquisition management systems see *Air Traffic Control: FAA's Modernization Investment Management Approach Could Be Strengthened* (GAO/RCED/AIMD-99-88, Apr. 30, 1999) and *Independent Assessment of the Federal Aviation Administration's Acquisition Management System*, prepared by Booz-Allen & Hamilton for FAA's Office of Program Evaluation and Configuration Management, July 6, 1999. For a review of the personnel system, see *Personnel Reform in the Federal Aviation Administration: Three Year Status Report.* A Report for the Congress by the National Academy of Public Administration, Aug. 1999.

performance parameters to control projects. Furthermore, an FAA senior management investment review group—the Joint Resources Council—makes key decisions about which investments best meet the agency's needs and are to be funded.

However, implementation of this objective has fallen short. FAA has not fully achieved its objective of managing its modernization projects as a totally integrated program—that is, as a complete investment portfolio—because it is not consistently applying acquisition management policies and procedures to all of its modernization projects. Instead, it limits its oversight of projects mainly to those that are under development or being implemented, excluding those that are operational. As a result, FAA is not examining the costs of maintaining existing systems versus investing in new ones; comparatively ranking projects according to the expected costs, benefits, and risks; and reaching decisions based on a project's overall contribution to the most pressing organizational needs. Furthermore, in July 1999, Booz-Allen & Hamilton reported that FAA had made little progress toward achieving the acquisition management system's stated goal of executing more timely and cost-effective programs. For example, programs such as the Standard Terminal Automation Replacement System and Wide Area Augmentation System are still experiencing delays and cost overruns.[6]

Finally, FAA continues to experience problems in implementing its third objective—organizational and culture reform. As part of its effort to reform its culture, FAA is using a team approach to acquiring acquisitions. Members of a team include all stakeholders who are involved in the acquisition, maintenance, and eventual disposal of a product/system. However, team members have reported that they do not feel empowered to make binding, team-based decisions that would be supported by the different organizations within FAA. As a result, they have had to consult with their

[6] The Wide Area Augmentation System augments the Department of Defense's global positioning system to satisfy aviation's navigation requirements. The Standard Terminal Automation Replacement System replaces 15- to 25-year old controller workstations and supporting computer systems. The early phases of these projects, such as mission and investment analyses, were implemented prior to the implementation of the acquisition management system; however, this system's requirements for overseeing these projects apply.

respective organizations on all issues, which extended the time it took to make decisions, and might have prolonged the acquisition process.

Personnel Reform

Following congressional approval, FAA established a new personnel system to meet its unique needs. According to the National Academy of Public Administration (NAPA), this system provides some flexibility in hiring, training, compensating, and deploying personnel. For example, FAA has reduced the time taken to fill vacancies from months to weeks. Moreover, over the last 3 years, more than 70 executive-level positions have been filled as a result of tools provided by the new personnel system, such as on-the-spot hiring authority, temporary promotions to executive positions, and recruitment and retention bonuses. However, NAPA concluded that these efforts have not made FAA more effective in carrying out its mission.

NAPA identified issues that have made FAA's implementation of personnel reforms less than fully successful:

- FAA lacks baseline data and specific performance measures, which hampers its efforts to assess the effectiveness of personnel reform and establish a basis for continuous improvement.

- The decentralized personnel structure that resulted from FAA's reform has caused (1) morale problems, (2) communication gaps and inconsistencies in technical advice and leadership within FAA organizations, and (3) insufficient understanding throughout the workforce about the intent of reforms. As a result of these problems, FAA lacks a broad base of support and accountability for reform initiatives among employees below the highest management levels.

Ensuring Aviation Safety

Ensuring that all components of the air transportation system—including the airports, aircraft, and key personnel such as pilots—operate in a manner that maximizes aviation safety is a fundamental responsibility for FAA. FAA's aviation safety programs provide for the initial certification, periodic surveillance, and inspection of airlines, airports, repair stations, other aviation entities, pilots, and mechanics. These inspections are intended not only to detect actual violations but also to serve as part of an early warning system for identifying potential systemwide weaknesses. In October 1997,[7] we reported that work performed by aviation repair stations—the 2,800 facilities that repair and maintain nearly half of all U.S. passenger and cargo aircraft—was cited by the National Transportation Safety Board as a factor in several accidents. FAA had systems in place to monitor the performance of repair stations, but its implementation of these systems has inhibited the agency's effectiveness. We found that FAA inspections of these stations relied primarily on reviews by individual inspectors, even though inspection teams provide more effective reviews because they uncover more systemic and long-standing problems. We also found that when deficiencies were discovered, sufficient documentation did not exist to determine how well FAA followed up to ensure that the deficiencies were corrected.

These problems are compounded by FAA's lack of complete information on compliance in the aviation industry and by the information's limited use in providing early warning of potential risks and in targeting inspection resources to the greatest risks. We reported in 1998 that some inspectors reported less than half of the problems or violations they observed, and many inspections were not thorough or structured enough to detect many violations.[8] We also noted that the impact of FAA's enforcement actions on compliance was difficult to assess because the agency had not followed up on the aviation industry's implementation of corrective action.

---

[7] *Aviation Safety: FAA Oversight of Repair Stations Needs Improvement* (GAO/RCED-98-21, Oct. 24, 1997).

[8] *Aviation Safety: Weaknesses in Inspection and Enforcement Limit FAA in Identifying and Responding to Risks* (GAO/RCED-98-6, Feb. 27, 1998).

We recommended actions to FAA to improve its oversight of repair stations and to improve the usefulness of its inspection and enforcement efforts. FAA agreed with our recommendations and has developed and begun to implement a fundamentally reengineered system—the Air Transportation Oversight System—to oversee airline safety. While this system is definitely a positive action by FAA to address prior problems, it is not fulfilling its potential because of implementation problems. In June 1999, we reported that FAA's ability to conduct effective inspections remains limited largely because of an overly ambitious implementation schedule that compressed complex, critical steps into a very short time frame.

Improving Aviation and Computer Security

Aviation and computer security are of paramount concern. U.S. aircraft are widely believed to be a target of terrorist actions, which has heightened the need to improve domestic aviation security. FAA is implementing recommendations made in 1997 by the White House Commission on Aviation Safety and Security (the Gore Commission) and mandates contained in the Federal Aviation Reauthorization Act of 1996 to improve security at airports.

FAA has made some progress in five critical areas—passenger profiling, explosives detection technologies, passenger-bag matching, vulnerability assessments, and the certification of screening companies—as recommended by the Gore Commission and mandated by the Congress. However, given the current implementation schedule, it will take years for FAA and the aviation industry to fully implement all the initiatives. We reported in April 1998 that FAA had encountered delays of up to 12 months in implementing these initiatives, in part, because they are more complex than FAA originally envisioned and involve new and relatively untested technologies.[9] These delays are still occurring. In January of this year, FAA issued a notice of proposed

[9] *Aviation Security: Implementation of Recommendations Is Under Way, but Completion Will Take Several Years* (GAO/RCED-98-102, Apr. 24, 1998).

rulemaking requiring the certification of screening companies, but the issuance of the final rule may not occur for another 12 months, nearly 2 years later than the planned issuance date.

Security is a concern not only for preventing and deterring terrorist and criminal acts against aircraft but also for protecting critical information and computer systems that are relied on by pilots, air traffic controllers, and others. A failure to adequately protect these systems, as well as the facilities that house them, could cause a nationwide disruption of air traffic or even the loss of life in collisions. Consequently, FAA's policy requires that air traffic control systems and facilities be certified as having appropriately implemented security safeguards. However, in May 1998,[10] we reported that FAA was ineffective in all critical areas we analyzed. For example, FAA had not assessed the physical security controls at 187 facilities since 1993 and therefore did not know how vulnerable they were. Additionally, FAA had not performed the analysis necessary to determine system threats, vulnerabilities, and safeguards for 87 of 90 operational air traffic control computer systems nor had it consistently included well-formulated security requirements in the specifications for new air traffic control modernization systems. Further, we noted that FAA's security structure was ineffective—responsibilities were distributed among three organizations, all of which were remiss in their security duties.

We made a number of recommendations to FAA that address these computer security concerns, and FAA has initiated efforts in response to these recommendations. For example, FAA reported that it completed inspections of the 187 facilities that it had not assessed since 1993 and that it established a Chief Information Officer position in February 1999 with responsibility for developing, implementing, and enforcing the agency's information security policy. However, in December 1999,[11] we reported that

---

[10] *Air Traffic Control: Weak Computer Security Practices Jeopardize Flight Safety* (GAO/AIMD-98-155, May 18, 1998).

[11] *Computer Security: FAA Needs to Improve Controls Over Use of Foreign Nationals to Remediate and Review Software* (GAO/AIMD-00-55, Dec. 23, 1999).

computer security problems continued to exist. In its efforts to address Year 2000 computer problems—which were largely successful—FAA used contractor employees to perform repairs to mission-critical systems. However, the agency did not follow its own policy requiring background checks on all of these contractor employees, and in some instances no background checks were conducted. As a result, the air traffic control system may be more susceptible to intrusion and malicious attacks.

Applying Sound Financial Management

As with any organization, sound financial management is critical to the effective and efficient operation of FAA. Weak financial management renders FAA vulnerable to waste, fraud, and abuse; undermines its ability to manage its operations; and limits the reliability of the financial information it provides to the Congress. Beginning with fiscal year 1994, the Department of Transportation's Office of the Inspector General has audited FAA's financial statements and has consistently been unable to determine whether the financial information is reliable. This pattern has continued with the Inspector General's most recent report—a disclaimer of opinion—on FAA's fiscal year 1998 financial statements.

Related to the financial problems identified by the Inspector General, we reported in February 1998 that many problems in the property and equipment accounts affect FAA's ability to efficiently and effectively manage programs that use these assets.[12] For example, the lack of adequate physical controls over equipment could result in the costly, unnecessary acquisition of additional assets or the misuse of assets. We reported that until FAA implements effective policies and procedures to provide accountability over property and equipment, it remains vulnerable to significant mismanagement of appropriated funds.

[12] *Financial Management: Federal Aviation Administration Lacked Accountability for Major Assets* (GAO/AIMD-98-62, Feb. 18, 1998).

FAA also has problems in its cost accounting system. Federal financial accounting standards require federal agencies to maintain a cost accounting capability.[13] The Congress has specifically required that FAA develop a cost accounting system. However, the agency has not achieved this mandate. We reported in February 1998 that many of the problems in the property and equipment accounts result from the lack of a reliable system for accumulating cost accounting information on individual projects. As a consequence of weak cost accounting practices, the agency did not have reliable and timely information about the full cost of program activities. Furthermore, the lack of cost accounting information limits FAA's ability to (1) make effective decisions about resource needs and adequately control major projects, such as the multibillion-dollar air traffic control modernization program; (2) estimate future costs in order to prepare and review budgets; (3) control and reduce costs in order to increase efficiency and avoid waste; (4) develop a system of user fees based on the cost of services provided; and (5) meaningfully evaluate performance measures in terms of efficiency and cost-effectiveness.

In January 1999, we designated FAA's financial management as a high-risk area because of serious and long-standing accounting and financial reporting weaknesses.[14] In March 1999, we testified that FAA senior management recognized the urgency of correcting their financial management deficiencies and had taken steps to address them, including efforts to continue to develop a cost accounting system, which FAA expects will be fully operational in 2001.[15] However, much still remains to be done. Until full accountability is achieved, FAA will continue to be exposed to waste, fraud, abuse, and mismanagement. In addition, the Congress will have no assurance of receiving accurate financial management information to help make informed decisions about future funding and oversight of FAA activities.

---

[13] Statement of Federal Financial Accounting Standards, no. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government.*

[14] *High-Risk Series: An Update* (GAO/HR-99-1, Jan. 1999).

[15] *Federal Aviation Administration: Financial Management Issues* (GAO/T-AIMD-99-122, Mar. 18, 1999).

Proposals to Resolve Modernization Problems Through Restructuring

Over the years, a number of fundamentally different proposals have been offered for restructuring FAA. The impetus behind most reform proposals lies in congressional frustration with the slow pace of modernization and concerns about the potential for aviation gridlock. Two types of proposals have been designed principally to improve FAA's air traffic control modernization efforts: (1) establishing a public or private air traffic control corporation or (2) making performance-based changes within FAA. In addition, another type of proposal would make FAA, in its entirety, an independent government agency to improve overall mission effectiveness, including air traffic control modernization.

The common theme in the restructuring proposals is the need to make FAA more effective, accountable, and results-oriented. Proponents of these proposals contend that restructuring FAA, in whole or in part, will provide the agency with flexibility in managing its budget, implementing regulations, and making policy decisions. They also contend that such restructuring will enable additional resources to be tapped, such as user fees. However, any restructuring will need to address the fundamental problems affecting the implementation of air traffic control modernization, such as the lack of a complete systems architecture, a sophisticated process for acquiring software, sound financial management practices, and an effective organizational culture. While each of these proposals offers potential advantages, each also raises a number of issues:

- <u>Create a separate federal or private air traffic control corporation while leaving safety oversight with the federal government</u>. This proposal has raised a number of safety and oversight issues. For example, an air traffic control corporation would be responsible for operating the air traffic control system and making long-term decisions that affect safety and efficiency. At the same time, however, the FAA Administrator would presumably have ultimate authority on all safety matters. It is unclear how these two separate organizations would share responsibilities and preserve the margin of safety. Additionally, if this independent entity were a private

organization, it is unclear how the Congress would oversee this independent organization's activities.

- Make performance-based changes within FAA.[16] If a performance-based organization or a Chief Operating Officer position with set performance expectations were established within FAA for air traffic control modernization, congressional oversight would be preserved because the organization would remain under the Department's jurisdiction. However, like the proposed air traffic control corporation, the margin of safety could suffer if there were ambiguity and lengthy conflict between the FAA Administrator and the Chief Operating Officer. Also, while the congressionally established National Civil Aviation Review Commission advocated a performance-based organization for the air traffic control system, the Commission noted that FAA initiatives to quantify and measure the agency's performance are in their infancy and need to be expanded.

- Make FAA an independent government entity. Opponents of this proposal have noted that the Federal Aviation Reauthorization Act of 1996 gave FAA final authority to issue certain types of regulations and make other decisions, thus alleviating the need to separate FAA from the Department of Transportation. They also note that removing FAA from the Department would hamper efforts to develop and implement an integrated national transportation system.

FAA Is at a Critical Crossroads for Resolving Outstanding Problems

With the projected growth in air travel, FAA has a limited window of opportunity for correcting the critical deficiencies we and others have identified. While FAA has agreed

[16] In its 1998 proposal for reauthorizing FAA, the administration proposed a separate performance-based organization within FAA managed by a Chief Operating Officer. In1999, separate House and Senate FAA reauthorization proposals included provisions to establish a Chief Operating Officer who would be required to enter into an annual performance agreement with the FAA Administrator. In addition, the proposals provide for the Chief Operating Officer to submit an annual performance report to the Secretary of Transportation and the Congress. However, these proposals did not provide for a separate performance-based organization. Reauthorization is still pending.

with recommendations made by us and others, its implementation has often gone awry or proceeded too slowly. This raises a larger question: What should FAA do differently to ensure that it implements its initiatives successfully and on time?

We believe that FAA should develop a systematic approach to completing its initiatives. The framework for such an approach has been laid out in recent governmentwide management reforms, such as the Government Performance and Results Act. As these acts make clear, such a framework should include the establishment of baseline data, clear priorities, time-sensitive strategies that respond to recommendations for addressing root causes of existing problems, and an evaluation plan to measure progress. While FAA has made a concerted effort to resolve outstanding problems, it has not done so in the context of such a framework. Without this framework, FAA will not realize its potential for accomplishing its mission, whatever its structure. Furthermore, the Congress' ability to monitor FAA's progress will be impaired.

The Congress Needs to Continue Its Oversight of FAA

The Congress has put into place mechanisms to better ensure efficient and effective government operations—the Government Performance and Results Act, the Chief Financial Officers Act, and the Clinger-Cohen Act. Taken together, these laws provide a framework for developing and fully integrating information about (1) FAA's mission and strategic priorities, (2) the results-oriented performance goals that flow from those priorities, (3) the extent to which goals are being achieved, (4) the relationship of technology and other investments to the achievement of goals, and (5) the reliability of financial information on the costs of achieving mission results.

FAA, like other federal agencies, is responding to these directives. However, FAA's ability to successfully implement these directives is impeded by the problems we have identified in modernization, procurement and personnel, safety, aviation and computer security, and financial management.

Given the extent of these problems, we believe that continuing congressional oversight is of paramount importance to ensure that FAA meets the challenges presented by the exponential growth in air traffic projected for this decade.

Contacts and Acknowledgments

For future contacts regarding this testimony, please contact Gerald L. Dillingham at (202) 512-2834. Individuals making key contributions to this testimony included John C. Fretwell, Belva M. Martin, Colleen M. Phillips, Yvonne C. Pufahl, John R. Schulze, and Carol Herrnstadt Shulman.

Related GAO Products

Air Traffic Control Modernization

Air Traffic Control: FAA's Modernization Investment Management Approach Could Be Strengthened (GAO/RCED/AIMD-99-88, Apr. 30, 1999).

Air Traffic Control: Status of FAA's Modernization Program (GAO/RCED-99-25, Dec. 3, 1998).

National Airspace System: FAA Has Implemented Some Free Flight Initiatives, but Challenges Remain (GAO/RCED-98-246, Sept. 28, 1998).

Air Traffic Control: Immature Software Acquisition Processes Increase FAA System Acquisition Risks (GAO/AIMD-97-47, Mar. 21, 1997).

Air Traffic Control: Complete and Enforced Architecture Needed for FAA Systems Modernization (GAO/AIMD-97-30, Feb. 3, 1997).

Aviation Acquisition: A Comprehensive Strategy Is Needed for Cultural Change at FAA (GAO/RCED-96-159, Aug. 22, 1996).

Aviation Safety

Aviation Safety: FAA's New Inspection System Offers Promise, but Problems Need to Be Addressed (GAO/RCED-99-183, June 28, 1999).

Aviation Safety: FAA Has Not Fully Implemented Weather-Related Recommendations (GAO/RCED-98-130, June 2, 1998).

Aviation Safety: Weaknesses in Inspection and Enforcement Limit FAA in Identifying and Responding to Risks (GAO/RCED-98-6, Feb. 27, 1998).

Aviation Safety: FAA Oversight of Repair Stations Needs Improvement (GAO/RCED-98-21, Oct. 24, 1997).

Aviation Security

Computer Security: FAA Needs to Improve Controls Over Use of Foreign Nationals to Remediate and Review Software (GAO/AIMD-00-55, Dec. 23, 1999).

Air Traffic Control: Weak Computer Security Practices Jeopardize Flight Safety (GAO/AIMD-98-155, May 18, 1998).

Aviation Security: Implementation of Recommendations Is Under Way, but Completion Will Take Several Years (GAO/RCED-98-102, Apr. 24, 1998).

Financial Management

Federal Aviation Administration: Financial Management Issues (GAO/T-AIMD-99-122, Mar. 18, 1999).

High Risk Series: An Update (GAO/HR-99-1, Jan. 1999).

Financial Management: Federal Aviation Administration Lacked Accountability for Major Assets (GAO/AIMD-98-62, Feb. 18, 1998).

Air Traffic Control: Improved Cost Information Needed to Make Billion-Dollar Modernization Investment Decisions (GAO/AIMD-97-20, Jan. 22, 1997).

Other Related Products

Major Management Challenges and Program Risks: Department of Transportation (GAO/OGC-99-13, Jan. 1999).

Airport Development Needs: Estimating Future Costs (GAO/RCED-97-99, Apr. 7, 1997).

Airport Privatization: Issues Related to the Sale or Lease of U.S. Commercial Airports (GAO/RCED-97-3, Nov. 7, 1996).

(348214)