United States General Accounting Office

GAO

Testimony

Before the Subcommittee on Aviation, Senate Committee on Commerce, Science, and Transportation

For Release on Delivery
Expected at 9:30 a.m. EDT
Tuesday, May 18, 2004

FEDERAL AVIATION ADMINISTRATION

Challenges for Transforming Into a High-Performing Organization

Statement of JayEtta Z. Hecker, Director
Physical Infrastructure Team

G A O
Accountability * Integrity * Reliability

GAO-04-770T

May 18, 2004

FEDERAL AVIATION ADMINISTRATION

Challenges for Transforming Into a High-Performing Organization

GAO Accountability • Integrity • Reliability

Highlights

Highlights of GAO-04-770T, a report to the Subcommittee on Aviation, Senate Committee on Commerce, Science, and Transportation

Why GAO Did This Study

Over the last two decades, FAA has experienced difficulties meeting the demands of the aviation industry while also attempting to operate efficiently and effectively. Now, as air traffic returns to pre-9/11 levels, concerns have again arisen as to how prepared FAA may be to meet increasing demands for capacity, safety, and efficiency.

FAA's air traffic control (ATC) modernization efforts are designed to enhance the national airspace system through the acquisition of a vast network of radar, navigation, and communication systems. Nine years have passed since Congress provided FAA with personnel and acquisition reforms. However, projects continue to experience cost, schedule and performance problems. FAA's Air Traffic Organization (ATO) is its most current reform effort. Expectations are that the ATO will bring a performance management approach to ATC modernization.

This statement focuses on three main questions: (1) What are some of the major challenges and demands that confront FAA? (2) What is the status of FAA's implementation of reforms and/or procedural relief that Congress provided? and (3) What are some of the critical success factors that will enable FAA to become a high-performing organization?

What GAO Recommends

GAO is making no recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-04-770T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact JayEtta Z. Hecker at (202) 512-2834 or HeckerJ@gao.gov.

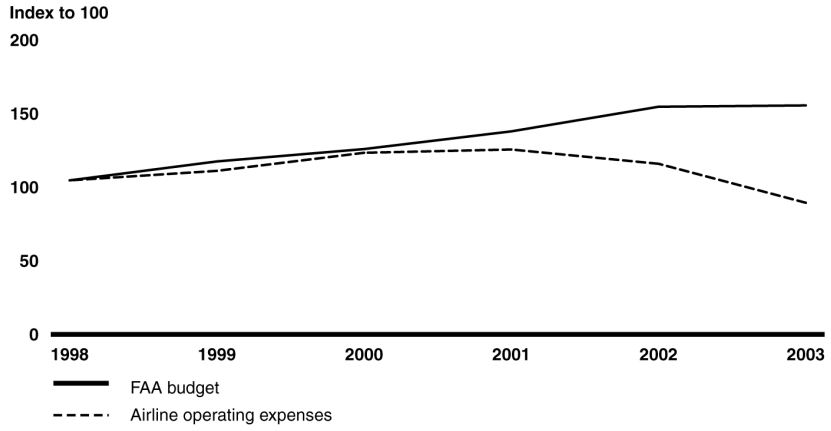
What GAO Found

A forecasted increase in air traffic coupled with budgetary constraints will challenge FAA's ability to meet current and evolving operational needs. The commercial aviation industry is still recovering from financial losses exceeding $20 billion over the past 3 years. Many airlines cut their operating expenses, but FAA's budget continued to rise (see figure). However, transportation tax receipts into the Airport and Airways Trust Fund, from which FAA draws the majority of its budget, have fallen by $2.0 billion (nearly 20 percent) since 1999 (in constant 2002 dollars). Cost-cutting and cost-control will need to be watchwords for FAA from this point forward.

FAA has implemented many of the reforms authorized by Congress 9 years ago, but achieved mixed results. Despite personnel and acquisition reforms the agency contended were critical to modernizing the nation's air traffic control (ATC) system, systemic management issues continue to contribute to the cost overruns, schedule delays, and performance shortfalls. FAA's most current reform effort, the Air Traffic Organization (ATO) – a new performance-based organization mandated by AIR-21 that is operating the ATC system – is just now being put in place.

To meet its new challenges, FAA must fundamentally transform itself into a high-performing organization. The key characteristics and capabilities of high-performing organizations fall into four themes: (1) a clear, well articulated, and compelling mission; (2) strategic use of partnerships; (3) focus on the needs of clients and customers; and (4) strategic management of people. FAA has taken some promising steps through its new ATO to restructure itself like high-performing organizations, but still faces significant and longstanding systemic management challenges. Even modest organizational and operational changes at FAA can be difficult and time consuming.

Changes in Air Carrier Operating Expenses vs. FAA Budget (indexed to 100)



Source: GAO analysis of data from the U.S. Office of Management and Budget and the DOT Bureau of Transportation Statistics.

Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to participate in today's hearing to discuss the challenges that FAA faces both in the immediate environment and over the next decade. We all recall that in the summer of 2000, the air traffic control system lacked the capacity to handle demand efficiently, and flight delays produced near-gridlock conditions at several U.S. airports. A combination of factors — the downturn in travel caused by the general economic slowdown, SARS, and of course the crises instigated by the events of 9/11 – reduced traffic significantly and reduced pressure on the air traffic control system.

Passenger traffic and airline operations are slowly returning to previous levels, making this an appropriate time to re-examine the status of nation's aviation leadership and infrastructure and its preparations for the future of air transport over the next decade. FAA's budget request for 2005 provides a starting point from which to review the agency's direction.

My statement today focuses on three main questions: (1) What are some of the major challenges and demands that confront FAA? (2) What is the status of FAA's implementation of reforms and/or procedural relief that Congress provided? And (3) What are some of the critical success factors that will enable FAA to become a high-performing organization? Our statement is based on our past reports on ATC modernization and airline competition work—updated to reflect important milestones and recent interviews with key stakeholders in the aviation community, including several current and former FAA officials. We performed our work in accordance with generally accepted government auditing standards.

In summary:

Significant external and internal demands will challenge FAA's ability to meet current operational needs and require it to adapt to meet the evolving needs of the aviation industry. The commercial aviation industry is still recovering from financial losses exceeding $20 billion over the past 3 years. The downturn in travel has affected the Airport and Airways Trust Fund, from which FAA draws the majority of its budget. Transportation tax receipts into the Trust Fund fell by a total of $2.0 billion (19.6 percent) between 1999 and 2003. The overall condition of the Federal budget adds more pressure on FAA's budget. Taken together, cost-cutting and cost-control need to be watchwords for FAA from this point forward. To meet the demands of the aviation industry for safe, secure, and efficient operations and for additional capacity to meet forecasted growth, FAA will

need to continue to improve its management controls. Traditionally, FAA's ability to operate efficiently and effectively – particularly regarding its air traffic control modernization projects — have been hampered by inadequate management of information technology and financial management controls.

Nine years have passed since Congress provided FAA with the personnel and acquisition reforms the agency contended were critical to successfully modernizing the nation's air traffic control (ATC) system. Despite these reforms, systemic management issues, including inadequate management controls and human capital issues continue to contribute to the cost overruns, schedule delays, and performance shortfalls that FAA's major ATC projects have consistently experienced in the past.

- Personnel reforms addressed three broad areas: (1) compensation and performance management, (2) workforce management, and (3) labor and employee relations. FAA has taken steps to implement a number of reforms in each of the three areas.[1] For example, in the area of labor and employee relations, FAA implemented initiatives establishing new partnership forums for union and nonunion employees and a new model work environment program.[2] However, in February 2003, we found that the agency had not fully incorporated elements that are important to effective human capital management, including data collection and analysis, performance goals and measures, and establishing links between reform goals and program goals.

- As part of its procurement reforms, FAA introduced a new acquisition management system in 1996 to reduce the time and cost to deploy new products and services. To FAA's credit, our work has shown improvements in the agency's oversight of investment risk, tracking key information from the investment selection process in a management information system, and implementation of guidance for validating costs, benefits, and risks. However, in estimating the costs of new projects, FAA has not yet incorporated actual costs from developing related systems. Moreover, the agency has not yet implemented processes for evaluating projects after implementation in order to identify lessons learned and improve the investment management process. These weaknesses have

[1] *FAA's Modernization Efforts—Past, Present, and Future* (GAO-04-227T): October 30, 2003.

[2] *Human Capital Management: FAA's Reform Effort Requires a More Strategic Approach*, GAO-03-156, February 2003.

impeded FAA's ability to manage its investments effectively and make sound decisions about continuing, modifying, or canceling projects.

- FAA's Air Traffic Organization (ATO) is one of its most current reform effort. Under the leadership of a Chief Operating Officer, the ATO is a new performance-based organization that is operating the ATC system. While the ATO holds promise for laying the foundation for much needed and overdue organizational change, progress has been slow, and the office still faces significant challenges to implementing reform

To meet the challenges of the 21st century, FAA must fundamentally transform itself to become a high-performing organization. Our work has shown that high-performing organizations have adopted management controls, processes, practices, and systems that are consistent with prevailing best practices and contribute to concrete organizational results. Specifically, the key characteristics and capabilities of high-performing organizations fall into four themes (1) a clear, well articulated, and compelling mission; (2) strategic use of partnerships; (3) focus on the needs of clients and customers; and (4) strategic management of people. To facilitate the transformation of federal agencies to high performing organizations, we have also recommended that agencies apply the Chief Operating Officer concept to provide long-term attention and focus on management issues and transformational change. FAA has begun implementing this concept. While FAA has taken some promising steps through its new ATO to restructure itself in a manner consistent with high-performing organizations, the agency still faces significant and longstanding systemic management challenges which must be overcome if it is to meet the demands and match the pace of ongoing changes in the aviation industry and transform itself into a world-class organization. Our work for more than two decades has shown that even modest organizational and operational changes at FAA can be difficult and time consuming, which underscores the difficult road ahead for FAA's leadership.

Significant External and Internal Demands Will Challenge FAA's Current and Evolving Operations

FAA faces significant demands that will challenge its ability to operate both in the current environment and in what it expects to encounter in the coming decade. With the industry still attempting to recover from the most tumultuous period in its history, FAA's funding is constrained by lowered Airports and Airways Trust Fund receipts and increased pressure on the contribution from the General Fund. To meet its current and future operational challenges, FAA is facing demands for greater efficiency and

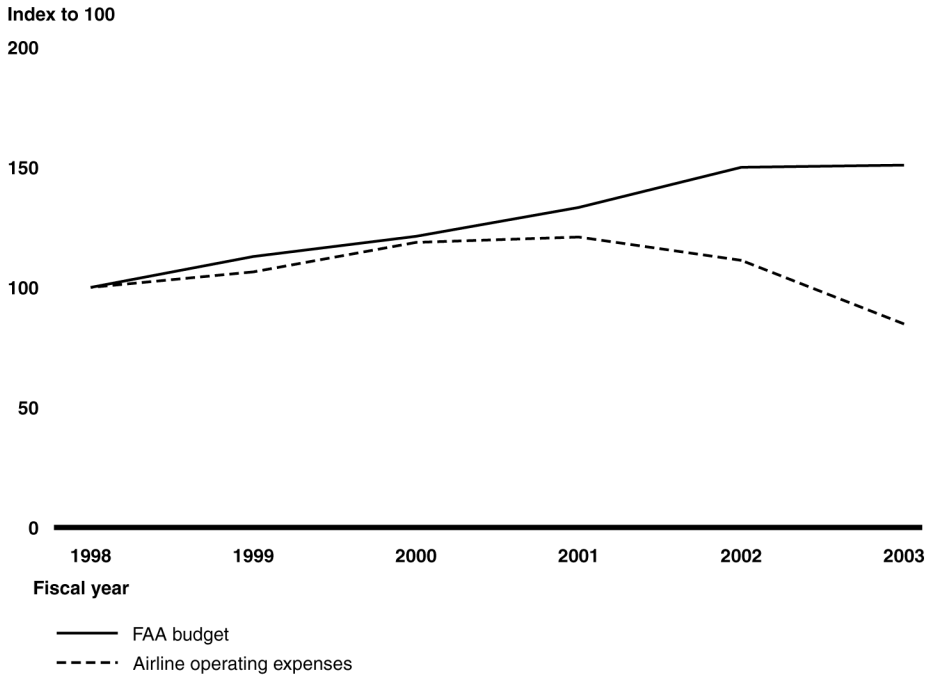
accountability. And it goes without saying that FAA must continue to meet demands for maintaining safety standards.

The U.S. Commercial Aviation Industry Is Still Recovering From Unprecedented Financial Chaos

Since 2001, the U.S. airline industry has confronted financial losses of previously unseen proportions. Between 2001 and 2003, the airline industry reported losses in excess of $20 billion. A number of factors – including the economic slowdown, a shift in business travel buying behavior, and the aftermath of the September 11, 2001 terrorist attacks—contributed to these losses by reducing passenger and cargo volumes and depressing fares. The industry has reported smaller losses since 2001, but still may not generate net profits for 2004.

To improve their financial position, many airlines cut costs by various means, notably by reducing labor expenditures and by decreasing capacity through cutting flight frequencies, using smaller aircraft, or eliminating service to some communities. According to data from the Bureau of Transportation Statistics, large U.S. air carriers cut their operating expenses by $7.8 billion from 2000 through 2002. The drop in total large air carrier operating expenses stands in sharp contrast to increases in FAA's budget. (See Figure 1.)

Figure 1: Changes in Air Carrier Operating Expenses Compared to Changes in FAA Budget, 1998 – 2003 (nominal dollars, indexed to 100)



Source: GAO analysis of data from the U.S. Office of Management and Budget and the DOT Bureau of Transportation Statistics.

Budgetary Pressure on FAA Will Increase Over Time

FAA's budget – which has increased from $9 billion in 1998 to $14 billion in 2004 — will be under pressure for the foreseeable future. Over the past 10 years, FAA has received on average approximately 80 percent of its annual funding from the Airports and Airways Trust Fund (Trust Fund), which derives its receipts from taxes and fees levied on airlines and passengers.[3] The downturn in passenger travel, accompanied by decreases

[3]The Trust Fund was established by the Airport and Airway Revenue Act of 1970 (P.L. 91-258) to help fund the development of a nationwide airport and airway system and to fund FAA investments in air traffic control facilities. It provides all of the funding for the Airport Improvement Program, which provides grants for construction and safety projects at airports; the Facilities and Equipment account that funds technological improvements to the air traffic control system; and a Research, Engineering, and Development account, which supports aviation safety, mobility, and environmental goals. In fiscal year 2002, the Trust Fund provided 79 percent of the funding for FAA Operations, which represented almost 50 percent of Trust Fund expenditures. The Trust Fund is supported by 10 dedicated excise taxes. In fiscal year 2002, the Trust Fund received about $10 billion in revenue from these taxes and interest.

in average yields, has resulted in lowered receipts into the Trust Fund. On average, domestic yields have fallen since 2000, and are at their lowest levels since 1987. As a result, the total amount of transportation taxes that were remitted to the Trust Fund declined by $2.0 billion (19.6 percent) between fiscal years 1999 and 2003 (in 2002 dollars).

Contributions from the General Fund have averaged about 20 percent of FAA's budget since 1994, but total Federal spending is under increasing stress because of growing budget deficits. According to the March 2004 analysis from the Congressional Budget Office, the Federal deficit under the President's fiscal 2005 budget will be $358 billion.

Clearly, a major challenge for FAA both now and into the future will be cost-cutting and cost control.

- Operating costs represent over half of FAA's budget. For 2005, the Administration has requested $7.8 billion for Operations. Because salaries and benefits make up 73 percent of that total, restraining the growth in operations spending will be extremely difficult, even with improvements in workforce productivity.

- Capital expenses (i.e., the Facilities and Equipment account) represent less than 20 percent of FAA's budget, but virtually none of the projects requested for funding for 2005 is expected to generate any savings in the Operations account.

- Funds for airports' capital development have more than doubled since 1998, rising from $1.6 billion (18.3 percent of the total) to a requested $3.5 billion (25.1 percent of the total) in 2005. Current funding levels are sufficient to cover much of the estimated cost of planned capital development. However, building new runways is not always a practicable way to increase capacity. FAA must decide how to increase capacity and service, as well as improve system efficiency and safety.

Financial Pressure Adds Premium to Improving Management Controls

FAA's ability to operate efficiently and effectively – particularly regarding its air traffic control modernization projects — have been hampered over time by inadequate management of information technology and financial management controls. FAA's ATC modernization projects have consistently experienced cost, schedule, and performance problems that we and others have attributed to systemic management issues.

The effect has been extraordinary cost growth and a persistent failure to deploy systems. FAA initially estimated that its ATC modernization efforts could be completed over 10 years at a cost of $12 billion. Two decades and $35 billion later, FAA still has not completed key projects, and expects to need another $16 billion thru 2007, for a total cost of $51 billion. GAO has kept major FAA modernization systems on the watch list of high-risk federal programs since 1995.

We believe that, in the current budget environment, cost growth and schedule problems with ongoing modernization efforts can have serious negative consequences: postponed benefits, costly interim systems, other systems not being funded, or a reduction in the number of units purchased.

Forecasts of Future Aviation Activity Add Further Demands for Immediate Improvements in FAA Operations

FAA recognizes that future U.S. air transport activity will likely place significant demands on its ability to keep the system operating. FAA's most recent forecasts project significant increases in overall system activity by 2015. Along with increased movements of aircraft and passengers comes an increased workload for FAA, as well as demands for more efficient operations and/or an expansion of capacity. (See Table 1).

Table 1: Forecasted Increase in Commercial Air Passengers, Operations, and FAA Workload

		2003	2015 (est.)	Percent change
Industry activity measure	Enplanements (millions)	641.4	1057.6	65.0
	Large carrier fleet	4,090	5,732	40.1
	Regional carrier fleet	2,672	4,303	61.0
FAA workload measure	Instrument operations (millions)	26.3	36.8	39.9
	Commercial instrument flight rule aircraft handled at Air Route Traffic Control Centers (millions)	31.9	44.9	40.8

Source: FAA.

Evidence of FAA's inability to meet system capacity demands already exists from the experience at Chicago O'Hare earlier this year. To reduce flight delays, FAA asked American Airlines and United Airlines to reduce their peak scheduled operations by 7.5 percent by June 10. As Secretary Mineta has already recognized, unless system capacity expands, the nation

will face "…more and more O'Hares as [the] economy continues to grow, and as new technology and competition bring even greater demand." It seems clear, however, that FAA's Operational Evolution Plan[4], a few additional runways, and updating more controller workstations with the Standard Terminal Automation Replacement System (STARS)[5] are not the answer to the system's need for capacity. We cannot pave our way to the year 2025.

Despite Personnel and Acquisition Reforms, Systematic Management Issues Continue to Impede ATC Modernization

Over the years, systematic management issues, including inadequate management controls and human capital issues have contributed to the cost overruns, schedule delays, and performance shortfalls that FAA has consistently experienced in acquiring its major ATC modernization systems. Historically, some of the major factors impeding ATC acquisitions included an ineffective budget process and an inability to provide good cost and schedule estimates. A number of cultural problems including widely diffused responsibility and accountability, inadequate coordination, and poor contract management/oversight also slowed the progress of individual projects. Problems within FAA's acquisition and procurement processes included an inability to obligate and spend appropriate funds in a timely manner, a complicated procurement and acquisition cycle, failure to field systems in a timely fashion, and an inability to field current technology systems. FAA lacked a means to strategically analyze and control requirements, and good cost and schedule estimates were often not effectively developed and integrated into acquisition plans. To address many of these issues, Congress passed legislation in 1995 exempting FAA from many of the existing Federal personnel and procurement laws and regulations and directed the agency to develop and implement new acquisition and personnel systems. More recently, in 2000, the Congress and the administration together provided for a new oversight and management structure and a new air traffic organization to bring the benefits of performance management to ATC modernization.

[4]The Operational Evolution Plan is an ongoing 10-year plan developed by the FAA to increase the capacity and efficiency of the national airspace system, while enhancing safety and security.

[5]STARS will replace controller workstations with new color displays, processors, and computer software at FAA and DOD terminal air traffic control facilities—within 5 to 50 nautical miles of an airport.

FAA Has Taken Steps to Implement Human Capital Strategies, but Further Efforts are Needed

According to FAA, burdensome government-wide human capital rules impeded its ability to hire, train, and deploy personnel and thereby hampered its capacity to manage ATC modernization projects efficiently. In response to these concerns, Congress granted FAA broad exemptions from federal personnel laws and directed the agency to develop and implement a new personnel management system.

- *Human capital reforms:* Following the human capital exemptions granted by Congress in 1995, FAA initiated reforms in three primary areas: compensation and performance management, workforce management, and labor and employee relations. In the area of compensation and performance management, FAA introduced two initiatives—a new, more flexible pay system in which compensation levels are set within broad ranges, called pay bands, and a new performance management system intended to improve employees' performance through more frequent feedback with no summary rating. Both new systems required an exemption from laws governing federal civilian personnel management found in title 5 of the United States Code. In the area of workforce management, FAA implemented a number of initiatives in 1996 through the establishment of agency-wide flexibilities for hiring and training employees. In the area of labor and employee relations, FAA established partnership forums for union and nonunion employees and a new model work environment program. Other human capital initiatives have included restructuring FAA's organizational culture and implementing means to provide sustained leadership.

- *Organizational culture:* FAA issued an organizational culture framework in 1997 that attempted to address some of the vertical "stovepipes" that conflicted with the horizontal structure of ATC acquisition team operations. A key piece of this framework included the establishment of integrated product teams in an attempt to improve collaboration among technical experts and users. Moreover, integrated teams have not worked as intended. For example, competing priorities between two key organizations that were part of the Wide Area Augmentation System's integrated team ultimately negated its effectiveness and undermined its ability to meet the agency's goals for the system.

- *Sustained leadership:* Until former Administrator Garvey completed her 5-year term in 2002,[6] FAA had been hampered by a lack of sustained

[6]To provide FAA's ATC modernization efforts with needed direction and stability, the Congress established a 5-year term for the FAA Administrator in 1994. Former Administrator Garvey was the first to complete a term of this length in 2002.

leadership at FAA was also problematic.[7] During the first 10 years of the ATC modernization effort, the agency had seven different Administrators and Acting Administrators, whose average tenure was less than 2 years. Such frequent turnover at the top contributed to an agency culture that focused on short-term initiatives, avoided accountability, and resisted fundamental improvements to the acquisition process. .

Nine years have passed since the agency received broad exemptions from laws governing federal civilian personnel management. While FAA has taken a number of steps since personnel reforms were implemented, it is not clear whether and to what extent these flexibilities have helped FAA to more effectively manage its workforce and achieve its mission. The agency did not initially define clear links between reform goals and program goals, making it difficult to fully assess the impacts of personnel reform. FAA has not yet fully implemented all of its human capital initiatives and continues to face a number of key challenges with regard to personnel issues. In our February 2003 report, we found that the agency had not fully incorporated elements that are important to effective human capital management into its overall reform effort, including data collection and analysis and establishing concrete performance goals and measures. Currently, the agency is still working to implement tools to keep accurate cost and workforce data. The new Air Traffic Organization has announced plans for establishing cost accounting and labor distribution systems, but they are not yet in place. More comprehensive cost accounting systems and improved labor distribution systems are necessary to maximize workforce productivity and to plan for anticipated controller retirements. More broadly, taking a more strategic approach to reform will allow the agency to better evaluate the effects of human capital initiatives, which it sees as essential to its ATC modernization effort.

ATC Projects Continue to Experience Cost, Schedule, and Performance Problems

FAA established its current acquisition management system (AMS) in 1996 following acquisition reform. The agency has reported taking steps to overseeing investment risk and capturing key information from the investment selection process in a management information system. It has also implemented guidance for validating costs, benefits, and risks.

FAA has also taken steps to improve the management of its ATC modernization efforts. For example, it implemented an incremental, “build

[7]Congress established a 5-year term for the FAA Administrator in 1994.

a little, test a little" approach that improved its management by providing for mid-course corrections and thus helping FAA to avoid costly late-stage changes. In the area of management controls, FAA has (1) developed a blueprint for modernization (systems architecture) to manage the development of ATC systems; (2) established processes for selecting and controlling information technology investments, (3) introduced an integrated framework for improving software and system acquisition processes, and (4) improved its cost-estimating and cost-accounting practices. Nonetheless, ATC modernization efforts continue to experience cost, schedule, and performance problems.

FAA is not yet incorporating actual costs from related system development efforts in its processes for estimating the costs of new projects. Further, the agency has not yet fully implemented processes for evaluating projects after implementation in order to identify lessons learned and improve the investment management process. Reliable cost and schedule estimates are essential to addressing some of the ongoing problems with ATC acquisitions.

In addition to controlling cost and schedule overruns, FAA needs to take concrete steps to identify and eliminate redundancies in the National Airspace System (NAS). FAA must review its long-term ATC modernization priorities to assess their relative importance and feasibility in light of current economic constraints, security requirements, and other issues. The ongoing challenges facing air traffic control modernization efforts led Congress and the administration to create a new oversight and management structure through the new Air Traffic Organization (ATO) in order to bring the benefits of performance management to ATC modernization.

Progress in Establishing the New Air Traffic Organization Has Been Slow

The ATO was created by an executive order in 2000 to operate the air traffic control system. In the same year, Congress enacted legislation establishing the Air Traffic Services Subcommittee, a five-member board to oversee the ATO and a chief operating officer to manage the organization. The ATO was designed to bring a performance management approach to ATC modernization efforts.

The Air Traffic Services Subcommittee has made some initial efforts with regard to the establishment of the ATO. They have taken steps to focus on the structure of the ATC system, including reviewing and approving performance metrics for the ATO, establishing a budget, and approving three large procurements that FAA initiated.

However, progress in establishing the organization has been slow, given that FAA received the mandate to establish the ATO nearly four years ago. FAA encountered difficulties finding a qualified candidate to take the position of chief operating officer, and did not fill the vacancy until June 2003. The final executive positions for the organization including the Vice-Presidents of Safety and Communications were just filled last month.

Key tasks for the ATO will include organizational restructuring, implementing effective financial management and cost-accounting systems, evaluating day-to-day business practices, and fostering growth with efficiency. Rapidly changing technology, limited financial resources, and the critical importance of meeting client needs will present significant challenges in order for the ATO to truly evolve into a high performing organization.

FAA's Future Success Hinges on Several Critical Success Factors

To successfully meet the challenges of the 21st century, FAA must fundamentally transform its people, processes, technology, and environment to build a high-performing organization. Our work has shown that high-performing organizations have adopted management controls, processes, practices, and systems that are consistent with prevailing best practices and contribute to concrete organizational results. Specifically, the key characteristics and capabilities of high-performing organizations fall into four themes as follows:

- **A clear, well-articulated, and compelling mission**. High-performing organizations have a clear, well-articulated, and compelling mission, strategic goals to achieve it and a performance management system that aligns with these goals to show employees how their performance can contribute to overall organizational results. FAA has taken its first steps toward creating a performance management system by aligning its goals and budgetary resources through its Flight Plan—blueprint for action for fiscal year 2004 through 2008—and its fiscal year 2005 budget submission. In addition, the new ATO has published both its vision and mission statement.

  Our past work has found that FAA's ability to acquire new ATC modernization systems has been hampered by its organizational culture, including employee behaviors that did not reflect a strong commitment to mission focus. Given the central role that FAA's employees will play in achieving these performance goals and overall agency results, it is critical for them to both embrace and implement the agency's mission in the course of their daily work. In addition, our work has found regularly

communicating a clear and consistent message about the importance of fulfilling the organization's mission helps engage employees, clients, customers, partners, and other stakeholders in achieving higher performance.

- **Strategic use of partnerships**. Since the federal government is increasingly reliant on partners to achieve its outcomes, becoming a high-performing organization requires that federal agencies effectively manage relationships with other organizations outside of their direct control. FAA is currently working to forge strategic partnerships with its external customers in a number of ways. For example, the agency recently announced a program to create "express lanes in the sky" to reduce air traffic delays this spring and summer and is in the early stages of working with selected federal partners to develop a long-term plan for the national aerospace system (2025) and to leverage federal research funds to conduct mutually beneficial research. In addition, FAA has ongoing partnerships with the aviation community to assess and address flight safety issues (e.g., development of technology to prevent fuel tank explosions and to reduce the potential for aircraft wiring problems through development of a "smart circuit breaker").

  However, our past work has shown that forging strategic partnerships with organizations outside of FAA can be difficult and time-consuming. For example, FAA's efforts to establish voluntary data sharing agreements with airlines—Flight Operational Quality Assurance Program (FOQA)—spanned more than a decade, due in part, to tremendous resistance from aviation community stakeholders who formed a rare alliance to oppose several of FAA's proposals. In addition, when attempting to increase airport capacity (e.g., new runways), FAA and airport operators have frequently faced opposition from the residents of surrounding communities and environmental groups. Residents are often concerned about the potential for increases in airport noise, air pollutant emissions, and traffic congestion.

- **Focus on needs of clients and customers**. Serving the needs of clients and customers involves identifying their needs, striving to meet them, measuring performance, and publicly reporting on progress to help assure appropriate transparency and accountability. To better serve the needs of its clients and customers, FAA published *Flight Plan*, which provides a vehicle for identifying needs, measuring performance, and publicly reporting progress. Flight Plan includes performance goals in the areas of safety, greater capacity, international leadership, and organizational excellence, which are linked to the agency's budget and progress monitored through a Web-based tracking system.

However, over the years, FAA's efforts to meet client and customer needs have not always been successful, and some have had a long lasting negative impact. FAA has had particular difficulty fielding new ATC modernization systems within cost, schedule and performance goals to meet the needs of the aviation community. Agency promises to deliver new capabilities to airlines via improvements to the ATC system led some airlines to install expensive equipment in their aircraft to position themselves to benefit from expected FAA services; however, when the agency failed to deliver on those promises, participating air carriers were left with equipment that they could not use—no return on their investment. In addition, shifting agency priorities have made it difficult for the aviation industry to anticipate future requirements and plan for them in a cost-effective manner (e.g., providing air carriers with adequate lead time to purchase new equipment and airframe manufacturers with lead time to incorporate changes into new commercial airplane designs). Furthermore, the absence of a full-functioning cost-accounting system makes it difficult for FAA to assess the actual cost of providing services to users of the National Airspace System.

- **Strategic management of people**. Most high-performing organizations have strong, charismatic, visionary, and sustained leadership, the capability to identify what skills and competencies the employees and the organization need, and other key characteristics including effective recruiting, comprehensive training and development, retention of high-performing employees, and a streamlined hiring process. Toward this end, FAA has hired a Chief Operating Officer (COO) to stand up its new ATO. Our work on high-performing organizations has recommended use of the COO concept to facilitate transformational change in federal agencies and to provide long-term attention and focus on management issues. Furthermore, FAA has placed 78 percent of its workforce under a pay-for-performance system[8] and implemented a training approach for its acquisition workforce which reflects four of the six elements used by leading organizations to deliver training effectively.[9] However, it is too

[8]Inspector General, U.S. Department of Transportation, Key Issues for the Federal Aviation Administration's FY 2005 Budget, CC-2004-038 (April 22, 2004).

[9]To deliver training effectively, leading organizations' training approaches generally include six elements: (1) prioritize initiatives most important to the agency; (2) demonstrate top-level commitment and provide resources; (3) identify those who need training on specific initiatives and set training requirements; (4) tailor training to meet the needs of the workforce; (5) track training to ensure it reaches the right people; and (6) measure effectiveness of training. GAO found that FAA's acquisition organization has highly developed processes for elements 1, 2, 4, and 5.

soon to know the extent to which these elements of effective training will be incorporated into the new ATO. Finally, FAA is currently conducting an Activity Value Analysis, a bottoms-up effort to establish a baseline of ATO headquarters activities and their value to stakeholders. The results of this analysis are intended to help FAA's leadership target cost-cutting and cost savings efforts.

Despite FAA's efforts to date, our past work has found the agency's strategic management of human capital lacking. For example, organizational culture issues at FAA (e.g., its vertical, stovepiped structure) have discouraged collaboration among technical experts and users of the ATC system and contributed to the agency's inability to deliver new ATC systems within cost, schedule and performance goals. One of the most significant early challenges facing the ATO will be negotiating a new contract with air traffic controllers, which is due to expire in September 2005. The DOT IG has repeatedly noted that despite the importance of controllers' jobs, that FAA simply cannot sustain the continued salary cost growth for this workforce, which rose from an average salary of $72,000 in 1998 to $106,000 in 2003. Given the inextricable link between FAA's operating costs and its controller workforce, striking an acceptable balance between controllers' contract demands and controlling spiraling operating costs will be a strong determinant of the ATO's credibility both within FAA and across the aviation industry.

While FAA has taken some promising steps through its new ATO to restructure itself in a manner consistent with high-performing organizations, the agency still faces significant and longstanding systemic management challenges. These challenges must be overcome if FAA is to keep pace with ongoing changes in the aviation industry and transform itself into a world-class organization. Our work for more than two decades has shown that even modest organizational, operational, and technological changes at FAA can be difficult and time consuming, all of which underscores the difficult road ahead for FAA and its new ATO.

This concludes my statement. I would be pleased to respond to any questions that you or other Members of the Subcommittee may have at this time.

For further information on this testimony, please contact JayEtta Hecker at (202) 512-2834 or by e-mail at heckerj@gao.gov. Individuals making key

contributions to this testimony include Samantha Goodman, Steven Martin, Beverly Norwood, and Alwynne Wilbur.

This is a work of the U.S. government and is not subject to copyright protection in the United States. It 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 General Accounting 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 the Internet. GAO's Web site (www.gao.gov) contains abstracts and full-text files of current reports and testimony and an expanding archive of older products. The Web site features a search engine to help you locate documents using key words and phrases. You can print these documents in their entirety, including charts and other graphics.

Each day, GAO issues a list of newly released reports, testimony, and correspondence. GAO posts this list, known as "Today's Reports," on its Web site daily. The list contains links to the full-text document files. To have GAO e-mail this list to you every afternoon, go to www.gao.gov and select "Subscribe to e-mail alerts" under the "Order GAO Products" heading.

Order by Mail or Phone

The first copy of each printed report is free. Additional copies are $2 each. A check or money order should be made out to the Superintendent of Documents. GAO also accepts VISA and Mastercard. Orders for 100 or more copies mailed to a single address are discounted 25 percent. Orders should be sent to:

U.S. General Accounting Office
441 G Street NW, Room LM
Washington, D.C. 20548

To order by Phone:	Voice:	(202) 512-6000
	TDD:	(202) 512-2537
	Fax:	(202) 512-6061

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Web site: www.gao.gov/fraudnet/fraudnet.htm
E-mail: fraudnet@gao.gov
Automated answering system: (800) 424-5454 or (202) 512-7470

Public Affairs

Jeff Nelligan, Managing Director, NelliganJ@gao.gov (202) 512-4800
U.S. General Accounting Office, 441 G Street NW, Room 7149
Washington, D.C. 20548

PRINTED ON RECYCLED PAPER