



Highlights of [GAO-09-479T](#), a testimony before the Subcommittee on Aviation, Committee on Transportation and Infrastructure, House of Representatives

Why GAO Did This Study

To prepare for forecasted air traffic growth, the Federal Aviation Administration (FAA), including its Joint Planning and Development Office (JPDO) and Air Traffic Organization (ATO), is planning for and implementing the Next Generation Air Transportation System (NextGen) in partnership with other federal agencies and the aviation industry. NextGen will transform the current radar-based air traffic control system into a more automated, aircraft-centered, satellite-based system. GAO's previous work has identified issues related to the usefulness of NextGen planning documents, FAA's organizational structure to manage the transition to NextGen, and FAA's workforce to oversee and implement NextGen. Recently, the focus of NextGen planning and implementation has shifted to capabilities that can be achieved in the midterm, defined as 2012 through 2018.

GAO's testimony focuses on (1) JPDO's and ATO's progress in planning and implementing NextGen, (2) ongoing efforts to implement midterm capabilities to address capacity constraints and delays, (3) the potential impact on NextGen of organizational changes and human capital issues, and (4) research and development and facilities maintenance and reconfiguration challenges going forward. GAO's testimony updates prior GAO work with FAA data and interviews with agency and union officials and industry stakeholders, including airline, aircraft, and avionics manufacturer representatives.

To view the full product, click on [GAO-09-479T](#)

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NEXT GENERATION AIR TRANSPORTATION SYSTEM

Status of Transformation and Issues Associated with Midterm Implementation of Capabilities

What GAO Found

JPDO and ATO have made progress in planning for and developing NextGen. JPDO has continued to update its basic planning documents, and in January 2009, ATO released the current version of its NextGen Implementation Plan, which focuses on the midterm implementation of capabilities. Recent versions of NextGen planning documents have partially addressed some of GAO's concerns about their usefulness, but industry stakeholders continue to express frustration that the documents lack any specific timelines or commitments. In addition to these planning efforts, FAA has continued to plan and conduct several demonstrations of some key NextGen technologies.

To help address current congestion and delays, industry stakeholders have frequently suggested that FAA focus on maximizing what can be done with existing, proven capabilities and existing infrastructure. Partly to help accelerate the implementation of capabilities in the midterm, FAA has created a NextGen Midterm Implementation Task Force, which is to report its recommendations to FAA in August 2009. The task force plans to identify and prioritize capabilities that can be implemented in the midterm and potentially be deployed regionally to address key bottlenecks. Essential to the mid- and long-term success of these efforts is persuading the airlines to make costly investments in NextGen equipment—a step they are reluctant to take without clearly demonstrated benefits. Incentives that could encourage such investments include operational preferences—such as preferred airspace, routings, or runway access—and equipment investment tax credits. FAA will also have to validate, certify, and issue rules for these capabilities.

Recent changes in the management structure for NextGen, though designed to address industry stakeholders' and others' concerns about fragmentation of authority and lack of accountability, have not fully addressed these issues and have raised further questions about parties' roles and responsibilities. Additionally, human capital issues remain to be resolved, including the degree to which key stakeholders, such as controllers and technicians, are involved in NextGen efforts and whether FAA is able to acquire the systems engineering, contract management, leadership, and other skills needed for NextGen. FAA plans to fill 378 NextGen positions in fiscal years 2009 and 2010.

Going forward, FAA faces challenges in addressing ongoing research needs, reconfiguring and maintaining existing facilities, and enhancing the physical capacity of airports. For NextGen, research on the environmental impact of aviation, human factors, and weather will be critical. Air traffic facilities will also have to be reconfigured to support NextGen, and existing facilities require maintenance to ensure safety and reliability. FAA is currently reviewing its facility needs. Finally, even with the efficiencies anticipated from implementing NextGen, FAA has determined that it will need additional airport and runway capacity. Efforts to develop new infrastructure will require significant advance planning and cost and safety analyses.