

GAO Highlights

Highlights of [GAO-15-608](#), a report to congressional requesters.

Why GAO Did This Study

The United States, Europe, and other countries across the world are modernizing their ATM systems. As these efforts proceed, international coordination in developing interoperable ATM systems and procedures will be necessary to support a global aviation network and ensure the seamless transition of aircraft and aviation information across national borders.

GAO was asked to review FAA's actions to achieve the interoperability of NextGen with other countries' ATM modernization efforts. This report examines (1) selected stakeholders' views on factors that might affect NextGen's global interoperability; (2) the extent to which FAA has established a strategy to effectively achieve NextGen's global interoperability; and (3) actions FAA has taken to coordinate with other countries on global interoperability. GAO reviewed documents pertaining to FAA's international strategy and collaborative efforts with foreign and domestic aviation stakeholders. GAO also interviewed FAA officials and 25 stakeholders representing different facets of the aviation industry including foreign ANSPs, manufacturers, and standards-making bodies.

What GAO Recommends

GAO recommends that FAA conduct a comprehensive assessment of risks to NextGen's global interoperability and identify how this information will be used to mitigate risks and prioritize resources. In responding to a draft of the report, FAA agreed with the recommendations and discussed some of its ongoing risk assessment activities.

View [GAO-15-608](#). For more information, contact Gerald Dillingham at (202) 512-2834 or dillinghamg@gao.gov

July 2015

NEXT GENERATION AIR TRANSPORTATION SYSTEM

Improved Risk Analysis Could Strengthen FAA's Global Interoperability Efforts

What GAO Found

Aviation industry stakeholders GAO interviewed described various factors that may affect the interoperability of the Next Generation Air Transportation System (NextGen)—a complex, long-term initiative to modernize the U.S. air-traffic management (ATM) system—with other countries' ATM modernization efforts. Interoperability allows different ATM systems and procedures to accept and use each other's information and services for technical or operational purposes. One factor described by 17 of 25 stakeholders that could affect achieving global interoperability, which, in turn, can affect NextGen's interoperability efforts, is the ability of key stakeholders, particularly air navigation service providers (ANSP) from different countries, to agree on the desired outcome of ATM modernization efforts. Stakeholders also identified several conditions that could affect when international standards are developed and when nations can implement ATM modernization efforts. For example, government and industry resource constraints could delay countries' modernization efforts and thereby could delay the interoperability of NextGen with other systems.

The Federal Aviation Administration (FAA) developed an international strategic plan in 2014 to guide internal efforts for coordinating and executing NextGen's global interoperability and other international activities. This plan and other supporting documents demonstrate, to varying degrees, five of the six characteristics of an effective strategy that GAO has previously identified. For example, FAA identified organizational roles, responsibilities, and coordination mechanisms and is developing activities and performance measures to achieve global interoperability. However, FAA lacks a mechanism for comprehensively identifying and assessing risks and for prioritizing resources to manage NextGen's interoperability risks, such as those resulting from the factors identified by aviation industry stakeholders GAO interviewed. According to FAA officials, potential risks to NextGen's interoperability are identified and assessed through working groups; however, FAA has not conducted a comprehensive risk assessment or analysis of threats and vulnerabilities specific to NextGen interoperability. Without a more comprehensive approach to assessing and managing risks, FAA is not well positioned to ensure that its strategy effectively mitigates all potential risks to NextGen's interoperability or to prioritize resources toward actions that will manage and mitigate those risks.

In addition to internal coordination efforts, FAA coordinates with the European Union and other foreign ANSPs on the global interoperability of their ATM modernization efforts through various mechanisms, such as through bilateral agreements and participation in regional and international working group forums. This coordination has resulted in efforts that further global interoperability, including agreement on a framework for developing global technology standards and conducting a demonstration of worldwide flight-information sharing. For example, FAA and European Union officials continue to collaborate to support the International Civil Aviation Organization's efforts to update the Aviation System Block Upgrades, which are designed to be consistently applied by countries and regions around the world to help achieve interoperability.