

## NEXT GENERATION AIR TRANSPORTATION

### Collaborative Efforts with European Union Generally Mirror Effective Practices, but Near-Term Challenges Could Delay Implementation

#### Why GAO Did This Study

The Federal Aviation Administration (FAA) is leading development of the Next Generation Air Transportation System (NextGen), which will transform the current radar-based air traffic control system into a satellite-based system. At the same time, the European Union (EU) is developing a similar transformation effort, known as the Single European Sky Air Traffic Management Research (SESAR) programme. Interoperable NextGen and SESAR systems and procedures will be important for aircraft to seamlessly transition from one system to the other.

As requested, this report discusses (1) the efforts that FAA has taken to ensure the interoperability of NextGen with SESAR and (2) how those efforts compare with effective interagency collaboration practices. To address these issues, GAO reviewed agreements between the U.S. and the EU concerning collaborative research on air traffic management and documents related to NextGen and SESAR; reviewed the literature on effective collaboration; and interviewed FAA and EU officials.

#### What GAO Recommends

GAO recommends that FAA improve its dissemination of information to key stakeholders on the efforts taken and planned toward NextGen/SESAR interoperability. After reviewing a draft of this report, the Department of Transportation (DOT) agreed to consider our recommendation. DOT and the European Commission provided technical comments, which we incorporated as appropriate.

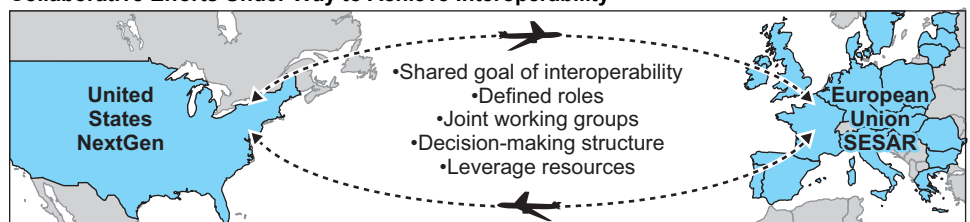
View GAO-12-48. For more information, contact Gerald L. Dillingham at (202) 512-2834 or [dillingham@gao.gov](mailto:dillingham@gao.gov).

#### What GAO Found

FAA and the EU are working collaboratively toward NextGen/SESAR interoperability. In 2006, FAA and the European Commission established a Memorandum of Understanding (MOU) that allowed reciprocal participation in meetings, which provided each with an awareness of the other's plans. The MOU also continued a long-standing agreement that fostered collaborative research and helped develop some of the central concepts of NextGen and SESAR, such as data communications and satellite-based surveillance. Additionally, FAA and the EU conducted demonstrations of NextGen/SESAR procedures and technologies that produced useful results at the airports involved in the demonstrations. In March 2011, FAA and the EU signed a separate Memorandum of Cooperation (MOC) that established a formal collaborative structure for NextGen and SESAR. Outside of formal agreements, U.S. and EU standards bodies have formed joint committees to develop common standards for NextGen and SESAR systems. Additionally, FAA and the EU are working with an international standards organization to facilitate global interoperability.

FAA's efforts toward interoperability generally mirror effective collaborative practices, but mitigating stakeholder skepticism about NextGen/SESAR benefits will nevertheless be a challenge. FAA and EU officials share a common goal—interoperability. Having a common goal is a characteristic of effective collaborative efforts. Also consistent with effective practices, the 2011 MOC provides a strategy for working together and provides the means to operate across U.S.-EU boundaries. The MOC also defines roles and responsibilities, leverages resources, and provides for monitoring and evaluating results. Some U.S. and European stakeholders expressed skepticism about whether those benefits will ever be realized, while others were unaware of the MOC's details, such as its structure and governance for achieving interoperability. Although FAA has long collaborated with Europe, it has not disseminated information about these efforts in public documents, such as its strategic plans and performance reports. With the 2011 MOC's signing, FAA has an opportunity to include in its public documents the details of the MOC's structure for collaboration and governance. Such information could reduce skepticism on both sides of the Atlantic about realizing the future benefits of NextGen and SESAR and, in turn, reduce airlines' hesitancy to equip with NextGen's advanced technologies.

#### Collaborative Efforts Under Way to Achieve Interoperability



Sources: GAO and Map Resources (maps).