

FAA NextGen

MODERNIZING OUR NATION'S SKIES



WHAT IS NEXTGEN

The Next Generation Air Transportation System, or NextGen, is modernizing the national airspace from a ground-based radar system to a satellite-based navigation system, from voice to digital communication, and from point-to-point data to a fully integrated information management system—changing how we see, navigate, and communicate in our nation's skies.

The U.S. air traffic control system is moving from one based on knowing where an aircraft is to knowing where an aircraft is going to be at critical points along its flight path. This system of time-based management, known as trajectory-based operations, will increase predictability and efficiency throughout the national airspace. NextGen is already improving safety, capacity, and efficiency on runways and in our skies while reducing fuel burn, carbon emissions, and noise.

IMPLEMENTATION

Recent major NextGen milestones include:

- › Deployment of En Route Automation Modernization (ERAM) at 20 control centers. ERAM covers most of the nation's more than 3.2 million square miles and enables air traffic controllers to handle more than 30 million flights annually.
- › Completed installation of the network of Automatic Dependent Surveillance-Broadcast (ADS-B) sensors in April 2014, with 123 air traffic control facilities presently using this technology. ADS-B allows an aircraft to determine its position via satellite navigation and periodically broadcasts it, enabling it to be tracked by air traffic control ground stations and even by other aircraft. The aviation industry is required to be fully equipped with ADS-B technology by 2020.
- › Testing of a new digital communication system called DataComm at Newark and Memphis airports. DataComm provides a digital link between ground automation and flight deck avionics for safety-of-flight air traffic control clearances and instructions. Data Comm is critical to the success of NextGen.

REALIZED BENEFITS

- › The FAA has measured \$1.6 billion in benefits to airlines and the traveling public from NextGen capabilities already in place. Over the next 15 years NextGen should produce an additional \$11.4 billion in benefits.
- › Hartsfield–Jackson Atlanta International Airport reports that flights are 48 percent faster from the gate to departure and into enroute airspace.
- › Estimates predict airlines will burn at least 2.5 million fewer gallons of fuel each year in the skies above Washington, DC, while emitting at least 25,000 fewer metric tons of carbon dioxide (the equivalent of annual greenhouse gas emissions from 5,263 passenger vehicles or 8,961 tons of waste taken to landfills).
- › Delta Air Lines reports saving up to two minutes of outbound taxi time per flight and saving \$13–\$18 million in operating costs annually.

NEXT STEPS

To continue to support NextGen implementation, the United States needs to pursue the following:

- › Provide stable and consistent funding to move NextGen forward and implement the ongoing initiatives as well as future improvements.
- › Provide incentives for the aviation industry to equip its fleets to take full advantage of NextGen capabilities.
- › Support the continued expansion of airport infrastructure to meet traffic growth and reduce congestion.
- › Encourage the continued creation of direct and efficient flight paths as a way to avoid congestion.



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