

# Expediting Air Traffic Modernization and Accelerating NextGen

## NextGen to NowGen

While we enjoy the safest aviation system in the world and must maintain our high levels of safety, the United States must seize the opportunity to transition from an antiquated air traffic system designed in the 1950s to a fully modern, digitally integrated 21st-century Next Generation Air Transportation System (NextGen). NextGen will improve airspace efficiency by making flights shorter and more predictable and will reduce the impact of weather delays that plague the current system. Moving to NextGen will decrease greenhouse gas emissions by 5 to 10 percent and will provide greater system-wide throughput to support projected increases in air transportation demand over the next 10 years. Instead of 2025 as a Federal Aviation Administration goal to reach system-wide NextGen deployment, the National Association of Manufacturers (NAM) supports the acceleration of NextGen to significantly increase the achievement of its promised benefits over the next two to five years as a stated national goal.

### Competitiveness Under Threat

The nation's air transportation system is a unique public-private system that requires significant investment and leadership from both public and private sources to deliver benefits to the traveling public and other users of the system. The U.S. competitive position in the aviation sector is being challenged by the European Union (E.U.) and the U.S. civil aerospace industry will be outpaced if we do not consider the transition to NextGen as a serious national objective. U.S. passenger traffic will more than double over the next 20 years and almost triple globally. Other nations with growing air traffic, like China and India, are looking to the U.S. or the E.U. to guide the evolution of their air transportation systems. If the U.S. is not the perceived leader in deploying this technology, opportunities for U.S. manufacturers and workers will be lost forever.

### Supporting a High-Tech Transformation

NextGen efforts will employ thousands of engineers, software developers and other high-tech workers to support this transition to a modernized aviation infrastructure where pilots and controllers will benefit from advanced technology to help them do their jobs with decreased stress and increased safety.

### Reducing the Carbon Footprint

More efficient routing of airplanes from air traffic modernization efforts can result in significant fuel and CO<sub>2</sub> reductions by 2015—11 percent on the ground and 5 percent in the air. In 2008, the aviation industry spent \$57.8 billion on fuel and could eliminate as much as 15 million tons of CO<sub>2</sub> emissions annually with a fully modernized system. Also, reducing overhead aircraft noise from improved climb and descent procedures will improve the quality of life for thousands living around and near the nation's airports.



### Next Steps for NextGen

*A National Public Policy Priority:* The President's identification of and \$865-million commitment to NextGen in the FY 2010 budget request is commendable, but that funding level needs to be increased. Policy goals and objectives must utilize progress-based metrics to maximize the government's return on investment (ROI) and must recognize that NextGen is not a typical federal procurement program that should be treated as a multi-year capital expenditure. The proposed 2010 funding level will maintain the program as is, but the NextGen initiative must evolve from its planning phases to an accelerated deployment effort that is focused on achieving critical outcomes over the next two to five years. Responsibility for moving NextGen forward must jointly lie with the Federal Aviation Administrator and the Secretary of Transportation, who must report directly to the White House on its progress. Maintaining committed support from other relevant agencies is also critical.

*Encouraging Investment in Equipment:* Investing in avionics and other equipment and training in support of the NextGen system is a multi-billion-dollar investment that airlines and operators are unable to justify when the government has not made a clear commitment that the supporting NextGen air traffic equipment and services will be deployed in the near-term. A federal program or initiative that would incentivize early purchase decisions for NextGen airborne capability will support a business case to equip by reducing investment risk and making NextGen a stronger certainty.

*The Nation's Air Transportation System is National Infrastructure:* Although we are experiencing an unprecedented economic downturn of global proportions, the rest of the world and our major competitors are heavily investing in infrastructure. Targeting investments that modernize the strongest and most essential

parts of our nation's infrastructure must be encouraged not only for our economic survival and competitiveness, but as a point of national pride. As Congress and the Administration consider the development of a National Infrastructure Bank in the coming months, the NAM believes NextGen could benefit from this innovative approach to infrastructure financing.

### Facts

By 2028, over 29,000 new aircraft orders are expected to be placed with manufacturers here in the U.S. and overseas, representing \$3.2 trillion in economic activity worldwide.

Civil aviation represents approximately 5.6 percent of U.S. GDP. Airline delays and congestion in 2000 accounted for a \$10-billion productivity loss to U.S. business and industry.

The first transcontinental flight in 1960 between New York and San Francisco aboard a Boeing 707 took 4.5 hours, point to point. Today, that same flight takes at least 5.5 hours. NextGen will improve those transit times by 3 percent. NextGen can eliminate the inefficiencies that contribute to this wasted time and fuel.

## En Route Efficiency

**Aircraft have traditionally followed airways defined by ground-based navigation aids**

FAA Published "Preferred Route"  
2304.6 nautical miles

**Modern aircraft navigation systems enable routing independent of ground based radios supporting more time and fuel efficient, direct flight plans**

3% Shorter Route  
RNAV Direct Route  
2240.3 nautical miles

- More Efficient Routing Saves Time and Energy
- 3% doesn't sound like much... but equates to over \$1.5B savings per year for U.S. airlines
- Most of the 1000+ Ground-Based NavAids can be Decommissioned

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