Statement of
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AND
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BEFORE THE
Subcommittee on Aviation
Committee on Transportation and Infrastructure
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A Review of and Update on the Management of FAA's NextGen Program

Chairman Petri, Ranking Member Costello, Members of the Subcommittee:
Thank you for the opportunity to appear before you to discuss the state of the Federal Aviation Administration's (FAA) Next Generation Air Transportation System, known as NextGen.

NextGen is one of the nation's largest infrastructure projects underway today, but it is more than just a single project, plan or new system. It is the integration of many systems, projects, concepts, technologies, plans, and organizations working with our National Airspace System (NAS) stakeholders to deliver new service capabilities that meet increasing air transport demands. The future of the NAS depends on the success of NextGen, and NextGen's success depends on FAA's effective management and oversight of program implementation, as well as collaboration with our industry partners and our employee labor representatives. We would like to highlight the significant progress we have made to date, and outline how our program management and industry collaboration have contributed to our successes and helped us meet challenges.

Airline passenger travel is expected to nearly double in the next 20 years. That translates into many more aircraft carrying a lot more passengers who will need to arrive at their destinations safely and on time. NextGen can meet that challenge. Our latest estimates show that by 2020, NextGen improvements will reduce delays, in the air and on the ground, by 38 percent as compared to what would occur without those improvements. Such delay reductions are estimated to result in $24 billion in cumulative benefits to aircraft operators, the traveling public and the FAA. Full implementation, which is defined in the NextGen Implementation Plan as occurring in 2020, will result in 1.4 billion gallons of fuel saved and a 14 million metric ton reduction in carbon dioxide emissions.

While we are on track to meet these long-term goals, it is important to stress that NextGen is happening now. Across the country, we are creating satellite-based procedures that will transform the NAS. Satellite navigation is essential to deliver benefits to users right away. The new flight tracks will relieve bottlenecks, improve safety and efficiency, and foster the flow of commerce.

NextGen programs are delivering benefits to users of the system and the traveling public today. Through our work with an advisory group composed of industry stakeholders, we received expert input on the problem of congested airspace in busy metropolitan areas. We have turned those recommendations into specific action by launching our Metroplex initiative. This is a collaborative effort with industry to bring benefits to the public as soon as we possibly can. We are creating new, more direct routes across the country that will relieve bottlenecks and congestion, in addition to improving safety and efficiency. We are making progress in many different areas, including Houston, Atlanta, Charlotte, the San Francisco bay area in northern California, the Los Angeles area in southern California, the Dallas-Fort Worth area in northern Texas and right here in the metropolitan Washington, D.C. We are also working on additional metropolitan areas. Satellite-based navigation is expected to cut a total of seven million nautical miles from flight plans around these cities each year. These shorter routes, together with gradual descents under reduced engine power, are projected to save at least 22 million gallons of fuel annually. For these cities, that's a total reduction in carbon emissions of 220,000 metric tons annually, or the equivalent of taking more than 43,000 cars off the nation's streets.

Each Metroplex is unique and requires an integrated solution that yields benefits to the specific users of the airspace. The development of flight tracks and procedures must take into consideration numerous factors, including the area's terrain, the number and location of airports, the volume of operations, and the mix of equipped and non-equipped aircraft operating in the area. The precision of satellite-based navigation being deployed under the Metroplex initiative helps us to use our airspace more efficiently by deconflicting traffic headed to adjacent airports and allowing general aviation better access to smaller airports near big cities. It also provides GPS precision approaches to smaller airfields that do not have expensive instrument landing systems on the ground.

NextGen is also providing the general aviation community access to airports that have previously been inaccessible in low visibility conditions. Sixty percent of general aviation aircraft that fly under instrument meteorological conditions are equipped to take advantage of satellite-based navigation into airports that have no ground navigation capability. This has the added benefit of reducing congestion around larger airports that have previously been the only available choice in bad weather.

Another initiative that is yielding positive results is the Greener Skies Over Seattle initiative, a collaborative project between the FAA, Alaska Airlines, the Port of Seattle, and the Boeing Corporation. This initiative will create new NextGen approaches for multiple aircraft and airlines flying into Seattle-Tacoma International Airport (Sea-Tac), leaving Seattle's skies quieter and greener. These flight tracks are shorter, more fuel efficient and more environmentally friendly. Thanks to a lot of hard work by all of our partners, we reached a milestone this summer. For the first time, Alaska Airlines is flying customers into Sea-Tac using these new NextGen approaches. The importance of Greener Skies is not just that we are creating more efficient flight paths into Sea-Tac, but that we are developing a template for how to implement these kinds of airspace improvements in cities across the country.

Finally, I would like to share another example of how the FAA is partnering with industry to advance NextGen technology. The FAA entered into an agreement with JetBlue last year to

provide data and conduct real-time operational evaluations. JetBlue will equip up to 35 of its A320 aircraft with Automatic Dependent Surveillance-Broadcast (ADS-B) avionics. ADS-B will provide air traffic controllers with precise positioning of the aircraft by using GPS satellite signals, enabling the aircraft to fly more direct routes off the East Coast where ground-based radar coverage is unavailable. Field trials are scheduled to begin in early 2013. The FAA will collect valuable NextGen data by observing and conducting real-time operational evaluations of ADS-B on revenue flights. This agreement is beneficial to both the airline and the FAA and has the potential for industry-wide benefits.

While we've made significant progress in accelerating the benefits of new technology, we recognize that, as with any large-scale infrastructure program, we need to position ourselves to address the challenges that will inevitably arise. The FAA's Foundation for Success initiative, which we implemented last year, is helping the agency use our resources as efficiently and effectively as possible, while improving agency accountability. The changes that we made include attaining greater productivity by improving internally-shared services, redesigning FAA's governance and implementing a revised NextGen management structure. We recognized that the agency needed to be more proactive and flexible in order to keep pace with anticipated growth and advancements in aviation world-wide. We also recognized that our commitment to maintaining the safest, most efficient aviation system in the world could not be compromised in any way. Safety will always remain our number one priority.

We have learned lessons from previous large acquisition programs, and are developing new best practices moving forward. As an agency, we are also going through a positive transformation. You may recall that in 2010, we embarked upon Destination 2025, a long-term strategic vision for transforming not only the national aviation system, but also the agency responsible for making it happen.

In support of that vision, we launched our Foundation for Success initiative, which is putting an improved organizational structure in place to ensure the agency has the flexibility necessary to keep pace with the expected growth and advancement of aviation worldwide. As part of that initiative, we reorganized the structure of the NextGen office, moving it from the Air Traffic Organization (ATO) and elevating its top official to the position of Assistant Administrator for NextGen. This newly realigned position, reporting directly to the FAA Deputy Administrator, oversees an organization dedicated entirely to delivering NextGen benefits. Under a revised management structure, the new NextGen organization provides technical assistance and systems integration expertise, as well as promoting collaboration and accountability across the FAA.

We also created a program management office to improve our administration and coordination of key air traffic development programs. Through the Foundation for Success, we also established a new organization solely focused on implementing major technology programs. The Program Management Organization (PMO) is part of the FAA's Air Traffic Organization and is responsible for strategically managing our major acquisition programs. The PMO helps us to work across organizational boundaries to help continue to advance NextGen initiatives, ushering them from the drawing board to live operation. Equally important, we moved responsibility for these programs out of the components of the ATO which also have responsibility and primary

expertise in running the day-to-day operation of the aviation system. As a result, both the daily operation and the transformational programs can get the focused attention they need.

This new approach is already working with the En Route Automation Modernization (ERAM), a foundational NextGen program. ERAM has successfully been refocused and is on-time and on-budget. Changes to the program oversight, contract management and implementation approach over the last year have delivered significant progress in deployment of the technology. ERAM is now operating in some capacity at nine of the 20 en route centers, and five of those centers are currently using ERAM as the primary technology to direct high-altitude air traffic. Since December 2011, the system has accumulated more than 20,000 hours of operations across a range of varying airspace needs and traffic volumes. All of the en route centers will be operating ERAM by 2014. This turn-around is, in no small part, attributable to an improved relationship between a newly appointed management team and our labor organizations, the National Air Traffic Controller Association (NATCA) and the Professional Aviation Safety Specialists (PASS). We created collaborative work groups and established new program governance and oversight that included a steering committee and regular program management reviews. We standardized procedures to transition to continuous operations on ERAM, and made a series of process improvements across all aspects of the ERAM technology lifecycle. The success of ERAM is an essential component of moving forward with NextGen, and we will apply the lessons we've learned from the turn-around of ERAM to other initiatives.

Just as collaboration with the workforce has paid dividends on the ERAM program, industry partners continue to play a key role in transforming the way we travel and communicate in the NAS. The FAA has a longstanding history of engaging with industry. The agency has used the RTCA to develop industry consensus around policy, program and regulatory decisions for many years.

To facilitate NextGen specific recommendations, the NextGen Advisory Committee (NAC) was formed within the RTCA. The NAC's goal is to develop a common understanding of NextGen priorities in the context of NextGen capabilities and implementation constraints, with an emphasis on near and mid-term initiatives. Under the leadership of JetBlue Airways President and CEO Dave Barger, the NAC has helped foster a common understanding of success with joint performance objectives and development milestones, and focuses on implementation issues, including joint investment priorities, and the location and timing of capability implementation. The NAC is comprised of top-level executives representing operators, manufacturers, air traffic management, aviation safety, airports, environmental, civil and military, and domestic and international interests. Within the scope of the NAC's purpose, the FAA will issue tasks that reflect an FAA request for aviation community advice and recommendations on a particular operational or investment topic. Representatives of FAA, MITRE, and the RTCA are non-voting members of the NAC.

The NAC is working to define accepted metrics in six areas to enable measurement of the impact of NextGen on system performance. They include improved situational awareness, increased operational efficiency, increased capacity, increased fuel efficiency, reduced NAS costs, and improved access to the NAS. Agreed-upon NextGen metrics are critical to ensuring continued investment by users of the system, government and the international community.

Of course, the full range of NextGen goes well beyond what we have discussed. The Joint Planning and Development Office (JPDO) is the organization responsible for interagency coordination on NextGen and other select aviation issues. The JPDO is also the primary body to consider long-term concepts for NextGen and to ensure alignment of agency priorities.

The NextGen Institute, established by the FAA in 2005, is the mechanism through which the JPDO enables collaboration between government and the private sector to coordinate long-term NextGen goals and priorities. Key objectives are to foster a shared vision, facilitate concepts and approaches and to encourage innovations[1]. The Institute Management Council (IMC), comprised of 16 senior industry representatives, oversees the NextGen Institute.

The JPDO charters a variety of collaborative networks that include study teams, discussion groups, information-sharing sessions and community review and validation opportunities. Each has defined expectations and performance periods. These collaborations have produced a long-term avionics roadmap, examined research and simulation needs for safety of more automated systems and share environmental approaches.

NextGen is a comprehensive undertaking, and can't succeed without industry collaboration, effective management, and engaging our workforce. Continued investment in NextGen is critical to transforming the NAS and delivering benefits to the flying public. It is not something FAA can do alone; rather, it will require partnership and commitment by the aviation industry if these endeavors are to be successful. We know that this Committee is committed to supporting NextGen and understands its significance. We, both government and industry, appreciate and rely on that support. There is certainly much more to NextGen than can be discussed in a single statement or appearance before this Committee. We will continue to work with you as we move forward delivering near-term benefits of NextGen and long-term success in modernizing our nation's aviation system.

This concludes our prepared statement. We will be happy to address any questions that the Subcommittee might have.

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