The Next Generation Transportation System: Status & Issues

Statement of

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AIA Member of NextGen Institute Management Committee

before the

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Good afternoon Chairman Gordon, Ranking Member Hall, and Members of the Committee. Thank you for the opportunity to testify before you today. My name is Paul Kaminski. I am the chairman and chief executive officer of Technovation, Inc., and a senior partner in Global Technology Partners --- but I am here today representing the Aerospace Industries Association (AIA). Since January, I have been representing AIA on the Institute Management Council of the NextGen Institute that oversees industry participation in the JPDO.

Representing nearly 300 manufacturing companies with more than 642,000 high-wage, highly skilled employees, AIA operates as the largest aerospace trade association in the United States across three sectors: civil aviation, space systems, and national defense. AIA member companies export 48 percent of their total output and they routinely post the nation's largest manufacturing trade surplus, at a level approaching $60 billion in 2007. The aerospace industry continues to look to the future, investing heavily in R&D and spending more than $50 billion over the last 15 years.

I last testified before you in June of 2006 when I chaired the National Research Council's committee on the Decadal Survey of Civil Aeronautics. Then I said: "The U.S. air transportation system is a key contributor to the economic vitality, public well-being, and national security of the United States." I endorsed the need to improve our air transportation system then, and I believe that need is even more important today with the high cost of fuel and the growing concerns about the environment.

NextGen -- with its capacity, efficiency, energy, environmental and safety benefits -- must be a strong and urgent priority for the nation.

Marion Blakey, former FAA Administrator and now President of AIA, sought my assistance with the IMC in January of this year because of my commitment to improving NextGen, and my experience in the development and acquisition of large, complex systems in the Department of Defense.

Working with AIA, I proposed a method to accelerate the development, acquisition, integration and implementation of the NextGen

System based on the techniques that we used to accelerate development and fielding of the F-117 program. This method is very effective in dealing with large, complex systems that depend upon effective integration of numerous enabling technologies and complex operating procedures.

But before I get into detail about this AIA proposal for development and acquisition, I want to highlight a few other important points:

1. Systems engineering and integration will critical to the success of NextGen – and that's the lynchpin to this proposal I'll discuss shortly. I expect our nation's efforts on NextGen to continue for a long time, as new technology enablers will continue to appear and we must consider the cost and benefits of advanced technology within our systems engineering foundation. We must also continue to consider the cost and benefits of maintaining legacy systems that will become obsolete. In a sense, NextGen will be like painting the Golden Gate bridge – when we finish the north end, it will be time to come back and begin at the south end. So we should prepare the foundation with that extended process in mind. But that doesn't mean that we shouldn't move with dispatch.

2. This AIA proposal allows us to begin <u>now</u> - to build a little and test a little, layering and linking capabilities. It will help to better define and prioritize the essential NextGen R&D for both FAA and JPDO partner agencies. It will also provide critically important "domain experience" to key personnel in both government and industry. This domain experience in both government and industry is a requisite for the systems engineering and integration required in large scale, complex programs such as NextGen. I recently chaired a National Research Council review of systems engineering which recognized the importance of strengthening systems engineering skills to avoid problems associated with the acquisition of large and complex systems. The FAA has recently initiated a program to enhance systems engineering education – a good first step.

3. AIA believes that JPDO's role as an honest broker with partner agencies can be enhanced by the recent FAA restructuring. As planning melds into implementation, the operating agency – with all the responsibility and, at the end of the day, all the accountability – is the FAA. JPDO participating agencies should be engaged and assured

that their work will be more closely integrated, aligned with key milestones and measured under the new structure.

4. AIA has two recommendations for metrics of success -- and they are not exclusive. The first – as I will elaborate soon – is implementation of NextGen incremental leave-behind capabilities using a rigorous implementation schedule. Second, we suggest that FAA and industry – possibly through the IMC – develop NextGen measures of success and milestones. For NextGen, industry has valuable process expertise, as well as subject-matter expertise, to offer.

5. Recent developments with energy and its impact on NextGen cannot be ignored. The consideration of NextGen benefits must be expanded beyond capacity improvement to include NextGen's energy and environmental benefits. AIA is encouraged at FAA's quick response, as they have begun integrating modeling of energy and environmental consequences – such as fuel burn and noise – with modeling of aircraft operations and system-wide operations. This will help quantify energy and environmental benefits of NextGen improvements to strengthen the NextGen business case.

6. We also have an idea for incentivizing early NextGen equipage. With the significant energy and environmental benefits of NextGen, Congress should consider energy tax credits for early NextGen equipage. We do it for cars, home improvements and appliances, why not aviation – at least for early equipage?

7. While FAA can speak more authoritatively about this, lack of a new FAA budget will seriously hamper NextGen development and progress. And industry is on record as strongly endorsing the integration of NextGen with day-to-day air system operations and JPDO long-term planning. Because AIA members populate all of the working groups and co-chair 7 of the 9 groups, we are in a good position to evaluate the FAA restructuring: Our members uniformly support this change for it keeps the work plan where it belongs -- closer to the implementing agency-- and keeps longer term planning within the visionary construct of JPDO.

Now, to discuss how we can accelerate the transition from NextGen system concepts and R&D to implementation. See attached briefing charts.