

JPDO “Snap Shot” Series: Information Sharing in a High Consequence Environment: The U.S. Air Transportation System

Modernizing the National Airspace System

Much of the current aviation system, though reliable and safe, is built on technologies developed as long ago as World War II. These include radar, ground control (by voice) of aircraft, and point-to-point navigation beacons. The Next Generation Air Transportation System (NextGen) represents nothing short of the total transformation of the nation’s air transportation system.

Through the application of new technologies, capabilities, and procedures, NextGen will improve the security, efficiency, and scalability of our nation’s aviation system, allowing the system to grow and change to meet increased demand and new aviation business models without compromising safety. This isn’t possible with our current system.

Net-Centricity and NextGen

Some of the core technologies that will underpin the development of NextGen include satellite-based navigation of aircraft, advanced digital communications, and advanced automation for trajectory-based operations. An inherent requirement to the application of these groundbreaking capabilities will enable the efficient development of Net-Centric Operations. Net-Centric Operations will enable the efficient sharing of advanced digital information within an aviation-based network environment.

It will provide the core capability necessary to make NextGen a success. In addition, it will enable the real-time exchange of digital information at all levels of system operations (air-to-air, air-to-ground, and ground-to-ground) in support of current operations and unanticipated future requirements. It involves the real-time sharing of information and data among users, systems, and networks.

The Department of Defense (DoD) has long since recognized the importance of Net-Centric Operations to the future of its mission, and remains a leader in its development. That is why the Joint Planning and Development Office (JPDO) and DoD are working together to develop the basic framework and op-

erational concept for the way advanced Net-Centric Operations will work in the National Airspace System.

An Unprecedented Initiative

In 2003, the Congress chartered the JPDO to serve as the coordinator and planner for a new, unique, multi-agency initiative, working closely with industry to develop NextGen. This long-term transformation effort involves close coordination between the Departments of Transportation, Defense, Homeland Security, and Commerce, as well as NASA, the Federal Aviation Administration, and the White House Office of Science and Technology Policy. Through coordinated planning, budgeting, and leveraged research, the JPDO is facilitating one of the most dramatic initiatives in the history of transportation.

The importance of NextGen is underscored by aviation’s role as a dynamic economic engine for this nation. Aviation and aviation-related industries account for over five percent of our nation’s gross domestic product and are responsible for the employment of 11 million Americans.

To be successful, NextGen requires an alliance between many government agencies and private industry. To foster the collaboration and openness necessary for NextGen success, the JPDO has developed a Web-based decision support system, the Joint Planning Environment (JPE), to serve as the primary interactive planning tool. The JPE allows the JPDO to communicate in a clear, concise way to government partners and stakeholders.

Get Connected

The JPDO also launched its own blog site, Facebook fan page, Twitter account, and Wikipedia page which, in addition to the JPDO Web site, help stakeholders and interested parties stay connected with the JPDO and NextGen updates.

To access all of the JPDO’s social networking tools and a variety of information, such as an overview of the JPDO’s organization, upcoming events, frequently asked questions, and an online library of important documents and materials, visit the JPDO’s primary Web site at www.jpdo.gov.

