Request for Private Sector Participation

Requesting Team/Organization: Net-Centric Operations WG

Directors Names and Phone: Doug Wreath, 703-588-6150; David Sweet, 703-727-5277

Brief Description of the Team's Task

The mission of the Net-Centric Operations Working Group (NCO WG) is to assist the JPDO in defining the policies, procedures, technical enablers and architectural elements for the net-centric environment that will be the core foundational capability for NextGen. This will be achieved by developing an information sharing environment (framework), allowing globally compatible, accessible, and secure information when required, giving Air Transportation stakeholders relevant up-to-the second, accurate, and credible information to make possible informed decision making for routine, planned or crisis events.

Expected Products and Timeframes

The NCO WG envisions several key areas where industry/private sector entities can contribute significantly to attaining the NextGen vision. The WG needs non-government participation and perspective to support formidable challenges in a multi-dimensional arena, spanning technology, policy, and cultural issues across the aviation and information collection and dissemination communities. Assessing these environments to establish a baseline or starting point will call for comprehensive research of exiting and planned research & development (R&D) initiatives, industry practices and methodologies, as well as government and industry policy, rules, and regulations.

Required Expertise and Skill Mix

The NCO WG has ongoing needs for individuals with diverse expertise in the following areas:

1) Information Exchange Professionals [5]

Expertise in creating and implementing information exchange methodologies in a multi-enterprise environment. Expertise in information exchange governance and management of Communities of Interest (COIs) especially needed. Service Oriented Architecture (SOA) implementation, to include data and service registry development, service development, and creation of underlying support infrastructure also needed.

2) Air Traffic Controllers and Navigators (ANSP) [1]

Expertise in ATM and air traffic control (ATC) services for the purpose of safe and efficient flight operations, including:

- Forecasting demand for effective, timely capacity planning
- Managing capacity and dynamic management of NAS resources
- Collaborating with airspace users on flow-management strategies

- Managing trajectory and negotiating with flight operators
- Providing flight planning support and maintaining the flight object
- Providing flow strategy and trajectory impact analysis services
- Maintaining net-centric infrastructure and providing other NAS infrastructure services (e.g., navigation and surveillance)
- Coordinating changes to U.S. and international procedures

3) Airport Operations: Security [1]
Expertise in shared situational awareness (SSA), security, environment and safety, including an in-depth understanding of airport infrastructure development that integrates facility planning, finance, regional system planning and environmental activities to enable a more efficient, flexible and responsive system.

4) Aviation Weather Service/Meteorology [1]
Expertise in products and resources that supply aviation-weather information

- Support better automation and human decision-making by providing expertise in integrating weather information.

5) Environment Management [1]
Expertise in new technologies, procedures, and policies that minimize impacts on community noise and local air quality and mitigate water quality impacts, energy use, and climate effects.

6) Integrated Safety Management (SMS) [1]
Expertise in identifying and managing potential problems in a system or operation to manage safety risk, including:

- Safety Policy: Managing safety as an integral part of operations
- Safety Risk Management (SRM): Describing the system, identifying hazards, and assessing, analyzing and controlling risk as an embedded process
- Safety Assurance: Ensure organizational products and services meet or exceed safety requirements, including the processes used to ensure safety such as audits, evaluations, inspections, and data tracking and analysis.
- Safety Promotion: Train, communicate, and disseminate safety information

7) Trans-Atmospheric/Space Ops [1]
Expertise in “near-space” and space operations, including knowledge and experience of near-space and space aircraft capabilities and vehicle performance.

8) Security and Defense Providers [1]
Expertise in national and homeland defense, information security, physical and operational security, homeland security and law enforcement.

9) International Harmonization [1]
Expertise and in-depth knowledge of collaborative development and implementation of best practices in both standards and procedures. Knowledge of ICAO Planning and Implementation Regional Groups (PIRGs) or multilateral agreements that coordinate

planning and implementation. Advocacy for the highest operational standards for aircraft operators and air navigation service providers (ANSP) to ensure the safest global air transportation system.

10) Manufacturers and Owners [1]

Expert knowledge of the organizations and people who manufacture equipment for flight operators, ANSPs, security and defense providers, including:

- The manufacturing of airframes, aircraft engines, avionics and other aircraft systems and parts.
- Knowledge of organizations and people responsible for making investment decisions related to the development and implementation of NextGen and its associated capabilities.