The Next Generation Air Transportation System (NextGen) and Global Partnership

Presented to: APEC 14th GNSS Implementation Team (GIT/14)
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Impact of Aviation on the U.S. Economy

The Aviation Industry contributes to the U.S. Economy and International Trade

- In every region of the U.S., communities depend on civil aviation to stimulate economic growth and strengthen business by linking economic activity through aviation to the larger global economy.

- Aviation accounts for:
  - 12 million aviation-related jobs
  - $1.3 trillion in economic activity
  - 5.6% Contribution to Gross Domestic Product
  - Adds $61 Billion to the US Trade Balance
Aviation’s Impact on the U.S. Economy Drives the Importance of NextGen

- 12 Million Jobs
- $1.3 Trillion in Economic Activity
- 5.6% of GDP
NextGen is more. . .

*Than just a single project*… It is the integration of many projects, concepts, and technologies.

*Than just a program plan*… It is the integration of many program plans, some new and some ongoing, to deliver new service capabilities to meet increasing demand.

*Than just a new system*… It is the integration of new systems, new procedures, new aircraft performance capabilities, renewable fuels, new supporting infrastructure, and a new way to do business as the Air Transportation System.
NextGen Capabilities
Broad Ranging for Broad Benefits

New Infrastructure & Procedures

- Aircraft
- Air Traffic Control
- Airports

- New Safety Tools (e.g. ASIAS)
- New Environmental Tools (e.g., CLEEN, Alt. Fuels)
- New Security Tools (SITS)

Increased Efficiency, Safety, Security, and Environmental Performance
NextGen: Improving Service Delivery

From Today…
- Ground-based navigation and surveillance
- ATC communications by voice
- Air traffic “control”

... To the NextGen System
- Increased use and reliance on satellite-based navigation and surveillance
- Digital communications and routing of aviation data throughout the system
- Air traffic “management”

The transition to NextGen has already begun and we are seeing real benefits
NextGen is Already Underway…
Transformational Programs

NextGen technologies and procedures, along with airspace redesign, have already enabled more direct routes and efficient operations, using less fuel and reducing emissions.

- **Automatic Dependent Surveillance – Broadcast (ADS-B)** is in operation at several key sites throughout the U.S., including Miami, Louisville, Gulf of Mexico and Philadelphia.

- **Performance Based Navigation (PBN)** procedures are saving fuel, reducing flight times, and decreasing aviation’s carbon footprint across the globe.

- **System Wide Information Management (SWIM)** will deliver “the right information to the right location at the right time.”
RTCA Task Force 5

Objectives
- Study the difficult “transition” issues of NextGen to:
  - Accelerate near-term user benefits
  - Provide a solid foundation for NextGen
  - Maximize existing capabilities and equipment

Product
- Provide a short list of recommendations, with sufficient detail for each area

Constraints
- Recommendations must be implementable by the FAA
- Keep alignment with the current plans for NextGen
RTCA Task Force 5 Report

- Prioritized the Operational Capability Sets
- Defined “What,” “Where,” “Who,” and “When” for each capability
- Recommended strategies and means to accelerate NAS-wide operational benefits
- Recommended business strategies to ensure delivery of benefits and encourage equipage
- The report was delivered to the FAA September 2009
- The FAA integrated the Task Force 5 recommendations into NextGen planning activities, making significant adjustments where necessary.
NextGen Implementation Plan 2010

• Detailed overview of the Mid-Term NextGen operating environment
• Response and updates from Task Force 5 report
• Greater emphasis of existing technologies and procedures
• Focus on dependencies and progress of transformational programs
International Cooperation... A Necessity

- Daily interaction with 18 foreign ANSPs
NextGen Strategic Partnerships

- FAA must promote harmonization with key strategic partners
- Bilateral and Multilateral partnerships
  - FAA/China NextGen Air Traffic Management Steering Group (NATMSG)
  - FAA/Japan Future Air Traffic Systems Working Group (FATS)
  - US/Canada/Mexico NextGen Trilateral Steering Group
  - NextGen and European SESAR Harmonization
  - Asia and Pacific Initiative to Reduce Emissions (ASPIRE)
  - Atlantic Interoperability Initiative to Reduce Emissions (AIRE)
- ICAO and Regional Planning Groups (PIRGs)
NextGen – SESAR Collaboration

• Single European Skies ATM Research (SESAR) – the European future vision
• NextGen – SESAR harmonization is uniquely critical to success
• The FAA and SESAR partners are building a new framework for collaboration
• Developing agreements with the SESAR Joint Undertaking/European Commission and Eurocontrol
The ASIA and Pacific Initiative to Reduce Emissions (ASPIRE)

- ASPIRE is a regional approach to air traffic efficiency and environmental stewardship
- Emphasizes:
  - Best Practices for Asia Pacific international flights
  - Shared performance measurement
  - Collaborative efficiency improvement through enhanced procedures and technologies
  - Shared operational demonstrations
- February 2010 - Civil Aviation Authority of Singapore joined the ASPIRE Partnership
2010 NextGen Implementation Plan

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Please visit our website for the latest information on NextGen and the RTCA Task Force 5

http://www.faa.gov/nextgen