Delivering NextGen Improvements

**Legacy System**
- Radar
- Inefficient Routes
- Voice Communications
- Disparate Information
- Fragmented Weather Forecasting
- Weather Restricted Visibility
- Forensic Safety Systems
- Nationwide Focus

**NextGen**
- Satellite
- Performance Based Navigation (fuel savings)
- Voice & Digital Communications
- Automated Decision Support Tools
- Integrated Weather Information
- Improved Access in Low Visibility
- Prognostic Safety Systems
- Focus on Congested Metroplexes

Implementation
- TFDM
- PBN
- TBFM
- ASIAS
- AIM
- NWP

Transformational
- ADS-B
- CATM-T
- SWIM
- CSS-Wx
- NVS
- DataComm

Foundational
- Terminal Automation Modernization and Replacement
- En Route Automation Modernization
- Terminal Automation Modernization and Replacement
**Areas of NextGen/SESAR Harmonization**

**Transversal Activities**
- ICAO GANP and ASBU
- Wake Vortex / Re-categorization (RECAT)
- RPAS
- Cyber Security

**CNS & Airborne Interoperability**
- Avionics Roadmap
- DataComm / Datalink Applications
- DataComm / Datalink Technology – AeroMACS
- ADS Services and Technology

**Information Exchange & Mgmt**
- SWIM
- AIXM, WXXM, FIXM Models

**Collaboration Projects**
- AIRE
- SWIM Demonstrations
- Initial 4D Trajectory (i4D) Trials

**Trajectory Management**
- 4D Trajectory (4DT) Mgmt

---

Organised by: canso
Hosted by: IDAC
Sponsored by: Aireon
Three Principles of Harmonization

We need to understand:

• What must be identical
• What must be compatible
• What must be synchronized
State of Harmonization Document

- Provides a high-level summary of the current state of progress toward achieving the necessary level of interoperability between NextGen and SESAR at end of 2014
- Describes the collaborative activities that are being performed under Annex 1 of EU/US MoC in support of ICAO GANP and ASBUs
- Serves as an outline for consideration of the current issues at stake, risks and the challenges ahead
- Demonstrates that differences are recognized and actions are taken to address them where necessary to ensure interoperability
- Next Update planned for September 2016
GANP

Global Air Navigation Plan

- Supports a harmonized global Air Navigation System
- Endorsed by 12th ANC & 38th ICAO Assembly
- Assists ICAO Regions and States to establish air navigation priorities for the next 15 years

ASBU

Aviation System Block Upgrades

- ASBU is introduced by GANP
- ASBU is a systems engineering planning and implementation approach

The US and aviation stakeholder collaboration aims to harmonize and secure ATM modernization efforts
The Need for Regional Harmonization

FAA Managed Airspace Abuts
- 26 Adjacent FIR’s
- 4 ICAO Regions
- 17 ANSP’s
U.S. Outbound Air Traffic

- Canada: 29.9%
- Mexico: 16.6%
- Caribbean: 16.6%
- Europe - Russia: 16.4%
- Asia Pacific: 10.3%
- South America: 6.3%
- Central America: 5.3%
- Middle East: 1.2%
- Africa: 0.4%
- South America: 6.3%
- Central America: 5.3%

Organised by: canso
Hosted by: IDAC
Sponsored by: Aireon
SE Asia CDM Concept in the Caribbean?

Global Harmonization Works!
Thank You
kevin.chamness@faa.gov