ASBU and Implementation
Challenge

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ASBU CONSIDERATIONS

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CANSO AND LATIN AMERICA AND CARIBBEAN CONFERENCE 2017
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Agenda!

✈ ICAO Strategy
✈ Global Air Navigation Plan Overview
✈ ASBU implementation overview
✈ ICAO NAM/CAR Activities
Global Air Navigation Plan (GANP)

- ICAO’s Vision
- Our Mission
- 2017–2019 Strategic Objectives

Aviation System Block Upgrades (ASBU), Modules and Roadmaps
2017–2019 Strategic Objectives

A. Safety
   Enhance global civil aviation safety.

B. Air Navigation Capacity and Efficiency
   Increase capacity and improve efficiency of the global civil aviation system.

C. Security and Facilitation
   Enhance global civil aviation security and facilitation.

D. Economic Development of Air Transport
   Foster the development of a sound and economically-viable civil aviation system.

E. Environmental Protection
   Minimize the adverse environmental effects of civil aviation activities.
The Global Air Navigation Plan’s Aviation System Block Upgrades methodology is a programmatic and flexible global systems engineering approach that allows all Member States to advance their Air Navigation capacities based on their specific operational requirements. The Block Upgrades will enable aviation to realize the global harmonization, increased capacity, and improved environmental efficiency that modern air traffic growth now demands in every region around the world.
GANP and ASBU

The ICAO GANP established internationally agreed phases implementation of the new technologies and capabilities through ASBU.
ICAO’s 10 Key Air Navigation Policy Principles

1. Commitment to the implementation of ICAO’s Strategic Objectives and Key Performance Areas.
2. Aviation safety is the highest priority.
3. Tiered approach to air navigation planning.
4. Global Air Traffic Management Operational Concept (GATMOC)
5. Global air navigation priorities
6. Regional and State air navigation priorities
7. Aviation System Block Upgrades (ASBUs), Modules and Roadmaps
8. Use of ASBU Blocks and Modules
9. Cost-benefit and financial issues
10. Review and evaluation of air navigation planning.
Phased development approach for ICAO

**Until 2019**

Agreement on a simple set of Key Performance Indicators (KPIs), based on existing best practices in more mature regions that have already published performance information and on ICAO publications;

• Initial development of guidance material, illustrating the benefits of a performance-based approach and explaining the data collection, calculation and analysis required for the selected KPIs.

**Until 2022**

Illustrate links between ASBU Modules and KPIs and exchange of experience and best practices at regional and subregional levels;

• Update of performance related ICAO manuals (Doc 9883 and Doc 9161) and development of additional guidance material on data collection, data analysis, etc.;

• Define a global performance baseline, based on States’ performance monitoring and reporting, against which future progress will be measured.

**2022 and beyond**

Standardization of performance data and enhanced data exchanges to automate and reduce the cost of performance data collection and processing. This work could benefit from existing work on exchange models.
Global Air Navigation Plan Evolution

- The adjustment of dates for the Blocks is the most visible change (B0 = 2013-2018, B1 = 2019 – 2024, B2 = 2025 – 2030, B3 = 2031 onward). This will allow better synchronization with the ICAO Assembly and the amendment cycles.

- The updates to the ASBU document were provided by the ICAO expert groups that are in charge of developing the associated standards. The order in which the ASBU Modules are presented is now unique in the GANP and follows the one of the ASBU document. Naming convention inconsistencies are corrected.
ICAO companion publications supporting the GANP

**Global Air Traffic Management Operational Concept (Doc 9854)**

The Global ATM Operational Concept (GATMOC) was published in 2005. It set out the parameters for an integrated, harmonized and globally interoperable ATM system planned up to 2025 and beyond. Doc 9854 can serve to guide the implementation of CNS/ATM technology by providing a description of how the emerging and future ATM system should operate. The GATMOC also introduced some new concepts:

a. planning based on ATM system performance;
b. safety management through the system safety approach; and
c. a set of common performance expectations of the ATM community.
ICAO companion publications supporting the GANP

**Manual on Air Traffic Management System Requirements (Doc 9882)**

Doc 9882, published in 2008, is used by PIRGs as well as by States as they develop transition strategies and plans. It defines the high-level requirements (i.e. ATM system requirements) to be applied when developing Standards and Recommended Practices (SARPs) to support the GATMOC. This document provides high-level system requirements related to:

a. system performance-based on ATM community expectations;

b. information management and services;

c. system design and engineering; and

d. ATM concept elements (from the GATMOC).
ICAO companion publications supporting the GANP

Manual on Global Performance of the Air Navigation System (Doc 9883)

This document, published in 2008, is aimed at personnel responsible for designing, implementing and managing performance activities. It achieves two key objectives:

a. it outlines performance framework and performance-based strategy from the performance concepts provided in the GATMOC; and

b. it analyses ATM community expectations and categorizes these into key performance areas (KPAs) from which practical metrics and indicators can be developed.

Doc 9883 also provides organizations with the tools to develop an approach to performance management suited to their local conditions.
Technology Roadmaps complement the ASBU Modules by providing timelines for the technology that will support the communications, navigation and surveillance (CNS), information management (IM) and avionics requirements of the global air navigation system. These Roadmaps provide guidance for infrastructure planning (and status) by indicating on a per-technology basis, the need for and readiness of:

- existing infrastructure
- ICAO Standards and guidance material
- Demonstrations and validations
- Initial operational capability (IOC) of emerging technologies
- global implementation.
Regional Performance Objectives (RPO) Our Air Navigation priorities

- Implementation of Performance Based Navigation (PBN)
- Implementation of Flexible Use Airspace (FUA)
- Improve Demand and Capacity Balancing (DCB)
- Improve Situational Awareness
- Enhance Capacity and Efficiency of Aerodrome Operations in the CAR Region.

- Optimization and Modernization of Communication Infrastructure
- Implementation of Aeronautical Information Management (AIM)
- Improve Availability of Meteorological Information
- Improve Search and Rescue (SAR) Services
NAM/CAR SUPPORT AND IMPLEMENTATION WORKING GROUP

http://www.icao.int/NACC/Pages/nacc-regionalgroups-aniwg.aspx
Needs to be done to comply with implementation dates

- Improve use of ADSC/CPDLC in the oceanic Pacific Area.
- FPL errors
- Improve regional agreements
- Improve surveillance data information
- Improve regional infrastructure for the SWIN, AIM, ATFM and SAR implementation.

- AIDC Implementation
- ADS-B Implementation
- PBN Implementation
- ATFM Implementation
- SWIN Implementation
- Improve SITUATIONAL AWARENESS
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<td>Regional Aviation Safety Group – Pan America (RASG-PA)</td>
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<td>Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA)</td>
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<td>NAM/CAR Civil Aviation Training Centres Working Group (NAM/CAR/CATC/WG)</td>
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CANSO and ICAO work together to support ANSPs in complying with ASBU Implementation.

- Support ANSP based in the same objectives.
- Same Regional Strategy
- Improve Standardization and Harmonization.
- Take advantage of the CNS infrastructure currently in use.

- Promote the development of national and multinational projects that solve real needs.
- Projects based on cost benefits, minimize risks, promote integration and improve situational awareness in the region.