



Agenda Item 3: Air Navigation Matters
3.3 Specific Developments in Air Navigation

**AVIATION SYSTEM BLOCK UPGRADES (ASBU) METHODOLOGY AND UPDATE
OF THE PERFORMANCE-BASED AIR NAVIGATION IMPLEMENTATION PLANS**

(Presented by the Secretariat)

SUMMARY	
This working paper presents the ICAO initiative on Aviation System Block Upgrades (ASBU) Methodology, the ASBU Workshop outcome held in the ICAO NACC Regional Office in Mexico City, Mexico, 27 February - 2 March 2012, and the future actions for the performance-based air navigation implementation plans update.	
References	
• Global Air Navigation Industry Symposium (GANIS), Montreal, Canada, 20 to 23 September 2011. • State Letter Ref.: EMX1266 dated 16 December 2011.	
<i>Strategic Objectives</i>	<i>This working paper is related to Strategic Objectives A and C.</i>

1. Introduction

1.1 The 37th Session of the ICAO General Assembly held in 2010 directed the Organization to double its efforts to meet the global requirements for airspace interoperability while maintaining its focus on safety. Furthermore, the need was recognized to integrate the air, ground and regulatory parts in the air navigation infrastructure planning by addressing flight trajectories as a whole, distributing the decision-making process, taking into account safety risks and recognizing the changing role of the human element. In response to these developments, ICAO initiated the ASBU methodology as a global framework that comprises a suite of modules, which are organized into flexible and scalable building blocks and can be implemented in a State or a region depending on the need and level of readiness.

2. Initiative for the Aviation System Block Upgrades (ASBU)

2.1 The ASBU initiative will be integrated in the revised Global Air Navigation Plan (GANP, Doc 9750) with the intention to seek the endorsement of AN-CONF/12 scheduled from 19 to 30 November 2012, under the concept of One Sky. The revised GANP will also include related technology

roadmaps such as CNS, AIM, and avionics. Consequential amendments will also take place in the Regional and National Performance Frameworks for Air Navigation Systems and reflected appropriately in the air navigation plans.

2.2 The Global Air Navigation Industry Symposium (GANIS) was held in September 2011, in which initial ASBU proposals were presented with the participations of all the involved entities in its implementation: users, service providers, avionics manufacturers, international organizations, States, ICAO and NEXT GEN, SESAR, CARATS programmes representatives, among others. This event had the complete support from the industry, States, service providers and all aviation communications to follow the ASBU initiative aiming to create operational benefits through this methodology, creating a global framework to ensure:

- Safety is maintained and enhanced
- ATM improvement programmes are harmonized
- Barriers to future efficiency and environmental gains are removed, at reasonable cost
- Investment certainty (Operators, Infrastructure providers, Equipment manufacturers)
- Regulatory approval process must be outlined (support States in introduction of significant changes)

2.3 Documentation, results and conclusions of the GANIS are available in the web page: <http://www2.icao.int/en/GANIS/Pages/Documentation.aspx>.

2.4 In **Appendix A** to this working paper, the General ASBU concept is illustrated and in **Appendix B** the completed list of ASBU models is described by blocks.

3. Workshop on Aviation System Block Upgrades (ASBU) methodology

3.1 The successful roll-out of the ASBU concept and modules/technologies will depend on well synchronized strategies for education and training that would also facilitate discussions during the AN-CONF/12. As a result, significant efforts are underway to familiarize States, Regulators, Service Providers, Airline Operators, Military and International Organizations on the concept of ASBUs as well as the agenda of AN-CONF/12. ICAO established a Special Implementation Project (SIP) consisting of a workshop on “Preparations for AN-CONF/12 – ASBU methodology,” for the States and Territories of the North American, Central American and Caribbean (NAM/CAR) Regions, in order to provide requisite training in the development of performance frameworks for air navigation systems using the ASBU methodology. This workshop was held in the ICAO NACC Regional Office, from 27 February to 2 March 2012.

3.2 The objective of the workshop was to share with the participants in understanding the air navigation performance planning process through the revised GANP and ASBU methodology, reviewing related technology roadmaps such as CNS, AIM and Avionics, assessing regulatory needs, defining operational improvements, developing business cases, determining performance metrics and evaluating fuel savings and corresponding environmental benefits through the ICAO Fuel Savings Estimation Tool (IFSET). The workshop provided the participants with practical experience for the development of a national performance framework on the basis of the ASBU concept and understands its impact on regional Air Navigation Plans. Also, the outcome of this workshop shall enable the States to prepare for their participation in the upcoming AN-CONF/12.

3.3 The Appendix to the workshop invitation, Ref. State letter EMX1266CNS-NT4-4.35 on the ASBU developments, provides background information on the ASBU concept. The presentations, complementary information and the results of the Workshop are available at: <http://www.mexico.icao.int/Meetings/ASBU2012.html>.

3.4 Within this strategy of education and training it is foreseen to conduct similar workshops in other world regions, completing these workshops for mid-2012, and subsequent preparations for the AN-CONF/12.

4. Future actions for the Performance-Based Air Navigation implementation plans update

4.1 The NAM/CAR Regions adopted the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (RPBANIP) as a regional agreement for the guidance of air navigation implementation aspects, whose execution and follow-up is given through the working groups of the NAM/CAR Regions. This plan was updated in the NACC/WG/3 meeting and approved by the Directors of Civil Aviation (NACC/DCA/4).

4.2 As established in the ASBU initiative, it is expected that the air navigation plans must be adjusted in accordance with the Global Air Navigation Plan (GANP) update and the ASBU methodology, issues that will be available once discussed and agreed in the upcoming AN-CONF/12, to be held in Montreal, Canada, from 19 to 30 November 2012.

5. Suggested action

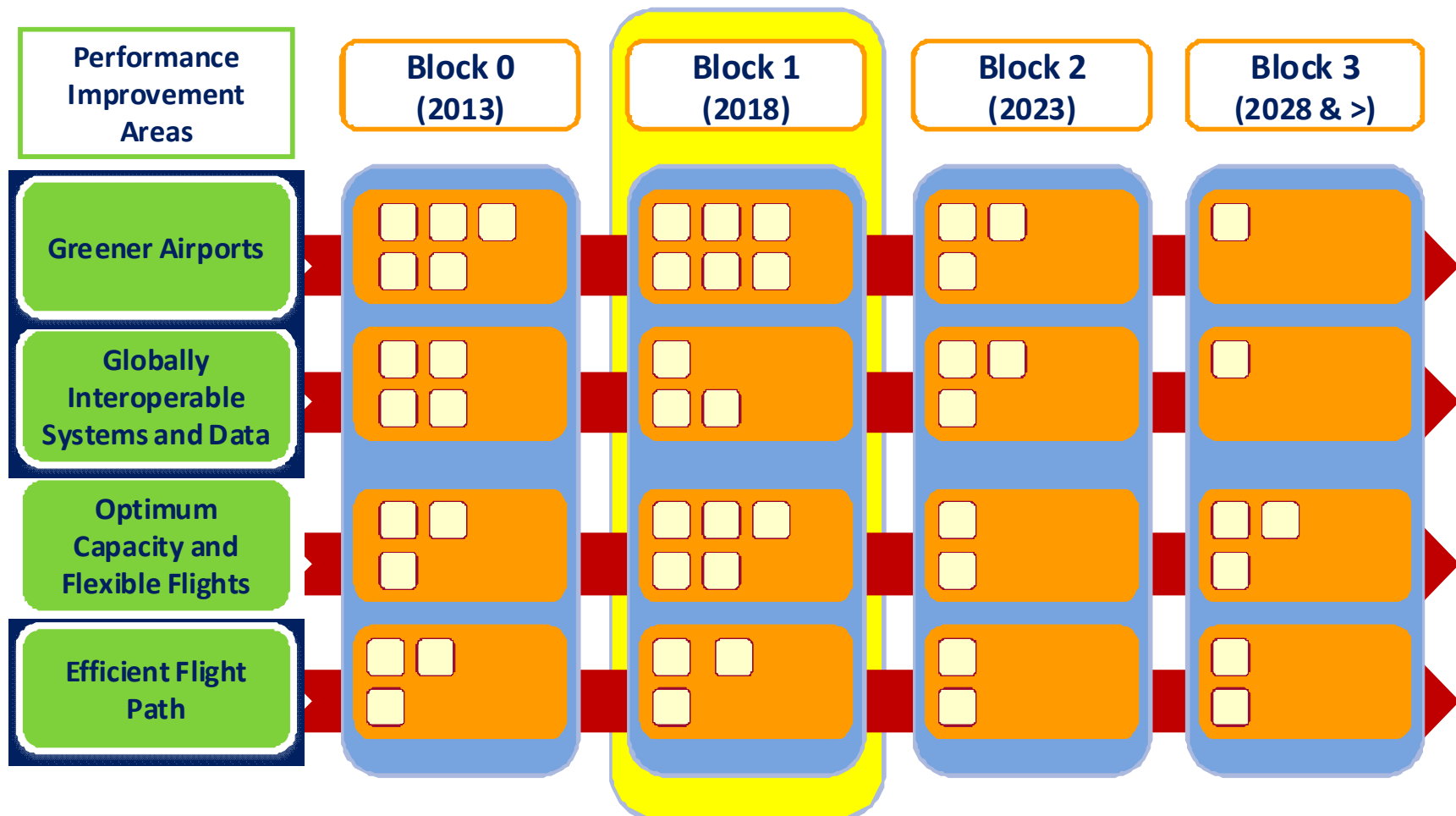
5.1 The meeting is invited to:

- a) take note of the ASBU initiative, the GANIS Symposium and the ICAO efforts to educate and inform its methodology application;
- b) review the information contained in the ICAO State letter Ref.: EMX1266CNS-NT4-4.35 on the ASBU developments; and
- c) plan future actions to update the air navigation plans according to paragraph 4.2.

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APPENDIX A

General concept of Aviation System Block Upgrades (ASBU)



APPENDIX B

Aviation System Block Upgrades Modules

