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Global Air Navigation Plan and the Aviation System Block Upgrades (ASBUs)

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Regional and National Air Navigation Performance Framework/Aviation System
Block Upgrade (ASBU) Implementation Workshop for the NAM/CAR Regions
(Mexico City, Mexico, 22 – 26 August 2016)



Implementation Planning and Support Section – Air Navigation (IMP-AN)

Mission: To provide support to States and ANSPs to enhance the performance of their air navigation system maintaining and/or enhancing safety of operations.

Responsibility: To undertake studies and provide guidance and advice to the organization as well as to Member States on cost effective ways to implement operational improvements which are necessary to attend the expectations of the aviation community in collaboration with Regional Offices and other stakeholders.





Objective

To level knowledge on the relationship between the GANP, the ASBUs and their policies and operational impact.



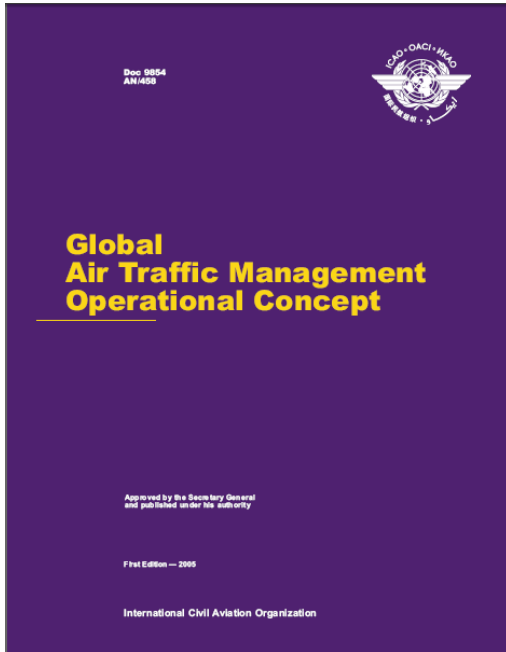
- Vision
- Planning mechanism based in scenarios
- GANP
- ASBUs
- Enhancement plan.



“Do we know where to go?”



YES



*“To achieve an **interoperable** global air traffic management system, for **all users** during **all phases of flight**, that meets **agreed levels of safety**, provides for **optimum economic operations**, is **environmentally sustainable** and meets **national security requirements**”*

GAP



A yellow diamond-shaped sign with a black border and two silver bolts at the top and bottom. The sign is mounted on a brown post. The text on the sign is in bold, black, uppercase letters.

**DRIVERS
FOR
CHANGE**

Aviation is
undergoing a
FUNDAMENTAL
change



WORKING TOGETHER – *Overcoming today's challenges and tomorrow's needs*

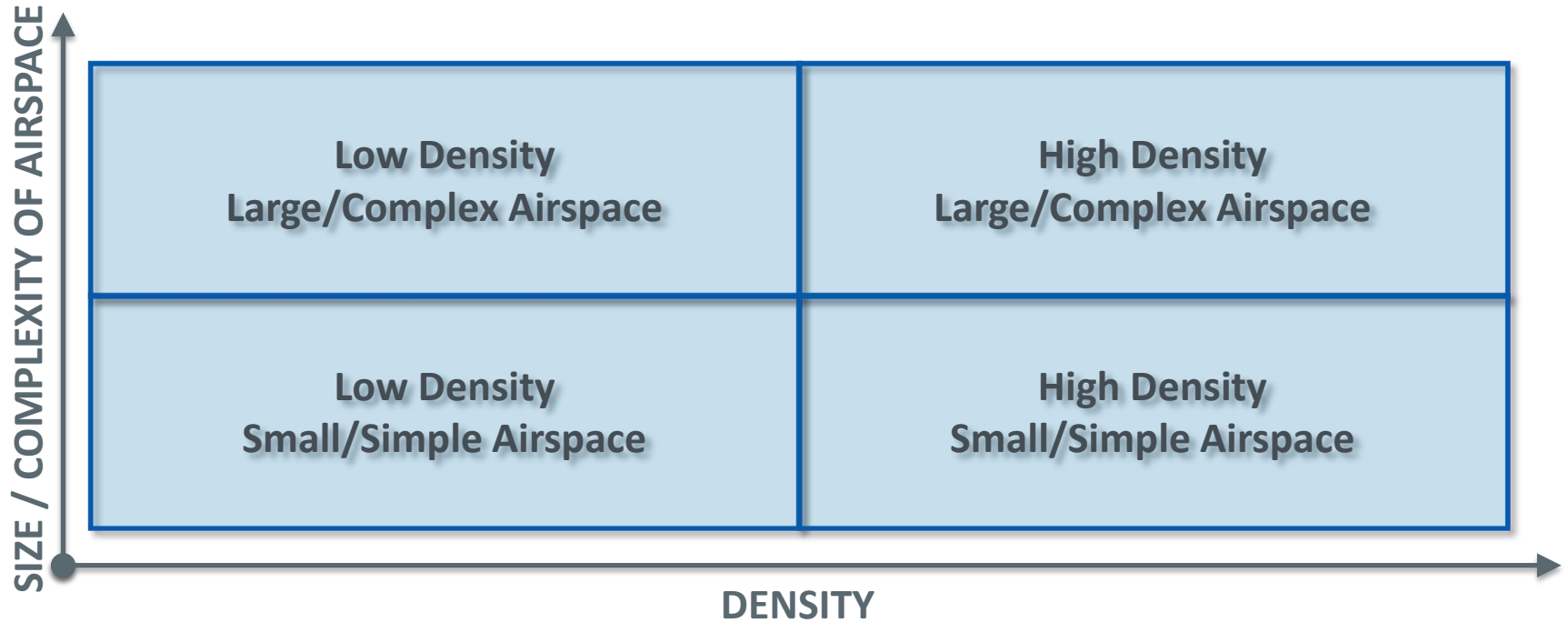


ICAO's Role in ATM Modernization

“Increase the capacity and improve the efficiency of the global civil aviation system”



- Through the **GANP**, offer a long-term vision to assist all aviation stakeholders, and ensure continuity and harmonization among modernization programmes
- Through the **Aviation System Block Upgrades (ASBU)**, provide a consensus-driven modernization strategy for integrated planning based on performance

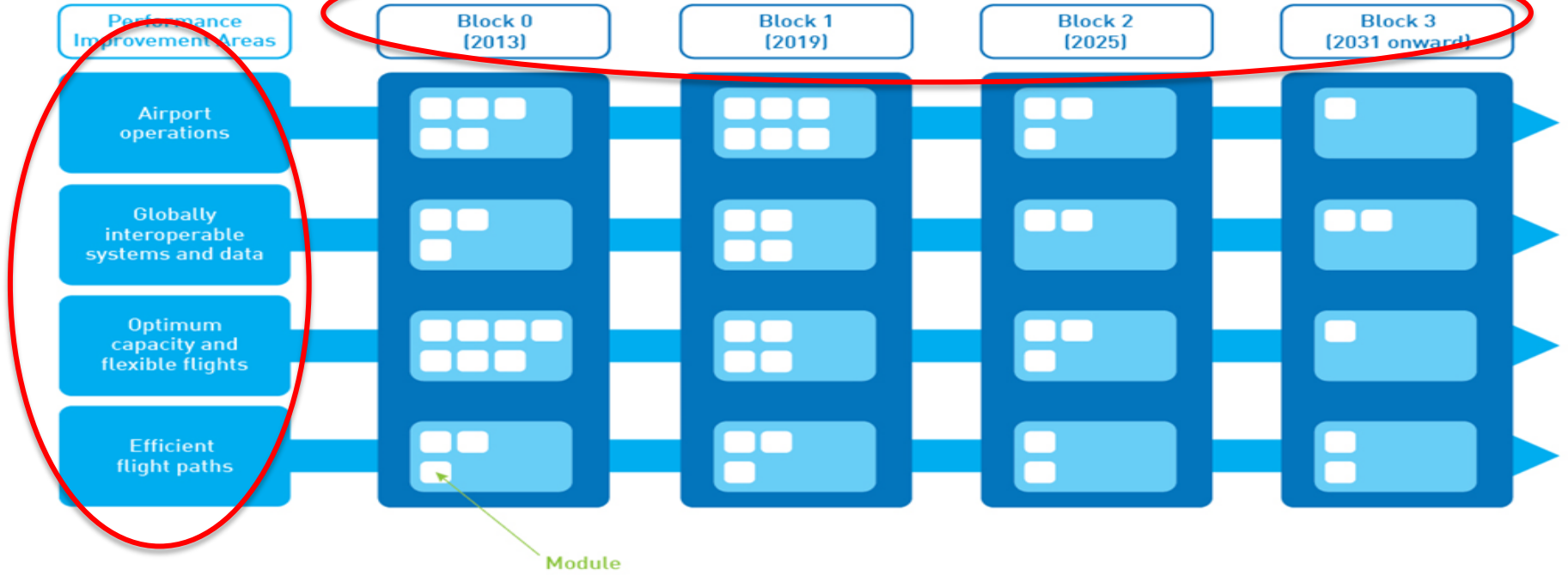


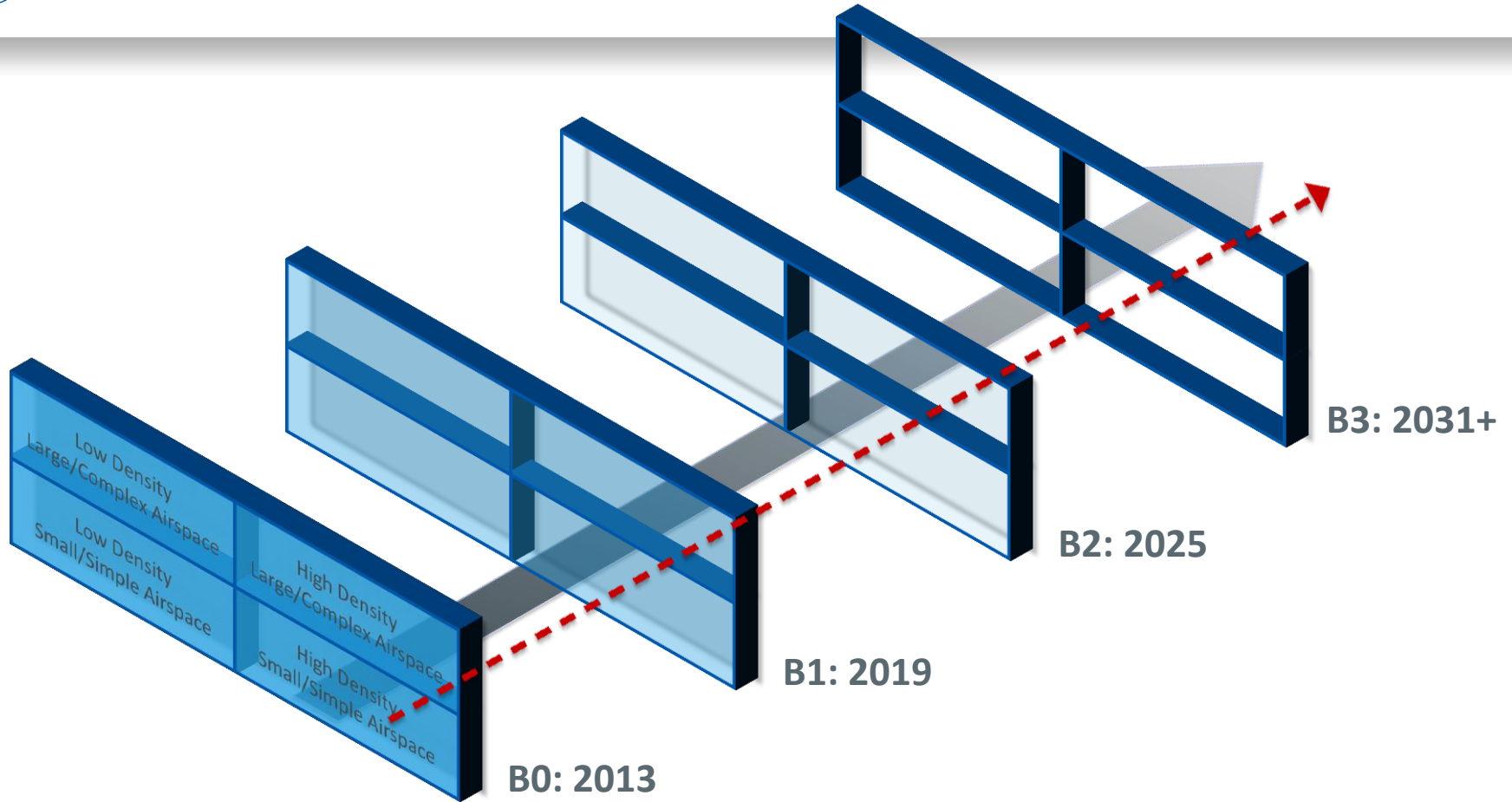


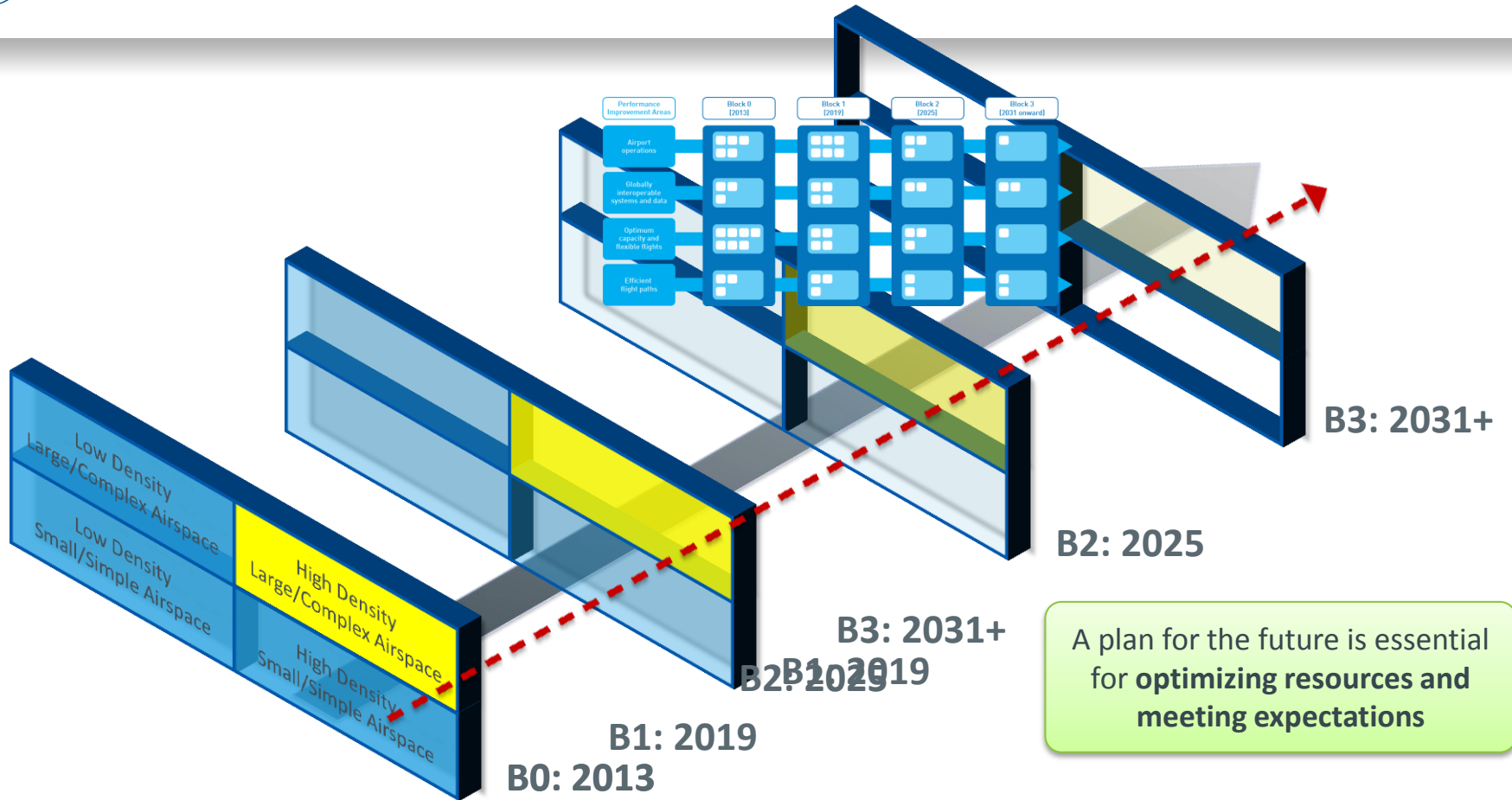
ASBU framework

4 Performance Improvement Areas

6-year blocks (new 2016)



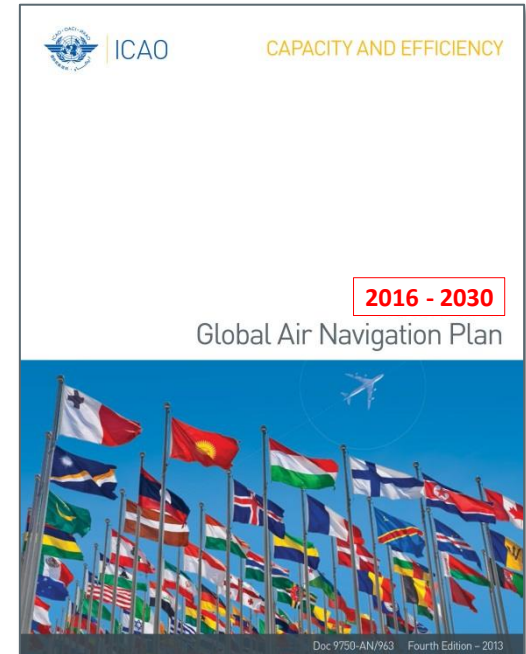




A plan for the future is essential for optimizing resources and meeting expectations

GANP Update

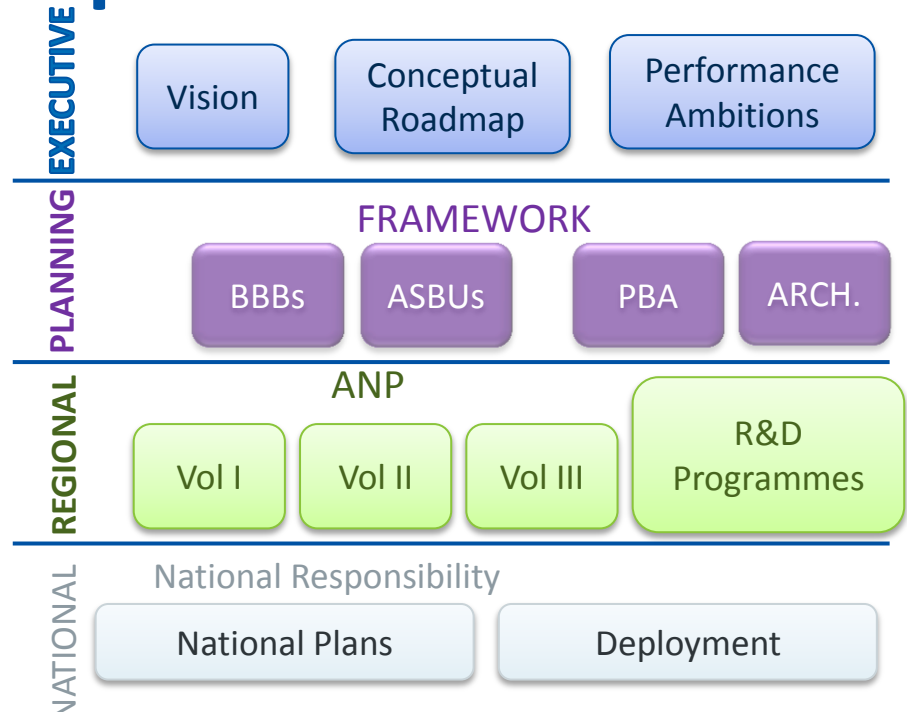
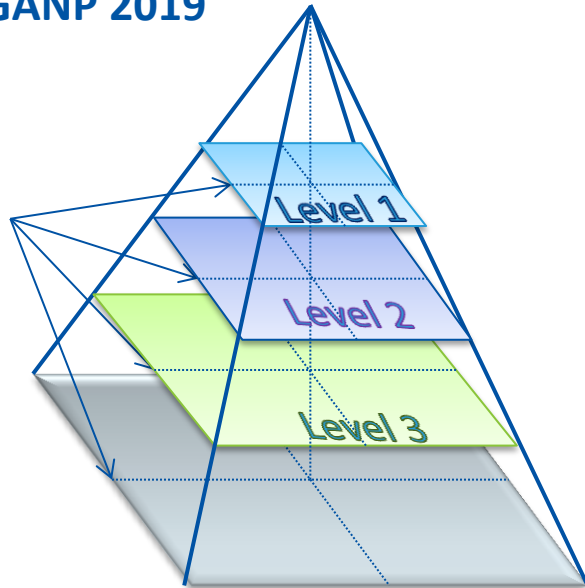
- **Objectives**
 - **International and overarching framework** of a global investment plan: make it more usable towards implementation
 - Keep it **stable** while making the necessary updates/additions
 - Adjust the **periodicity** to the Assembly and ICAO editing cycles
- **A Planning Document for Implementation**
 - GANP should be comprehensive planning tool to **support the development and implementation** of a harmonized global air navigation system



GANP Update

- GANP 2019

LAYERS





What is Global Plan?

- Strategic Document for global, regional and national planning for air navigation improvements
- Refers to five major disciplines
 - ATM, CNS, MET, AIM and AGA





GANP History

Appendix to FANS Report, 1992

Doc 9750 Edition 1, 1999

Doc 9750 Edition 2, 2002

Doc 9750 Global Air Navigation Plan, Edition 5 2016-19

Doc 9854, 2005 Global ATM Operational Concept

Doc 9883, 2008 ATM System Requirements

Doc 9883, 2008 Global Performance Manual

Related documents

Doc 9750 Global Air Navigation Plan, Edition 4 2014-16

Includes ASBU Framework

Addresses ANSP, Regulatory and User requirements

Encompasses Performance Framework



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GANP Policy Principles



- 1. Commitment to the Implementation of ICAO's Strategic Objectives and KPAs**
- 2. Aviation Safety is the highest priority**
- 3. Global Air Traffic Management Operational Concept (GATMOC)**
- 4. Regional and National Air Navigation Priorities**
- 5. Aviation System Block Upgrades (ASBUs), Modules, Elements and Roadmaps**
- 6. Cost Benefit and Financial issues.**



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Benefits

- Represents a rolling, 18-year strategic methodology
- Leverages existing technologies and anticipates future developments
- Offers a long-term vision
- Assist ICAO, States and industry to ensure continuity and harmonization among their modernization programmes





Content



- Identifies issues to be addressed in the near future alongside financial aspects of aviation system modernization
- Recognizes importance of collaboration and partnership and addresses its multidisciplinary challenges.



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Content



- Information on online support documentation, description of ASBU Modules, and Technology Roadmaps, as well as financial guidance
- Explores the need for more integrated aviation planning at both regional and national level
- Identifies issues to be addressed in the near future alongside financial aspects.



- Link improvements in air navigation with reduction in aviation emissions – as aviation pursues its commitment to comprehensively reduce its environmental impacts.



Aviation System Block Upgrades – Definition

- What is an ‘Aviation System Block Upgrade’ (ASBU)?

A global operational framework that allows all Member States to advance their air navigation capabilities based on their specific operational requirements.



What is the Basis for Block Upgrades?

- Foundation of blocks originates from existing near term implementation plans
- Aligned with ICAO ATM Operational Concept
- Block upgrades will allow **structured approach to meet regional and local needs, while considering associated business cases**
- They reflect recognition that all **module elements are not required in all airspaces or airports.**



Challenges



- Air traffic growth expands **two-fold every 15 years**
- Growth can be a **double-edged sword**. Challenge is how to achieve both safety and efficiency
- The 37th session of ICAO General Assembly advised to redouble our efforts with focus on **ensuring interoperability** of systems while at the same time maintaining or enhancing aviation safety.

National/Regional Plans - interoperability challenges

Examples..



Many Regional and National ATM modernization programmes are being developed worldwide

- They are following the Global ATM Operational Concept view, but nevertheless **they are different in their own way**
- Resulting in **interoperability and procedures harmonization challenges**



What is the difference between current implementation approach and ASBU framework?

- **Current method**
 - Scope covers only **ground equipment for ANSPs**
 - Planning based on short and medium term
- **ASBU framework**
 - Scope extends to **airspace users** and regulators
 - Planning based on short, medium and **long terms**
 - Provisions development process is through Blocks and corresponding module elements
 - **Envisages enhancement in performance and not in implementation of technologies**



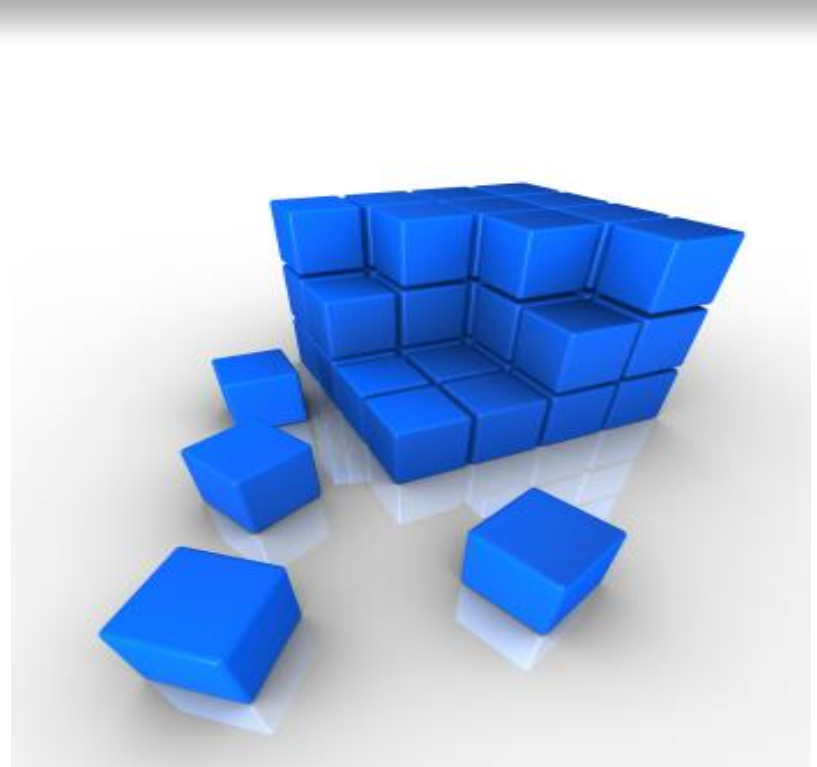
What are the advantages of ASBU framework?

- Takes into account all related issues such as air/ground systems, air/ground procedures, air/ground regulatory requirements and business case formulation
- One stop planning at the same time **flexible and scalable**
- Module elements provide a series of **measurable, operational performance improvements**, which can be introduced as needed.



ASBUs Summary

- **Addresses ANSP, aircraft and regulatory requirements**
- **Identify 4 improvement areas**
- **Availability of provisions through Block Upgrades (0,1,2, and 3) each comprising a number of modules**
- **Each module is explained in a standardized 4-5 pages template**



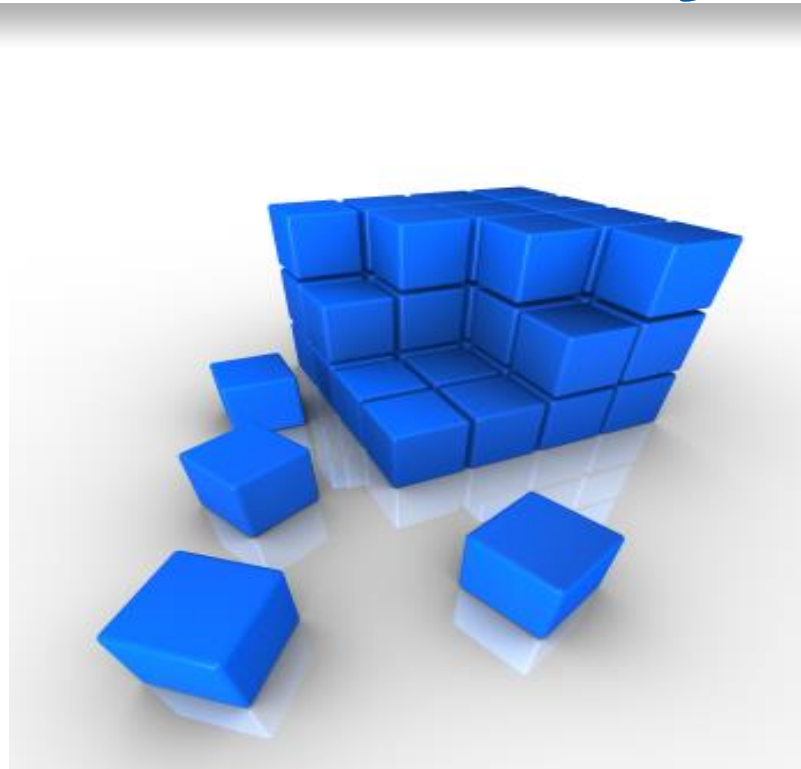


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ASBUs Summary

- **Provide a series of measurable, operational performance improvements**
- **Organized into flexible & scalable building blocks**
- **Can be introduced as needed**
- **All modules are not required in all airspaces.**

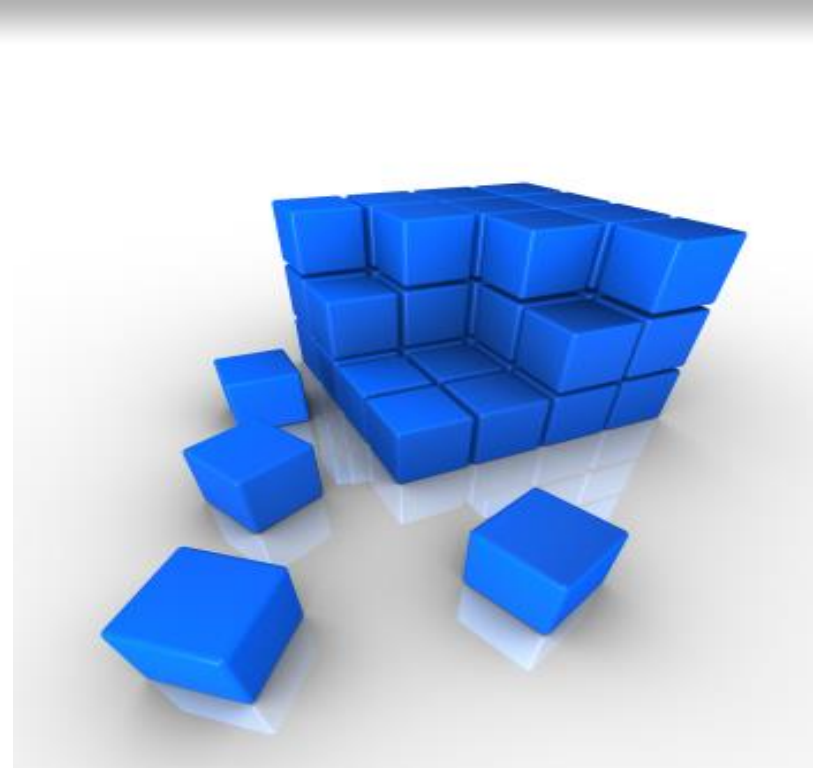




Enhancement Plan

Consists of two distinct phases:

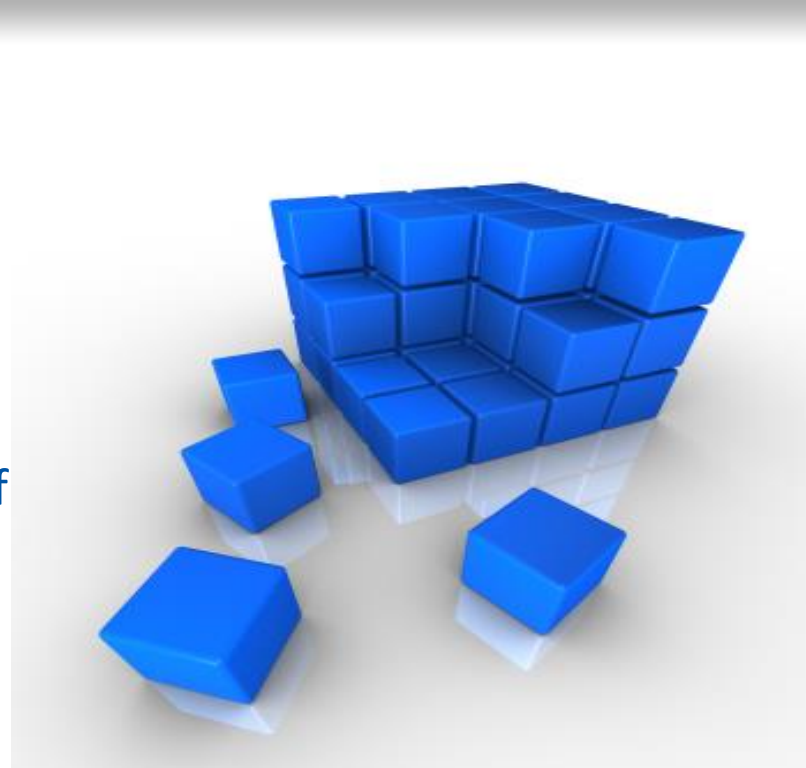
- **Phase one:** harmonization of the provision of air navigation services in according to the ICAO SARPs and PANS
- **Phase two:** to improve the performance of the air navigation system as a whole





Enhancement Plan

- A **performance-based approach** will set the basis for collaboration among all aviation stakeholders
- Will ensure the achievement of agreed performance targets and the **optimization of resource allocation** for the implementation of air navigation operational improvements.







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- Planning mechanism based in scenarios
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North Atlantic
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Paris

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(MID) Office
Cairo

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Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU