✈ The Global Air Navigation Plan (Doc 9750) is the ICAO's highest air navigation strategic document and the plan to drive the evolution of the global air navigation system, in line with the Global Air Traffic Management Operational Concept (GATMOC, Doc 9854) and the Manual on Air Traffic Management System Requirements (Doc 9882). It also supports planning for local and regional implementation.

✈ In order to better communicate with technical and high-level managers and to not leave any State or stakeholder behind, a multilayer structure, tailored for the various audiences, is proposed for the sixth edition of the GANP. This multilayer structure of four layers; two global levels, a regional level and a national one, would also provide a framework for alignment of regional, sub-regional and national plans.

Resolution A41-6: ICAO global planning for safety and air navigation

- ✈ Endorses the 2023-2025 edition of the Global Aviation Safety Plan (GASP) and the seventh edition of the Global Air Navigation Plan (GANP) as the global strategic directions for safety and the evolution of the air navigation system, respectively;

- ✈ Resolves that ICAO shall implement and keep current the GASP and the GANP to support the relevant Strategic Objectives of the Organization, while ensuring necessary stability;

- ✈ Resolves that these global plans shall be implemented and kept current in close cooperation, collaboration and coordination with all concerned stakeholders;

- ✈ Resolves that these global plans shall provide the frameworks in which regional, subregional and national plans will be developed and implemented, thus ensuring consistency, harmonization and

- ✈ coordination of efforts aimed at improving international civil aviation safety, capacity and efficiency;

Resolution A41-6: ICAO global planning for safety and air navigation

- Urges Member States to develop sustainable solutions to fully exercise their safety oversight and air navigation responsibilities which can be achieved by sharing resources, utilizing internal and/or external resources, such as regional and subregional organizations and the expertise of other States;

- Urges Member States to demonstrate the political will necessary for taking remedial actions to address safety and air navigation deficiencies, including those identified by Universal Safety Oversight Audit Programme (USOAP), through the GASP, the GANP and the ICAO regional planning process;

- Urges Member States, the industry and financing institutions to provide the needed support for the coordinated implementation of the GASP and GANP, as well as regional and national plans, avoiding duplication of efforts;

- Calls upon States and invites other stakeholders to cooperate in the development and implementation of regional, subregional and national plans based on the frameworks of the GASP and GANP;

- Instructs the Secretary General to promote, make available and effectively communicate the GASP and the GANP; and

- Declares that this resolution supersedes Resolution A40-1 on ICAO global planning for safety and air navigation.

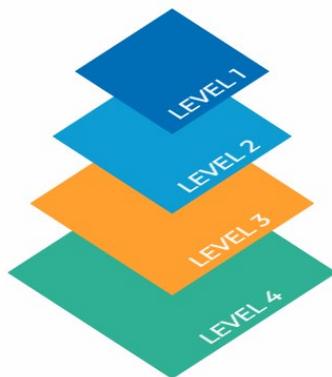# GLOBAL AIR NAVIGATION PLAN

MULTILAYER STRUCTURE OF THE GANP

Click a level to navigate

GLOBAL STRATEGIC

GLOBAL TECHNICAL

REGIONAL

NATIONAL

LEVEL 1
LEVEL 2
LEVEL 3
LEVEL 4

Basic Building Blocks (BBB)

The Basic Building Block (BBB) framework outlines the foundation of any robust air navigation system. It is nothing new but the identification of the essential services to be provided for international civil aviation in accordance with ICAO Standards. These essential services are defined in the areas of aerodromes, air traffic management, search and rescue, meteorology and **information management**.

In addition to essential services, the BBB framework identifies the end users of these services as well as the assets (communications, navigation, and surveillance (CNS) infrastructure) that are necessary to provide them. The BBB is considered an independent framework and not a block of the ASBU framework as they represent a baseline rather than an evolutionary step. This baseline is defined by essential services recognized by ICAO Member States as necessary for international civil aviation to develop in a safe and orderly manner. Once these essential services are provided, they constitute the baseline for any operational improvement.

BBB - AIM References

- ✈ Annex 15: Aeronautical Information Services
- ✈ Annex 4: Aeronautical Charts
- ✈ PANS-Aeronautical Information Management (Doc 10066)
- ✈ Aeronautical Information Services Manual (Doc 8126)
- ✈ Aeronautical Charts Manual (Doc 8697)
- ✈ WGS-84 Manual (Doc 9674)
- ✈ AIM Quality Manual (Doc 9839)
- ✈ AIM Training Manual (Doc 9991)
- ✈ Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services (Doc 9377) (Note: Annex 3, 11, 14 and PANS-Aircraft Operations contain information relevant to aeronautical information services)

BBBs & USOAP –PQs

✈ Safety oversight is a function by which Member States ensure the effective implementation of:

✈ Safety-related Standards and Recommended Practices (SARPs), and

✈ Associated procedures contained in the Annexes to the Convention on International Civil Aviation and related ICAO documents.

https://www4.icao.int/ganpportal/BBBsUSOAPPQs

Where is AIM described in the GANP?
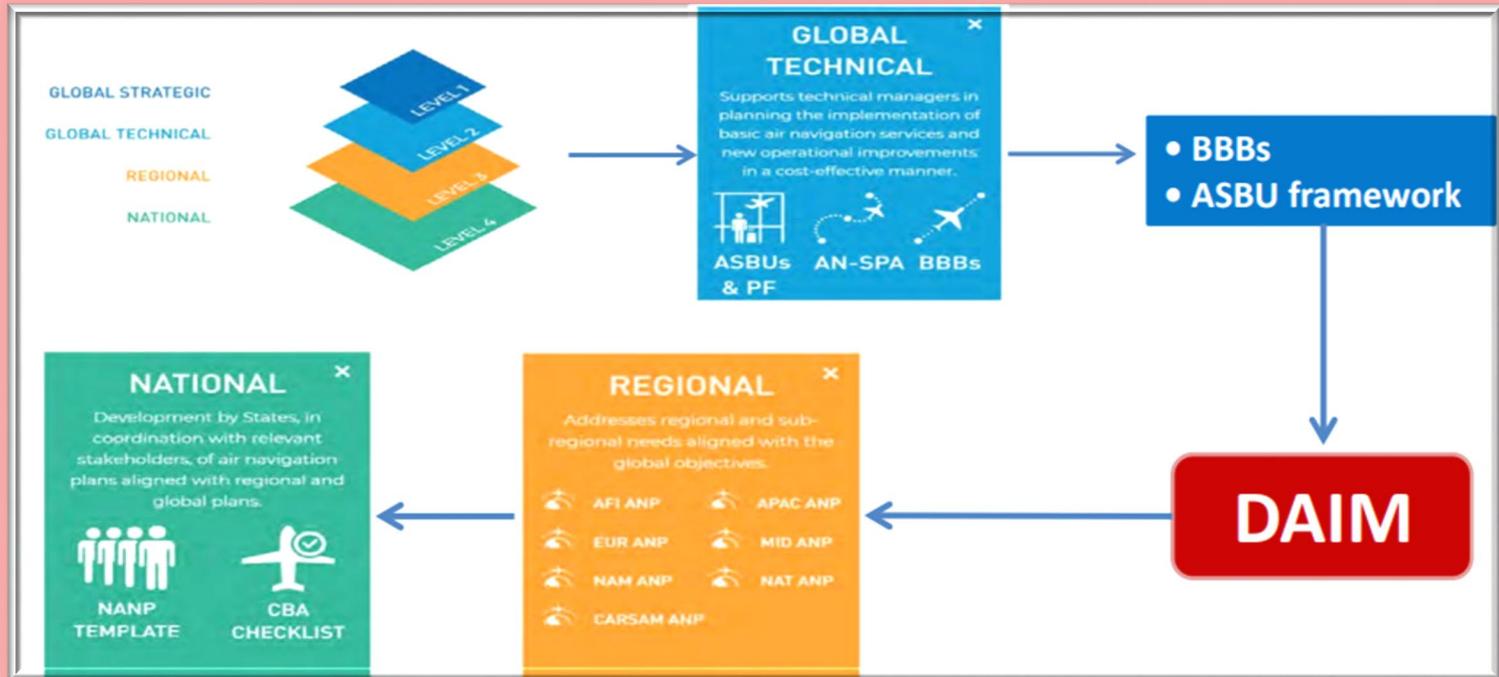
Concept of operations of D-AIM
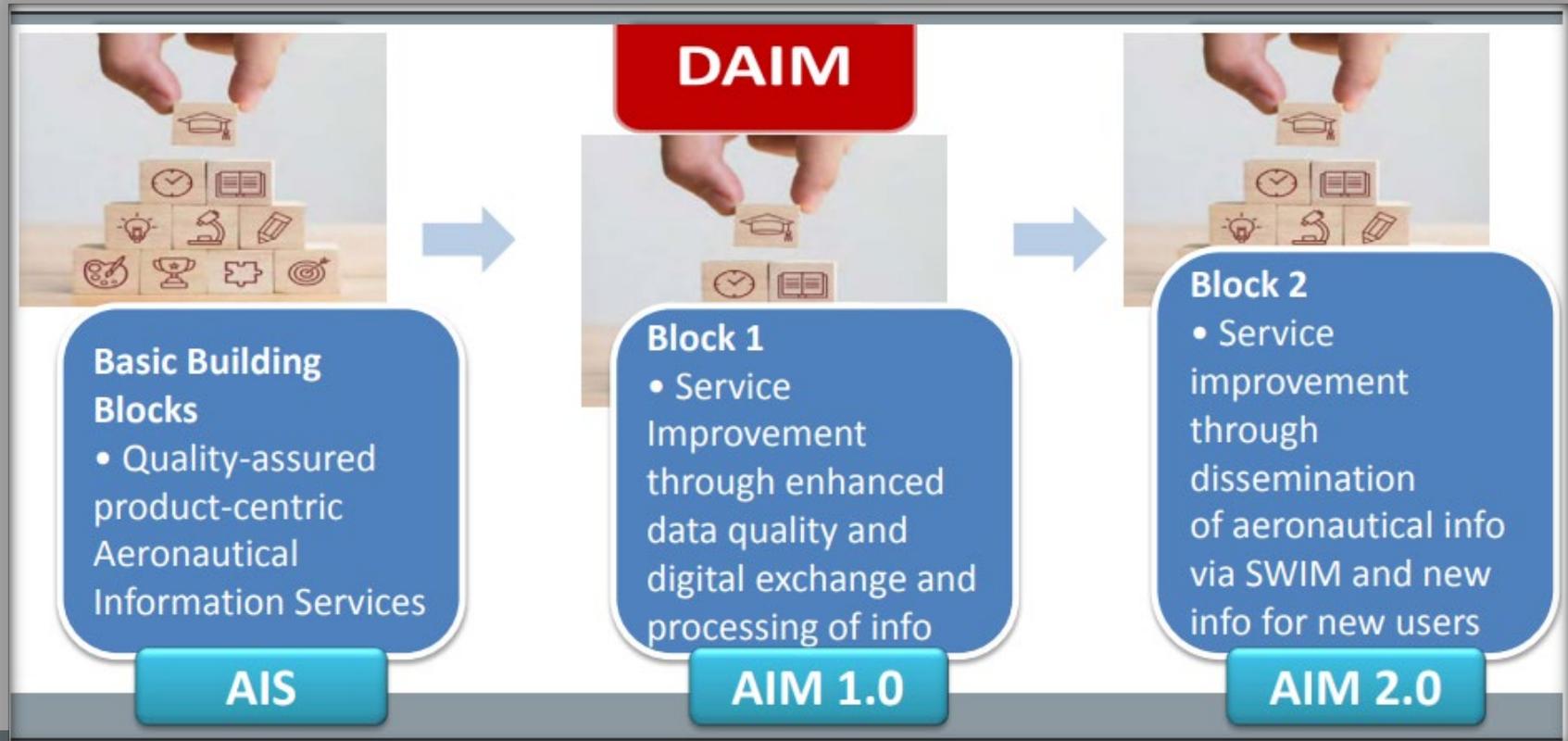
AIM in the BBBs

Basic Building Blocks
• Quality-assured product-centric Aeronautical Information Services

AIS

Block 1
• Service Improvement through enhanced data quality and digital exchange and processing of info

AIM 1.0

Block 2
• Service improvement through dissemination of aeronautical info via SWIM and new info for new users

AIM 2.0

Reference provisions: Annex 15 (16th Ed.) and PANS-AIM (1st Ed.)

AIM in Block 1

Basic Building Blocks
• Quality-assured product-centric Aeronautical Information Services

AIS

Block 1
• Service Improvement through enhanced data quality and digital exchange and processing of info

AIM 1.0

Block 2
• Service improvement through dissemination of aeronautical info via SWIM and new info for new users

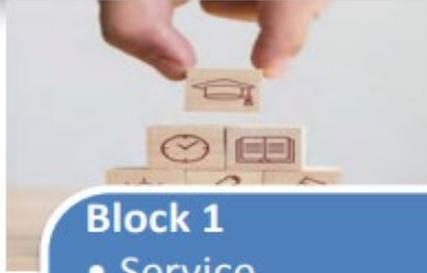**AIM 2.0**
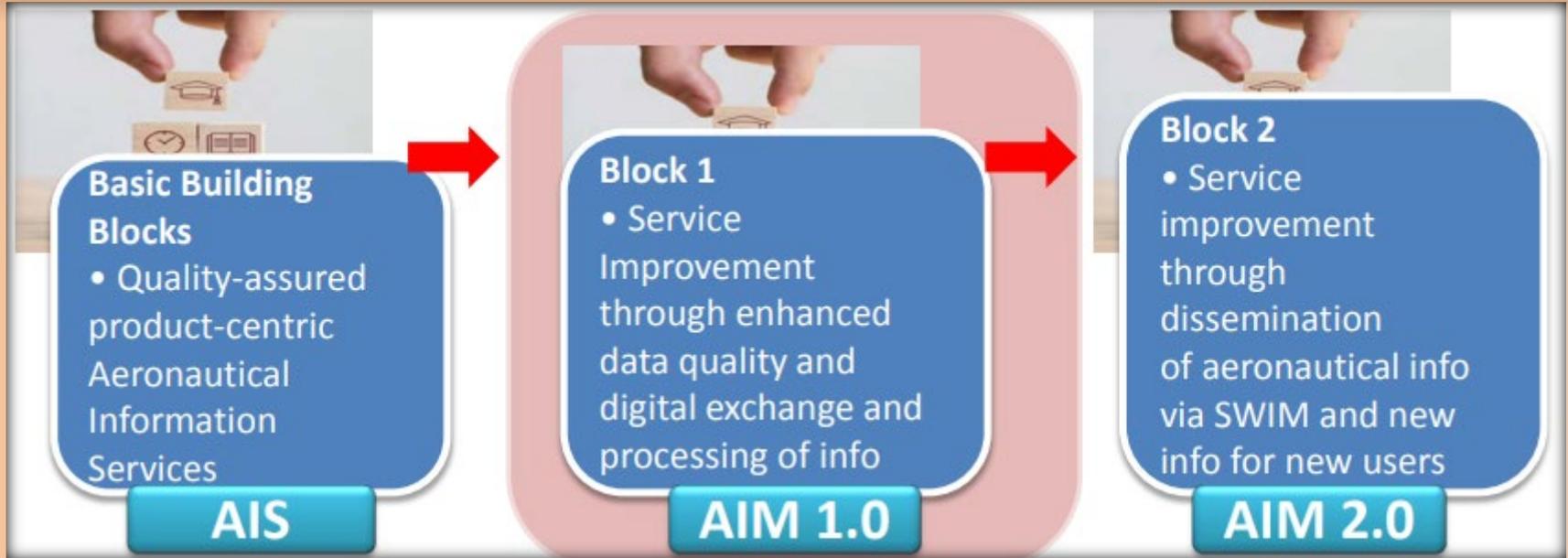
- ✈ Improved aeronautical information based on enhanced data quality to support PBN, airborne computerbased navigation systems and ground automation
- ✈ Digital information exchange and processing allows a more efficient information management
- ✈ Reference provisions: Annex 15 (16th edition) and PANS-AIM (1st edition)

PURPOSE	**Main purpose:** The summary of the essence of the element
	New capabilities: The description of what the stakeholders can do with this element that could not be done before. This section is not mean to describe performance improvement.
Description	**Description:** Additional information to improve understanding of the element.
	Maturity level: The stage of the element (concept, validation, standardization, ready for implementation)
	Human factors: Does not imply a change in task by the user or affected others? Does it imply processing of new information by the user? Does it imply the use of new equipment? Does it imply a change to levels of automatization?

DAIM – B2 Module

Basic Building Blocks
• Quality-assured product-centric Aeronautical Information Services

AIS

Block 1
• Service Improvement through enhanced data quality and digital exchange and processing of info

AIM 1.0

Block 2
• Service improvement through dissemination of aeronautical info via SWIM and new info for new users

AIM 2.0

- ✈ Block 2 guide towards a full AIM environment, which include the dissemination of aeronautical information in a SWIM-enabled environment, user-defined products and the decommissioning of current distribution mechanisms
- ✈ Traditional aeronautical information will be complemented by new information required to support operations in high airspace or the UAS Traffic Management concept.
- ✈ Reference provisions: To be developed

ENABLERS

(Ex: SWIM-B2/1 Information service provision)

Enabler Category	Enabler Type	Enabler Name	Description/References	Stakeholders	Year
Operational procedures	Information exchange	1. Procedures for how to publish and access a service overview 2. Procedures for defining the content of a service overview and how an information service can be discovered via a registry. 3. Procedures for quality management system	1. Reference guidance: Manual on System Wide Information Management (SWIM) Implementation Doc (XXXX) 2. Standards and procedures: Future ICAO PANS-IM 3. Procedures for quality management system to ensure the quality of the information services. Manual on System Wide Information Management (SWIM) Implementation Doc (XXXX)	ATM SWIM service provider	2023
Ground system infrastructure	Information exchange	1. Automated systems capable to provide information over an IP network following the required message exchange patterns. 2. Automated systems with logon and authentication mechanisms	Automated systems capable to exchange information: - Over IP network (OSI Layer 1 to 5) Standards and guidance material: 1. ICAO Annex 10 - Aeronautical Telecommunications Vol III-Rules to access an IP network Manual on System 2. Wide Information Management (SWIM) Implementation Doc (XXXX) 3. Following exchange patterns required to support the service provision (e.g. publish/subscribe or request/reply) (OSI Layer 7) 4. Guidance material: Manual on System Wide Information Management (SWIM) Implementation Doc (XXXX) OSI Layer 5 Guidance material: ICAO Doc 10039 - Future Manual on system wide information management (SWIM)	Information service provider ATM SWIM service provider	2023
Information exchange model	----	Information exchange model	Information exchange models such as FIXM, AIXM, IWXXM,... These exchange models are to be selected by the information service providers depending on the domain of the information to be provided.	Airport operator ANSP Airspace user	2023
Training	----	Training requirements for information service provision	Training on how to define, develop and provide information services.	Information service provider ATM SWIM service provider	2023

AMBITIONS IN TERMS OF PERFORMANCE

In addition to the fundamental aviation principles of safety, aviation security and economic and environmental sustainability, there are a number of consequential performance requirements for the air navigation system that must meet the increasing expectations of society at large and, in particular, of the aviation community. The level of performance required of the air navigation system involves difficult choices and firm compromises. Based on what we know about the future and its opportunities and challenges, the air navigation system should provide certain performance ambitions.

SUMMARY OF THE GANP PERFORMANCE AMBITIONS "A high performing system by 2040 and beyond"	
KPA	**Ambition**
ACCESS AND EQUITY	No aviation community member excluded or treated unfairly.
CAPACITY	Nominal capacity easily scalable with demand.
	Disruptive events do not interrupt service provision and do not significantly affect the performance of the system.
COST-EFFECTIVENESS	No increase of total direct ANS cost while maintaining the safety and quality of service.
	Significant increase of ANS productivity, irrespective of demand.
EFFICIENCY	Reduction of the gap between the flight efficiency achieved and the desired optimum trajectory of airspace users.
ENVIRONMENT	ANS-induced inefficiencies to be progressively removed to contribute to the global ICAO aspirational goals for CO_2 emissions.
	To benefit from achieved flight efficiency gains.
FLEXIBILITY	To absorb required changes to individual business and operational trajectories.
INTEROPERABILITY	Essential at an operational and technical level.
PARTICIPATION BY THE ATM COMMUNITY	Pre-agreed level of participation to make the maximum shared use of the air navigation resources.
PREDICTABILITY	No increase in ANS delivery variability including asset availability.
SAFETY	Zero ANS-related accidents and a significant (50%) reduction of ANS-related serious incidents.
SECURITY	Zero significant disruptions due to cyber incidents

THANK YOU!