



ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

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HOW THE ASBU ELEMENTS OF THE GANP ARE INTEGRATED IN AIRPORT PLANNING?

Second North American, Central American and Caribbean Working Group
(NACC/WG) Aerodromes and Ground Aids (AGA) Implementation Task Force
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SUSTAINABLE DEVELOPMENT GOALS

<p>1 NO POVERTY</p> 	<p>2 ZERO HUNGER</p> 	<p>3 GOOD HEALTH AND WELL-BEING</p> 	<p>4 QUALITY EDUCATION</p> 	<p>5 GENDER EQUALITY</p> 	<p>6 CLEAN WATER AND SANITATION</p> 
<p>7 AFFORDABLE AND CLEAN ENERGY</p> 	<p>8 DECENT WORK AND ECONOMIC GROWTH</p> 	<p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p> 	<p>10 REDUCED INEQUALITIES</p> 	<p>11 SUSTAINABLE CITIES AND COMMUNITIES</p> 	<p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p> 
<p>13 CLIMATE ACTION</p> 	<p>14 LIFE BELOW WATER</p> 	<p>15 LIFE ON LAND</p> 	<p>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</p> 	<p>17 PARTNERSHIPS FOR THE GOALS</p> 	

ICAO STRATEGIC OBJECTIVES

 <p>SAFETY</p>	 <p>CAPACITY AND EFFICIENCY</p>	 <p>SECURITY AND FACILITATION</p>	 <p>ECONOMIC DEVELOPMENT</p>	 <p>ENVIRONMENTAL PROTECTION</p>
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Global Air Navigation Plan (GANP)

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The GANP is the tool to develop and prioritize the technical and operational work of the ICAO programme;



The aviation system must use the GANP to plan and implement activities, establish priorities, goals, and indicators consistent with globally harmonized objectives, and consider operational needs.

The GANP aims to equitably accommodate all airspace user operations safely and cost-effectively while reducing the environmental impact of aviation. To this end, the GANP provides a series of operational improvements to increase capacity, efficiency, predictability and flexibility while ensuring interoperability of systems and harmonization of procedures.



MULTILAYER STRUCTURE OF THE GANP

✈ *Level 1: Global Strategic*

✈ *Level 2: Global Technical*

✈ *Level 3: Regional Objectives*

✈ *Level 4: National Objectives*



Points to consider;

- ✈ *The implementation of the ASBU modules must be based on;*
 - ✈ *Real needs of the States*
 - ✈ *Data that supports it*
 - ✈ *Feasibility analysis and investment recovery*
 - ✈ *Based on the satisfaction of an operational need*

ROLES AND RESPONSIBILITIES

Aviation System Block Upgrade (GANP)

States

✈ They contribute to the development of the GANP by providing their experience in local and regional matters and their vision of the operational considerations necessary to comply with ICAO provisions.



ICAO and other Organizations

✈ The evolution of the air navigation system requires joint implementation by all participating stakeholders. ICAO serves as a global forum that brings together the aeronautical community to define a common strategy for the evolution of the global air navigation system at the global strategic level of the GANP.



Planning and implementation of the Planning regional groups (PIRGs)

✈ The PIRGs are responsible for the regional level of the GANP. Based on regional performance and operational needs, differences, constraints, and opportunities, PIRGs are responsible for defining regional planning and implementation priorities, in line with the GANP, through Volumes I, II, and III of the air navigation plans.



ROLES AND RESPONSIBILITIES

Aviation System Block Upgrade (GANP)

AIRPORT OPERATORS

✈ Airport operators must work closely with international and national regulators to fully integrate airports into the air navigation system.

AIR NAVIGATION AND AERONAUTICAL INFORMATION SERVICE PROVIDERS

✈ ANSPs are responsible for effectively planning, organizing, and managing the air navigation system so that it achieves its optimal performance.



AIRSPACE USERS

✈ Airspace users are organizations or individuals that carry out flights with aircraft or other vehicles in the airspace. This includes ICAO-compliant manned flight operations, non-ICAO manned flight operations, and unmanned aircraft systems (UAS) flight operations.

ROLES AND RESPONSIBILITIES

Aviation System Block Upgrade (GANP)

STATE AVIATION

✈ The main interested party within the group of State air operators is the army. In many cases, the military acts not only as aircraft operators, but also as regulators, ANSPs, and airport operators for their operations.

MANUFACTURING INDUSTRY

✈ The manufacturing industry contributes to the evolution of the technical content of the GANP by providing up-to-date industrial standards, technical knowledge, and experience in all technological areas relevant to air transport. Having access to this expertise is key to developing effective and cost-effective arrangements.

INTERNATIONAL ORGANIZATIONS, INCLUDING PROFESSIONAL ORGANIZATIONS

✈ International organizations, including airspace users, airports, and air navigation service providers, support ICAO in the development and implementation of GANPs by sharing information with members of the organizations and raising awareness of compliance requirements through training and audit activities.

RESEARCH AND DEVELOPMENT ORGANISMS

✈ The GANP provides a common strategy for joint efforts to drive research and development activities in the same direction. Research and development organizations manage innovation activities by providing in-depth ideas and solutions related to performance needs for GANP and ASBU evolution and air navigation system efficiency.



PERFORMANCE AMBITIONS

✈ In addition to the fundamental aeronautical principles of safety, security, economic, and environmental sustainability, there are several consequential performance requirements that the air navigation system must meet to meet the increasing expectations of society in general and in particular of the aeronautical community.



SAFETY

ACCESSIBILITY AND EQUITY

**PARTICIPATION OF THE ATM
COMMUNITY**



COST EFFECTIVENESS

CAPACITY AND RESILIENCE

PREDICTABILITY



GLOBAL INTEROPERABILITY

SECURITY



FLEXIBILITY

EFFICIENCY

ENVIRONMENT

Aviation System Block Upgrade (ASBU)

- ✈ The ICAO GANP ASBU methodology is a programmatic and flexible global approach that allows all Member States to improve their air navigation capabilities based on their specific operational requirements.



Aviation System Block Upgrade (ASBU)

✈ *The ASBU operates according to the following structure:*

✈ *ASBU Thread: three different categories, operational, information, and technology.*

✈ *ASBU Module: is the set of elements of a common thread that, per the enablers' roadmap, will be available for implementation within the defined deadline established by the ASBU Block.*

✈ *ASBU Block: this implies that the element and all enablers associated with it must be available for deployment in the ASBU block year.*

✈ *ASBU Element: This module is the set of elements of a common thread that, in accordance with the enablers' roadmap, will be available for implementation within the defined deadline established by the ASBU Block.*

INFORMATION

- ✈ *AMET: Meteorological information*
- ✈ *DAIM: Digital Aeronautical Information Management*
- ✈ *FICE: Flight and Flow Information for a Collaborative Environment (FF-ICE)*
- ✈ *SWIM: System Wide Information Management*

TECHNOLOGY

- ✈ *ASUR: Surveillance systems*
- ✈ *COMI: Communication infrastructure*
- ✈ *COMS: ATS Communication service*
- ✈ *NAVS: Navigation systems*

OPERATIONAL

- ✈ *ACAS: Airborne Collision Avoidance System (ACAS)*
- ✈ *ACDM: Airport Collaborative Decision Making*
- ✈ *APTA: Improve arrival and departure operations*
- ✈ *CSEP: Cooperative Separation*
- ✈ *DATS: Digital Aerodrome Air Traffic Services*
- ✈ *FRTO: Improved operations through enhanced en-route trajectories*
- ✈ *GADS: Global Aeronautical Distress and Safety System*
- ✈ *NOPS: Network Operations*
- ✈ *OPFL: Improved access to optimum flight levels in oceanic and remote airspace*
- ✈ *RSEQ: Improved traffic flow through runway sequencing*
- ✈ *SNET: Ground-based Safety Nets*
- ✈ *SURF: Surface operations*
- ✈ *TBO: Trajectory-based operations*
- ✈ *WAKE: Wake Turbulence Separation*

ASBU elements for airport operations

ACDM

ACDM-B0/1 Airport CDM Information Sharing (ACIS)

ACDM-B0/2 Integration with ATM Network function

ACDM-B2/1 Airport Operations Plan (AOP)

ACDM-B2/2 Airport Operations Centre (APOC)

ACDM-B2/3 Total Airport Management (TAM)

ACDM-B3/1 Full integration of ACDM and TAM in TBO

Questions?





Thank You!