



OACI | UNIENDO A LA AVIACIÓN

NINGÚN PAÍS SE QUEDE ATRÁS



# GANP – Sixth Edition Global Strategic

**WORKSHOP ON THE APPLICATION AND DEVELOPMENT OF THE VOL. III  
OF THE CAR / SAM E-ANP INCLUDING KPI FORMULATION FOR THE SAM  
REGION**

**Virtual Meeting, September, 15-17, 2020**



OACI

UNIENDO A LA AVIACIÓN

NINGÚN PAÍS SE QUEDE ATRÁS



## MULTILAYER STRUCTURE OF THE GANP

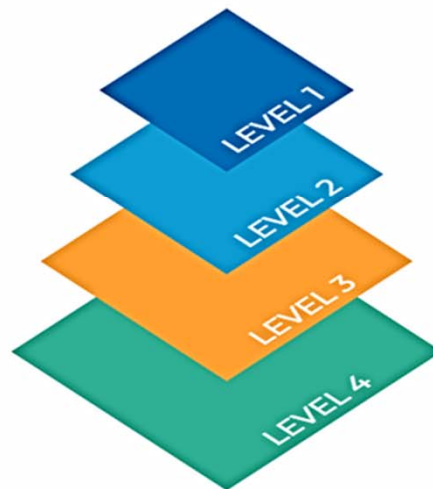
Click a level to navigate

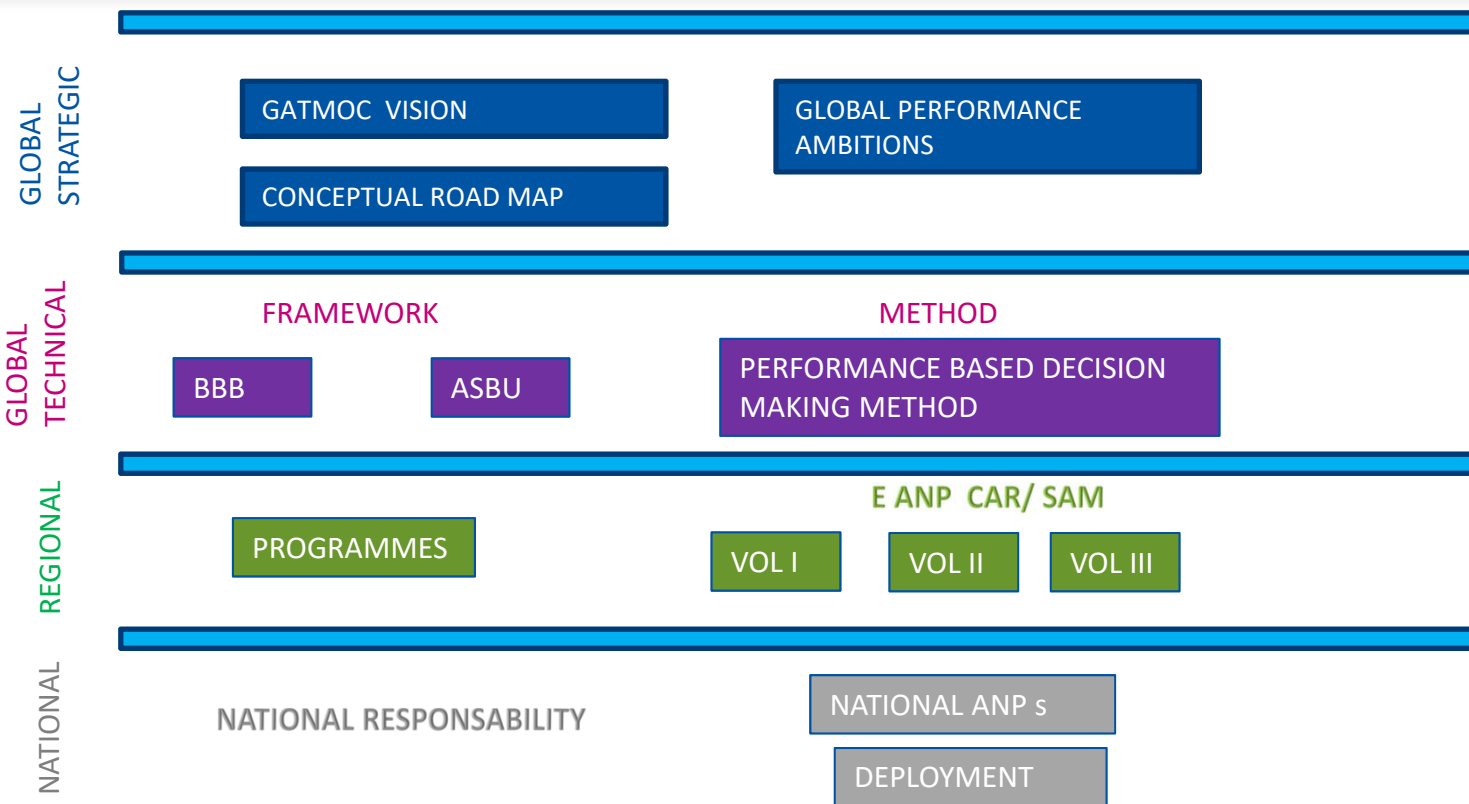
GLOBAL STRATEGIC

GLOBAL TECHNICAL

REGIONAL

NATIONAL







## MULTILAYER STRUCTURE OF THE GANP

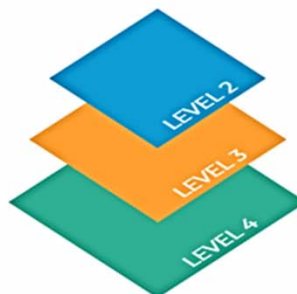
Click a level to navigate

GLOBAL STRATEGIC

GLOBAL TECHNICAL

REGIONAL

NATIONAL



**GLOBAL STRATEGIC** ×

Provides high-level strategic directions for decision makers to drive the evolution of the global air navigation system towards a common agreed vision.



**GANP STRATEGY**

### GLOBAL STRATEGIC

Provides high-level strategic directions for decision makers to drive the evolution of the global air navigation system towards a common agreed vision



OACI UNIENDO A LA AVIACIÓN

NINGÚN PAÍS SE QUEDE ATRÁS



https://www4.icao.int/ganportal/GanpDocument#/?\_k=3xvpqk

English | Français | Español | русский | 中文 | العربية

# Global Air Navigation Plan Strategy (EN)

A photograph of a commercial jet airplane flying through a blue sky with light clouds, viewed from a low angle looking up at the tail and wings.



## GANP



Aviation is an integral part of society, connecting people and transporting goods worldwide, and an important driver of economic growth and sustainable development, improving the standard of living of people around the world through the safe and reliable operation of over 120,000 flights every day (oct. 2018).

The achievement of sustainable growth within the international air transport system strongly relies on a high-performing and seamless global air navigation system.



The global air navigation system supports the safe and orderly development of international civil aviation through the collaborative integration of humans, information, technology, facilities and services.

Within the technical scope, the system comprises aerodrome operations, air traffic management, meteorology, aeronautical information and search and rescue services supported by air, ground and space-based communications, navigation and surveillance (CNS) capabilities.

## GANP





# GANP

BASE

- SARPs
- PANS

Relationship  
with other Plans

- GASP
- GAsEP
- Agenda 2030 ONU (SDG)



## GANP

All stakeholders, whether traditional or emerging, aim to move passengers and goods from place to place without delay, at minimum cost and in a safe, secure and environmentally sustainable way.

For this to be successful, it is imperative that such stakeholders take accountability of their roles and responsibilities within the respective GANP levels. GANP stakeholders include all members of the aviation community.





## Challenges and Opportunities

New demands on the aviation system, emerging technologies, innovative ways of doing business and the shifting human role are bringing not only challenges but also opportunities that call for an urgent transformation of the global air navigation system so that aviation can continue to boost social well-being worldwide.



Continued support of social wellbeing worldwide

Accommodation of increasing demand and new types of demand

Use of advanced technologies

Human capability and capacity

Emerging, new and adapted business models



# GANP - Vision

The global air navigation system has witnessed significant improvements in recent decades.

For the air transport system **to continue to contribute** to social development and economic progress worldwide, a safe, secure, efficient and sustainable global air navigation system, which limits the impact of aviation on climate change, **must transform from conceptual approaches designed in the twentieth century.**



## GANP - Vision

At the core of this transformation is a strong need for a fully harmonized global air navigation system built on agreed performance-based standards with interoperable and scalable systems.

Within this harmonized system, airspace users will have access to the air navigation resources consistent with their adherence to performance requirements.

**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 <sub>2</sub> 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



OACI

UNIENDO A LA AVIACIÓN

NINGÚN PAÍS SE QUEDE ATRÁS



# Conceptual Roadmap

This evolution will be enabled by a progressive increase in automation, advancements in technology and the use of standardized, interoperable ground and air systems in an integrated infrastructure.

This aviation infrastructure, based on the ubiquitous sharing of information, will interface with non-aviation transportation systems to achieve an efficient, multimodal transport system.

The conceptual roadmap presented (**also see tutorial**) is aimed at transforming the air navigation system based on its strengths and opportunities, rather than simply improving it, by providing a more holistic approach to its evolution.



**EVOLUTIONARY STEP 1: FLIGHT OPERATIONS IN A DIGITAL RICH ENVIRONMENT**

**EVOLUTIONARY STEP 2: TIME-BASED OPERATIONS ENABLED BY AN INFORMATION REVOLUTION**

**EVOLUTIONARY STEP 3: TRAJECTORY-BASED OPERATIONS ENABLED BY FULL CONNECTIVITY THROUGH THE INTERNET OF AVIATION**

**EVOLUTIONARY STEP 4: TOTAL PERFORMANCE MANAGEMENT SYSTEM FOCUS ON BUSINESS/MISSION NEEDS**



## FROM CONCEPT TO OPERATIONS

The vision outlined in the GANP is a proactive move towards a globally interoperable air navigation system and constitutes an integrated and common approach to emerging challenges and opportunities stemming from aviation and technological trends.





OACI

UNIENDO A LA AVIACIÓN

NINGÚN PAÍS SE QUEDE ATRÁS



**Philosophy GANP: “Think globally and act locally”**



OACI UNIENDO A LA AVIACIÓN

NINGÚN PAÍS SE QUEDE ATRÁS



North American  
Central American  
and Caribbean  
(NACC) Office  
Mexico City

South American  
(SAM) Office  
Lima

ICAO  
Headquarters  
Montréal

Western and  
Central African  
(WACAF) Office  
Dakar

European and  
North Atlantic  
(EUR/NAT) Office  
Paris

Middle East  
(MID) Office  
Cairo

Eastern and  
Southern African  
(ESAF) Office  
Nairobi

Asia and Pacific  
(APAC) Sub-office  
Beijing

Asia and Pacific  
(APAC) Office  
Bangkok



**THANKS**