



ICAO | UNITING AVIATION

# ANS Modernization and Performance Monitoring – History & Background

Mohamed Smaoui



# ANS Performance



1. What is ANS Performance and how we could monitor it?
2. Who are the main stakeholders? What are their main responsibilities?
3. What is the GANP? How can we define GANP implementation and how can we monitor the status of implementation of GANP?
4. How could we monitor ANS performance at National and Regional level?
5. What should be the content of the ANP Vol III?
6. Link between GANP, ANP (Vol III) and NANP

# How did we start?



## ICAO vision on global harmonisation

- A global ATM system is envisioned as the foundation of a worldwide **integrated, harmonised and interoperable** air transportation system. This system is intended to integrate regional and local ATM systems as well as to interoperate and provide **seamless** services (across all regions, sub-regions and States) to all users in all phases of flight.
- A **globally interoperable** system will meet requirements for **safety** and **security** and provide optimum **economic** operations that are **environmentally sustainable** and **cost effective**.
- The ICAO vision of global harmonisation is therefore based on the need for:
  - Uniform level of safety across all regions, sub-regions and States
  - Optimised traffic flows across all regions, sub-regions and States
  - Physical system-to-system connectedness, sharing pertinent data across systems and regions
  - Common performance requirements, standards and operating procedures
  - Common aeronautical information exchange
  - Meeting environmental objectives
  - Meeting minimum and common security objectives

# Air Navigation Conference 11 (Doc 9828)



- Endorsement of the global ATM operational concept at the 11<sup>th</sup> Air Navigation Conference **in 2003**
- ICAO is requested to:
  - develop ATM system requirements
  - address interoperability and seamlessness
  - define requirements for global AIM
  - publish the operational concept
  - amend the Global Plan
  - develop a performance framework

# Air Navigation Conference 11 (Doc 9828)



## The role of States and PIRGs

- That States and PIRGs consider the Global Air Navigation Plan for CNS/ATM Systems as a catalyst for change, providing a global safety and **interoperability** framework while allowing **regional or local adaptation** to efficiently **meet regional and local needs**
- That States and PIRGs agree on a **set of metrics related to key performance areas**, incorporate these metrics into the **performance monitoring process** and **review their results on a regular basis**

# Air Navigation Conference 11

## Recommendation 3/3 — Performance framework



That ICAO, in consultation with the other members of the ATM community:

- a) formulate the **performance objectives and targets** for a future global ATM system;
- b) continue the definition of related **performance metrics** and elementary characteristics in the context of the overall behaviour of the ATM system; and
- c) coordinate and harmonize all related contributions within the overall performance framework initiated by the Air Traffic Management Operational Concept Panel, including definitions, **standards for reporting requirements, information disclosure and guidance for monitoring.**

# Air Navigation Conference 11

## Recommendation 4/1 — Harmonization of air navigation systems between regions



- That ICAO, in consultation with the other members of the ATM community:
- a) maintain, and develop further, a coordination mechanism between regions for planning and implementation of **capacity-enhancing** measures and **ATM performance improvement between regions** for a harmonized evolution aimed at **enhancing aviation efficiency and safety**;
  - b) be systematically involved in any regional initiatives aiming at enhancing **ATM capacity and performance**; and
  - c) urge States, who have not already done so, to establish national CNS/ATM coordination and implementation committees, with a point of contact to be made known to the respective ICAO Regional Office, so as to facilitate harmonized transition to CNS/ATM systems.

# Air Navigation Conference 11

Follow up in the ICAO Assembly (A35, Oct. 2004)



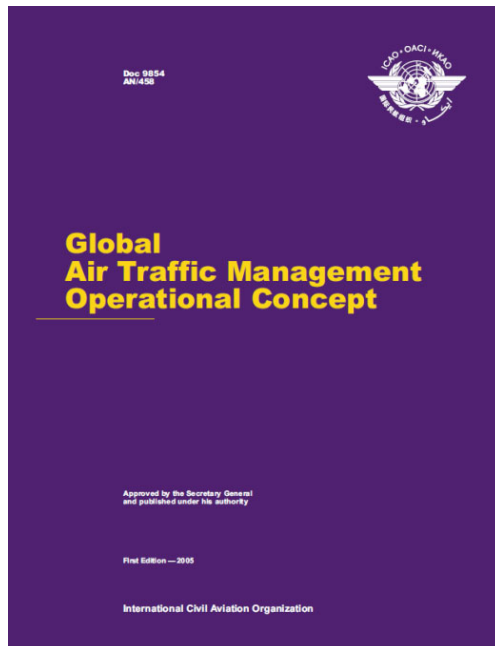
## Assembly Resolution A35-15 (Appendix B)

- Calls upon States, regional planning groups and the aviation industry to use the ICAO Global ATM Operational Concept as the common framework to guide planning and implementation of CNS/ATM systems and to focus all such development work on the operational concept
- Urges the Council to take the steps necessary to ensure that the **future global ATM system is performance based** and that the **performance objectives and targets** for the future system are developed in a timely manner

# GATMOC (Doc 9854), First Edition 2005



## High level Guidance



- **Vision Statement**
  - 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
- **Guiding Principles**
  - Safety
  - Human
  - Technology
  - Collaboration
  - Continuity
  - Information

# AN-Conf/12 (Doc 10007)



- Held in Montreal from **19 to 30 November 2012**
- **Revised Global Plan** that was presented during 12th AN-Conf, **introduced the ASBU methodology**
- The block upgrades comprise various operational improvements **aimed at harmonizing and improving the efficiency of the Global Air Navigation System.**
- With focus on harmonization and interoperability leading to a global air traffic management (ATM) system, the AN-Conf/12 noted that the **revised Fourth Edition** of the Global Air Navigation Plan (Doc 9750, GANP) provides a global planning framework which, among others, provides a **timeline for which future improvements can be implemented by States in accordance with their needs.**
- Arrangements to ensure the **periodic update of the ASBUs and roadmaps** on a rolling fifteen-year planning horizon were discussed.

# AN-Conf/12 (Doc 10007)



- Although the GANP has a global perspective, **it is not intended that all ASBU modules are to be applied around the globe.** When the ASBU blocks and modules are adopted by regions, sub regions or States they should be followed in close accordance with the specific ASBU requirements to **ensure global interoperability and harmonization** of air traffic management. It is expected that **some ASBU modules will be essential at the global level** and therefore may eventually be the subject of ICAO mandated implementation dates.
- The implementation of air navigation measures, including those identified in the ASBUs can require **significant investment** of finite resources by ICAO Regions, Sub regions, States and the Aviation Community. When considering the adoption of different blocks and modules, ICAO regions, sub regions and States **should undertake cost benefit analyses** to determine the **business case** for implementation in their particular region or State.

# AN-Conf/12 (Doc 10007)



- The progress and effectiveness of ICAO Regions and States against the priorities set out in their respective regional and State air navigation plans should be annually reported, using a consistent reporting format, to ICAO. This will assist Regions and States adjust their priorities to reflect actual performance and address any emerging air navigation issues.
- With regard to Regional Air Navigation Plans (ANPs) and for the process of aligning the regional ANPs with the GANP, AN-Conf/12 agreed that PIRGs should focus initially on implementing ASBU Block 0 Modules and finalize the development of their ASBU aligned regional plans by May 2014.
- The AN-Conf/12 agreed to the following recommendations concerning the Regional performance framework – planning methodologies:

# AN-Conf/12 (Doc 10007)

## Recommendation 1/15



### Performance monitoring and measurement of air navigation systems

That ICAO:

- a) **establish a set of common air navigation service performance metrics** supported by guidance material, **building on existing ICAO documentation** (e.g. Manual on Global Performance of the Air Navigation System (**Doc 9883**) and the Manual on Air Navigation Services Economics (Doc 9161));
- b) promote the development and use of “leading safety indicators” to complement existing “lagging safety indicators” as an integral and key component to drive improvement in performance and in the achieved management of risk; and
- c) **encourage the early and close involvement of the regulator and oversight bodies** in the development, proving of concepts and implementation of the aviation system block upgrades and regional programmes.

# AN-Conf/12 (Doc 10007)

## Recommendation 1/16



### Access and equity considerations

That States:

- a) ensure, as part of the aviation system block upgrade implementation, the principles of access and equity are included in all airspace modernization and redesign efforts; and
- b) detail how they will **monitor** the service providers to **ensure that they are providing fair, equitable, and efficient access to all aviation services** including general aviation.

# AN-Conf/12 (Doc 10007)

## Recommendation 6/1



### Regional performance framework – planning methodologies and tools

That States and PIRGs:

- a) **finalize the alignment of regional air navigation plans** with the Fourth Edition of the Global Air Navigation Plan (Doc 9750, GANP) by May 2014;
- b) **focus on implementing** aviation system block upgrade **Block 0 Modules according to their operational needs**, recognizing that **these modules are ready for deployment**;
- c) **use the electronic regional air navigation plans as the primary tool to assist in the implementation of the agreed regional planning framework** for air navigation services and facilities;
- d) **involve regulatory and industry personnel** during all stages of planning and implementation of aviation system block upgrade modules;
- e) **develop action plans to address the identified impediments** to air traffic management modernization as part of aviation system block upgrade **planning and implementation** activities;

# AN-Conf/12 (Doc 10007)

## Recommendation 6/1 (cont'd)



That ICAO:

- f) consider how the continuous monitoring approach to safety oversight maps to the evaluation of Member States' safety oversight capabilities concerning aviation system block upgrades;
- g) review the current amendment process to the Regional Air Navigation Plans (ANPs) and recommend improvements to increase efficiencies related to the approval and maintenance of the data in the regional ANPs;
- h) **develop guidance material**, on the basis of best practices employed worldwide, for the regional/local deployment of new air traffic management technologies, required procedures, operational approvals and **continue to support States in the implementation of the aviation system block upgrades**;

# AN-Conf/12 (Doc 10007)

## Recommendation 6/1 (cont'd)



That ICAO:

- i) identify the issues, funding, training and resource requirements necessary to support a safety framework that would lay the foundation for successful implementation the aviation system block upgrades;
- j) develop, together with industry and stakeholders, an engagement strategy to address the economic and institutional impediments to implementation of the aviation system block upgrades;
- k) develop a mechanism for **sharing of best practices for the aviation system block upgrade implementation**; and
- l) define a methodology to **ensure interregional and global harmonization of air navigation services** through ANRF reporting in an effective and timely manner, and consider the employment of interregional and multi-regional fora.

# Evolution of the GANP



2002 (2<sup>nd</sup> Edition)

2007 (3<sup>rd</sup> Edition)

2013 (4<sup>th</sup> Edition)

2016 (5<sup>th</sup> Edition)



Doc 9750  
AN/953



**Global Air Navigation Plan  
for CNS/ATM Systems**

Approved by the Secretary General  
and published under his authority

Second Edition – 2002

International Civil Aviation Organization

Doc 9750  
AN/953



**Global  
Air Navigation  
Plan**

Approved by the Secretary General  
and published under his authority

Third Edition – 2007

International Civil Aviation Organization



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CAPACITY AND EFFICIENCY

2013–2028  
Global Air Navigation Plan



Doc 9750-AN/953 Fourth Edition – 2013



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CAPACITY & EFFICIENCY

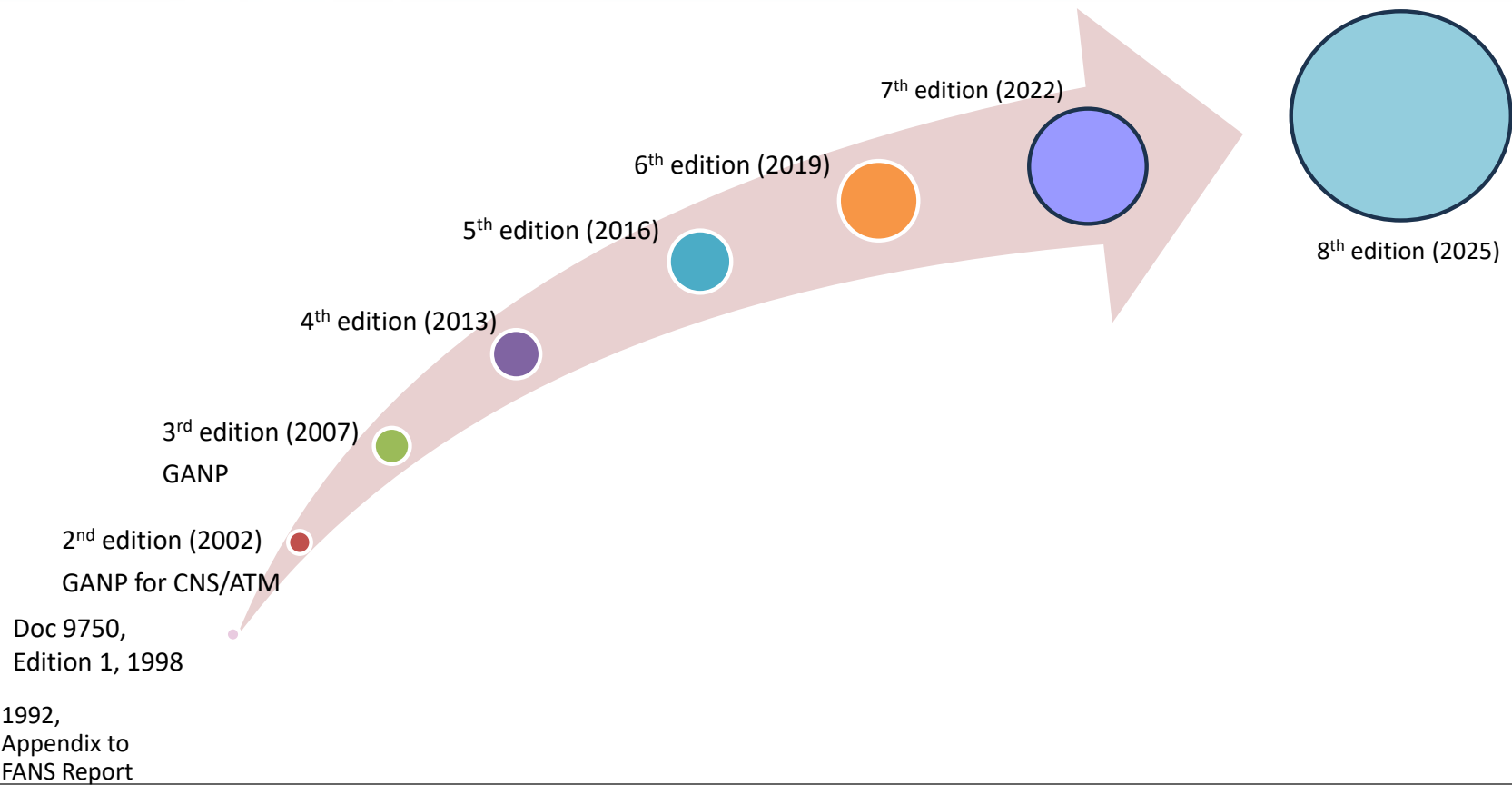
2016–2030  
Global Air Navigation Plan



Doc 9750-AN/953 Fifth Edition – 2016

(ASBU)

# Evolution of the GANP



# Evolution of the GANP



- Following the discussions and recommendations from the Twelfth Air Navigation Conference (AN-Conf/12), the Fourth Edition of the Global Air Navigation Plan (GANP) based on the Aviation Systems Block Upgrades (ASBU) approach was endorsed by the 38th Assembly of ICAO in October 2013.
- The Assembly Resolution A38-02, amongst others, invited PIRGs to use ICAO standardised tools or adequate regional tools to monitor and (in collaboration with ICAO) analyse the implementation status of air navigation systems.
- At the 39th ICAO Assembly, the 5th edition of the GANP with updates on the ATM logical infrastructure, the introduction of a minimum path and the performance-based implementation concept was endorsed in October 2016. The ICAO Assembly Resolution A39-12 called upon States, PIRGs and the aviation industry to **utilise the guidance provided in the GANP for planning and implementation activities which establish priorities, targets, and indicators consistent with globally harmonised objectives, taking into account operational needs.**
- The GANP's Block Upgrades have been initially organised in five-year time increments starting in 2013. A first updated version of the GANP, with a new planning horizon from 2016 to 2031 and the introduction of 6-year time increments so that they would be aligned with the ICAO Assembly cycles, was endorsed at the 39th ICAO Assembly in October 2016.

# Evolution of the GANP



- The significantly revised sixth edition of the GANP was presented at the 13th Air Navigation Conference in 2018 and had been endorsed at the 40th ICAO Assembly in September 2019. The Performance Based Approach (PBA) and the performance management process have been introduced through Rec. 4.3/1 of the ANConf/13
- The 41st ICAO Assembly endorsed, through Assembly Resolution A41-6 ICAO global planning for safety and implementation, the 7th edition of the GANP in October 2022, which is a minor revision to the GANP, that introduced an update to the safety key performance area of the GANP performance framework, a maintenance process revision, and minor updates to the BBBs as well as the ASBU framework.

# AN-Conf/13 (9 to 19 October 2018) (Doc 10115)



## Recommendation 1.1/1 — Vision and overview of the Sixth Edition of the Global Air Navigation Plan (Doc 9750, GANP)

That States:

- a) agree that the future Global Air Navigation Plan (Doc 9750, GANP), based on the outcome of the Thirteenth Air Navigation Conference (AN-Conf/13), be available as a **web-based platform**, including a concise executive summary (printable) which outlined its key policies, priorities and strategies to ensure that the GANP was easily accessible to all States and key decision makers;
- b) agree with the proposed **multilayer structure** for the Sixth Edition of the GANP;
- c) welcome the proposed **vision, performance ambitions and conceptual roadmap** for the Sixth Edition of the GANP, with the inclusion of the civil-military dimension;
- d) recognize the importance of a separate but aligned GANP and Global Aviation Safety Plan (Doc 10004, GASP);

That ICAO:

- e) consider the establishment of a GANP Study Group comprised of Member States from all regions and industry to undertake work on future editions of the GANP;
- f) make available the GANP global strategic level (printable) in the six ICAO languages;

# AN-Conf/13 (Doc 10115)

## Rec 1.1/1 (Cont'd)



- g) develop online training and organize regional seminars in conjunction with the planning and implementation regional groups (PIRGs), where possible, for the familiarization of the Sixth Edition of the GANP and support the deployment and implementation of regional and national air navigation plans;
- h) develop a national air navigation plan template available for voluntary use by States, as part of the Sixth Edition of the GANP, aligned with the global and regional air navigation plans, and support States in developing their national air navigation plans while taking into consideration neighbouring requirements;
- i) strengthen the relationship between the GASP, the GANP and the newly developed Global Aviation Security Plan (GASeP); and
- h) continue to work with States, international organizations, air traffic management (ATM) modernization programmes and other stakeholders on the development of the Sixth Edition of the GANP, as required for subsequent endorsement at the 40<sup>th</sup> Session of the ICAO Assembly

# AN-Conf/13 (Doc 10115)

## Rec 1.2/1



### Recommendation 1.2/1 — Global technical level of the Sixth Edition of the Global Air Navigation Plan (Doc 9750, GANP)

That States:

- a) agree with the proposed change management process to maintain an up-to-date aviation system block upgrade (ASBU) framework with the formal involvement of the ASBU Panel Project Team (ASBU PPT) to improve transparency, consistency and stability;
- b) welcome the updated ASBU framework and consider the initial version of the basic building block (BBB) framework;

That ICAO:

- c) map the global technical level of the Global Air Navigation Plan (Doc 9750, GANP) to the strategic level;
- d) make available the ASBU and proposed BBB frameworks in an interactive and simplified format, as part of the web-based GANP Portal, emphasizing the relationship between both frameworks, and between the frameworks and the regional air navigation plan (ANP) elements;
- e) enable the capability, within the GANP Portal, to upload relevant information related to the development and deployment of the ASBU and proposed BBB frameworks in order to allow States, regions and industry to share information;
- f) incorporate a flexible framework for emerging air navigation concepts, such as unmanned aircraft systems (UAS), UAS traffic management (UTM), Big Data and the aviation Internet, into future editions of the GANP;

# AN-Conf/13 (Doc 10115)

## Rec 1.2/1 (Cont'd)



- g) include a Global Aeronautical Distress and Safety System (GADSS) thread in the Sixth Edition of the GANP in line with ICAO provisions;
- h) consider designing a thread for a Global Aviation Internet in the GANP, in coordination with aviation and non-aviation-related industries;
- i) emphasize and enhance a human-centric approach to system design and processes for change management;
- j) support the conducting of trials for new air navigation concepts as outlined in the ASBU framework within the GANP; and
- k) continue to work with States, international organizations, air traffic management (ATM) modernization programmes and other stakeholders on the development of the global technical level of the Sixth Edition of the GANP for subsequent endorsement at the 40th Session of the ICAO Assembly.

# AN-Conf/13 (Doc 10115)

## Rec 1.4/1



### Recommendation 1.4/1 — Cost-benefit analysis (CBA) in support of assets deployment

That States:

- a) perform a cost-benefit analysis (CBA) as part of all required impact assessments, in coordination with air navigation services providers (ANSPs) and among other relevant stakeholders, **when defining optimum solutions for improvements in the performance of the air navigation system** through the use of the aviation system block upgrades (ASBU) framework;
- b) use a simplified mechanism, if they do not have a process already in place, such as the checklist available on the Global Air Navigation Plan (GANP) Portal, for CBA of air navigation infrastructure investment projects to support improvements as described in the ASBU framework; and

That ICAO:

- c) support the implementation of applicable CBA methodologies through dedicated workshops.

# AN-Conf/13 (Doc 10115)

## Rec 4.2/1



### Recommendation 4.2/1 — Implementation of essential air navigation services

That States:

- a) consider the use of more advanced technologies and procedures, in coordination with international organizations and industry stakeholders, to provide the essential air navigation services for international civil aviation, taking into account the principles of **global interoperability and performance specification compliance**;
- b) **include planning** for the implementation of the essential services outlined in the proposed basic building blocks (BBB) framework within their national air navigation plans;

That ICAO:

- c) in coordination with the planning and implementation regional groups (PIRGs) and by making use of existing **reporting mechanisms**, verify the **provision of the essential air navigation services** for international civil aviation, as outlined in the proposed **BBB framework**, through the methodology for the identification of air navigation deficiencies against the regional air navigation plans;
- d) develop the necessary tools to support the PIRGs in the verification of the provision of the proposed basic building block (BBB) services at the regional and national levels;

# AN-Conf/13 (Doc 10115)

## Rec 4.2/1 (Cont'd)



- e) coordinate the interoperability of systems and harmonization of procedures at a regional level, through the PIRGs, in relation to the use of advanced technologies and concepts of operations, taking into account global requirements;
- f) in line with the No Country Left Behind (NCLB) initiative, provide the necessary technical assistance to States for the provision of essential air navigation services as identified by the PIRGs and as reflected in State national air navigation plans; and
- g) urge the aviation manufacturing industry to create a testing environment for States to justify procurement decisions which guarantee interoperability and system functionality within local specific environments as a follow-up to the provision of essential air navigation services.

# AN-Conf/13 (Doc 10115)

## Rec 4.3/1



### Recommendation 4.3/1 —Improving the performance of the air navigation system

That States:

- a) **adopt and adapt** as needed the **six-step performance management process** for the planning and implementation of air navigation **improvements and reflect this process in their national air navigation plans**;
- b) **align their national air navigation plans with regional plans** to attain a **globally harmonized performance management process** and support the achievement of global performance objectives;
- c) support ICAO in promoting the No Country Left Behind (NCLB) initiative and reaffirm their commitment to the development of timely and accurate national air navigation plans aligned with regional and global plans;

That ICAO:

- d) encourage the planning and implementation regional groups (PIRGs) to embrace a **performance-based approach** for implementation and adopt the **six-step performance management process**, as described in the Manual on Global Performance of the Air Navigation System (Doc 9883), **by reflecting the process in Volume III of all regional air navigation plans**;
- e) continue to expedite the work on performance indicators related to the Global Air Navigation Plan (Doc 9750, GANP), including their review by an appropriate group of performance experts, and consider establishing such an expert group under the Global Air Navigation Plan (GANP) Study Group; and
- f) examine possible operational incentives in the development of new air traffic management (ATM) concepts.

# 40<sup>th</sup> ICAO General Assembly (A40)



## A40-1: ICAO global planning for safety and air navigation (superseding A39-12)

The Assembly:

1. **Endorses** the third edition of the Global Aviation Safety Plan (GASP) and the **sixth edition** of the Global Air Navigation Plan (GANP) as the global strategic directions for safety and air navigation, respectively;
4. 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**;
8. 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**;

# 40<sup>th</sup> ICAO General Assembly (A40)



## A40-1: ICAO global planning for safety and air navigation (superseding A39-12)

### APPENDIX B

#### Global Air Navigation Plan (GANP)

3. Calls upon States, planning and implementation regional groups (PIRGs), and the aviation industry to utilize the guidance provided in the GANP for planning and implementation activities which establish priorities, targets and indicators consistent with globally-harmonized objectives, taking into account operational needs;
4. Calls upon States to take into consideration the GANP guidelines for the implementation of operational improvements as part of their national strategy to reduce the environmental impact, including CO2 emissions, from international aviation;
5. Calls upon States, PIRGs, and the aviation industry to provide timely information to ICAO, and to each other, regarding the implementation status of the GANP, including the lessons learned from the implementation of its provisions;
6. Invites PIRGs to use ICAO standardized tools or adequate regional tools to monitor and, in collaboration with ICAO, analyse the implementation status of air navigation systems;
7. Instructs the Council to publish the results of the analysis on the regional performance dashboards and in an annual global air navigation report including, as a minimum, the key implementation priorities and accrued environmental benefits associated with the implementation of the operational improvements outlined in the ASBU framework;
8. Urges States that are developing new air navigation plans, for their own air navigation modernization, to coordinate with ICAO and align their plans so as to ensure regional and global compatibility and harmonization;

# Main Outcomes of AN-Conf/13 and A40



- Endorsement of the 6<sup>th</sup> Edition of the GANP
- 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**
- **Web-based GANP Platform**
- **GANP Multi-layer structure**
- **States to adopt/adapt** as needed the six-step performance management process for the planning and implementation of air navigation **improvements and reflect this process in their national air navigation plans**
- PIRGs to embrace a **performance-based approach** for implementation and adopt the **six-step performance management process**, as described in the Manual on Global Performance of the Air Navigation System (Doc 9883), **by reflecting the process in Volume III of all regional air navigation plans**

# AN-Conf/14 (Doc 10209) (26 August – 6 September 2024)



## Agenda Item 3: Air navigation system performance improvement

### 3.3: Eighth Edition of the Global Air Navigation Plan (GANP)

**Recommendation 3.3/1 — Update to the global strategic level of the seventh edition of the *Global Air Navigation Plan* (GANP, Doc 9750)**

**That States:**

- a) agree in principle with the addition of two challenges and opportunities, recognizing the priority areas of the 41st Session of the Assembly; the approach to the new entrants and artificial intelligence and the approach to map the strategic and technical levels, in the draft eighth edition of the Global Air Navigation Plan, to be presented for endorsement by 42nd Session of the Assembly; and
- b) agree in principle with the proposed update to the performance ambitions and conceptual roadmap;

**That ICAO:**

- c) take into consideration input from the Conference and other input arising from States, international organizations and other stakeholders in order to finalize the development of the eighth edition of the Global Air Navigation Plan for subsequent endorsement at the 42nd Session of the Assembly; and
- d) develop efficient communication strategies with Member States to enhance the accessibility, visibility and traceability of revisions to the entire GANP structure and context, from strategic to technical levels, and consider the development of an integrated document as part of this approach, for future updates of the GANP

# AN-Conf/14 (Doc 10209)

## (26 August – 6 September 2024)



**Recommendation 3.3/2 — Update to the global technical level of the seventh edition of the Global Air Navigation Plan and its regional and national levels**

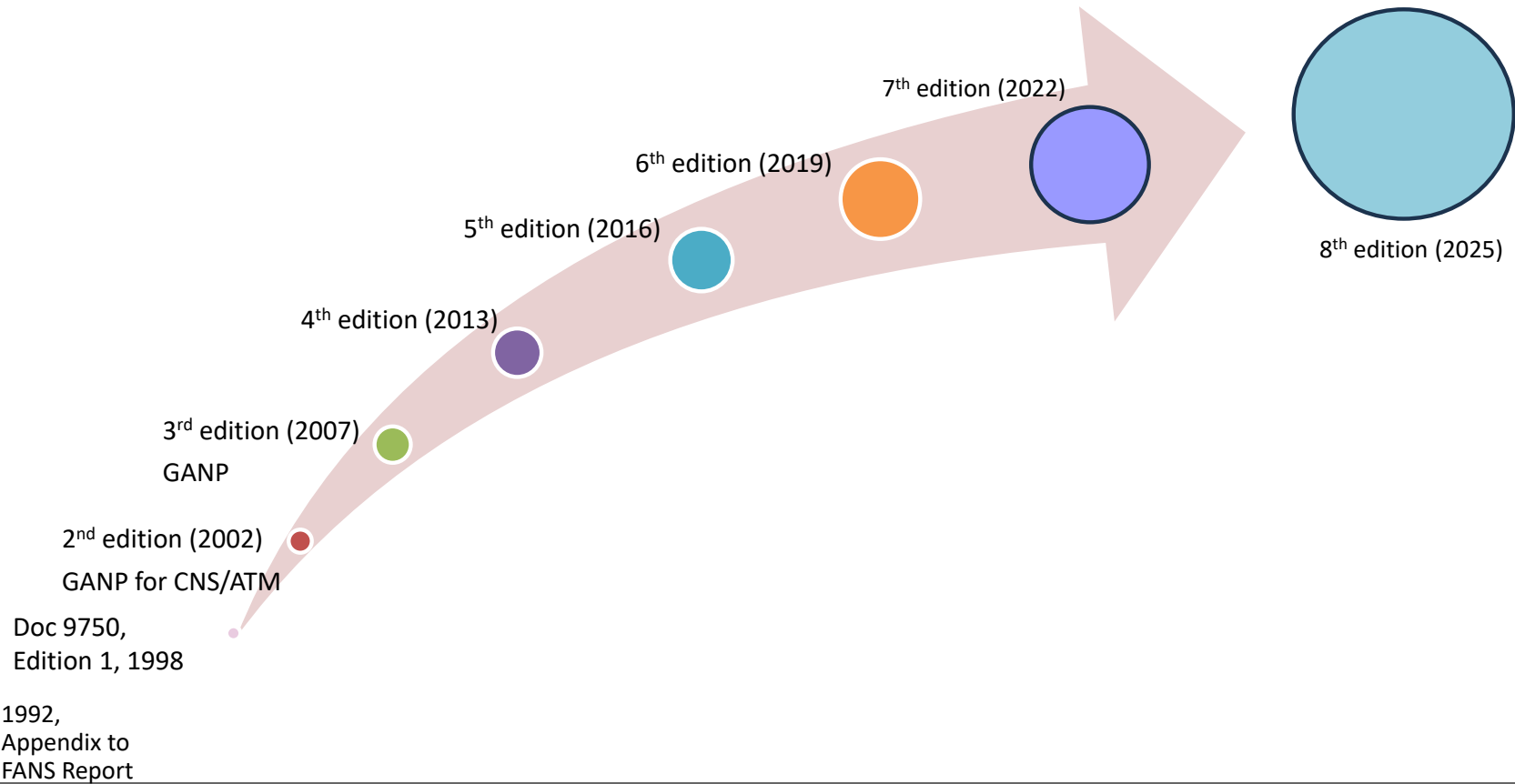
**That States:**

- a) agree in principle with the update of the **environment key performance area**, which will be reviewed by the appropriate expert groups, noting the ongoing work of the Committee on Aviation Environmental Protection on monitoring and reporting metrics for the long-term aspirational goal 2050, covering all in-sector CO2 emissions reductions;
- b) agree in principle with the **resilience focus area**;
- c) use, in collaboration with the regional offices, the electronic system for the management of regional air navigation plans, when available; and
- d) consider the national air navigation plan template, when available;

**That ICAO:**

- e) update the performance assessment of the Aviation System Block Upgrade framework, with the **new objectives on the environment key performance area and resilience focus area**;
- f) continue the update of the Aviation System Block Upgrade framework and reflect the two additional challenges and opportunities proposed, recognizing the priority areas of the 41st Session of the Assembly, for the **eighth edition of the Global Air Navigation Plan, to be presented for endorsement by 42nd Session of the Assembly**;
- g) develop and disseminate a roll-out plan for the electronic system for the management of the regional air navigation plans, including clear revision procedures and presentation methods, in coordination with all relevant stakeholders, and provide the national air navigation plan template; and
- h) take into consideration input from the Conference and continue to work with States, international organizations and other stakeholders on the development of the eighth edition of the Global Air Navigation Plan for subsequent endorsement at the 42<sup>nd</sup> Session of the Assembly.

# Evolution of the GANP



# Evolution of the GANP



- The significantly revised sixth edition of the GANP was presented at the 13th Air Navigation Conference in 2018 and had been endorsed at the 40th ICAO Assembly in September 2019. The Performance Based Approach (PBA) and the performance management process have been introduced through Rec. 4.3/1 of the ANConf/13 and the need to reflect the process in the ANP Volume III was required.
- The 41st ICAO Assembly endorsed, through Assembly Resolution A41-6 ICAO global planning for safety and implementation, the 7th edition of the GANP in October 2022, which is a minor revision to the GANP, that introduced an update to the safety key performance area of the GANP performance framework, a maintenance process revision, and minor updates to the BBBs as well as the ASBU framework.

**What is ANS Performance about?**

**Who are the main stakeholders?**

**What are the key words?**

# Summary



- **ANS performance refers to the effectiveness and efficiency of services provided by the ANSPs in managing air traffic safely, efficiently and cost-effectively.**
- **KPAs and KPIs have been defined by ICAO to measure ANS performance.**

# Summary



**Could you now associate the most important responsibilities to the relevant stakeholders using some of the keywords?**

**In brief, what is required from PIRGs/ROs and States ?**

# Summary



## PIRGs/ROs Responsibilities

- Finalize the alignment of regional ANP with the GANP
- Identify Regional Priorities/Performance Objectives
- Utilize the guidance provided in the GANP for planning and implementation activities which establish priorities, targets and indicators consistent with globally-harmonized objectives, taking into account operational needs
- Monitor, analyze and report on implementation status of GANP and air navigation system at Regional level
- Embrace a performance-based approach for implementation and adopt the six-step performance management process, as described in the Manual on Global Performance of the Air Navigation System (Doc 9883), by reflecting the process in Volume III

# Summary



## States Responsibilities

- Ensure the provision of essential air navigation services for international civil aviation (BBBs) and the modernization of their air navigation system based on local performance and operational needs, taking into consideration regional requirements
- Identify priorities for implementation based on operational needs
- Implement PBA: adopt and adapt as needed the six-step performance management process for the planning and implementation of air navigation improvements and reflect this process in their national air navigation plans;
- Perform a cost-benefit analysis (CBA) as part of all required impact assessments, in coordination with air navigation services providers (ANSPs) and among other relevant stakeholders, when defining optimum solutions for improvements in the performance of the air navigation system, making use of the aviation system block upgrades (ASBU) framework
- Develop NANP; align NANPs with regional plans to attain a globally harmonized performance management process and support the achievement of global performance objectives
- Report on the progress and effectiveness against the priorities set out in the regional and State air navigation plans on annual basis, including reporting on the status of ASBU implementation

**You cannot improve what you cannot measure**

(Peter Drucker)

**Don't wait for perfection before you start. Start  
somewhere that you can have something tangible  
you can work to perfect**

(Simon Sinek)

# ANS Performance



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2. Who are the main stakeholders? What are their main responsibilities?
3. What is the GANP? How can we define GANP implementation and how can we monitor the status of implementation of GANP?
4. How could we monitor ANS performance at National and Regional level?
5. What should be the content of the ANP Vol III?
6. Link between GANP, ANP (Vol III) and NANP



# ICAO | CAPACITY & EFFICIENCY



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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



THANK YOU