International Civil Aviation Organization

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WORKING PAPER

THIRTEENTH AIR NAVIGATION CONFERENCE

Montréal, Canada, 9 to 19 October 2018

COMMITTEE A

Agenda Item 1: Air navigation global strategy
1.1: Vision and overview of the sixth edition of the GANP

PROPOSED MULTILAYER STRUCTURE FOR THE SIXTH EDITION OF THE GLOBAL AIR NAVIGATION PLAN (GANP) AND ITS GLOBAL STRATEGIC LEVEL

(Presented by the Secretariat)

EXECUTIVE SUMMARY

This paper presents the multilayer structure proposed for the sixth edition of the Global Air Navigation Plan (GANP) which highlights the importance of global, regional and national planning alignment. It elaborates on the global strategic level of the multilayer structure whose goal is to drive the evolution of the air navigation system by providing global strategic guidelines. To that end, the global strategic level should encompass a vision, performance ambitions and a conceptual roadmap.

Action: The Conference is invited to agree to Recommendation 1.1/x — Vision and overview of the sixth edition of the GANP in paragraph 3.2.

Strategic Objectives:	This working paper relates to the Safety and Air Navigation Capacity and Efficiency Strategic Objectives.
Financial implications:	*Impact for the aviation community:* None. *Impact for ICAO (relative to the current Regular Programme Budget resource levels)*: Since ICAO's current Standards and Recommended Practices (SARPs) development and implementation roll-out will continue over the next triennia, additional resources are required, both financial and human, to support ICAO's efforts in global air navigation planning.
References:	Doc 9750, *Global Air Navigation Plan* Doc 9854, *Global Air Traffic Management Operational Concept* Doc 9882, *Manual on Air Traffic Management System Requirements* Doc 10004, *Global Aviation Safety Plan* Assembly Resolution A39-12: *ICAO global planning for safety and air navigation* AN-Conf/13-WP/11 AN-Conf/13-WP/19 AN-Conf/13-WP/24 AN-Conf/13-WP/25

1. INTRODUCTION

1.1 The *Global Air Navigation Plan* (GANP, Doc 9750) is ICAO's highest air navigation strategic document. It is the plan driving the evolution of the global air navigation system and takes into account the *Global Air Traffic Management Operational Concept* (GATMOC, Doc 9854) and the *Manual on Air Traffic Management System Requirements* (Doc 9882). The GANP also supports planning for local and regional implementation.

1.2 The 39th Session of the ICAO Assembly endorsed the fifth edition of the GANP which includes updates to the Aviation System Block Upgrades (ASBU) framework and additional information while maintaining a stable structure as had been requested by the aviation community. However, the Assembly also highlighted the need for a more comprehensive update of the sixth edition with further enhancements as part of the evolution towards a performance-driven strategic planning environment which interacts with regional and national research, development and implementation programmes.

2. DISCUSSION

2.1 Multilayer structure

2.1.1 The 39th Session of the Assembly instructed the Secretary General to promote, make available and effectively communicate the GANP (Assembly resolution A39-12: ICAO global planning for safety and air navigation refers). Therefore, to better communicate with high-level and technical 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 four-layer structure, as illustrated in the appendix to this paper, is made up of global (strategic and technical), regional and national levels, and will provide a framework for alignment of regional, sub-regional and national plans.

2.1.2 The global strategic level will provide high-level strategic direction for decision makers to drive the evolution of the global air navigation system. To this end, the global strategic level will include a common vision, global performance ambitions and a conceptual roadmap. ICAO, with the support of States, international organizations and industry stakeholders, is developing and will maintain this level of the GANP.

2.1.3 The global technical level is also being developed and will be maintained by ICAO in partnership with all stakeholders. This level will support technical managers in planning implementation of basic services and new operational improvements in a cost-effective manner and according to specific needs, while ensuring interoperability of systems and harmonization of procedures. It will contain:

a) two global frameworks:

   — the Basic Building Blocks (BBB) framework will outline the foundation for any robust air navigation system by defining the basic services to be provided for international civil aviation; and

   — the ASBU framework will outline the performance benefits expected from specific air navigation operational improvements under certain operational conditions.

b) a performance-based method for implementation planning of air navigation operational improvements, including a catalogue of performance objectives and indicators.

2.1.4 The regional level will address regional and sub-regional needs aligned with the global objectives. As such, it will contain the ICAO Regional Air Navigation Plans (ANPs) and consider other regional initiatives. The fourth level, under responsibility of the States, will focus on national planning.

The development by States, in coordination with relevant stakeholders, of air navigation plans as a strategic part of their national development plans (AN-Conf/13-WP/24 refers) and aligned with regional and global plans is crucial to achieve the common vision being developed in the GANP. These air navigation plans will serve as reference documents for national investment in air navigation infrastructure.

2.1.5 For all stakeholders to have ready access to the vast amount of information contained in the multilayer structure of the GANP, ICAO is developing the GANP Portal (https://www4.icao.int/ganpportal/), a web portal where the different users will be able to find the most relevant information to fit their specific context. This web-based platform will ensure consistency between content on the different GANP levels, as well as provide more comprehensive information through a single interface.

2.1.6 While the following section elaborates on the global strategic level, further details on the development of the global technical level can be found in AN-Conf/13-WP/19. In addition, AN-Conf/13-WP/11 and AN-Conf/13-WP/25 add more detail on the implementation planning of the global technical level.

2.2 Global Strategic Level

2.2.1 The global strategic level, as described in paragraph 2.1.2, will contain the GANP vision, performance ambitions and a conceptual roadmap to provide high-level strategic directions for decision makers to drive the evolution of the global air navigation system. This level will provide the foundation for the other levels of the GANP.

The GANP vision

2.2.2 The GANP vision will lay out the ultimate objectives of the air navigation system, as well as the emerging challenges and opportunities stemming from aviation and technology trends. The evolution driven by this vision will yield a high-performing global air navigation system to meet the needs of society in general and the Air Traffic Management (ATM) community[1] in particular.

The Performance Ambitions

2.2.3 Supporting air transport requires sometimes difficult decisions and strong commitment from the air navigation system stakeholders. In addition to the three fundamental aviation performance principles of safety, security, and environmental and economic sustainability, there are several performance requirements that the air navigation system must meet to fulfil the needs of society. Performance should drive the evolution of the system and it is for this reason that the sixth edition of the GANP will propose performance ambitions.

2.2.4 These performance ambitions will serve as a call for action, as a catalyst for change and to help set global priorities. Therefore, they should not be seen as targets to continuously monitor and against which to report performance. Expressed in a qualitative but focused way, these performance ambitions will be met by pursuing specific performance objectives in each planning region based on relevant regional challenges. Although the selected performance objectives will serve as the regional and local drivers for performance improvement, the analysis of operational needs at the local level will still be necessary (AN-Conf/13-WP/11 refers).

[1] ATM community includes the aerodrome community, airspace providers, airspace users, ATM service providers, ATM support system, ICAO, Regulatory authorities and States as described in the *Global Air Traffic Management Operational Concept* (Doc 9854).

2.2.5 The ATM community should fully commit to these performance ambitions. As part of this commitment, ICAO has, in the area of safety, a strategy which is set forth in the Global Aviation Safety Plan (GASP). The purpose of the GASP, to continually reduce fatalities and the risk of fatalities associated with accidents, contributes to the safety ambition in the GANP: "Zero air navigation services (ANS) related accidents and a significant (50%) reduction of ANS related serious incidents". In this way, the GASP supports the implementation of the GANP by promoting the effective implementation of safety oversight and a safety management approach to oversight, including safety risk management to permit the evolution of the air navigation system in a safety-managed way.

The Conceptual Roadmap

2.2.6 The ATM community must also embrace the transformational change required to achieve performance ambitions by following a unified path laid out in a conceptual roadmap.

2.2.7 The proposed conceptual roadmap consists of four evolutionary steps: flight operations in a digital rich environment; time-based operations enabled by an information revolution; trajectory-based operations enabled by full connectivity through the internet of aviation; and a total performance management system focused on business/mission needs. Improved digital data quality, enhanced processing capability and sharing of information for better decision making based on agreed performance levels are the key components of this roadmap. The conceptual roadmap will be the basis for identifying new operational improvements for the ASBU framework (AN-Conf/13-WP/19 refers).

2.2.8 A draft of the GANP vision, performance ambitions and conceptual roadmap can be found at: https://www4.icao.int/ganpportal/ganpdocument.

3. CONCLUSION

3.1 To effectively communicate the GANP, a multilayer structure is needed for the sixth edition. For easier access, GANP information will be available via a single user interface being developed by ICAO called the GANP Portal, a web portal where different users will be able to find the most relevant information for their specific needs. A successful implementation of air navigation improvements starts with their development, it is therefore necessary to have a common vision, performance ambitions and conceptual roadmap to drive the evolution of the global air navigation system.

3.2 On this basis, the Conference is invited to agree to the following recommendation:

Recommendation 1.1/x – Vision and overview of the sixth edition of the GANP

That the Conference:

a) agree to migrate the Global Air Navigation Plan (GANP, Doc 9750) to a web-based platform and make available the global strategic level in the six ICAO languages;

b) agree with the proposed multilayer structure for the sixth edition of the GANP;

c) agree, in principle, with the proposed vision, performance ambitions and conceptual roadmap proposed for the sixth edition of the GANP, as amended by the Conference;

d) request ICAO to develop a national air navigation plan template aligned with the global and regional air navigation plans; and

e) request ICAO to continue to work with States, international organizations and other stakeholders on the development of the sixth edition of the GANP for subsequent endorsement at the 40th Session of the ICAO Assembly.

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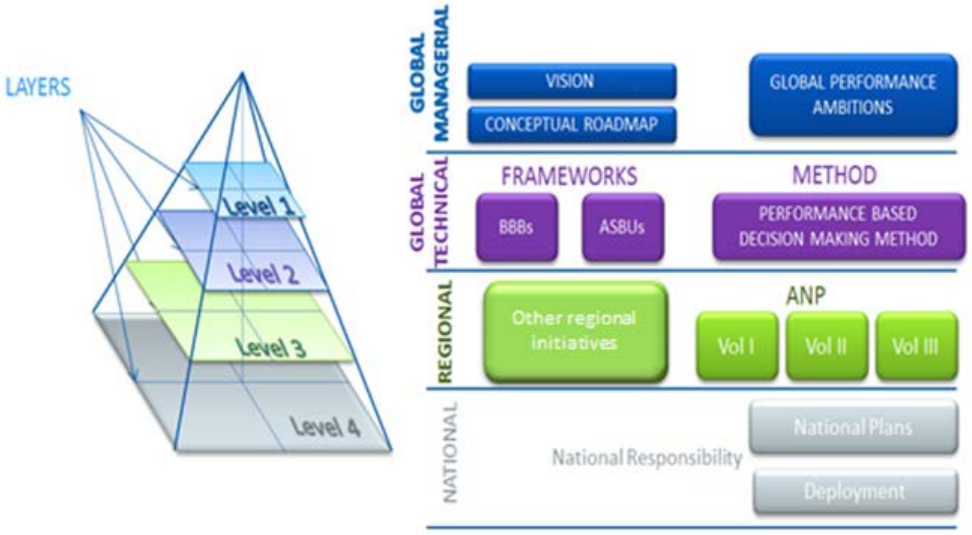
APPENDIX

MULTILAYER STRUCTURE PROPOSED FOR THE SIXTH EDITION OF THE GANP



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