



WORKING PAPER

ASSEMBLY — 40TH SESSION

TECHNICAL COMMISSION

Agenda Item 28: Aviation Safety and Air Navigation Policy

**INTERLINKAGE OF THE NATIONAL AIR NAVIGATION PLAN, MAINTENANCE
MANAGEMENT SYSTEM AND SAFETY MANAGEMENT SYSTEM**

(Presented by Colombia, and sponsored by
Latin American Civil Aviation Commission (LACAC) Member States)²

EXECUTIVE SUMMARY

This working paper relates to seamless interaction between air navigation service providers' (ANSP) and of aerodrome operators' (AO) national air navigation plans, maintenance management systems (MMS) and safety management systems (SMS), which inform appropriate, timely and cost-effective decisions on the minimum basic building block (BBB) services and operational improvements (in capacity, flexibility, interoperability, safety and predictability) required under the aviation system block upgrade (ASBU) approach.

Action: The Assembly is invited to request that ICAO, together with groups of State experts, develop guidelines on interlinkages among national air navigation plans, MMS and SMS so that cost-effective decisions can be made within the BBB framework and under the ASBU approach.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objectives: <i>Safety and Air Navigation Capacity and Efficiency.</i>
<i>Financial implications:</i>	Not applicable.
<i>References:</i>	Doc 9750, <i>Global Air Navigation Plan (GANP)</i> , sixth edition, web version AN-Conf/13-WP25, presented by the Secretariat AN-Conf/13-WP137, presented by Colombia (13 September 2018) AN-Conf/13-WP/311 – <i>Report of Committee A to the Conference on Agenda Item 4</i> (18 October 2018)

¹ Spanish version provided by Colombia.

² Aruba, Belize, Bolivia, Brazil, Chile, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic and Venezuela (Bolivarian Republic of).

1. INTRODUCTION

1.1 The BBB derived from Standards and Recommended Practices (SARPS) for air navigation service provision and aerodrome operation are the foundation for progress within the ASBU framework of the *Global Air Navigation Plan* (GANP, Doc 9750).

1.2 Accordingly, States should ensure that national air navigation plans include the BBBs, as they underpin safety in the provision and maintenance of services offered to airspace users.

1.3 Decisions are informed by input from the ANSP and the AO MMS.³ For example, the performance level (such as availability, accuracy, coverage, integrity and continuity), the capacity level used and the mean time between failures can inform priorities set in the national air navigation plan to find cost-effective solutions.

1.4 Furthermore, the ANSP's and the AO's SMS receive inputs from various sources, such as the MMS, for use in identifying hazards and safety events.

1.5 The SMS, for its part, can recognize as inputs to the national air navigation plans needs that have been identified in safety risk assessment and analysis.

2. ANALYSIS

2.1 An MMS is a data-robust tool for use in determining the true state of the services on offer and for effectively setting performance improvement objectives.

2.2 It provides measurements (based on performance indicators) and defines a baseline for identifying new operational needs.

2.3 Operational improvements identified on the basis of the current performance of the navigation system ensure transparency in substantial investments, as they will be associated with the community-expected operational benefits that are formulated in the national air navigation plans.

2.4 MMS-generated data and information can form part of air navigation system performance assessment.

2.5 MMS-generated data and information are valuable inputs to the SMS, for both risk analysis and safety-event analysis. The SMS, in turn, provides valuable inputs for use in setting priorities in national air navigation plans.

2.6 In view of the above, these three instruments must interact seamlessly in order to achieve a high-performance, scalable and integrated air navigation system.

³ The MMS covers policies, objectives, organization, assignment of responsibility, maintenance performance methods, tools and records, manuals and other elements, in the same way as an aircraft operator, while the ANSP and the AO contribute to ensuring aviation safety levels.



3. CONCLUSION

3.1 The air navigation system provides and maintains, through the MMS, air navigation services and aerodrome services, pursuant to the Chicago Convention and the Annexes (BBB) thereto. The system must be improved by focusing on service performance (11 key performance areas), while ensuring safety. The national air navigation plan, SMS and MMS must therefore interact seamlessly in order to achieve cost-effective improvements to the air navigation system.

— END —