INTERNATIONAL CIVIL AVIATION ORGANIZATION

Second Meeting of the AFI Aviation System Planning and implementation Group (AASPG/2)
Livingstone, Zambia, from 2 to 6 November 2026

Agenda Item 4: Implementation of safety and air navigation goals, targets and indicators, including priorities set in the Regional Aviation Safety and Air Navigation Plans

Updated AFI Regional PBN Implementation Plan

(Presented by the Secretariat)

SUMMARY
This working paper presents the updated version of the AFI Regional Performance-Based Navigation Implementation Plan taking into account the latest updates of the PBN Manual and the Global Air Navigation Plan (GANP), the regional air navigation requirements and development and introducing a new approach to PBN implementation performance monitoring and assessment. Action by the Meeting is at **Section 3 of this Paper**

Strategic Goals:	• *Every Flight is Safe and Secure;* • *Aviation Delivers Seamless, Accessible, and Reliable Mobility for All*

1. INTRODUCTION

1.1 In 2008, ICAO published the Performance-Based Navigation (PBN) concept and through Assembly Resolutions A36/23, called upon States and Planning and Implementation Regional Groups (PIRGs) to implement PBN routes and approach procedures by 2016, in accordance with the ICAO PBN concept laid down in the performance-Based Navigation Manual (Doc. 9613).

1.2 In response, APIRG/17 endorsed in 2010 the AFI PBN roadmap to assist States in developing their national PBN implementation roadmaps.

1.3 In October 2010, the ICAO General Assembly took Resolution A37/11 urging States to complete national PBN implementation plans and implement PBN as a matter of urgency.

1.4 Since the original PBN concept publication in 2008, new navigation specifications intended to meet the needs of future navigation applications were included in the 4th edition of the

PBN Manual (2013). The 5th edition of the Doc. 9613 also brought changes affecting the RNP implementation stemming form lessons learned from RNP implementation.

1.5 These changes were not reflected in the AFI PBN Plan which need alignment not only with the provisions of Doc. 9613, the AFI Seamless ATM Master Plan, and the latest edition of the Global Air Navigation Plan (GANP).

1.6 The purpose of this paper is to inform the meeting on the changes in the PBN Manual since 2010 and their reflection in the revised AFI PBN Plan attached.

2. DISCUSSIONS

2.1 PBN implementation is about implementation of navigation specifications for all areas of operations, using specific navigation aids. The areas of operations are divided into the five (5) areas as described below. Navigation specifications were developed for all these areas of operations. Based on the Navaid infrastructure in 2010, the following navigation specifications were adopted for the AFI region.

- Oceanic area : RNAV 10, RNP 4;
- Remote continental: RNAV 10, RNP 4;
- En-route continental : RNAV 5, RNAV 2, RNAV 1;
- Terminal area: RNAV 1, RNP 1; and
- Approach area: RNP APCH (with baro-VNAV), RNP APCH (LNAV only) or RNP AR APCH.

2.2 Since the original concept publication in 2008, new navigation specifications have been introduced; such as RNP 2, advanced- RNP, RNP 0.3 and new standards were introduced.

2.3 The first edition of the AFI region PBN implementation plan which was developed and endorsed in 2010 does not include these new navigation specifications and standards and contains outdated information on PBN implementation strategy, timelines and targets. In addition, the current edition of the plan is not aligned with the AFI regional performance management framework as lined up in the AFI air navigation plan volume III endorsed in 2023. The plan is also not aligned with national PBN implementation plans which follow a more modern framework adopted in 2016.

2.4 The updated AFI Regional PBN Implementation Plan maintains the strategic objective of implementing navigation solutions based on operational requirements while promoting harmonization, interoperability, safety, efficiency, airport accessibility, environmental benefits and ATM modernization across the AFI region

2.5 The revised Plan introduces several important enhancements, including:

a) implementation of the new navigation specifications and standards in accordance with the 5th edition of the PBN Manual (Doc. 9613);
b) alignment with the ICAO GANP and the AFI Seamless ATM Master Plan up to 2036;
c) introduction of key implementation strategies with clear indication of navigation specifications requirements;
d) incorporation of pre- and post-implementation safety assessment requirements;
e) confirmation of GNSS as a primary navigation infrastructure for operations in the AFI region while considering the retention of conventional navigation procedures and aids as resilience measures to mitigate GNSS service disruptions; and

f) emphasis on precision approach capabilities using GNSS and augmentation systems for all runway ends at international aerodromes.

2.6 The Plan was revised considering the current status of PBN implementation in the AFI region. By 2025, implementation levels had reached 91.6% for national PBN implementation plans and en-route RNAV/RNP operations, 82.3% for RNP APCH procedures, and 63.65% for APV approaches. However, implementation of PBN SIDs, STARs and CCO/CDO operations remain comparatively low, indicating the need for continued regional efforts.

2.7 The revised Plan establishes measurable regional implementation targets for key performance indicators, including national PBN plans, en-route RNAV/RNP operations, PBN SIDs and STARs, CCO/CDO, and instrument approach procedures. The targets envisage achieving full implementation of national PBN plans and en-route RNAV/RNP operations by 2028, full implementation of RNP APCH (LNAV) by 2030, and progressive implementation of advanced approach and terminal procedures by 2032.

2.8 In view of projected traffic growth in the AFI region and the high level of fleet PBN readiness, estimated at approximately 93-98% of the commercial fleet, the updated Plan provides a timely framework for States and stakeholders to coordinate investments, infrastructure development, procedure implementation, training and regulatory oversight.

2.9 The Plan also establishes a governance mechanism for periodic review, synchronized with the GANP update cycle, ensuring continued relevance and responsiveness to evolving operational and technological developments.

3. ACTIONS BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper;
b) review the updated AFI Regional PBN Implementation Plan and its implementation targets and strategy for the period 2027-2036;
c) endorse the updated AFI Regional PBN Implementation Plan to ensure continued support for harmonized PBN implementation in the AFI region; and
d) urge States, ANSPs and relevant stakeholders to align national PBN implementation plans, programmes and activities with the provisions and targets contained in the updated regional Plan.

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AASPG/2 Conclusion 2/XX: Endorsement of second edition of the AFI PBN Implementation Plan	
Why:	*That, to support the timely, harmonized and effective implementation of Performance-Based Navigation in the AFI region,*
What:	*a) the second edition of the AFI Regional PBN Implementation Plan is endorsed;* *b) The Secretariat to coordinate its timely dissemination and promotion by 30 June 2027; and* *c) States to align national PBN implementation plans, programmes and activities with the provisions and targets contained in the updated regional Plan by 2027.*
Who:	*a) AASPG/2* *b) AASPG Secretariat* *c) AFI States*
When:	*a) 7 November 2026*

	b) 30 June 2027 *c) By AASPG/3*				
Implementation follow-up					
Follow-up required	Yes ☒ No ☐	Metrics	**Metric 1:** # of Workshops on the AFI Regional PBN Implementation Plan. **Metric 2:** % of States with National PBN programme aligned with the AFI regional PBN implementation plan	Means to collect data	Secretariat report to PRCC and AASPG States' air navigation Implementation report