



International Civil Aviation Organization

**The Eighth Meeting of the Performance Based Navigation Task Force
(PBN/TF/8)**

New Delhi, India, 12 – 13 May 2011

Agenda Item 3: APAC Region PBN Plans and Implementation

**PROPOSED AMENDMENTS TO THE ASIA/PACIFIC REGIONAL PBN
IMPLEMENTATION PLAN**

(Presented by IATA)

SUMMARY

This paper proposes several amendments to the Asia/Pacific Performance-Based Navigation Implementation Plan. These updates will ensure the Regional Plan continues to provide States with essential information for PBN implementation.

The following amendments are proposed:

1. Amend the Regional plan to include and describe the Basic Planning Elements (BPEs) identified in the Regional plan review. This will help ensure States address all areas required to successfully implement PBN.
2. Include the area of Operational Approval as a Basic Planning Element, critical to conduct PBN operations.
3. Amend Appendix C of the Regional Plan to include guidance for States to consider using the COSCAP Ops Approval Handbook as a reference until ICAO guidance materials are released.
4. Update Appendix D of the Regional Plan to include real examples of specific measurable benefits resulting from their PBN implementation.

This paper relates to –

Strategic Objectives:

- A: *Safety – Enhance global civil aviation safety*
- C: *Environmental Protection and Sustainable Development of Air Transport – Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment*

Global Plan Initiatives:

- GPI-5 RNAV and RNP (Performance-based navigation)
- GPI-11 RNP and RNAV SIDs and STARs

1. INTRODUCTION

1.1 The Thirty-sixth Session of the ICAO Assembly held in Montreal in September 2007 adopted a resolution that States and PIRGs complete a regional PBN implementation plan by 2009.

1.2 The Asia Pacific PBN Regional Plan was developed by the PBN Task Force to serve as proper guidance to assist States in the development of their national PBN implementation plans. States are advised to develop their implementation plans to align and follow the guidance recommended by the Regional Plan.

2. DISCUSSION

2.1 One strategic objective of the Regional plan is to ensure that the implementation of the navigation item of the CNS/ATM system is based on clearly established operational requirements. In 2010, the PBN TF conducted a review of all State Plans. The review team identified 10 Basic Plan Elements (later named BPEs) that are considered the minimum necessary areas to be addressed in a State Plan. The BPEs and their reference to the Regional Plan are listed in the **Appendix** to this WP.

2.1.1 The PBN TF endorsed a State plan review team recommendation that the BPEs may be used by States as a baseline template to develop or improve implementation plans. The BPEs however are not published in the current Regional plan and thus States have no formal source of reference.

2.1.2 In addition to the critical planning elements identified in the State plan review, establishment of the regulatory framework and process for Operational Approvals are considered critical steps on the path to PBN implementation.

2.1.3 Recommend the Regional plan be amended to include and describe the BPEs identified in the plan review and also include an element for Operational Approvals.

2.2 Another strategic objective of the Regional plan is “to avoid the need for multiple airworthiness and operational approvals for intra- and inter-regional operations. PBN implementation progress has been hampered in many States because of the inability to establish an airworthiness and operational approval mechanism for PBN operations. There is a reported limited understanding of the requirements on the part of operators and regulators and States have not recognized the importance of creating the regulatory framework and a useful process to facilitate approvals.

2.2.1 Limited guidance exists in the current ICAO Doc 9613 (PBN Manual). In response to the lack of global guidance and needs expressed in the Region, COSCAP SEA developed the COSCAP Ops Approval Handbook as a supplement to ICAO Document 9613 Performance Based Navigation Manual and to provide a reference document for operators and inspectors.

2.2.2 The current version of the Regional PBN plan has Appendix C as a placeholder for ‘Reference documentation for developing operational and airworthiness approval’ to be developed.

2.2.3 The COSCAP Ops approval handbook is proven to be a highly effective reference that many States are already using to form the basis on which their inspectors will provide operational approvals to operators. ICAO has plans to release further guidance on operational approvals but no date for release has been mentioned.

2.2.4 Recommend PBN Regional Appendix C be amended to advise that States consider using COSCAP Ops Approval Handbook as a reference until ICAO guidance materials are released.

2.3 The current version of the Regional PBN plan has Appendix D as a placeholder for ‘Practical Example of tangible benefits’ to be developed. A description of tangible benefits was identified as a critical planning element for PBN implementation that can help provide a rationale and justification for investment, gives stakeholders motivation to follow through with implementation, and provides a benchmark to substantiate further improvements.

2.3.1 Recommend the TF request a volunteer State(s) to provide examples of specific measurable benefits resulting from their PBN implementation and include in Appendix D of the Regional Plan.

3. **ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) Endorse and amend the Regional plan to include and describe the Basic Planning Elements (BPEs) identified in the State plan review and include the area of Operational Approval as a Basic Planning Element;
- b) Direct TF amend Appendix C of the Regional Plan to advise that States consider using the COSCAP Ops Approval Handbook as a reference until ICAO guidance materials are released; and
- c) Direct TF request a volunteer State(s) to provide examples of specific measurable benefits resulting from PBN implementation and publish in Appendix D of the Regional Plan.

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Appendix: BPE Table

Basic Plan Elements	Regional Plan References
1. Policy and Implementation Planning Formation of a key working group Standards & Requirements in accordance with ICAO Communication with stakeholders	4.0
2. Assessment of CNS infrastructure	6.11-6.16
3. Assessment for PBN fleet readiness Based on actual operator traffic	6.4-6.7
4. Selection of appropriate PBN navigation specification	7.3-7.18
5. Strategies for en-route implementation Key traffic flows and city pairs identified Domestic International Harmonization in en-route, across FIRs	5.4-5.9
6. Strategies for terminal area implementation, including timeline Specify terminal areas selected for implementation by 2010	5.10- 5.11
7. Strategies for Instrument approach implementation, including timeline Specify procedures selected for implementation by 2010 APV (Baron-VNAV and/or augmented GNSS) Designate RNP APRCH (LNAV or LNAV/VNAV) Designate RNP AR APCH (with operational justification)	4.16(b) / 5.12-5.13 / 7.8-7.10 / 7.16- 7.18
8. Transition strategy Include decommissioning plan	4.17(b) / 8.0
9. Safety Assessment Pre- and post- implementation safety assessments conducted in accordance with ICAO provisions Seek guidance and technical assistance from RASMAG Periodic safety reviews undertaken by the State or group of States where required	4.17(a) / 9.0
10. Description of the tangible benefits Benefits to operations derived from PBN implementation	4.10 / Appendix D
XX. Regulatory Framework and Process for Operational Approval	Appendix C