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Global & Regional PBN Updates

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Assembly Resolution A37-11

States complete a PBN implementation plan as a matter of urgency to achieve:

- implementation of RNAV and RNP operations (where required) for en route and terminal areas;
- implementation of approach procedures with vertical guidance (APV) (Baro-VNAV and/or augmented GNSS), including LNAV only minima, for all instrument runway ends, either as the primary approach or as a back-up for precision approaches by 2016 with intermediate milestones as : 30 per cent by 2010, 70 per cent by 2014; and
- implementation of straight-in LNAV only procedures, for instrument runways at aerodromes where there is no local altimeter setting available and where there are no aircraft suitably equipped for APV operations with a maximum certificated take-off mass of 5 700 kg or more;



Asia and Pacific Ministerial Declaration on Civil Aviation (Delhi) (New Delhi, India, from 11 to 11 September 2024)

4.0 Air Navigation Services

4.1 Commit to resources in modernization and innovation in Air Navigation Services, in tandem with developments in the airport and airline capacity, to support recovery and meet future demand for air travel and new entrants.

4.2 Commit to implement the ICAO Standards and Procedures for Air Navigation Services (PANS), and the Asia/Pacific Seamless ANS Plan (including prioritized GANP elements) and its subsidiary plans to enhance ANS capacity and harmonization in the Asia and Pacific Region focusing on as a matter of priority:

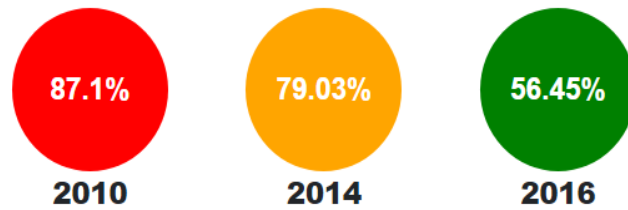
- ...
- Performance Based Navigation (PBN) implementation in accordance with ICAO Assembly Resolution A37-11 on Global PBN Goals;

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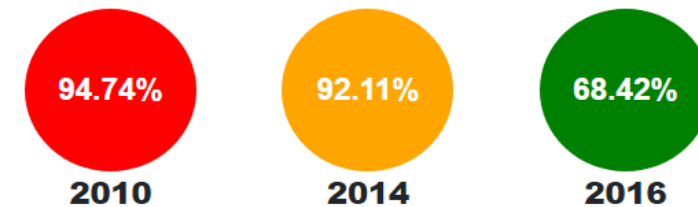
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PBN Implementation (Approach Procedures) Trend

Percentage of States in World meeting the Resolution Targets for Applicable Years



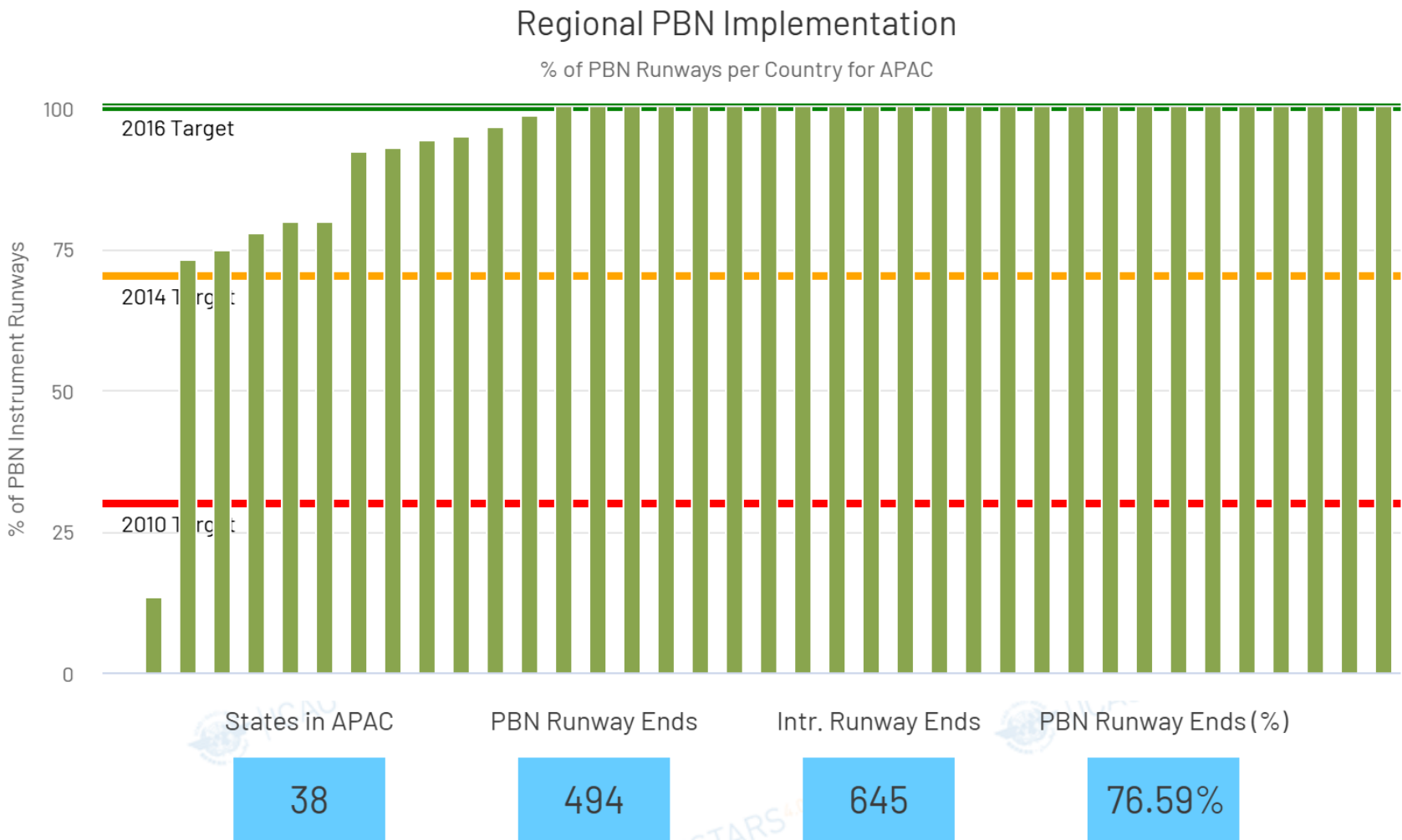
Percentage of States in APAC meeting the Resolution Targets for Applicable Years



Note: This data is taken from iSTARS (<https://istars.icao.int/Sites/PBN>), updated as on March 2025 and is for International Aerodromes as listed in the APAC ANP.

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PBN Implementation (Approach Procedures) Trend

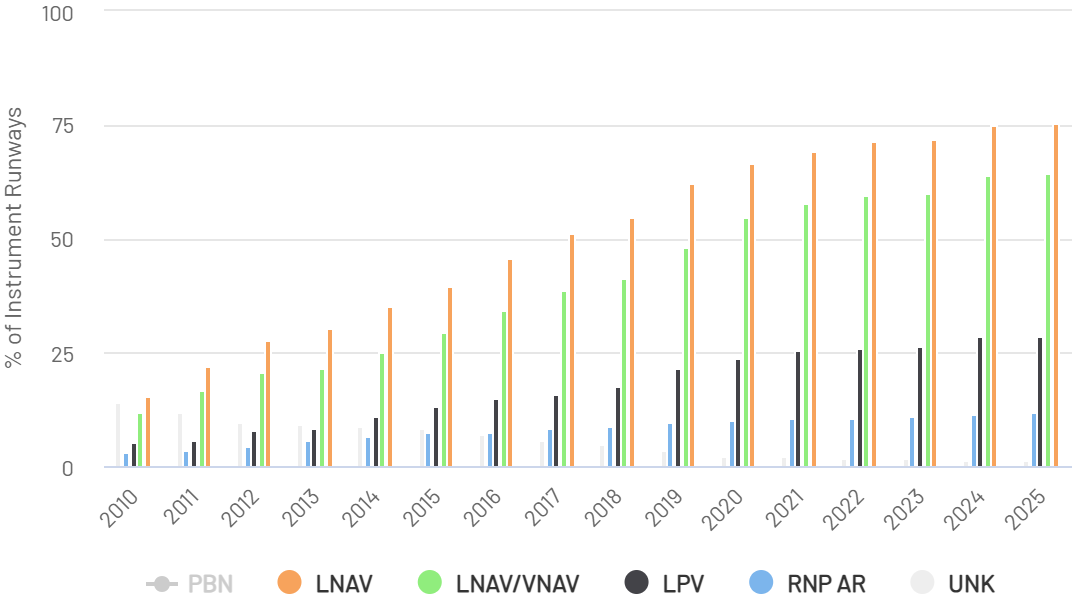


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PBN Implementation (Approach Procedures) Trend

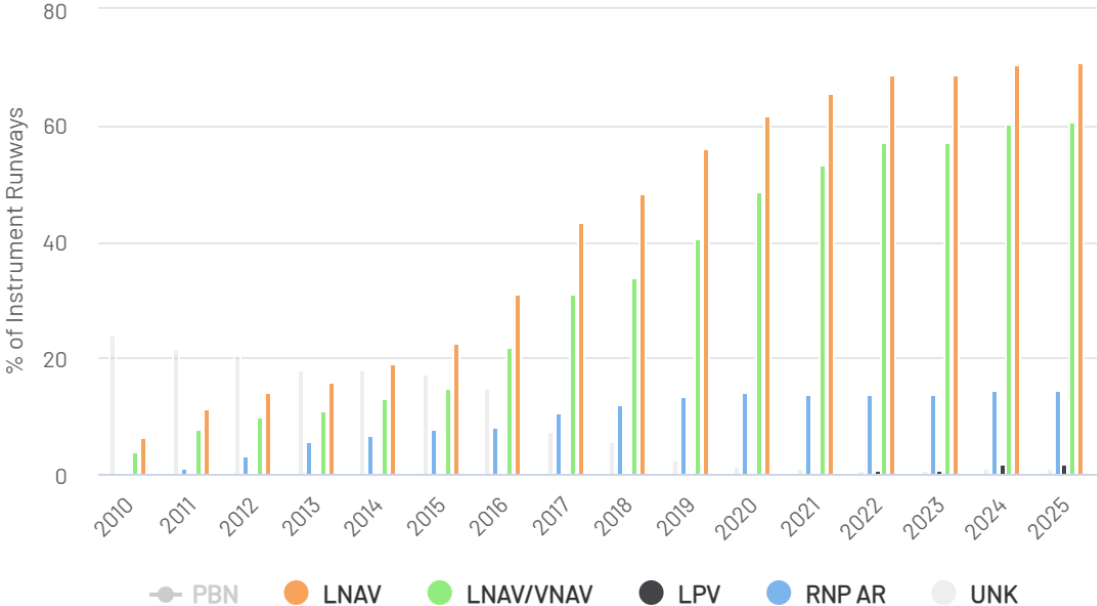
PBN Trends

% of PBN Runways by type for World



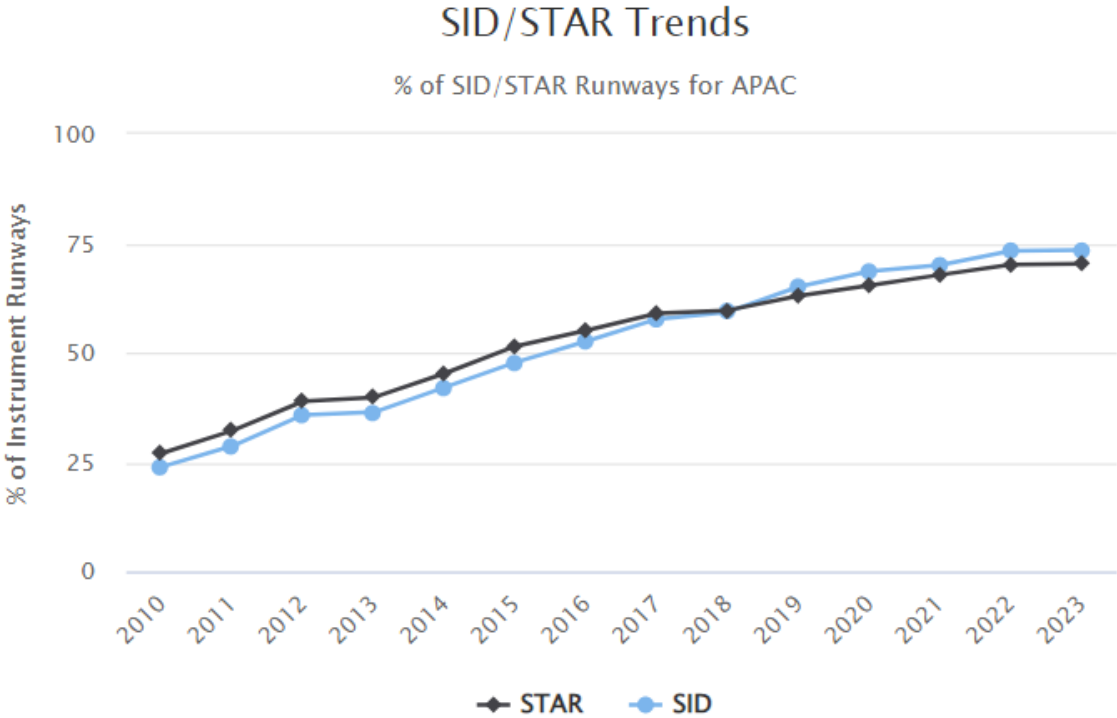
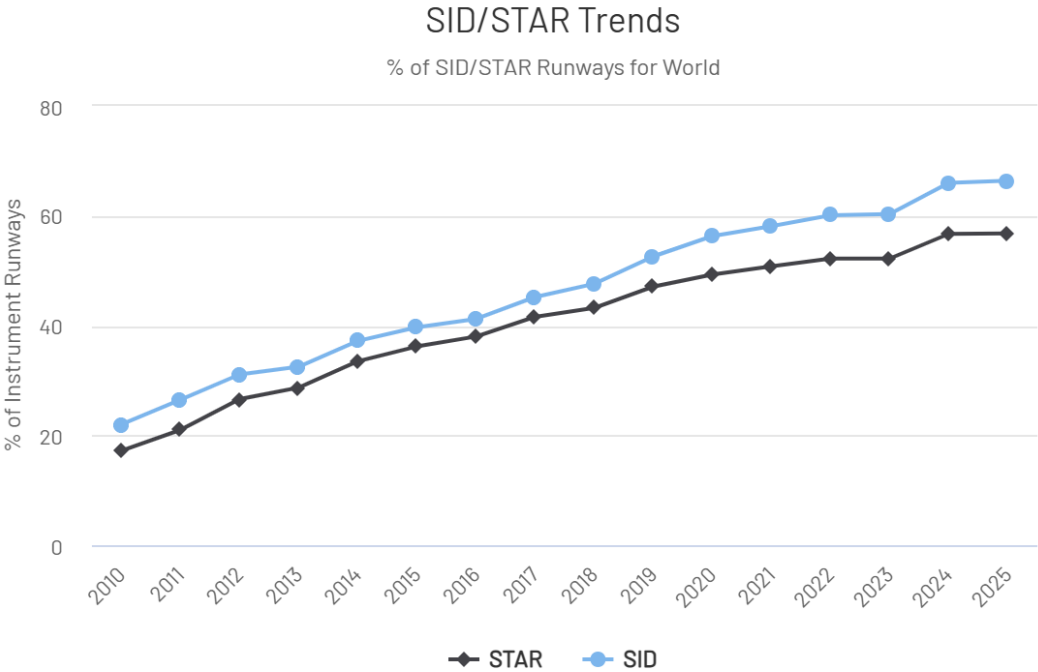
PBN Trends

% of PBN Runways by type for APAC



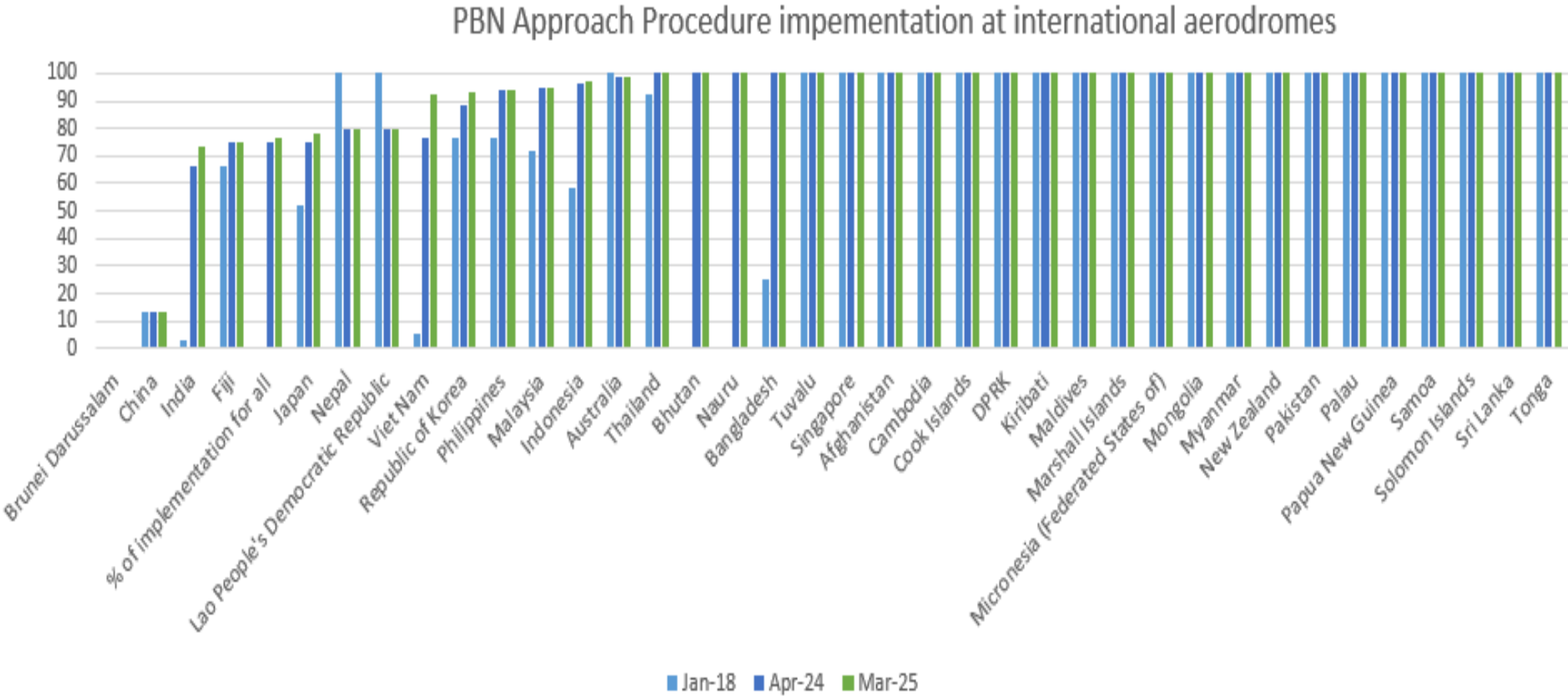
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PBN Implementation (Terminal Procedures) Trend



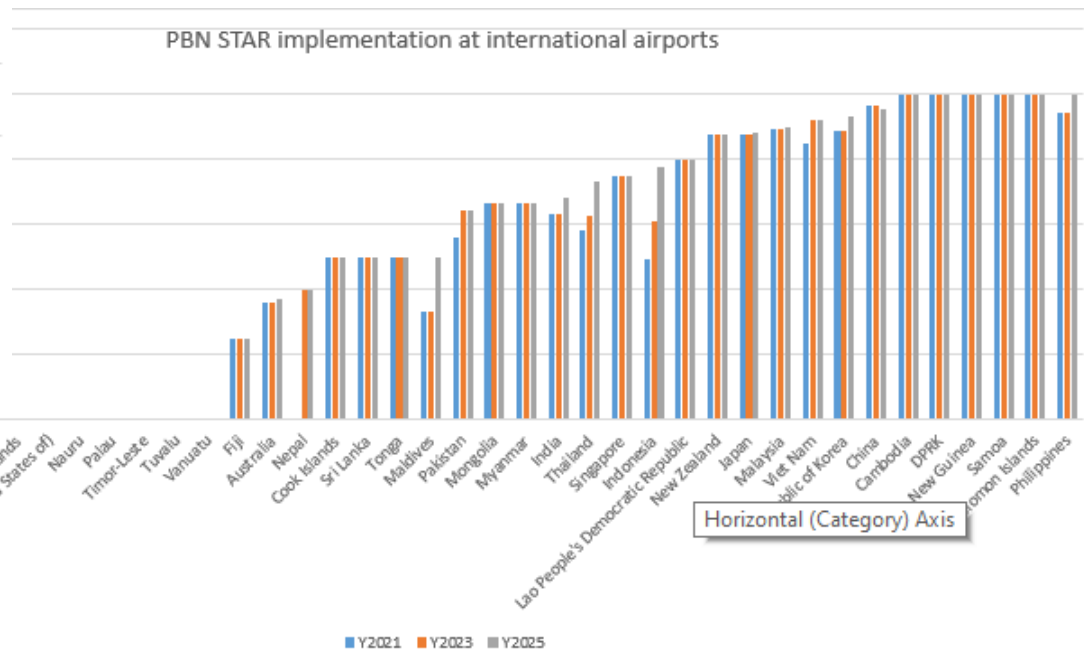
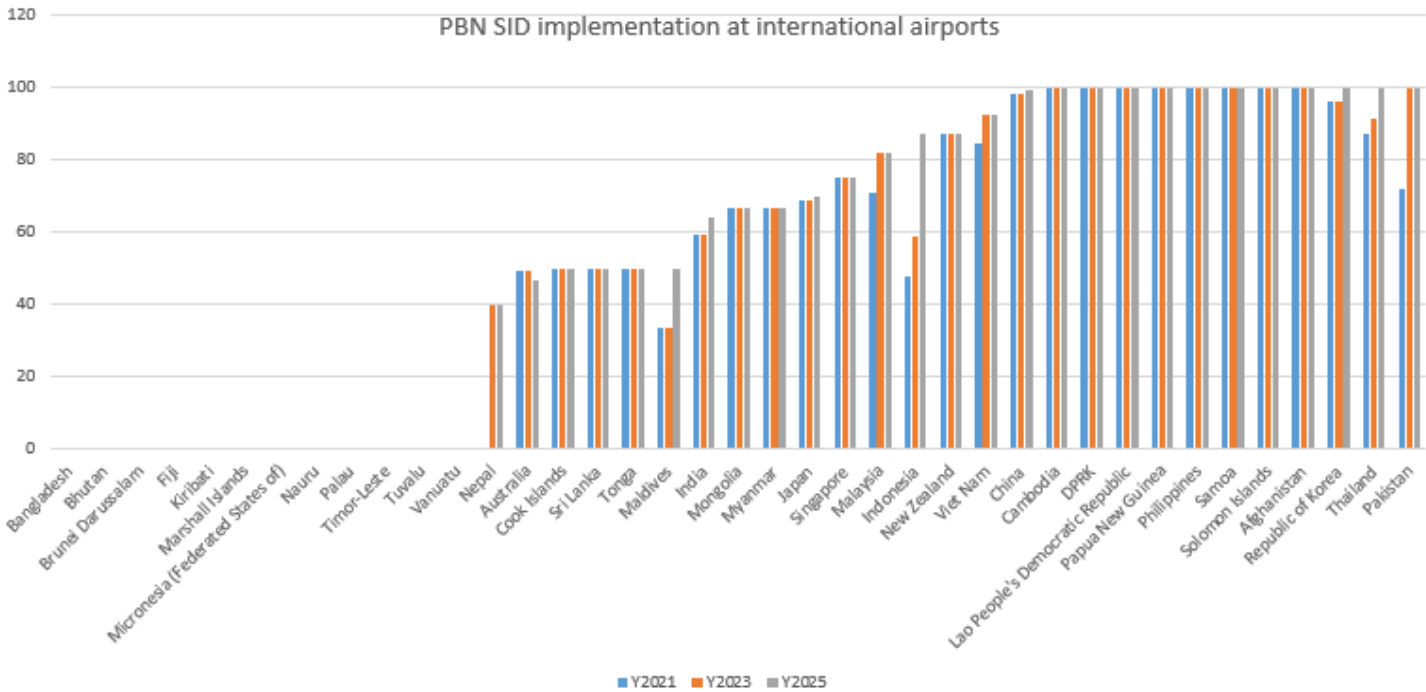
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PBN Implementation (Approach Procedures) APAC Trends



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PBN Implementation (Terminal Procedures) APAC Trend



Last amendments to Annex 10

Source : ICAO Electronic Bulletin 2025.36

Annex 10 – Aeronautical Telecommunications

Volume I – Radio Navigation Aids, Amendment 94 (State letter AN 7/62.2.4-25/31)

Volume II – Communication Procedures including those with PANS status, Amendment 94 (State letter AN 7/63.2.5-25/37)

Volume III – Communication Systems, Amendment 93 (State letter AN 7/64.2.4-25/25)

Volume V – Aeronautical Radio Frequency Spectrum Utilization, Amendment 91 (State letter AN 7/66.2.2-25/21)

Last amendments to Annex 10

Source : ICAO Electronic Bulletin 2025.36

These amendments relate to:

- a) advanced receiver autonomous integrity monitoring (ARAIM), the global positioning system (GPS), the Galileo system, the satellite-based augmentation system (SBAS), the ground-based augmentation system (GBAS), distance-measuring equipment (DME) and frequency assignment planning for instrument landing system (ILS), VHF omnidirectional radio range (VOR), DME and GBAS (Annex 10, Volume I);
- b) updates to the aeronautical telecommunication network (ATN)/Internet Protocol Suite (IPS) requirements; and space weather information services (Annex 10, Volume II);
- c) updates to the aeronautical telecommunication network (ATN)/Internet Protocol Suite (IPS) requirements regarding IPS mobility; across multiple media, naming and addressing, IPS security, quality of service (QoS), system management and overall transitional aspects (Annex 10, Volume III); and
- d) introduction of new definitions and Standards and Recommended Practices (SARPs) related to wireless avionics intra-communications (WAIC); and update of references to guidance material and to partly obsolete provisions in relation to frequency utilization for instrument landing system (ILS), VHF omnidirectional radio range (VOR), distance measuring equipment (DME) and ground-based augmentation system (GBAS) (Annex 10, Volume V).

Questions for discussion

1. What are the constraints for the States in the region to reach 100% PBN implementation as per Assembly resolution A37-11 and Beijing Declaration?
2. Whether the States in the region are satisfied with the quality of procedures published i.e. if LNAV-VNAV or only LNAV have been published?
3. What is the usability of PBN procedures, if not being fully utilized, what are the roadblocks?
4. Whether Safety Assessment with all the stakeholders is being carried out before implementation of the procedures?
5. Whether ATCOs are trained for the implementation of PBN procedures and content of such trainings.
6. What kind of system States use to capture incidents during execution of PBN procedures and what are the mitigation methodology?
7. What should be the strategy for the region in PBN procedure implementation as is being adopted in some other region?
8. What is MON a State should consider for PBN?

Action by Meeting

The meeting is invited to:

1. note the information presented; and take action, as appropriate; and
2. provide update on the subject in subsequent meetings.

Thank You

