



Presentation on
**THE TENTH MEETING OF
PBN IMPLEMENTATION COORDINATION GROUP (PBNICG/10)**
PBN Implementation Progress Pakistan

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- **INTRODUCTION**
- **EN-ROUTE IMPLEMENTATION**
- **TERMINAL / APPROACH IMPLEMENTATION**
- **FUTURE DEVELOPMENTS**
- **SUMMARY**

- **Recognizing the benefits of PBN**
- **Significant progress in PBN implementation**
- **Performance Based Navigation implementation plan:**
 - to ensure progressive implementation of PBN;
 - in line with ICAO Global and Regional (APAC) ANP.
- **RNP APCH Procedures target completed.**
- **PBN departures RNP1 NAV Spec. implemented.**
- **Transition of RNAV to RNP charts (in August, 2020).**
- **PBN routes based on RNP10 and RNAV5 PBN specifications.**

- **Western boundary of the ICAO Asia/Pacific Region.**
- **Oman and Iran towards West.**
 - RNAV 5
- **APAC region, to support regional harmonization.**
 - RNP 10
- **Ready to introduce RNP2 on the basis of:**
 - ICAO APAC seamless ANS Plan
 - coordination with adjacent States
 - readiness of every stakeholder.

TERMINAL / APPROACH IMPLEMENTATION

- PBN implementation roadmap since 2009.
- RNP APCH and associated STARs implemented in 2018.
- Constituted **100%** of the required work.

| INTERNATIONAL | | | DOMESTIC | | | OVER ALL | | |
|---------------|-----------|------|----------|-----------|------|----------|-----------|------|
| Target | Published | %age | Target | Published | %age | Target | Published | %age |
| 25 | 25 | 100 | 21 | 21 | 100 | 46 | 46 | 100 |

- **Periodic review**
 - possibilities of further improvement.

Contd....

- **RNP SIDs, one of the priority task.**
- **Implemented RNP1 Nav Spec. SIDs, where practicable.**
- **CCO / CDO for PBN implementation.**
- **PBN airspace design principles.**
- **Karachi, Islamabad, Lahore and Faisalabad:**
 - Support CCO / CDO operations.

- **RNP AR APCH implementation in Northern part of Pakistan:**
 - typical surrounding terrain;
 - normal IFR aircraft operation.

- **Exploring the possibility of SBAS for better RNP APCH ops.**

- **Roadmap for PBN implementation.**
- **Completed target implementation of:**
 - RNP APCH procedures;
 - PBN SIDs procedures.
- **RNP STARs based on RNP1 Navigation Specification:**
 - implemented at all major Airports;
 - CCO & CDO technique.

Thank you