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International Civil Aviation Organization  
African Flight Procedure Programme

**10<sup>th</sup> Meeting of the African Flight Procedure Programme Steering Committee**  
(Dakar, Senegal, 19 to 21 November 2024)

**Agenda Item 4: Project terminal report**

**Working Paper 4.7: PBN implementation status**

(Presented by the Secretariat)

**EXECUTIVE SUMMARY**

This paper reports on the performance-based (PBN) flight procedures' implementation status in Africa. PBN flight procedures hereby relate to PBN arrival, approach and departure procedures. PBN route network is excluded since it is not part of the initial assignment of the Programme.

**Action by the meeting is indicated in section 3.**

**REFERENCES**

Phase III project document

**1. INTRODUCTION**

- 1.1 In 2008 ICAO developed the performance-based navigation (PBN) concept and called Member States to develop National PBN Implementation Plan (NPIP) to implement it for all phases of flight by 2016.
- 1.2 To this end, the AFI Region provided a PBN implementation roadmap to serve as model for the development of their own plan. NPIPs implementation status was provided in working paper 4.5.
- 1.3 PBN implementation starts with prerequisites followed by a national PBN implementation plan and then, design of routes and flight procedures.
- 1.4 PBN flight procedures here refer to PBN arrival, approach and departure procedures. PBN route network is excluded since it is not part of the initial assignment of the Programme.
- 1.5 The working paper presents the implementation status of the PBN flight procedures in Africa as of 19 November 2024.



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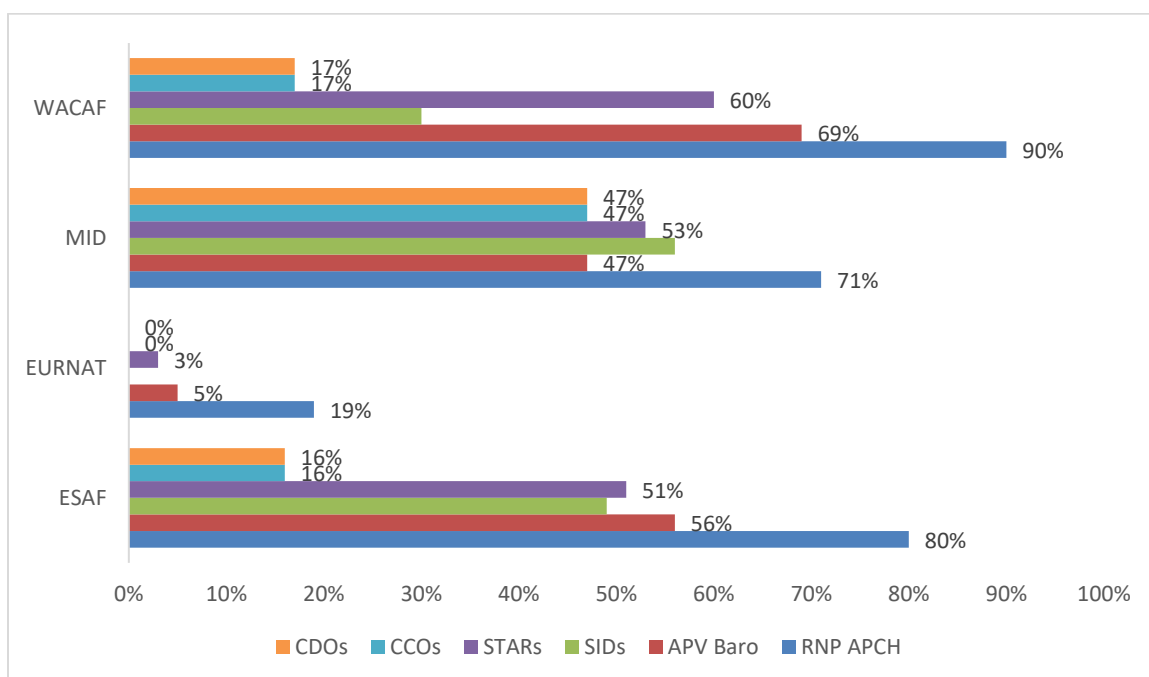
## 2. DISCUSSION

3. The continent faces many challenges for the PBN implementation:

- Lack of WGS-84 survey or non-periodic survey: the qualified survey companies are very few and the cost are found prohibitive;
- Lack of instrument flight procedure designers;
- Lack of IFPD and charting automation solutions;
- Calibration of Navaids (including GNSS);
- Revision of IFPs;
- Flight evaluation: there are very few flight calibration and flight calibration companies in the Continent and the cost are deemed expensive.

4. AFPP has trained more than one hundred designers, but the continent is still lacking designers. The situation is mainly due to the lack of recognition of the IFPD actors, lack of automation, inappropriate nomination of flight procedures candidate-trainees. Given these difficulties, many designers prefer to convert to PANS-OPS inspectors which is more recognized and less demanding.

4.1 As shown in the chart below, with an implementation rate of 85 per cent for the RNP APCH procedures, the PBN implementation rate can be considered as satisfactory.



## 5. ACTION BY THE MEETING

5.1 The Steering Committee is invited to:



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- a) take note of the information provided in this paper;
- b) encourage States and flight procedure design service providers to further motivate flight procedure designers and control the high rate of turnover;
- c) encourage states and ANSPs to follow the ICAO quality assurance and the annex 4 provisions to enhance the flight safety and avoid SSCs;
- d) encourage States and ANSPs to foster the implementation of free route airspace, parallel routes and CCO/CDO to optimize the flight efficiency.

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