



# AIM RBIS Project – Workshop on Go-team methodology

## Experience sharing on AIXM/eAIP implementation

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# Outline

- Introduction
- Description of the implementation process
- Challenges encountered
- Lessons & recommendations



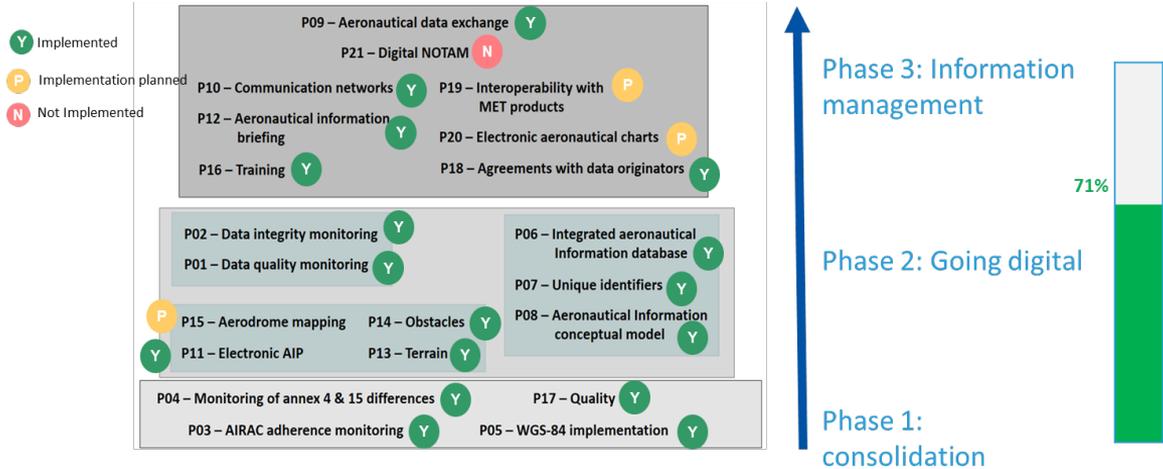
# Introduction

- *The 36th Session of the Assembly highlighted the need for the strategic evolution towards Aeronautical Information Management (AIM) and recognized the need for an ICAO strategy to transit to AIM in a manner that will ensure the availability of aeronautical information to any ATM user in a globally interoperable and fully digital environment*
- *Amendment 36 to Annex 15 — Aeronautical Information Services includes a provision enabling digital data exchange. Guidance material based on the aeronautical information conceptual model (AICM) and the aeronautical information exchange model (AIXM)*
- *The First meeting of the APIRG Infrastructure and Information Management Sub-Group (IIM/SG/1) held in Nairobi from 27 to 30 June 2017 and the second meeting of the APIRG Infrastructure and Information Management Sub-Group (IIM/SG/2) held in Dakar from 09 to 11 July 2018 emphasized on the status of implementation of the regional projects adopted by APIRG in AIM, to be implemented based on the ICAO ASBU prioritized related modules selected in the AFI Region.*



# Introduction

- Since the ICAO Air Navigation Commission adopted on March 10, 2009, the transition from the AIS to the AIM to bring into operation the concept of management of the Aeronautical information (AIM), ASECNA got ready to set his transition to the AIM via ASECNA AIS to AIM transition plan supported by a financial Plan of the Services and Equipments (PSE)





# Description of the implementation process

- Designing of AIXM data base and eAIP project ;
- Installation of equipment and computer programs for database and eAIP operations;
- Training for operating and maintenance personal ;
- Elaboration and validation of operation and maintenance procedures ;
- Signature of Service Level Agreement (SLA-AIM) with data originators under Civil Aviation Authority supervision of each country in order to assure aeronautical data quality as required;
- Data quality initial control and integration in the database ;
- Safety risk analysis and mitigation actions before to set up database and eAIP operation activities;
- Initial validation of database contents and initial eAIP release ;



# Description of the implementation process

- Implementation cyber safety of the eAIP web product;
- Webmastering of eAIP aim website <https://aim.asecna.aero>
- Operational personal training;
- Implementation of Aeronautical Information Exchange Systems (AIXM) (AFI).
- ASECNA has transitioned from paper-based AIP to eAIP AIXM4.5, from 08 November 2018 to 05 December 2019
- Normal operation of Database and eAIP with regular amendment publication since 05/12/2019
- AIXM5.X database migration feasibility studies



# Challenges encountered

- Estimate of the financial cost of each component of the system (AIS FPL AIXM/eAIP , Charting )
- Incomplete understanding of Eurocontrol eAIP specification 2.0 and code (syntactic check, semantic check and business rules)
- insufficient suppliers capable of AIXM solution and charts solution
- Lack of data matching to industry format (AIXM4.5 or XML)
- Incompatibility to worldwide data available in ARINC424, not fully compatible to AIXM4.5



# Challenges encountered

- Limitations in AIM human resources, specially with IT background; Launch of recruitment and upgrade of training program
- Complex vectorization of Airspace borders as series of points with geographical coordinates (reference data)
- Delay in the update of AIXM database structure to comply with the eAIP standards evolution
- Complex Multi-lingual eAIP issues
- Reluctance towards the exchange of data with the other Databases



# Recommendations

- *Definition of TOR or Definition of objectives and all specifications of the database, especially interoperability between database and others aeronautical information systems (NOTAM/PIB eAIP Charting Flight procedures Design, ATM FPL)*
- *setting up a database or establishing agreement with regional database manager to encode AIP information into AIXM4.5 or AIXM5.1*
- *Signature of agreement with data/information originator, to use datacatalogue*
- *Purchase software and hardware with dedicated manufacturers of AIXM database and eAIP.*



# Recommendations

- *Training of AIM staff in charge to conduct technical checks before receiving on site the AIXM database or sign agreement with existing AIXM/eAIP provider in the region*
- *Conduct safety case from paper product to AIXM4.5/eAIP*
- *Setting up Implementation plan*
- *Full verification of final version of database supporting the eAIP baseline*
- *Safeguarding of eAIP editions (eAMDT) with the possibilities of restarting edition from the saved version....*



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