



AIM RBIS Project – Workshop on Go-team methodology

Experience sharing on AIXM implementation

Presented by:

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ATNS

Virtual June 2022

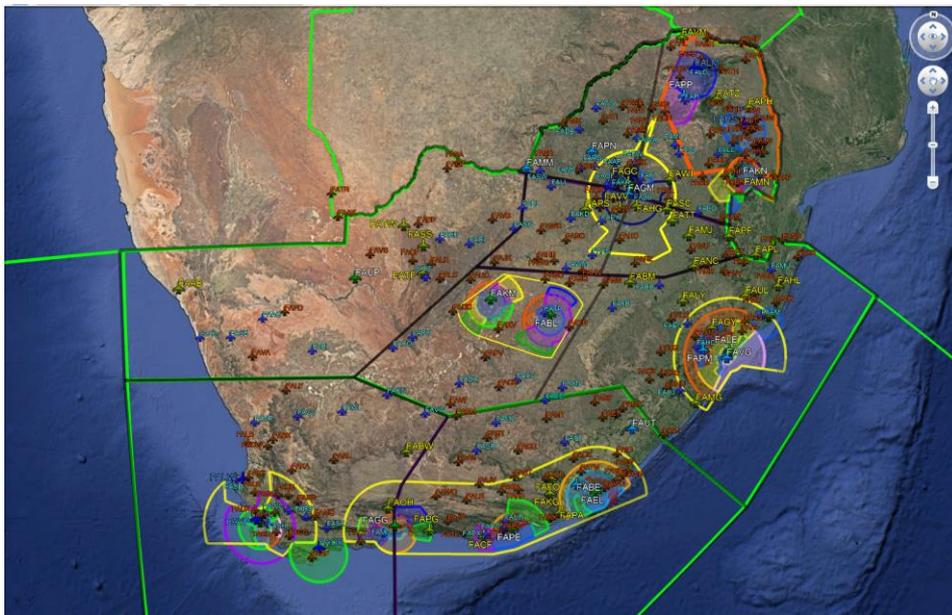


Outline

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



Introduction

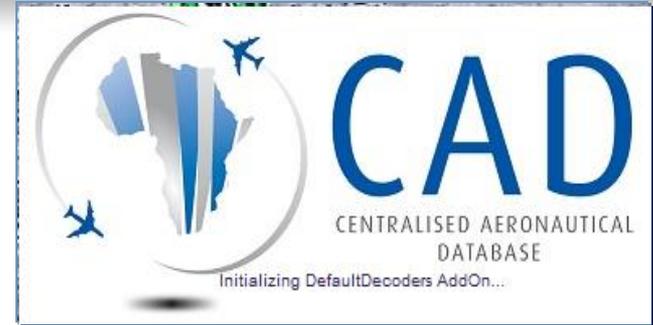


- Airspace (2 FIR, 1 Oceanic FIR) – 6% of global airspace
- 20 Aerodromes (9 ACSA / 12 Municipal/Regional/Private)
- 124 Licensed Aerodromes/Airfields (Published in RSA AIP/AIC)
- 160 Unlicensed Airfields (Not Published in RSA AIP)
- VSAT/NAFISAT, Flight Procedure Design, Charting,
- Obstacle Evaluation, Aeronautical Information Management,
- WGS-84 Surveys, Technical Services, etc
- Aviation Training Academy - ATA



Introduction

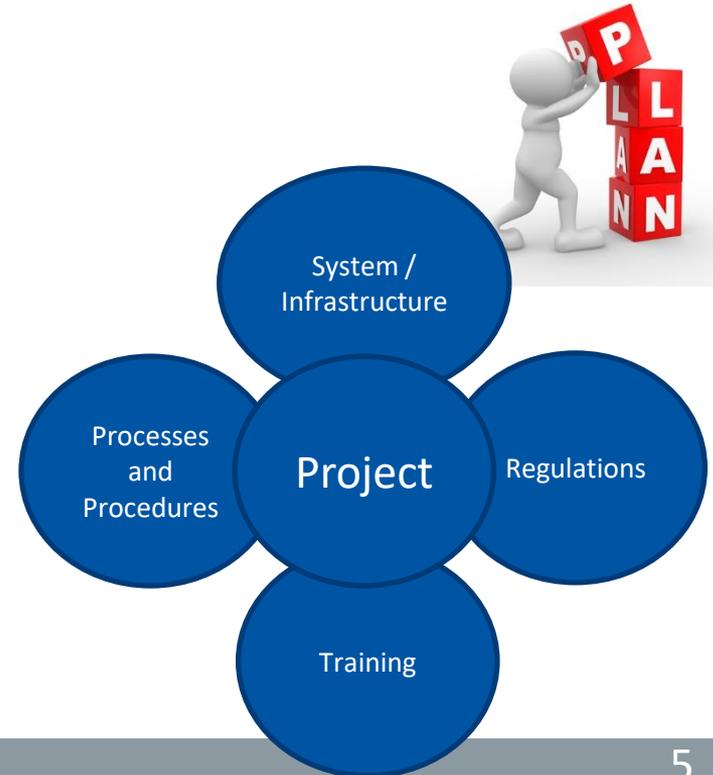
- *Started 2011 – Procurement of AIXM database*
- *Static Data Operations (SDO) SAT passed 2011*
- *AIP/Charting SAT Passed 2013*
- *AIP Services Transferred from SACAA to ATNS in 2014 (MOA signed between Regulator and ATNS June 2012)*
- *ATNS Certified in terms of Part 175 South African Civil Aviation Regulations*
- *Current projects – Charting Services and Obstacle Evaluations Transfer from SACAA to ATNS*
- *Aeronautical Information Product Quality assurance*
- *Alignment of Civil Aviation Regulations to Annex 15 AMDT 40 and ICAO Doc 10066 requirements (Started 2019 – Published in 2021)*





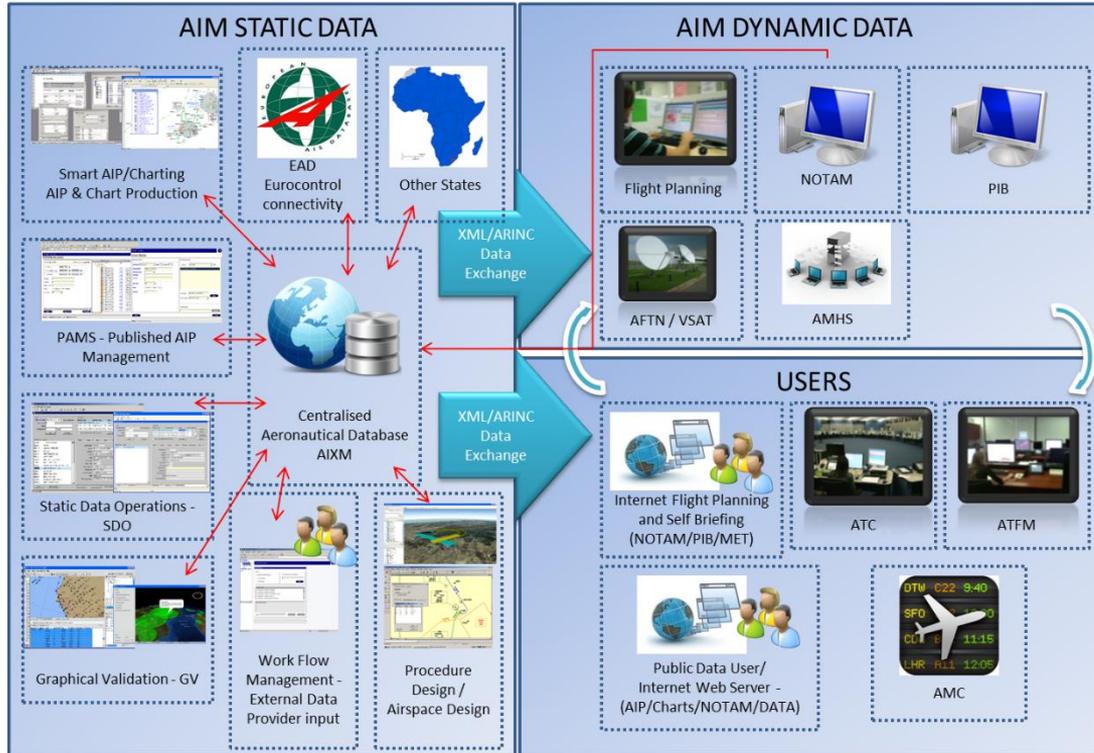
Description of the implementation process

- Develop Strategy (Regional, National, Organisational)
- Business case/Feasibility Study
- User Requirements Specification (URS) development
- Tender
- Procurement / Contract negotiations
- Project plan / Implementation plan
- Training
- Establishment of Processes and Procedures
- Factory Acceptance Testing/Site Acceptance Testing
- System integration
- Regulatory review and amendments
- Data loading & Operational use





Description of the implementation process





Description of the implementation process

ANC 12 Rec.3/8 (c):

That States: engage in intra-regional and interregional cooperation for an expeditious transition from aeronautical information service (AIS) to aeronautical information management (AIM) in a harmonized manner and to using digital data exchange and consider the regional or sub regional AIS databases as an enabler for the transition from AIS to AIM

APIRG 20 - Conclusion: 20/33: Implementation of AN-Conf/12 Rec. 3/8 (c)

That States which have taken the initiative of the AFI-CAD concept of implementing Centralized AIS databases should ensure compliance with the provisions of AN-Conf/12 Recommendation 3/S(c) calling for intraregional and interregional cooperation for an expeditious transition from aeronautical information service (AIS) to aeronautical information management (AIM) in a harmonized manner and use of digital data exchange and regional or sub regional AIS databases as an enabler for the transition from AIS to AIM.

The screenshot shows the CANSO website with the following content:

- Header:** canso TRANSFORMING GLOBAL ATM PERFORMANCE
- Navigation:** Introducing CANSO, News, Blog, Publications, Events, Programmes, Regions, Products & Services, Contact, Jobs
- Submenu:** ATM News, Articles, Press releases, Speeches, Media contacts, Subscribe
- Related Content:** Read more about Operations on: NEWS, BLOG, PUBLICATIONS, EVENTS
- Main Article:**
 - Headline:** ATNS and Namibian Civil Aviation take firm step towards global aviation technology alignment
 - Date:** 26 FEBRUARY 2016
 - Summary:** Air Traffic and Navigation Services (SOC) Ltd has signed an important Air Traffic Management (ATM) contract with the Namibian Directorate of Civil Aviation (NDCA). In terms of the agreement, ATNS will provide the necessary expertise and knowledge - to assist NDCA to migrate from the traditional manual Aeronautical Information System (AIS) to an International Civil Aviation Organization (ICAO) compliant automated Aeronautical Information Management (AIM) Service.
 - Quote:** ATNS CEO Thabani Mthiyane says future technologies in air navigation require the availability of and timely exchange of accurate and quality assured digital Aeronautical Information - within Air Traffic Systems. "One of ICAO's requirements as defined in the ICAO AIS/AIM Transition Roadmap - is the creation of a centralised repository for Aeronautical Information. Sharing of this information will be expanded to other aviation entities in Africa, using the appropriate exchange model." concludes Mthiyane.
 - Timeline:** The Agreement will commence at the beginning of April 2016 and ensue for a period of 7 (seven) years - ending in 2023.
- Latest News:**
 - 21 SEPTEMBER 2016: COMSOFT Solutions' SDDS-NG put into operation for Deutsche Flugsicherung, DFS
 - 21 SEPTEMBER 2016: The European Commission recommends Hungarian ATM development projects for funding
 - 15 SEPTEMBER 2016: NAVIAR continues surveillance project with COMSOFT Solutions



Challenges encountered

- *Inadequate Regulatory Framework (National)*
- *Misinterpretation of ICAO SARP's (Annex 14 & Annex 15, etc)*
- *Reluctance to change (Aviation Community – New processes, procedures. requaltions)*
- *Legacy Data Issues (Coordinates, Obstacles, WGS-84, e-TOD, etc)*
- *Staff competency and training*
- *Interoperability between systems (Oracle, SQL, 3rd Party Software)*
- *Standardised exchange formats (Raster, Vector, Grid formats, .ort, .bil, etc)*





Recommendations

Successful implementation of AIXM requires:

The system procured and implemented is only as good as the data that is loaded into the system, and capable of creating ICAO compliant digital dataset and products such as eAIP, and therefore it requires:

- *Adequate regulations to support ADQ through-out the data chain from originator to next intended user.*
- *Agreements with data originators*
- *Accredited Training & Skills development plan*
- *Well defined processes and procedures*





Recommendations

- *Redundancy / Disaster Recovery for system*
- *Adequate infrastructure*
- *Data migration plan*
- *Automation of processes*
- *Integration with other systems*





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Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montréal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU