South African AIXM Database Implementation

Presented by Raoul Bester

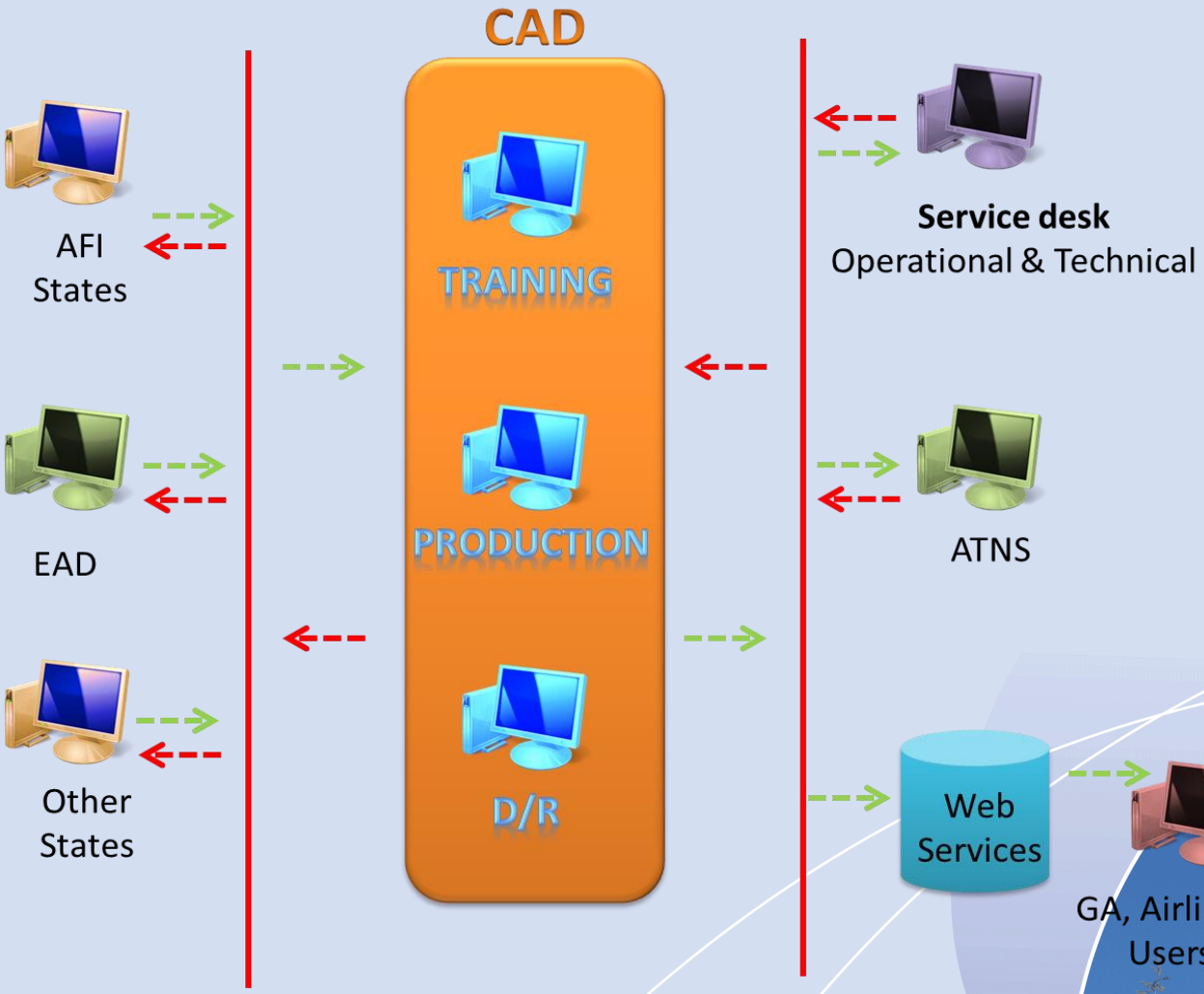
A-CAD Implementation

- Started 2011
- SDO SAT passed 2011
- AIP/Charting SAT Passed 2013
- AIP Services Transferred from SACAA to ATNS in 2014
- ATNS Certified in terms of Part 175
- Current project – Charting Services Transfer from SACAA to ATNS

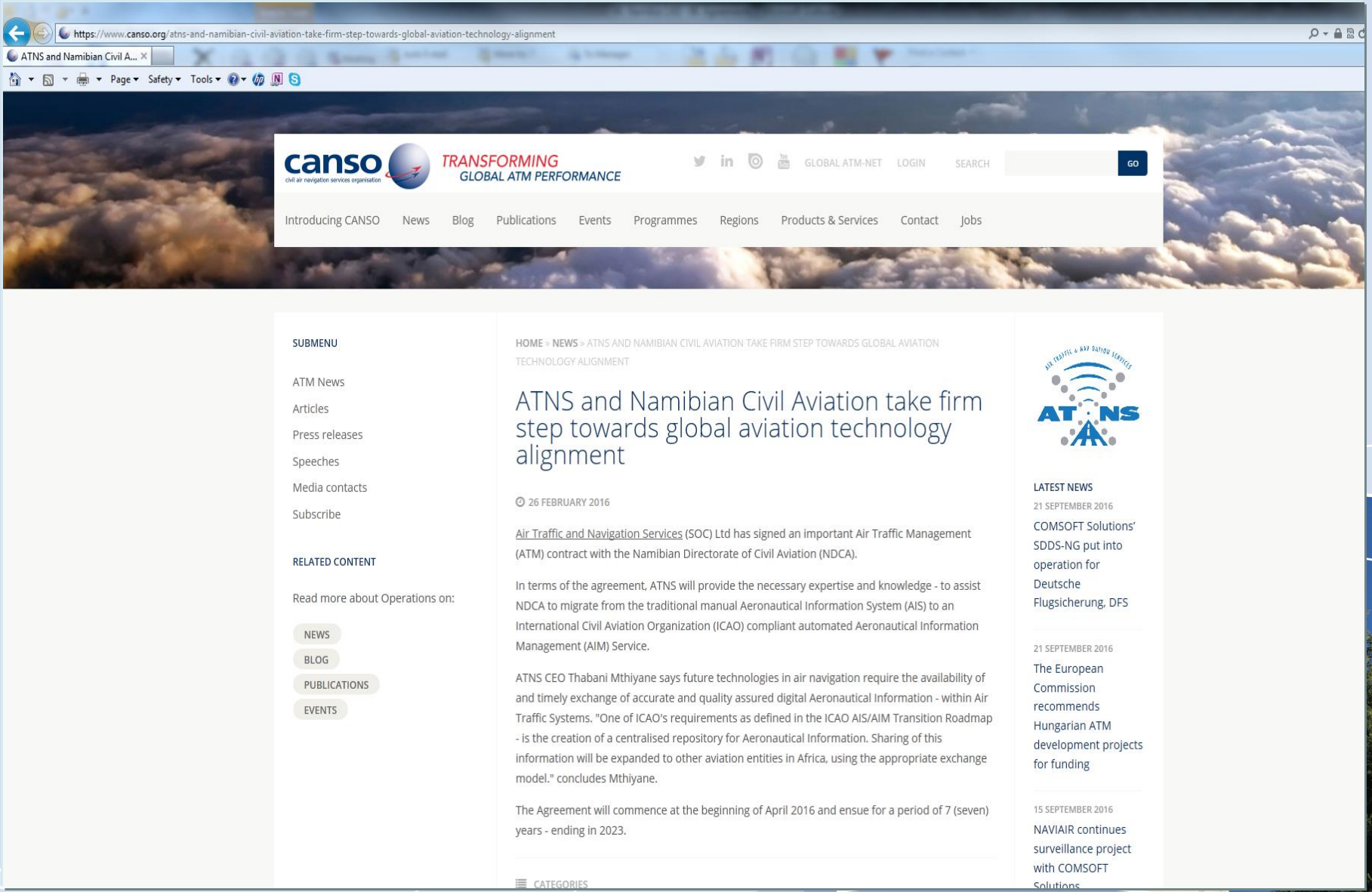
A-CAD Implementation

- Integrated AI database
  - •AI repository SAT completed December 2012
  - •Internal systems interoperability testing process taking place
- Data quality/integrity monitoring
  - •Quality management procedures implemented within ATNS QMS 2014
- Electronic AIP
  - •Review and amendment of Regulations and Technical Standards
  - •MOA signed between State and ATNS June 2012
  - •SmartAIP SAT completed October 2014
  - •Certificate of approval signed 3 November 2014
  - •eAIP GEN section generated June 2015

A-CAD Connectivity



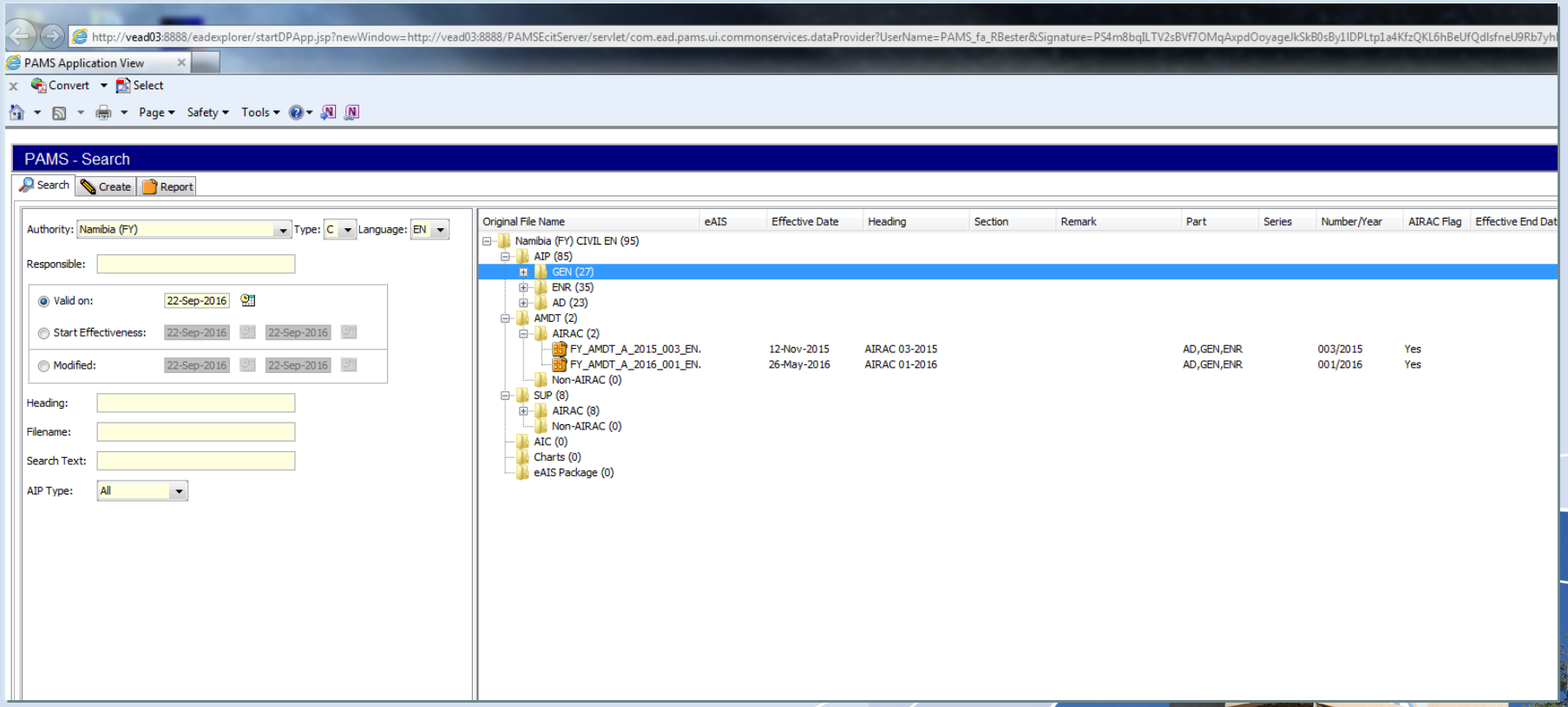
A-CAD Namibia



A-CAD Namibia

- Contract Signed with Namibia in February 2016
- Automated AIS solution
- Dynamic and Static AIM functions
- Agreement commenced at the beginning of April 2016
- 7 years implementation plan - ending in 2023.
- Phased approach

A-CAD Namibia



St Helena Project

http://www.atns.com/atm.php#subnav

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St Helena Project

The St Helena Airport is situated in a British Overseas Territory, a remote island in the South Atlantic Ocean. The St Helena Airport design, build, operate and transfer project was awarded by SHG to South African construction group, Basil Read.

The Air Traffic Control contract (sub-contracted by Basil Read) has been awarded to ATNS, who will provide Air Traffic Services (a Procedural Approach and Aerodrome Control service) and Aeronautical Information Management (AIM) services on behalf of the St Helena government.

More information for St Helena can be obtained at the following links:

- Air Safety Support International (ASSI) website: http://www.airsafety.aero/About-ASSI/Overseas-Territories/St-Helena-and-Dependencies.aspx
- St Helena Government website: http://www.sainthelena.gov.sh/

Charts related to the Aerodrome

Combined Aerodrome Chart and Parking Chart	FHSH 2-11
Aircraft Parking / Docking Chart	FHSH 2-12
Aerodrome Obstacle Chart - ICAO Type A	FHSH 2-13
- Intentionally Left Blank -	FHSH 2-14
RNAV LOC/DME RWY20	FHSH 2-15
RNAV LOC/DME RWY20 Tabulation	FHSH 2-16
DVOR LOC/DME RWY20 (Intentionally Left Blank)	FHSH 2-17

Aeronautical Information
Airspace Design
Chart Design
Flight Procedure Design
Simulation Services
Traffic Forecasts
Obstacle Evaluation
Safety Management System
Projects
Archives

Service Level Agreements

- SLA Implementation
- Pre-requisites
  - Agreements with data originators
  - Regulations to support ADQ
  - ISO Standards/Certification (QMS)
- Cost of Certification
- COMMISSION REGULATION (EU) No 73/2010

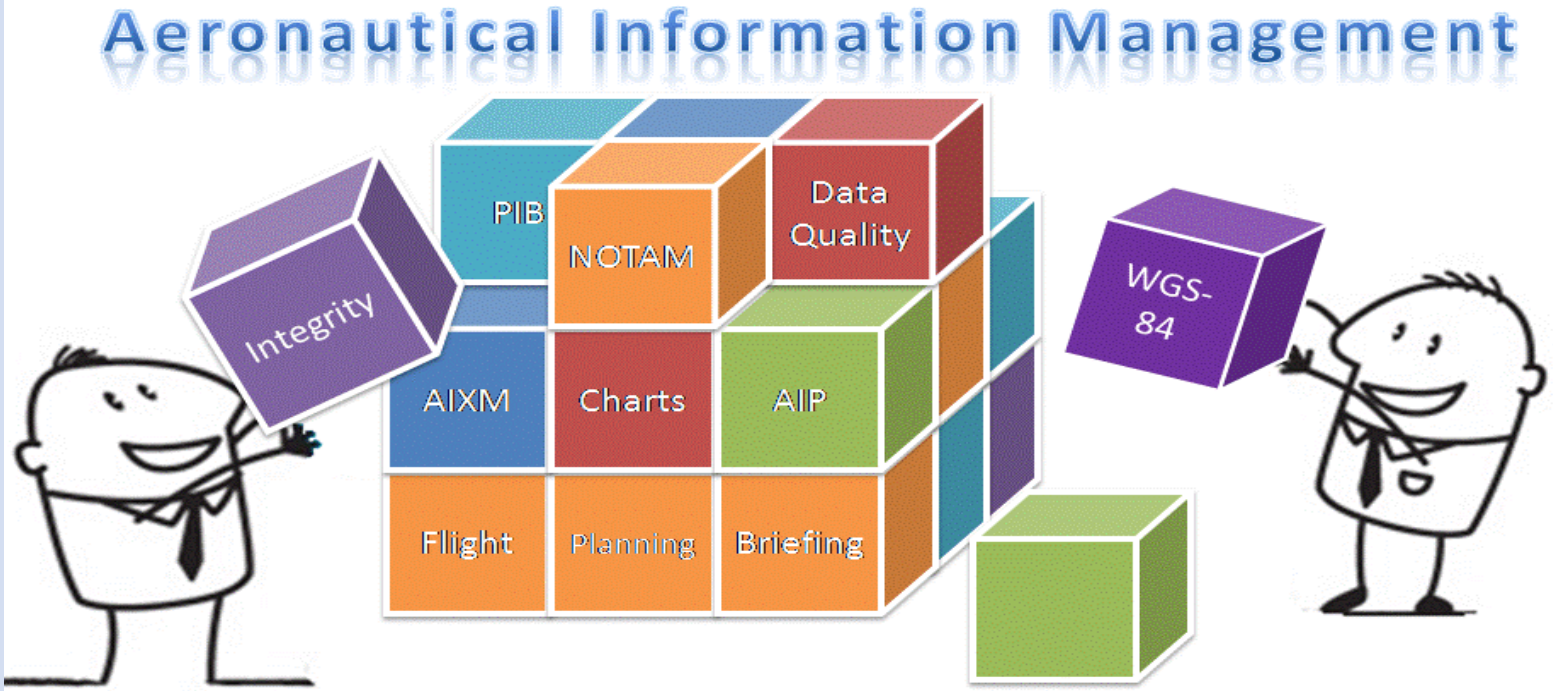
Possible Implementation Challenges

- Data Quality Standards
- Data Migration – Meta data not available
- Amount of data to be loaded and the maintenance thereof – coding of IFP, SID/STAR, etc
- QMS processes and Procedures
- Regulations to support AIM (ADQ, Service provision, SLA's)
- Training/Qualifications of AIS
- ISO Certification of organisations

Conclusion

- Successful implementation of A-CAD requires:
- Standardised exchange mechanisms
  - Although the system languages are the same (AIXM) communication between systems is still not guaranteed. (AIXM 4.5 – AIXM 5.1)
- Connection setup
  - Infrastructure must ensure Network connectivity (SLA KPI's)
- ADQ
  - Data quality requirements supported by regulations
- Certification of Organistaion providing services on behalf of another state
- Differences in Standards and State requirements
  - Differences require product changes which in turn cause delays

Thank You.


Aeronautical Information Management
PIB
NOTAM
Data Quality
Integrity
WGS-84
AIXM
Charts
AIP
Flight
Planning
Briefing
The Building Blocks of the ATM Community

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Thank you