



FIFTH AFI SAFETY SYMPOSIUM
(NIAMEY, JULY 16 2018)

**Safety Management System
Implementation from an Air Navigation
Service Provider perspective**

Presented by ASECNA



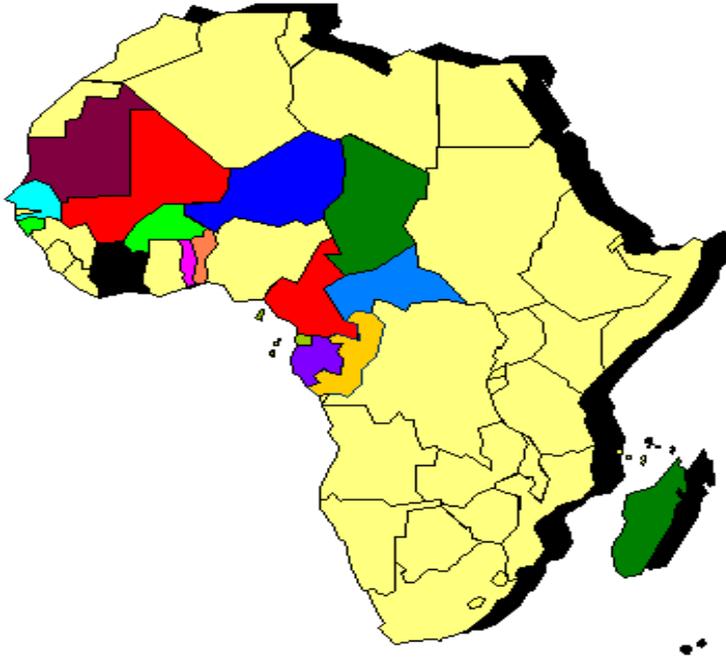
SCOPE

To share a practical case of Safety Management System (SMS) implementation from an air navigation service provider (ANSP) perspective

- highlights the status of implementation of ASECNA SMS
- focus on the main challenges to achieve a continuous improvement of the system.



ASECNA : Agency for the Safety of Air Navigation in Africa and Madagascar



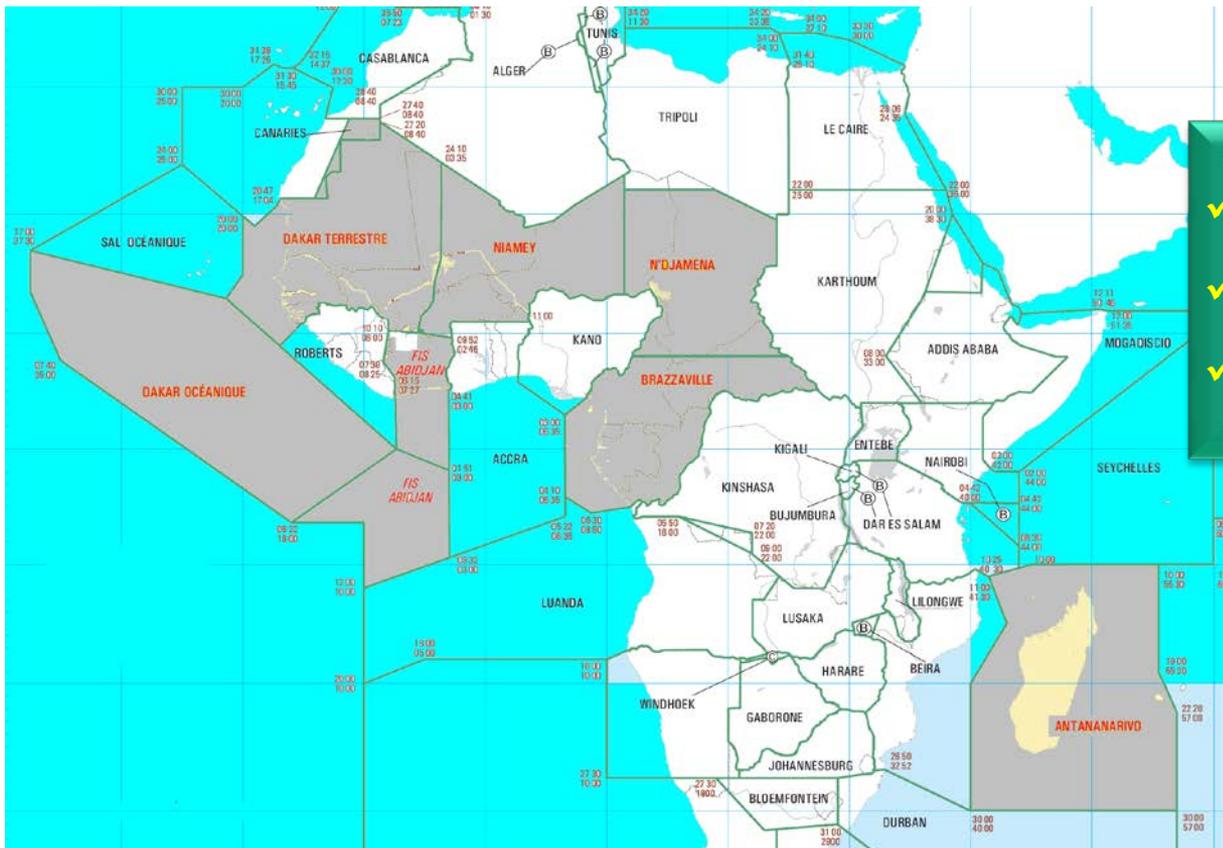
St Louis Convention : 12th Décembre 1959
Dakar Convention : 25th October 1974
Libreville Convention : 28th April 2010



Benin, Burkina Faso, Cameroun, Centrafrique, Congo, Côte d'Ivoire, France, Gabon, Guinée Bissau, Guinée Equatoriale, Madagascar, Mali, Mauritanie, Niger, Sénégal, Tchad, Togo, Union des Comores



ASECNA airspace



- ✓ More than 16 M km²
- ✓ 6 FIR
- ✓ 30 main aerodromes



ASECNA : Goal and activities

- ❑ **Goal** : to provide Air navigation services within member states' airspace

- ❑ **Activities**
 - ATS services
 - MET services
 - AFFS
 - TELECOM services
 - AIS/MAP and PANS-OPS
 - CNS (including installation and maintenance of equipment, flight calibration)
 - Training : 3 centers in Dakar, Douala, Niamey
 - Arodrome operations

SMS IMPLEMENTATION IN ASECNA

Role of the State in the provision of air navigation services

- ✓ Article 28 of the Chicago Convention on International Civil Aviation engages states to provide ANS services in the airspace above its territory and airports in its territory;
- ✓ ANSP provides the ANS service by state 's delegation : State 's responsibility remains.
- ✓ Principle of separation of roles strongly recommended by ICAO . States have to:
 - ❖ Establish the regulatory and oversight framework for service provision and the supervisory framework for ANSP activities; SSP
 - ❖ Ensure the qualification of staff through the issuance of licenses to ANSP staff when required;
 - ❖ conduct oversight of ANSP activities;
 - ❖ Ensure the viability and economic balance of the ANSP and the sector;

SMS IMPLEMENTATION IN ASECNA

Role of States in the ASECNA environment

- ✓ ASECNA is a multinational framework, governed by an international convention that binds the parties (18 Member States);
- ✓ Each State established a regulatory framework aligned with the ICAO SARPs and ASECNA shall provide air navigation services in accordance with ICAO provisions in accordance with Article 2 of the Convention governing the ICAO

Collegial supervision mechanisms through the statutory bodies

- ✓ Investment program and budget approval;
- ✓ high level strategic guidelines approval ;
- ✓ Strategic plan adopted for 2018-2032
- ✓ Various comities composed of members of the board or independent bodies (safety, account

Individual supervision mechanisms

- ✓ national regulatory framework including SSP and ALOS;
- ✓ issuance of license for the personnel;
- ✓ operational documents approval;
- ✓ Inspection activities (local and hqtrs);



SMS IMPLEMENTATION IN ASECNA

- SMS was implemented according to a 5 year investment plan (2009-2013) with ICAO`s specifications.
- ASECNA implemented SMS through its main components: Risk Management, Safety Insurance and Safety Promotion :
 - ✓ Systematic analysis of safety events, in accordance with the safety manual;
 - ✓ Adoption of a just culture policy ;
 - ✓ Monitoring and follow-up of established safety performance indicators ;
 - ✓ Periodic Review Meetings to evaluate the level of both SMS implementation and ASECNA safety performance



- ASECNA implemented SMS through its main components: Risk Management, Safety Insurance and Safety Promotion :
 - ✓ Safety assessment before any significant safety-related change, in accordance with established procedures;
 - ✓ Conduct inspections and safety audits (internal assessment and supervision);
 - ✓ Establishment and monitoring of the implementation of corrective and preventive actions plans;
 - ✓ Staff sensitization and training (audit, safety assessment...)
 - ✓ Dissemination of safety-related critical information;
 - ✓ Sharing of best practices, outcomes of safety-related events analysis and safety audit results



- **independent audits are regularly performed :**
 - ✓ Annual audits conducted by the Commission of Safety Verification, an independent body established by ASECNA Board of Directors
 - ✓ Two blank audits conducted by independent experts in 2014 and 2016 ;
 - ✓ The peer review conducted by ATNS in April and May 2016 in the framework of the AQSA initiative



STRATEGY FOR SMS IMPLEMENTATION

- Decision to establish a strategic plan
 - to implement an integrated management system
 - for Safety, Quality, Security, Environment, Health and Security at work,
 - for all its activities dealing with air navigation safety
 - and to achieve effectiveness and efficiency for sustainable development.
- Creation of a new Direction of Safety, Quality and Environment in charge of designing, planning and coordinating this system.



STRATEGY : **SMQ** IMPLEMENTATION ALONG WITH **SMS**

- Along with SMS, ASECNA implemented a quality management system (QMS),
- **October 2014** : ISO 9001 : 2008 Certification for all its services, including AIS and MET
- **April 2018** : ISO 9001:2015 Certification for all its services, including AIS and MET
- This certification makes proof that ASECNA meets ICAO requirements in terms of a solid quality management system as far as AIS and MET services are concerned :
 - ✓ SARPs 3.7, Annex 15 aeronautical information services
 - ✓ SARPs 2.2, Annex 3 OACI Meteorological Services for International Air Navigation





CHALLENGES

- **Safety oversight and regulation**

- ✓ The full exercise of AAMAC responsibility as a common body for safety oversight and regulation for the 18 members States

AAMAC is a body of Civil Aviation Authorities of the 17 African Member States of ASECNA, which is located in Ndjamena.

- **Collaborative oversight mechanism with civil aviation authorities of Member States**

- ✓ Common safety performance in concordance with national safety objectives

- **Application of risk management to all ASECNA activities**

- ✓ Safety risks and performance can be impacted by risks from other domains such as security, information systems, Environment.
- ✓ Ongoing development of a global risk map will be achieved by the end of 2018



CHALLENGES

- **Master interfaces with other SMS**
 - ✓ Management of interfaces with neighboring centers, including information systems and ATM data processing systems.
 - ✓ Protecting air navigation systems against new threats such as cyber-attacks, due to the interoperability of the systems.

- **Commitment in Peer Review Program**
 - ✓ ATNS and ASECNA conducted a reciprocal review in April and May 2016.
 - ✓ ASECNA in collaboration with ICAO hosted in May 2018 in Abidjan, a training workshop on the manual of program;
 - ✓ ASECNA and Ghana ANSP have planned to conduct a peer review by the end of 2018



Challenges Vision for 2032

- Growth of the traffic 5% a year
- Implementation of ASBU modules adopted by Members States
- Harmonized regional Regulation and Safety Oversight System (MoU with ATNS- MoU in progress with NAMA GCAA and Roberts Fir for surveillance data exchange...)
- Cooperation between ANSPs peers revue



Challenges Vision for 2032

- **Build a single sky for Africa based on:**

- ☞ Harmonise airspace from FL245 to FL600
- ☞ Use of standards ATS provisions in that corridor
 - ❖ Communication with airline based on ADS-C/CPDLC
 - ❖ Navigation based on GNSS with SBAS augmentation mono frequency in 2021 and DFMC Dual multi frequency by year 2028
 - ❖ Surveillance with radar or ADS B technology (contract signed with AIREON in that purpose)
- ☞ Full implementation of AIDC and AMHS and SWIM
- ☞ Interconnection of all network and systematic exchange of data
- ☞ PBN – CCO/CDO



Challenges Vision for 2032

- ☞ **Low airspace from ground to FL245** under approach and tower responsibility and use of VHF as primary mean of communication. Remaining of ILS
- ☞ These challenges can not be overcome by the individual states.
- ☞ ASECNA intends to strengthen its cooperation with all ANSPs, partners and international Organizations for that purpose.
- ☞ Signature of MoU with CANSO in that purpose



Follow up action

Note the availability of ASECNA to:

- share its experience with any Air Navigation Services Provider (ANSP) ;
- to capitalize any feedback from any Air Navigation Services Provider (ANSP) in terms of SMS implementation issues.

MERCI POUR VOTRE ATTENTION

