



# Implementation of a « seamless sky »

# The challenges



Traffic Growth



The Continent



Air Safety



Costs & Benefits



Environment compliance



# One Solution : seamless sky

An answer to all these issues  
The implementation of a seamless sky

The Single Sky or seamless sky concept refers to a "seamless space" that increases airspace capacity, improves service performance and operational efficiency in a context of continuous traffic growth:

Air Safety

Respect for the Environment Greenhouse gas emission

Capacity, Efficiency, Performance

Reducing Costs



This concept of a cooperative Single Sky consist of implementing a homogeneous airspace continuum, while maintaining the existing structuring of airspace (FIR/UIR) and the current organization mechanism of the air control centers. This mode is mainly oriented on a coordination and a cooperation of all the stakeholders (Regulator/ANSP/Airline companies) with a harmonization of all the technical and operational means, the integration and the mutualization of the new systems as well as the implementation of the operational evolutions induced by the new technologies.



# Strategy Cooperative Single Sky



## Ciel Unique Pour l'Afrique

STEP 1  
STEP 2  
STEP 3



# CNS & ATM requirement...



## Communication

- Efficient communication network
- Data Link
- VHF coverage
- AIDC
- AMHS
- .....

## Navigation

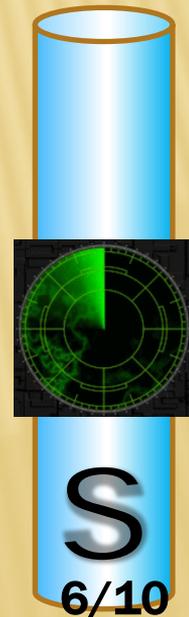
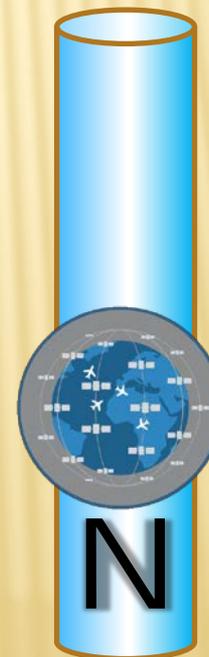
- ABAS, SBAS, GBAS
- GNSS
- Conventional means
- .....

## Surveillance

- Terrestrial and satellite ADS-B
- ADS-C,
- Radar,
- WAM

## ATM

- PBN
- CDO-CCO
- Airspace harmonization
- Routes harmonization
- Performance harmonization
- Free route
- ATFM
- SWIM
- .....



# How do we get there



## ACTORS

States, ANSP, OACI, Régulators (RSO), Military, African Union (CAFAC), Regional Economic Zones, Airlines, IATA, CANSO....

Regulatory, legal, institutional, human means, and financial resources

Operational Means (ATM)

- |            |     |     |     |      |      |      |       |
|------------|-----|-----|-----|------|------|------|-------|
| CDO<br>CCO | PBN | ATS | ASM | AIDC | ATFM | CNGE | ..... |
|------------|-----|-----|-----|------|------|------|-------|

## INTEROPERABILITY

SECURITY OF INFORMATION SYSTEMS (Cyber Security)

Technical Means (CNS)

- |       |      |      |     |              |      |     |     |      |      |       |       |
|-------|------|------|-----|--------------|------|-----|-----|------|------|-------|-------|
| ADS-B | SBAS | ATFM | MTO | Data<br>Link | SWIM | FDP | AMS | AMHS | AIDC | CPDLC | ..... |
|-------|------|------|-----|--------------|------|-----|-----|------|------|-------|-------|

Prerequisite: Communication



# Action by the meeting



The meeting is invited to:

1. To take note of information and proposals provided in this working paper
2. Encourage the establishment of an ANSP Task Force to harmonize strategies and propose a roadmap for the implementation of seamless airspace in the AFI region.

