Brainstorming on Certification/Safety for Africa

Prepared by SAFIR
- Egis Avia
- ESSP
- Pildo
- PIT

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ASECNA, Egis Avia, ESSP, Pildo

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SAFIR = Satellite navigation services for AFrIcan Region

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Certification scenario #1 (based on Fully European based scenario #A)

1 This scenario is also applicable if Africa has no infrastructure ownership
2 Services = NOTAM Raw Data + Data archiving + CDM

TO BE REVIEWED BASED ON WS5 OUTCOMES
African case / Fully European

- How is implemented the ICAO requirement in Annex 19 (SMS safety assessment of risk) in Africa today?
  - See SAFIR WS5 MoM (CAAs in charge of verification of compliance on Annex 19 requirement in their ANSPs)
  - It is noted that some CAAs certify their ANSP

- Scenario A is just an extension of the coverage of EGNOS Service towards Africa
  - Africa takes benefit of the European safety demonstration (light impact on the EGNOS change Safety Case is anticipated): approval by African regulator(s) is not foreseen at this stage
  - Performance could be committed in SDD for Europe + Africa (TBC)
  - Need to check that there is no negative impact on the European Service (no regression)

Africa takes benefit of European regulatory framework
African case / Fully European

- Does Africa need to consider ESSP as ANSP? (will drive the certification needs)
  - If Yes → Validation or certification depending on current practices of the countries of the module (see cases below)
  - If No (considered as Satellite Service Provider) → Service Acceptance only

- 2 cases for 1 module in case of « Yes »:
  - Validation (of the SMS including safety risk assessment/safety case)
    - If all countries of the module only rely on ICAO Annex 19
    - Based on current process
  - Certification
    - If at least one country shall certify the ANSP (so ESSP)
    - National existing Regulatory framework to be used: could benefit from existing African certification regulation(s) or certification recognition of EASA certification for Europe
  - Which institutions?
    - CAA or a group of CAAs or a leading CAA under AFCAC coordination
Certification scenario #2 (based on ramp-up scenario #B)

European Commission
Infrastructure Owner

African Infrastructure Owner

Delegation agreement
Service contract

ESA Design Agent and procurement of infrastructure evolutions

ESSP Service provision

AFI Region RIMS operations & maintenance

ESSP Service provision

African Services Center(s)

European ANSPs

African ANSPs

African Entity

African National CAAs

Services = NOTAM Raw Data + Data archiving + CDM

1 Services = NOTAM Raw Data + Data archiving + CDM

TBC

EASA

Independent performance validation?

Governance Actors

TO BE REVIEWED BASED ON WS5 OUTCOMES

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African case / Ramp-up scenario

- **Potential Services Center(s) Role:**
  - Services: *NOTAM content proposal, Data archiving, CDM, User support*
  - *Operations & Maintenance of African assets (RIMS & Network)*

- **Certification / validation requirements**
  - Certification of the Services Center(s) is not required as no ATM (or ATS TBC) service is delivered
  - ICAO Annex 19 → to be addressed at ANSP level in their SMS
  - Very similar to Scenario #A
African case / Ramp-Up

- 2 implementation timeframe for the Services Center(s)
  - Services Center(s) deployed from the beginning
  - Services Center(s) implemented as a second step (transition from scenario #A to scenario #B)
    - It seems not to impact safety of the system, it should not be considered as a major change → to be investigated

- Relationship between ESSP and Services Center(s): contractual agreement
TO BE REVIEWED BASED ON WS5 OUTCOMES
African case / Independent

- 2 Cases
  - Case 1: Based on current existing regulatory framework
  - Case 2: Considering initiatives towards a Single African Sky and a unique harmonised regulatory framework
  - Need to analyse the transition between the 2 cases

- **Case 1:** Based on current existing regulatory framework
  - Is there a need for EGNOS African Module Service Provider certification?
    - If Yes → certification depending on current practices of the countries of the module
    - If No (considered as Satellite Service Provider) → Validation of services (ICAO Annex 19 managed at ANSP level)

- **Case 2:** Considering initiatives towards a Single African Sky and a unique harmonised regulatory framework (applicable to other scenarios also)
  - Need of certification applicable to all modules with regard to the SAS regulation which has been developped
Thank you for your attention