EGNOS AFRICA JPO: Support to EGNOS in AFRICA

ACAC GNSS Workshop”
5th of April 2016, Rabat-Morocco
OUTLINE

- Introduction - background of JPO
- JPO Organisation setup
- JPO main activities and achievements (2014-2015)
- The proposed roadmap for EGNOS services implementation
  - Purpose and objective
  - Deployment strategy: establishment of modules
  - Strategy for implementation
  - Proposed services to target and Timeline
- JPO under Pan'Af programme - ‘Support Programme to EGNOS in Africa’ (2016-2017)
- JPO Coordination support activities-2016-2017
- Conclusion
Introduction- background of JPO

- EGNOS Africa JPO is key outcome of the Joint Africa-EU Strategy (JAES) regarding Africa-EU cooperation on satellite navigation - 3rd Africa-EU Summit in 2010 in Tripoli

- Operationalization of Africa-EU cooperation on satellite navigation: The ACP/EC framework Programme ‘Support to the Air Transport and Satellite services applications in Africa’ (SAFIR) was launched in 2012

- Two projects of the framework Programme, SAFIR and TREGA, addressed the Set-up, staffing and operationalization of JPO also capacity building for African stakeholders through working sessions

- Continuity of JPO is ensured through The Pan'Af programme, adopted in November 2015, with the Action ‘Support Programme to EGNOS in Africa’
JPO organisational setup

- JPO consists of 10 staff members, recruited after TREGA training sessions
- JPO expertise encompasses various multi-disciplinary domains including:
  - GNSS systems
  - Gnss applications for Aviation
  - GNSS applications for non-Aviation sectors
  - Legal and economic expertise
  - Certification
  - Programme Management
  - General management
- JPO Office: is currently located in Dakar, hosted and supported by ASECNA in own premises
JPO main activities and achievements (2014-2015)

- **Main Activities undertaken by JPO**
  - Promotion and awareness activities
  - Development of a roadmap for EGNOS services implementation
  - Definition of possible JPO short term legal and institutional framework
  - Development of JPO Action plan (post-SAFIR)

- **Key achievements**:
  - Possible JPO short term legal and institutional framework
  - the Roadmap for GNSS/EGNOS services implementation
Support to the definition of possible JPO short term legal and institutional framework

- **Objective:** To facilitate the establishment of a coordinated framework of EGNOS implementation in Africa

- **Methodology:**
  - Stakeholders analysis shows AUC has a leading role - AFCAC as a short term vehicle for JPO
  - Strategic analysis of JPO mandate call for a pan-African dimension entity, with financial sustainability

- **Recommendations for the legal status:**
  - an “Autonomous Entity of the Originating Organization (AUC/AFCAC)”
  - based on a tripartite framework - AUC/AFCAC, EC and the hosting Partner, ASECNA

- the evolution towards a long term solution through AUC and AFCAC

- A High Level Event (HLE) on Aviation planned this Year (under AUC) on the subject
Purpose: To assist States for harmonized introduction of cost-effective EGNOS/SBAS services, based on modular implementation strategy

Where a ‘module’ is defined as a Stakeholder or Group of Stakeholders acting together to implement EGNOS

Objective: to provide the necessary guidelines for EGNOS deployment in Africa through modular implementation (by 2028) with full SBAS coverage of Africa as a long-term goal for Africa (2028-38)

Proposed modules: Regional cooperation framework through the RECs with due consideration of ongoing initiatives (ASECNA, MEDA/ACAC, South Africa)
Deployment Strategy: establishment of modules

- Four modules have been identified for Africa:
  - Northern (M1),
  - West-Central (M2),
  - Eastern Africa (M3),
  - Southern (M4)
The strategy for implementation

- Scenario for implementation:
  - Extension
  - Autonomous

- Strategy for deployment includes:
  - Incremental approach, sharing of assets
  - Exploiting synergies with Europe
  - Consideration of the transition from V2 to V3
  - Consideration of the certification, operations and adoption by users

- Assumption: the responsibility for the funding strategy (CAPEX and OPEX) lies with African stakeholders implementing EGNOS
## Proposed services to target and timeline

<table>
<thead>
<tr>
<th>EGNOS v2 L1 services</th>
<th>Date</th>
<th>EGNOS v3 DFMC services</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Service GPS</td>
<td>2020</td>
<td>Open Service GPS, GPS+GALILEO</td>
<td>2025</td>
</tr>
<tr>
<td>Safety of Life NPA GPS</td>
<td>2021</td>
<td>Safety of Life NPA GPS, GPS+GALILEO</td>
<td>2026</td>
</tr>
<tr>
<td>Safety of Life NPA+APV1+LPV200 GPS</td>
<td>2023</td>
<td>Safety of Life NPA+APV1 + LPV200 GPS, GPS+GALILEO</td>
<td>By 2028</td>
</tr>
<tr>
<td>Safety of Life Maritime</td>
<td></td>
<td>Safety of Life Maritime</td>
<td>tbd</td>
</tr>
<tr>
<td>EDAS services</td>
<td></td>
<td>EDAS services</td>
<td>tbd</td>
</tr>
</tbody>
</table>
JPO under Pan'Af programme, - ‘Support Programme to EGNOS in Africa’ (2016-2017)

Main objective of Pan’AF Programme ‘Support to EGNOS in Africa’ is to ensure continuity of JPO programmes.

Main Activities:

- Support the process for the adoption of the preliminary decision for the establishment of modules, including support to regional initiatives

- Undertake the communication and awareness activities and strengthen capacity building on GNSS/EGNOS

- Support the JPO institutionalisation process
JPO coordination support activities -2016-2017

Support RECs/States ‘Modules’ establishment

- the development of Legal and institutional requirements
- the capacity building for the modules
- the EGNOS adoption: market assessment/promotion by States-RECs

Support to continental planning of SBAS and initiatives

General promotion of SBAS for Africa (Regional Forums, APIRG, IWG, EGEP)

Support the institutionalization process of the JPO
Conclusion

- JPO has completed the deliverables of the first phase of its ‘mandate’ under the framework programme SAFIR.
- JPO capacity building programme and the proposed roadmap are key achievements on which Africa could capitalize for the future GNSS/EGNOS implementation plans in Africa.
- JPO current work programme (under Pan’AF) provides opportunities for collaboration with all African organisations /States and initiatives in supporting their GNSS/EGNOS implementation plan in Africa.
- We look forward to further cooperation with ACAC with regards to GNSS/EGNOS implementation plan in Africa.
THANK YOU!

EGNOS -AFRICA Joint Programme Office (JPO) | ASECNA, BP 8163 Dakar Yoff, Senegal | Tel : +221 33 820 93 66
| info@egnos-africa.com; website: www.aviation-africa.eu/JPO