

GSA & ESSP

launched the EGNOS survey intended to measure EGNOS user satisfaction and gather valuable of the EGNOS services.

Thank you for your collaboration. Your opinion is essential to improve the EGNOS services!



YOUR SATISFACTION is our reason for being!









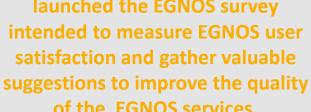






Geostationary "The European Navigation Overlay Service (EGNOS) provides an augmentation service to the Global Positioning System (GPS) Standard Positioning Service (SPS). Presently, **EGNOS** augments GPS using the L1 (1575.42 MHz) Coarse/ Acquisition (C/A) civilian signal function by providing correction data and integrity information for improving positioning, navigation and timing services over Europe".





QUESTIONNAIRE STRUCTURE

- 1.- Introduction and Classification
- 2.- EGNOS Use
- 3.- EGNOS User Support Services
 - Website
 - Documentation
 - Helpdesk
- 4.- EGNOS Time Service
- 5.- EGNOS Services (Performance & Satisfaction)
 - Safety of Life (SoL)
 - o EDAS
 - Open Service (OS)
- 6.- EGNOS Value (Market Segment)
 - Agriculture
 - Aviation
 - Maritime
 - Road
 - Rail
 - Surveying & mapping
 - Location-Based Services
 - o Other

7.- EGNOS Market Development







The questionnaire has been filled by

respondents

USER SATISFACTION SURVEY 2016

52 In 2015 **Non-EGNOS Users**

134 In 2015 **EGNOS Users**

11 respondents are using

EGNOS Time Service.

8.8 Satisfaction

34% could be interested in using this service.

Global **Satisfaction Score**

7.6 - 2015

USER SATISFACTION SCORE PER MARKET SEGMENT

22 respondents

Agriculture

82 respondents

2015 **Aviation**

5 respondents

2015

1 respondent

Road

7 respondents

2015 Sur. & Map.

LBS

2015

(Location Based-Services)

6 respondents

(*) There are not any respondents from **Rail** (Score 2015: 7.8)

2015

(*) All scores are graded out of 10 points and are based on 134 EGNOS Users' answers.

Your SATISFACTION is our reason for being!

EGNOS SUPPORT

SUPPORT

2015

Support Website



8.2

2015

Documentation

FGNOS SERVICES



2015

SoL

82 (61%) EGNOS Users (*)

EGNOS Users (*)

2015

(*) Each respondent can use more than one service.

Performance



Helpdesk

2015

8.3

8.8

EGNOS SoL accuracy 2015

8.8 **EGNOS Sol** availability 2015

8.4

EGNOS SoL

continuity 2015

8.4 **EGNOS SoL**

coverage 2015

7.5

7.3 🛦

EGNOS OS accuracy 2015

7.2

7.8 A EGNOS OS

availability 2015

7.1

7.8 **EGNOS OS** coverage 2015

7.4





ARCHITECTURE/ EVOLUTIONS

Inform in advance about SiS outages.

EGNOS USER SUPPORT WEBSITE

- □ **Define sections in EUSW per each Market Segment** (Ensure there is a minimum number of contents for each section).
- ☐ Improve the Usability of EUSW: remove links/content from a different Service/Market Segment when browsing content (e.g. LPV Maps and EBCAST tool in OS or Surveying content) and analyse the speed, access to information, navigation simplicity and updated/outdated content.
- □ Have a tool in EUSW to allow users to know the availability of the service depending on their coordinates (provided by users).
- ☐ Include information about the Message Type in EUSW (it is currently only in SDDs, include all information that appears in all SDDs in "About EGNOS" Webpage).

EGNOS DOCUMENTATION

- Increase EGNOS awareness via generic training material in the website or generic training sessions (live or webinars).
- Ensure that information can be searched inside documentation (e.g. when using Flash or videos provide the source text or an alternative format that can be used for searches).





EGNOS HELPDESK

Analyse Helpdesk services offered by E-GNSS off-shore service providers.

Investigate the feasibility to define/establish the EGNOS Service Provision scheme to enable the declaration and provision of an EGNOS Timing service for safety and liability critical applications/markets.

EGNOS TIME SERVICE

Investigate the necessary actions (i.e. installation of a redundant RIMS for RIMS-A PAR, equipment spares provisions, etc.) to be made at RIMS PAR as to provide redundancy or backup means to respectively avoid unpredictable outages or promptly restore the EGNOS timing service UTC(P) in case of failure.

EGNOS SoL PERFORMANCE

■ Extend the coverage area to Moldavia, Eastern Europe and MEDA, above 72ºN, Canary Island.





EGNOS SoL MARITIME

- Support MEDA region (e.g. Egypt and Morocco) using EGNOS to cope with more demanding requirements for Port Operations (1 meter horizontal accuracy 95%) as per IMO Res 915 (dual frequency). Current requirements consistent with IMO-1046.
- Support the recognition of EGNOS by IMO as a component of the World Wide Radio Navigation Systems since will help for the use of EGNOS for maritime navigation.
- Stablish a clear EGNOS Service Provision framework for SBAS services for Maritime including the required agreements with Maritime Authorities/AtoN providers and associated coordination.
- Definition of the EGNOS integrity concept adapted to maritime needs.

EGNOS SoL RAIL

- □ Stablish a clear EGNOS Service Provision framework for SBAS services for Rail including the required agreements with ERTMS/infrastructure managers and associated coordination.
- □ Analyse how current EGNOS performance could support Safety Integrity Levels (SIL) rail requirements.





- Define a Service Provision scheme for non-instrument runways, where there is no ANSP in place.
- Overlapping SBAS Service Area: To define a solution when using SBAS in APV Baro procedures (where no FAS DB is possible) same issue was solved for those where there is FAS DB.
- Provide coverage for Helicopter Operations in Class-G airspace with the current Service Provision Scheme (NOTAM Service).
- Increase EWA awareness in order to clarify the EWA coverage in terms of liability/responsibility.
- Analyse the difficulties faced by ANSPs to be compliant with the requirements to publish LPV procedures (economic costs, time consuming costs, etc.).
- Work together with Aviation receivers manufacturer to reduce the equipment costs for private pilots.
- Publish a list of EGNOS Compatible receivers for Aviation Market.

EGNOS SoL AVIATION





EGNOS OS

□ Support MEDA region (e.g. Egypt and Morocco) using EGNOS for public transport and services.

- □ Define a mechanism to allow EDAS access for relevant users from non-EU countries (e.g. specific agreements, under specific EU funded projects to access to the service, etc.).
- Increase the limit of concurrent connexions (mount-points) for NTRIP access. Enable a mechanism to reset blocked users automatically (without manual work).
- Remove UAS (ESA EDAS SISNET User Application Software) limitations that prevent the proper retrieval of the EGNOS GEO messages broadcast by EDAS SISNET. (The software gets blocked when it receives a MT63).
- Allow access to EDAS to citizens not belonging to corporations/private companies (currently only private or public organizations can obtain an account).
- Push for the development and maintenance for EGNOS/EDAS development toolkits (EGNOS SDK, Signature and Pegasus) and define distribution actions.

EGNOS EDAS



...and we are working on your suggestions. Some of them have already been implemented/launched...



http://egnos-user-support.essp-sas.eu



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- The **EGNOS Multimodal Adoption (EMA)** action plan for 2017 considers user recommendations to foster the EGNOS adoption in all market segments.
- □ **Different actions** are being implemented in order to improve user satisfaction levels.
- Innovative ways to present the information to users are being defined to be included in EGNOS User Support Website and also working to release the EGNOS APP to be freely available for users in the open markets.







+34 911 236 555 (H24/7)

THANK YOU FOR YOUR ATTENTION!



YOUR SATISFACTION is our reason for being!



- Safety of Life
- o Open Service
- EDAS Service













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