EGNOS

EGNOS, it's there. Use it.

"The European Geostationary Navigation Overlay Service (EGNOS) is Europe's regional satellite-based augmentation system (SBAS). It is used to improve the performance of global navigation satellite systems (GNSSs), such as GPS and Galileo in the future. EGNOS was deployed to provide safety of life navigation services to aviation, maritime and land-based users".

European
Global Navigation
Satellite Systems
Agency

GSA & ESSP

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

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

EGNOS

YOUR SATISFACTION is our reason for being!

ESSP

QUESTIONNAIRE STRUCTURE

1.- Introduction and Classification

2.- EGNOS Use

3.- Support in Developing Apps.

4.- EGNOS User Support Services

- o Website
- o Documentation
- o Helpdesk
- o Time Service

5.- EGNOS Services (Perceived Performance)

- o Safety of Life (SoL)
- o EDAS
- o Open Service (OS)

6.- EGNOS Value

7.- EGNOS Value (by Market Segment)

- o Agriculture
- o Aviation
- o Maritime
- o Road
- o Rail
- o Surveying & mapping
- o Location-Based Services
- o Other

8.- EGNOS Market Development

Precise navigation, powered by Europe

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The questionnaire has been filled by

140 respondents · *177 In 2017*

25 Non-EGNOS Users · *41 In 2017*

+

115 EGNOS Users · *136 In 2017*

USER SATISFACTION SCORE PER MARKET SEGMENT

8.3 ▲
Global Satisfaction Score
8.1 - 2017

30 respondents
Agriculture **7.9** ▲ 2017 **7.6**

6 respondents
Maritime **8.7** ▲ 2017 **7.9**

9 respondents
Sur. & Map. **7.2** ▼ 2017 **7.3**

62 respondents
Aviation **8.5** ▲ 2017 **8.4**

4 respondents
Rail **7.9** ▲ 2017 **7.1**

1 respondent
Road **9.4** ▲ 2017 **6.8**

3 respondents
LBS **8.5** ▼ 2017 **9.4**
(Location Based-Services)

(*) All scores are graded out of 10 points and are based on 115 EGNOS Users' answers.

EGNOS TIME SERVICE

4 respondents are using EGNOS Time Service (2017: 15)

7.0 Satisfaction ▼ (2017: 8.6)

18% could be interested in using this service. (2017: 22%)

EGNOS SERVICES

Your SATISFACTION is our reason for being!

EGNOS SUPPORT

www SUPPORT
2017 **7.9**
Support Website **8.0** ▲

Documentation
2017 **8.3**
8.3 ↔

Helpdesk
2017 **8.3**
8.7 ▲

42 (37%) EGNOS Users *(*)
SoL 2017
▲ **8.7** **8.5**

54 (47%) EGNOS Users *(*)
OS 2017
▲ **8.1** **7.8**

18 (16%) EGNOS Users *(*)
EDAS 2017
▲ **8.2** **8.0**

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

Performance

9.1 ▲ EGNOS SoL accuracy 2017 **8.9**

9.0 ▲ EGNOS SoL availability 2017 **8.6**

8.5 ▲ EGNOS SoL continuity 2017 **8.4**

8.2 ▲ EGNOS SoL coverage 2017 **7.9**

7.9 ▲ EGNOS OS accuracy 2017 **7.6**

8.3 ▲ EGNOS OS availability 2017 **7.9**

8.0 ▲ EGNOS OS coverage 2017 **7.7**

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Recommendations derived from your feedback…

ARCHITECTURE/ EVOLUTIONS	❑ **Increase accuracy and coverage.** ❑ **Minimize the impact on users of GEO Swaps.**
GENERAL SUPPORT	❑ **Multilingual User Support Services** (website, helpdesk, etc..).
EGNOS DOCUMENTATION	❑ **Release documentation oriented to end users avoiding technical language for publications.**
EGNOS App	❑ **Port all new EGNOS User Support Website aviation contents to the EGNOS APP.**

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Recommendations derived from your feedback...

EGNOS USER SUPPORT WEBSITE

❑ **Improve EGNOS User Support Website navigation with easier access to information** (e.g. a search bar)**.**

❑ **Replace static images for performance maps with dynamic tools.**

❑ **Earlier announcement of outages and more accurate information on the recovery.**

❑ **Add historic ionospheric activity maps with GIVEI and vertical delay values as well as ionospheric activity time series plots for monitoring station locations.**

❑ **Increase EGNOS V3 awareness in the aviation community.**

❑ **List active planned outages on the EGNOS User Support Website with specific affected times.**

❑ **Provide historical NOTAMs issued due to EGNOS in the EGNOS User Support Website.**

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Recommendations derived from your feedback...

EGNOS SoL PERFORMANCE

- ❑ Increase availability commitment to 99.9%.

- ❑ Increase continuity on SoL.

- ❑ Extend the coverage area to boundaries areas of the current service provided.

- ❑ Enable Dual frequency Operations.

EGNOS SoL MARITIME

- ❑ Implementation of EGNOS L1 Maritime Service including integrity at system level compliant with IMO resolution A.1046 taking into account the evolution of DGNSS infrastructure.

EGNOS SoL RAIL

- ❑ Continue working with Rail sector to document the requirements needed to enable SoL.

- ❑ Produce documentation material for Rail users.

- ❑ Evolve the SoL service as to cover ERTMS requirements.

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Recommendations derived from your feedback...

EGNOS SoL AVIATION

- ❑ **Reduce the time to publish NOTAMs to 15 minutes.**

- ❑ **Provide further support on RNP APCH, PinS, RNP 0.3, RNP AR APCH.**

- ❑ **Increase the number of LPV procedures to aim pilots, training organizations and rotorcraft operators to enable SBAS.**

- ❑ **Provide with solutions for pilots, rotorcraft operators and training organizations to reduce the costs associated to enable certified SBAS.**

- ❑ **Several ANSPs have requested to improve the LPV200 capabilities to foster EGNOS-based approaches on their network.**

EGNOS TIME SERVICE

- ❑ **Evaluate and understand the user needs for EGNOS time service development.**

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Recommendations derived from your feedback...

EGNOS OS

- ❑ Extend OS service area and increase its accuracy.

- ❑ Develop the concept of "integrity" for drones. The integrity must play a role as GNSS is the main navigation system for RPAS.

EGNOS EDAS

- ❑ Virtual stations (VRS) feature on EDAS service for testing purpose.

- ❑ Increase the EDAS awareness for OS users facing difficulties to have the SiS in view.

- ❑ Provide further support on post processing and real time systems.

- ❑ Enable EDAS for unregistered users.

- ❑ Inclusion of MSM on EDAS.

- ❑ Publish a mobile app in markets where users can connect and use EDAS corrections.

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

egnos-helpdesk@essp-sas.eu

+34 911 236 555 (H24/7)

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

❑ Provide **more visibility of planned outages** information and duration in **the EGNOS User Support Website**.

❑ Improve **the EGNOS User Support Website navigation** and **left side menu**.

❑ Produce **documentation oriented to end users** avoiding technical language for publications.