



EGNOS, it's there. Use it.

EGNOS Users' Satisfaction

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Satellite Systems
Agency



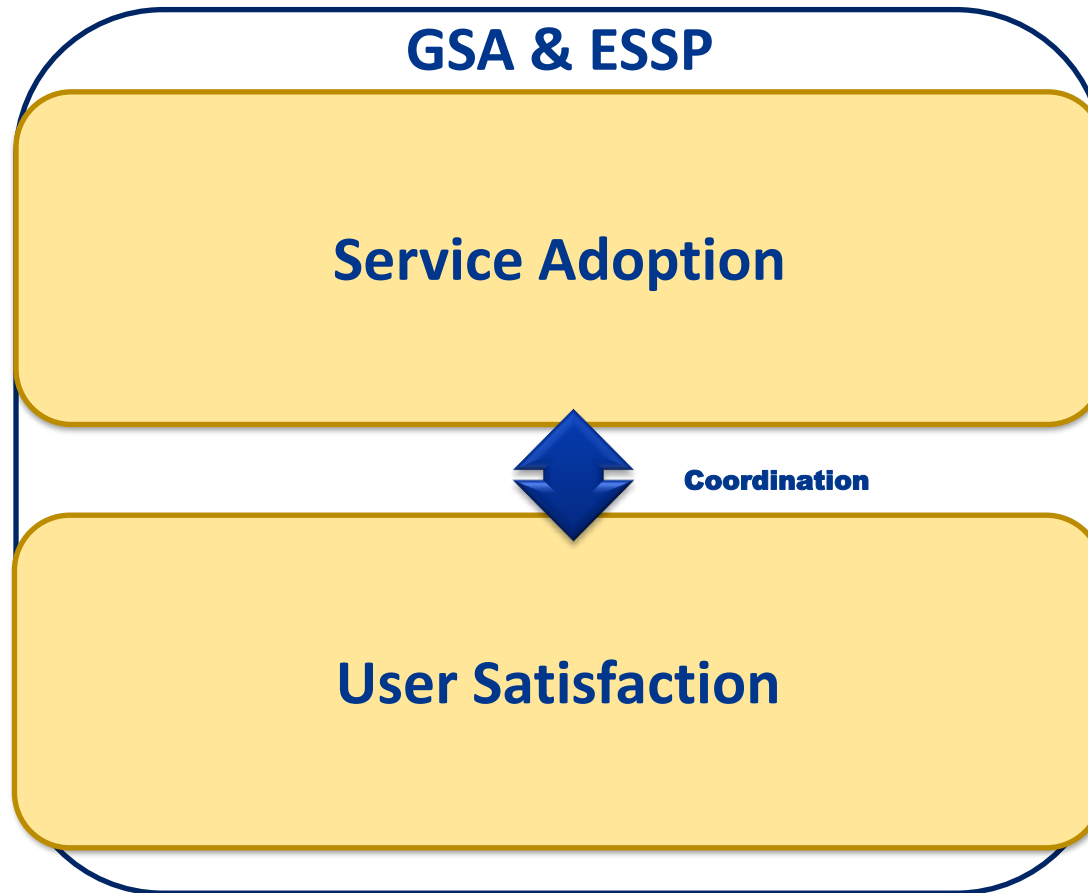
Precise navigation,
powered by Europe



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EGNOS User Support Improvement Process



Service Adoption:

Activities addressed to promote EGNOS and foster its adoption in different market segments.

User Satisfaction:

Activities addressed to improve users' perception on EGNOS service provision (especially those aspects directly related to GSA & ESSP responsibilities).

EGNOS User Support Improvement Process

USER SUPPORT IMPROVEMENT PROCESS

GSA / ESSP Interfaces

GSA Market information

User Satisfaction Surveys

EGNOS SP I/F Helpdesk, website, events, EWAs...



EGNOS Multimodal Adoption (EMA) Action Plan



Coordination

EGNOS User Satisfaction Action Plan



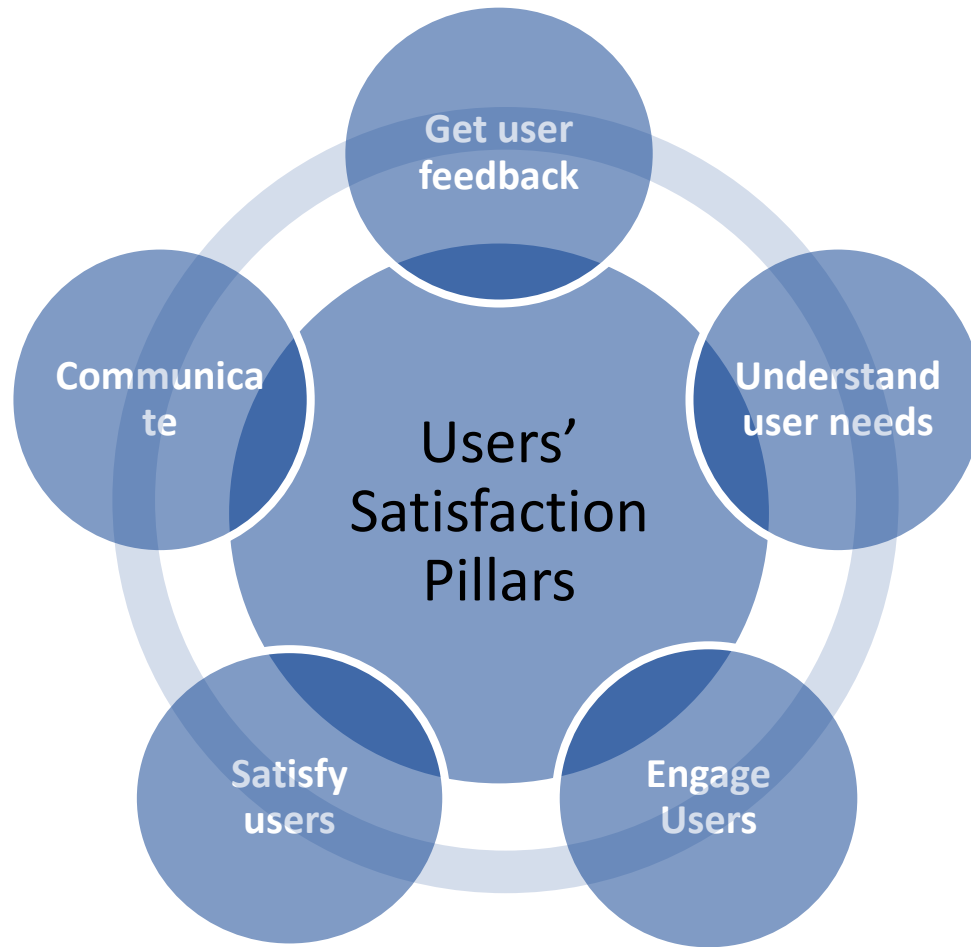
Service Adoption:

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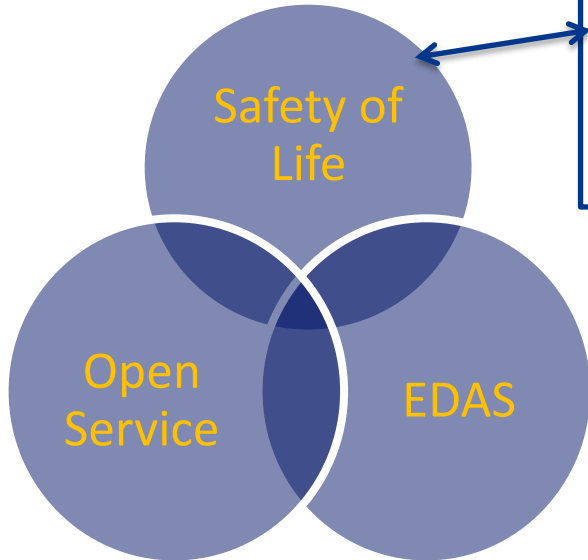
EGNOS Users' Satisfaction Principles



EGNOS Users' Satisfaction Principles

GSA mission:
 Linking space to user needs and maximise socio-economic benefits
 Continuously improve E-GNSS services and infrastructure

Aviation
Maritime
Agriculture
Road
Rail
Surveying & Mapping
LBS



SES Regulation
 "User Consultation Process"

ESSP Quality Management System
 ISO 9001:2008

EGNOS Users' Satisfaction Results (Sample Characterization)



The questionnaire has been filled by **134 EGNOS users**

136 in 2015

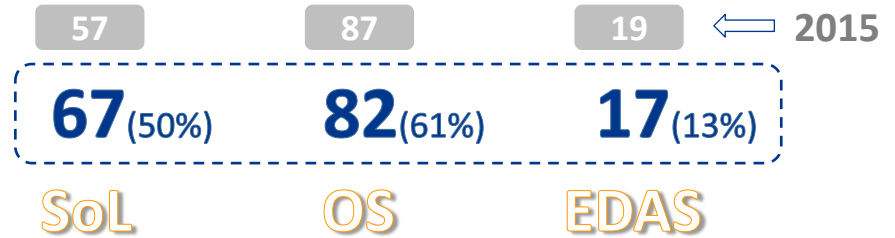
+52 additional respondents

Received answers per Market Segment

Country of origin of respondents (TOP 5)



EGNOS Services



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

Agriculture



22 (16%) ³⁰ 2015

Aviation



82 (61%) ⁶⁷ 2015

Maritime



5 (4%) ⁷ 2015

Rail



0 (0%) ² 2015

Road



1 (1%) ⁴ 2015

Surveying & Mapping



7 (5%) ¹¹ 2015

Location-Based Services



6 (4%)

Note.- 11 respondents (8%) marked "other" Market Segment in 2016 versus 9 (7%) in 2015.



EGNOS Users' Satisfaction Results

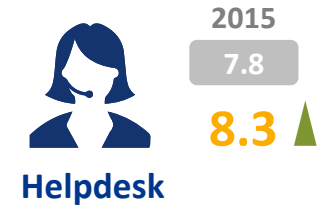
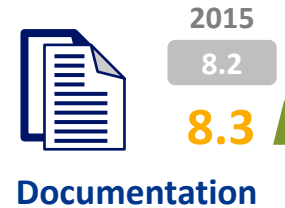
(Global Score – EGNOS Support & Services)

8.1 ▲

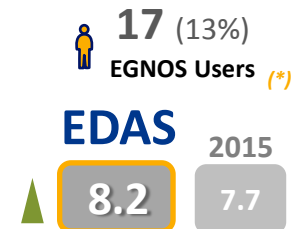
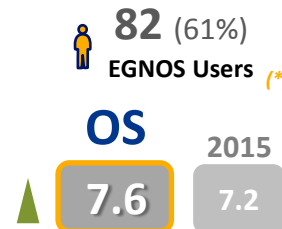
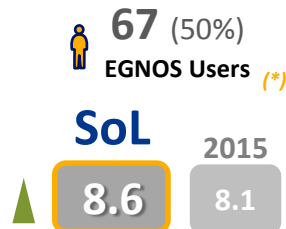
Global Satisfaction Score

7.6 - 2015

EGNOS SUPPORT



EGNOS SERVICES



134 EGNOS USERS
filled the questionnaire



egnos-helpdesk@essp-sas.eu
+34 911 236 555 (H24/7)

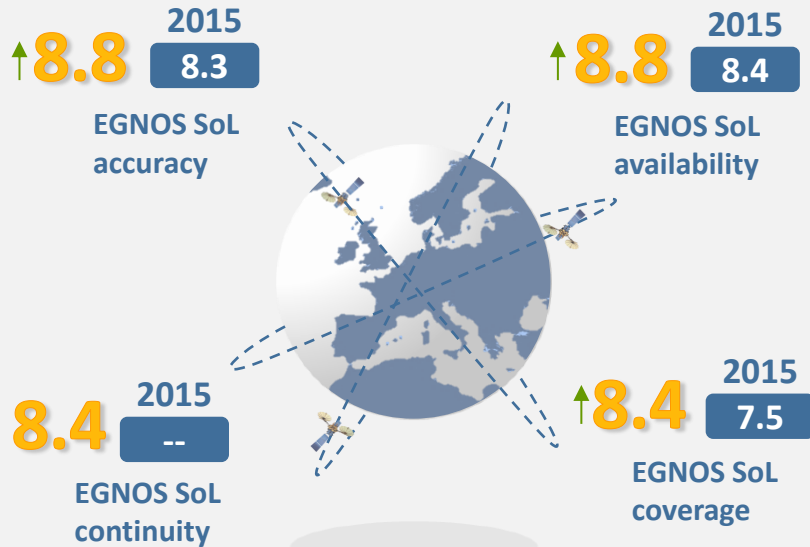


<http://egnos-user-support.essp-sas.eu>

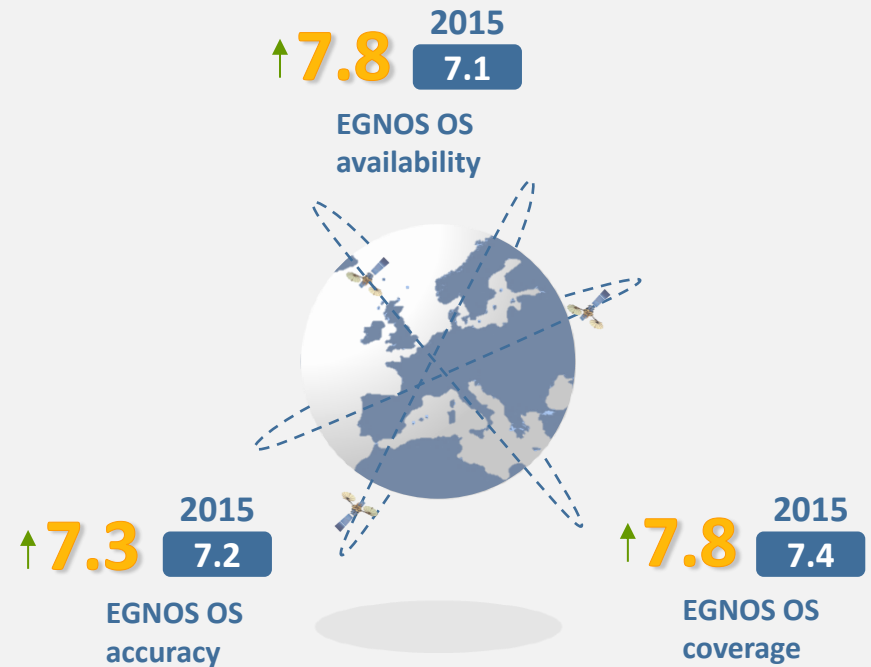


EGNOS Users' Satisfaction Results (EGNOS Services - Performance)

SAFETY OF LIFE



OPEN SERVICE



EGNOS Users' Satisfaction Results (Market Segments)



AGRICULTURE



AVIATION



MARITIME



RAIL



ROAD



SURVEYING &
MAPPING



LOCATION-BASED
SERVICES

Number of respondents

22 (16%)

82 (61%)

5 (4%)

0 (0%)

1 (1%)

7 (5%)

6 (4%)

Global Satisfaction Score

6.5 ↓

8.5 ↑

7.9 ↓

--

9.0 ↑

7.9 ↑

8.8 ↑

6.7

7.9

8.2

7.8

6.3

7.4

7.4

2015

NOTE.- 11 respondents (8%) marked "other" Market Segment: Automotive (1); Drones (1); GNSS R&D at chip (1); Hiking (1); Private citizen (1); Telecommunication (1); Science/Teaching/Research (5). (Global Satisfaction Score.- 7.3).

EGNOS Users' Satisfaction Analysis (Recommendations)

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).

HELPDESK

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

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 Users' Satisfaction Analysis (Recommendations)

ARCHITECTURE/ EVOLUTIONS

- ❑ Inform in advance about SiS outages.

TIME SERVICE

- ❑ 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.
- ❑ 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 72°N, Canary Island.

EGNOS Users' Satisfaction Analysis (Recommendations)

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.
- ❑ Establish 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

- ❑ Establish 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.

EGNOS Users' Satisfaction Analysis (Recommendations)

EGNOS SoL AVIATION

- ❑ 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 Users' Satisfaction Analysis (Recommendations)

EGNOS OS

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

EGNOS EDAS

- ❑ **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 Users' Satisfaction Implemented Actions

- ❑ The **EGNOS Multimodal Adoption (EMA)** action plan for 2017 considers user recommendations to foster the EGNOS adoption in all market segments. Others will be included in EMA 2018.
- ❑ The remaining areas of potential improvement are covered by defining specific **User Satisfaction Action Plan** to be implemented along 2017. 10 actions defined in 2017.

- ❑ The **EGNOS User Support Website**: Revamped website coming soon. See next slides.
- ❑ **Innovative ways** to present the information to users are being defined.



EGNOS Users' Satisfaction Implemented Actions

EGNOS Helpdesk will answer 24/7 your questions over the phone +34 911 236 555, via email (egnos-helpdesk@essp-eas.eu) or filling in the question form [here!](#)

HELPSDEK LOGIN REGISTER

EUROPEAN GNSS EGNOS SYSTEM SERVICES NEWS DOCUMENTS RESOURCES & TOOLS

EGNOS User Support

Looking for innovation and business opportunities in GNSS?
Check out GSA grants & procurements calls.

EGNOS System availability REAL TIME

- PRN 120 ACTIVE Sol. Mode
- PRN 123 ACTIVE Sol. Mode
- PRN 136 ACTIVE Test Mode

Safety of Life Service

EGNOS SIS availability forecast
The top part of each coil in the calendar represents the availability forecast of PRN 120, the bottom one shows the status of PRN 123.

Open Service

EDAS Service

REAL TIME

SLB	SLB	NTSP	FTP
SIENET	SIENET	DF NW	DF C
GEON	GEON	DF SW	DF M

FORECAST
Planned Outages: No planned outages.

HISTORICAL

Resources & tools

- EBCAST Tool
- LPV Procedures Map
- Training material

Latest news

- Expanding GNSS performance with assistance data
- EGNOS for aviation in acceleration mode

Satellite Systems Agency

Learn more

European GNSS Service Center

Learn more

EGNOS Video

The many uses of Galileo and EGNOS today and tomorrow

Learn more

Latest tweets

Tweets by @EGNOSPortal

EGNOS Portal @EGNOSPortal #EGNOS ELASTIC project is enabling the future of M2M markets and empowering high-performance location apps. #GNSS on /yJyXQ230YX8



EGNOS Survey 2017 open!!

EGNOS Survey (GSA-ESSP) 2017 covers EGNOS Services during the last year
Open until 30 November 2017

The screenshot shows the EGNOS User Satisfaction Survey webpage. At the top left is the European Global Navigation Satellite Systems Agency logo. The main navigation bar includes links for EUROPEAN GNSS, ABOUT, OPPORTUNITIES, GNSS APPLICATIONS, NEWSROOM, and MEDIA LIBRARY. Below this is a row of icons representing various sectors: AGRICULTURE, AVIATION, LOCATION BASED SERVICES (LBS), MAPPING & SURVEYING, MARITIME, RAIL, and ROAD. The breadcrumb trail reads: Home > European GNSS > EGNOS > Services > EGNOS User Survey. The main content area features a sidebar with a search function and a list of categories: What is GNSS?, Galileo, EGNOS, What is EGNOS?, Programme, System, Applications, and Services. The 'EGNOS User Satisfaction Survey' page is highlighted, showing a large EGNOS logo and a 'Start' button. The text on the page reads: 'Welcome to the EGNOS User Satisfaction Survey. Thank you for agreeing to participate in this survey. Your feedback is important to us, and it will help the GSA and the ESSP to improve EGNOS and meet your expectations.'

<https://www.gsa.europa.eu/european-gnss/egnos/what-egnos/egnos-user-satisfaction-survey>



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



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Corporate Video

Thank you!