The European Union Agency for the Space Programme (EUSPA) launched the 4th Galileo User Satisfaction Survey between 9th December 2020 and 1st April 2021. The aim was to gather valuable information regarding:

- perception and expectations about Galileo services
- specific needs of users in different market-related segments
- suggestions for improvement of the services provided by the European GNSS Service Centre (GSC).

This survey was intended to give voice to the growing Galileo User Community and build a continuous dialogue for the improvement of the Galileo system and its services.

Galileo is Europe’s Global Navigation Satellite System (GNSS), providing improved positioning and timing information, and serving public authorities, businesses and citizens across Europe and beyond.
Distribution of the respondents by downstream actor

Distribution of the respondents by market segment

Service Provider / Appl.. (28%)  End Users (27%)  Authority/Institutional.. (27%)
Receiver/Chipset manufacturer (10%)  System Integrator (8%)
**General Galileo Questions**

Already **using** Galileo
- **2017**: 87%
- **2018**: 86%
- **2019**: 89%
- **2020**: 90%

Are **satisfied** with Galileo
- **2017**: 94%
- **2018**: 96%
- **2019**: 94%
- **2020**: 98%

Would **recommend** Galileo
- **2017**: 97%
- **2018**: 100%
- **2019**: 100%
- **2020**: 100%

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**Use**
- Authority / Institutional / Scientific entities: 22% **Yes** / 78% **No**
- Service Providers / App. Developers: 4% **Yes** / 96% **No**
- System Integrators: 29% **Yes** / 71% **No**
- Rx/Chipset Manufacturers: 100% **Yes** / 0% **No**
- End Users: 41% **Yes** / 59% **No**

**Satisfaction**
- Authority / Institutional / Scientific entities: 72% **Very satisfied** / 28% **Satisfied** / 6% **Not satisfied**
- Service Providers / App. Developers: 74% **Very satisfied** / 21% **Satisfied** / 5% **Not satisfied**
- System Integrators: 80% **Very satisfied** / 20% **Satisfied** / 10% **Not satisfied**
- Rx/Chipset Manufacturers: 100% **Very satisfied** / 0% **Satisfied** / 0% **Not satisfied**
- End Users: 17% **Very satisfied** / 62% **Satisfied** / 21% **Not satisfied**

**Recommendation**
- Authority / Institutional / Scientific entities: 100% **Yes**
- Service Providers / App. Developers: 100% **Yes**
- System Integrators: 100% **Yes**
- Rx/Chipset Manufacturers: 100% **Yes**
- End Users: 100% **Yes**
## Feedback about Galileo

### Galileo Users

**Top-5 reasons to use Galileo**
- There are more satellites available: 73%
- I experience better positioning performance: 44%
- Position solution is not lost in harsh environments: 38%
- It is a European project designed for civil purposes: 36%
- My customers appreciate the inclusion of Galileo: 33%

**Top-5 features expected from Galileo**
- Better performance (accuracy, availability ...): 62%
- Stronger protection regarding jamming/spoofing: 45%
- Strong confidence regarding positioning error: 41%
- Lower time to obtain the first position: 30%
- More precise timing/synchronization information: 23%

### Non-Galileo users

**Top-3 reasons to not use Galileo**
- My device is not Galileo compatible: 42%
- Other: 33%
- Galileo cannot be activated in my device (even if it is Galileo compatible): 17%

**Comments to “Others”**: Backwards compatibility with GPS-only devices, network not processing Galileo, necessity of data from reference stations.

**Top-5 features expected from Galileo**
- Higher accuracy: 83%
- Higher availability of satellites: 75%
- Better performance in harsh environments: 58%
- Less time needed to fix my first position: 50%
- Possibility to get authenticated GNSS signals: 42%

**Most repeated comments**: Full Operational Capability is the top-repeated comment, followed by the use of HAS and the reduction in the time to inform users about any degradation in the Signal-In-Space.

**Note**: for all questions, users could select one or more answers.
GSC-RELATED QUESTIONS

15% of respondents are REGISTERED in the GSC

- **Global Statistics**: 59% KNOW about the GSC have VISITED the GSC

- **Overall ASSESSMENT for the GSC**: 3.60 (1-5 scale)

### NAGU satisfaction (1-5 scale)
- 2020: 3.90
- 2019: 3.60

### HELPDESK satisfaction (1-5 scale)
- 2020: 3.57
- 2019: 3.60

### ALMANACS satisfaction (1-5 scale)
- 2020: 4.50
- 2019: 4.00

### ELECTRONIC LIBRARY satisfaction (1-5 scale)
- 2020: 4.00
- 2019: 3.50

### INCIDENT REPORTS satisfaction (1-5 scale)
- 2020: 3.75
- 2019: 3.30

### SATELLITE METADATA satisfaction (1-5 scale)
- 2020: 4.25
- 2019: 4.10

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**Authority / Institutional / Scientific entities**
- 26% KNOW about the GSC
- 74% have VISITED the GSC
- 26% are REGISTERED in the GSC

**Service Providers / App. Developers**
- 36% KNOW about the GSC
- 63% have VISITED the GSC
- 13% are REGISTERED in the GSC

**System Integrators**
- 57% KNOW about the GSC
- 43% have VISITED the GSC
- 10% are REGISTERED in the GSC

**Rx/Chipset Manufacturers**
- 58% KNOW about the GSC
- 65% have VISITED the GSC
- 13% are REGISTERED in the GSC

**End Users**
- 57% KNOW about the GSC
- 43% have VISITED the GSC
- 9% are REGISTERED in the GSC

* New products will soon be provided to improve GSC visibility

* New products will soon be provided to improve GSC visibility

Global Statistics*

End Users

System Integrators

Rx/Chipset Manufacturers

Authority / Institutional / Scientific entities

Service Providers / App. Developers
FEEDBACK ABOUT GSC SERVICES

**NAGU rating**
- Authority / Institutional / Scientific entities: 13% Unsatisfied, 63% Moderately satisfied, 25% Very satisfied
- Service Providers / App. Developers: 50% Unsatisfied, 50% Moderately satisfied
- System Integrators: 50% Unsatisfied, 50% Moderately satisfied
- Rx/Chipset Manufacturers: 100% Unsatisfied
- End Users: 50% Unsatisfied, 50% Moderately satisfied

**HELPDESK rating**
- Authority / Institutional / Scientific entities: 17% Unsatisfied, 50% Moderately satisfied, 33% Very satisfied
- Service Providers / App. Developers: 33% Unsatisfied, 33% Moderately satisfied, 33% Very satisfied
- System Integrators: 100% Unsatisfied
- Rx/Chipset Manufacturers: 100% Unsatisfied
- End Users: 100% Unsatisfied

**ALMANACS rating**
- Authority / Institutional / Scientific entities: 67% Unsatisfied, 33% Moderately satisfied
- Service Providers / App. Developers: 100% Unsatisfied
- System Integrators: 100% Unsatisfied
- Rx/Chipset Manufacturers: 100% Unsatisfied
- End Users: 50% Unsatisfied, 50% Moderately satisfied

**ELECT. LIBRARY rating**
- Authority / Institutional / Scientific entities: 67% Unsatisfied, 33% Moderately satisfied
- Service Providers / App. Developers: 100% Unsatisfied
- System Integrators: 100% Unsatisfied
- Rx/Chipset Manufacturers: 100% Unsatisfied
- End Users: 50% Unsatisfied, 50% Moderately satisfied

**INCIDENT REPORTS rating**
- Authority / Institutional / Scientific entities: 17% Unsatisfied, 83% Moderately satisfied
- Service Providers / App. Developers: 67% Unsatisfied, 33% Moderately satisfied
- System Integrators: 100% Unsatisfied
- Rx/Chipset Manufacturers: 100% Unsatisfied
- End Users: 100% Unsatisfied

**SATELLITE METADATA rating**
- Authority / Institutional / Scientific entities: 33% Unsatisfied, 67% Moderately satisfied
- Service Providers / App. Developers: 33% Unsatisfied, 67% Moderately satisfied
- System Integrators: 100% Unsatisfied
- Rx/Chipset Manufacturers: 100% Unsatisfied
- End Users: 50% Unsatisfied, 50% Moderately satisfied
FURTHER RECOMMENDATIONS TO STRENGTHEN THE GNSS SERVICE CENTRE (GSC) (SHORT/MEDIUM TERM)

1. Include on the GSC web portal detailed roadmaps on future Galileo services under development and satellite launches.

2. Consider the provision of more Galileo products, such as RINEX Navigation files, in the GSC website.

3. Improve the publication time and content of Galileo NAGUs.

4. Improve the reactiveness of the Galileo helpdesk.

5. Consider new features in the web portal, such as the provision of past system status, support to developers, graphics of Galileo performance or a map of ground elements.

The OSNMA and HAS Info Notes have been published, with the roadmap of these services.

Work is ongoing and new products will be available soon, including more frequent publications of Galileo almanacs.

New OS SDD 1.2 addresses improved NAGU publication time. The publication of Service Notices provides additional information to complement NAGUs.

Current average time to reply user requests is now ~1 day.

Some of these features are already in the pipeline and will be ready in the next versions of the GSC.
THANK YOU!

https://www.euspa.europa.eu/
www.gsc-europa.eu

Linking space to user needs