



Geomatics on the move Competition:

boosting GNSS-based applications

PRESS BACKGROUND

The Geomatics Competition

Grounded in traditional land surveying disciplines, the geomatics field has evolved and grown together with advances in technology, implementing new tools and techniques to capture, process and draw meaningful insights from data. It integrates the skills and knowledge from the disciplines of land surveying, cadastre, cartography & mapping, geodesy, topography, GIS, photogrammetry, remote sensing, urban planning, and other applications.

Many of the geomatics applications benefit also from the European navigation programmes Galileo and EGNOS. Surveying, for example, has been an early adopter and leverages highly on the high-precision positioning of Galileo and EGNOS to develop new services and applications. Another source of geospatial data is Copernicus and its services, providing valuable information of the Earth's surface or digital elevation models among many other data products.

Through this Contest, "Geomatics on the Move", the GSA, in collaboration with the Council of European Geodetic Surveyors (CLGE)¹, encourages participants to explore the use of the European navigation programmes Galileo and EGNOS and their synergies with Copernicus, by submitting innovative surveying solutions, to shape the future of geomatics. The objectives of this Contest are to increase the usage of Galileo, EGNOS in the field of Geomatics, as well as to increase awareness of the benefits these EU Space Programmes provide toward fostering innovative geomatics applications.

How does it work?

The aim of the **contest** is to create innovative geomatics applications and solutions, using Galileo and EGNOS. Solutions must demonstrate their novel approach to the use of satellite data for the geomatics field, while ensuring that their technical feasibility is accurate and will have maximal practical impact on the sector. The **contest** invites also applications that integrate the use of additional technologies - using Galileo or EGNOS - such as artificial intelligence, machine learning, augmented reality and virtual reality, as well as supplementary remote sensing data sources like drones and Copernicus data. Solutions animated through mobile phone applications or other easy-to-use platforms are also welcome.

¹ <https://www.clge.eu/>

In the context of the Geomatics on the Move, in total ten (10) prizes will be given to applications received in the following two (2) categories:

- **Traditional Geomatics:** five (5) prizes will be given to solutions which main innovation is based on the usage of EGNSS, employing traditional equipment such as surveying or GIS grade GNSS Receivers for applications such as cadastral, marine and mining surveying or GIS mapping. These solutions can be supported or combined with Copernicus satellites data;
- **Integrated Geomatics:** five (5) prizes will be given to integrated surveying solutions that use Galileo or EGNOS, leveraging cutting-edge tools and technologies like drones, mobile mapping, laser scanners or Augmented/Mixed Reality that can either be used within geomatics applications or beyond. These solutions can be supported or combined with Copernicus satellites data;

The competition rolls out in two phases.

- **Phase 1 – Open Call for Ideas:** applicants shall submit a poster in a pre-defined format describing the idea.
- **Phase 2 – Pitch Preparation Phase / Finals:** During this phase, the selected applicants will refine their poster and prepare their pitch deck. The teams will receive technical assistance consisting of support with the graphic design of the poster, and a pitch training.

The finalists will be provided with information via email about the award ceremony and the logistics details. The official award of the Geomatics on the Move Prize Contest will take place virtually, during the European Space Week (7th-11th December 2020). During this event, each finalist will present its solution to the evaluation board (and interested audience). The winners of the two prizes will be selected based on the award criteria listed below and awarded. Winners will be announced on the official contest site and promoted in official channels.

For more information: www.gsa.europa.eu/geomaticsonthemove

Terms of references of the competition

https://www.gsa.europa.eu/sites/default/files/uploads/geomatics_prize_terms_of_reference.pdf

The Prizes

Each applicant participating in the Finals will receive a certificate of reaching the final stage. Additionally, the winner teams of the Geomatics on the Move Prize Contest will receive the following prizes:

- 1st Prize of the Traditional Geomatics solution: € 5.000 (five thousand Euro)
- 2nd Prize of the Traditional Geomatics solution: € 4.000 (four thousand Euro)
- 3rd Prize of the Traditional Geomatics solution: € 3.000 (three thousand Euro)
- 4th Prize of the Traditional Geomatics solution: € 2.000 (two thousand Euro)
- 5th Prize of the Traditional Geomatics solution: € 1.000 (one thousand Euro)

- 1st Prize of the Integrated Geomatics solution: € 5.000 (five thousand Euro)



- 2nd Prize of the Integrated Geomatics solution: € 4.000 (four thousand Euro)
- 3rd Prize of the Integrated Geomatics solution: € 3.000 (three thousand Euro)
- 4th Prize of the Integrated Geomatics solution: € 2.000 (two thousand Euro)
- 5th Prize of the Integrated Geomatics solution: € 1.000 (one thousand Euro)

Strengthen the field of geomatics using innovative data sources

The expanding field of geomatics has evolved dramatically thanks to significant advancements in technology, tools and techniques. Progressing from traditional mapping to the improved data capture and analysis we see today, the strength of geomatics relies on skills and knowledge found in many earth science-related disciplines such as land surveying and earth mapping. Combined with the enhanced accuracy and coverage that European space programmes Galileo, EGNOS and Copernicus provide, geomatics solutions have the power to shape the future of industry. Geomatics on the Move is an ideas competition with the opportunity to bring their cutting-edge data capture and analysis solutions to life.

Timeline

01/08/2020: Announcement of Contest

16/10/2020: Submission deadline

30/10/2020: Announcement of selected teams to proceed to Finals

7-11/12/2020: Contest Final

GNSS for Geomatics applications and services: key figures

Geomatics professionals already benefit from using EGNSS in a multi-constellation environment, providing higher availability, continuity, reliability and better results in harsh conditions. This is confirmed by a gradual penetration of Galileo in GNSS receivers for surveying and mapping: as of today, around 55% of the surveying GNSS receivers already support Galileo and around 90% are EGNOS-capable. In Europe, the majority of RTK providers have already upgraded or have started to upgrade to Galileo. This example is followed by major PPP and PPP-RTK providers that also support Galileo in their correction services.

From the ground to the cloud: the digital transformation of surveying: The role of the traditional GNSS surveying is undergoing a rapid transformation thanks to the integration of emerging digital data collection techniques. Geomatics applications that rely on GNSS in combination with terrestrial or airborne sensors (optical, multispectral, RADAR or LiDAR) are focusing the implementation of solutions directly in the cloud.

Geomatics is an important cross-sector enabler: Geomatics is a highly demanding segment, which provides other business sectors (such as autonomous driving and drones) with precise GNSS data and versatile consultation services. This cross-sectoral integration is empowered by the implementation of emerging business models, such as Capability as-a-Service.

The downstream GNSS market is empowered by the 4th Industrial Revolution: The 4th Industrial Revolution is a term that describes the profound economic impact from the radical growth of device interconnectivity and the incorporation of sensors, robots and powerful data analytics. Prime examples in Geomatics are the sophisticated products which fuse high-precision GNSS data with machines, inertial sensors, robotics and artificial intelligence (e.g. mobile mapping systems). The uptake of Building Information Modelling (BIM) and its integration with high-precision GNSS observations provide unprecedented levels of automation, interoperability and optimised decision making for the surveying and construction industry.

The installed base of GNSS devices will reach 4 million units by 2025, generating more than 5.5 billion revenues in GNSS device sales.

Although the market continues to be dominated by the established players, emerging companies from China and Europe are starting to effect a slight market reshaping. European companies now hold almost half of the market (43%), with North American players accounting for 29%, followed closely by Asian firms with 28% of worldwide production. (Source: [GSA Market report 2019](#)).

The European GNSS Agency (GSA) www.gsa.europa.eu

The European GNSS Agency (GSA), is the European Union Agency in charge of managing operations, security and service provision for Europe's Global Navigation Satellite System (GNSS), Galileo and EGNOS. By working with stakeholders, industry, service providers and user communities, the GSA ensures the highest return on European GNSS investment, multiplying the benefits of space applications for European citizens and business, boosting innovation and competitiveness, and securing sustainable economic growth.

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Galileo

Galileo is Europe's Global Navigation Satellite System (GNSS), providing improved positioning and timing information with significant positive implications for many European services and users. Galileo aims to ensure Europe's independence from other satellite navigation systems and its strategic autonomy in satellite navigation. Europe's investment in this sector will boost the European job market, help the EU step up its role as a security and defence provider, and support emerging technologies such as Artificial Intelligence, drones, automated mobility and the Internet of Things.

Questions about Galileo? Check out our [Galileo FAQ page](#) and [Galileo FAQ YouTube Playlist](#)

More Resources:

GNSS geomatics image gallery available [here](#) please cite ©European GNSS Agency