

## Poland

Head Office of Geodesy and Cartography

### From cyber-resilient infrastructure to smart e-services

*“Today, the most important political, economic and social decisions are made based on spatial data and analysis. Accurate and up-to-date spatial information about our surroundings, provided by geodesy and cartography is indispensable for defence, crisis management, economic development and daily administrative and business activities. The development of geoinformation systems and the maintenance of consistent spatial data resources are key elements of the national security strategy.”*

Andrzej Żylis

General Surveyor of Poland,  
Head Office of Geodesy  
and Cartography

**Poland continues to strengthen its national digital resilience and modernise spatial information services to enhance cybersecurity and public-sector efficiency.**

Under the Cybersecure Government programme, the Head Office of Geodesy and Cartography (GUGiK) has reinforced its infrastructure resilience while also piloting a GNSS signal-interference monitoring system to enhance the quality of spatial information e-services.

The pilot is part of a European Space Agency (ESA) programme project carried out in cooperation with the National Institute of Telecommunications). As a result, GUGiK implemented a system comprising selected stations of the ASG-EUPOS network along with data-centre infrastructure that provides analysis results via a dedicated web portal for users. The service is publicly available at <https://rtgms.pl>.

GUGiK has also modernised its server infrastructure and threat monitoring systems, ensuring full alignment with rigorous data protection standards. This overhaul enhanced its resilience against hybrid attacks, automated incident detection and developed staff digital security competencies. In addition, the organisation has introduced advanced validators (as a QGIS plugin) for key registers: the Land and Building Register (EGiB), the Real Estate Price Register (RCN) and the Database of Topographic Objects (BDOT10k). These IT tools automatically verify the consistency of data transmitted from county (powiat) to central levels, eliminating errors at the source and ensuring strict adherence to GML application schemas. Through automated testing, GUGiK maintains total spatial data consistency across all administrative levels.



More information:  
<https://rtgms.pl/>



### Benefits

- **Sovereignty and security:** The “Cybersecure Government” programme guarantees the uninterrupted continuity of state e-services in the face of increasing digital threats.
- **Data reliability:** The WMS/WFS compliance validator for the Land and Building Register (EGiB) eliminates errors in registers and builds investor trust.
- **High-quality e-services:** Automated verification of the EGiB database ensures that citizens and offices have access to high-quality data.
- **Transparency and market support:** Making validators available in open-source software (QGIS) allows surveying contractors to provide top-quality data during the creation phase.
- **Economic efficiency:** Automated data control reduces administrative costs and shortens the duration of official proceedings.
- **Openness and interoperability:** Modern GML control tools facilitate information exchange between different systems.
- **Support for UN goals:** Better access to precise spatial data supports sustainable spatial planning and environmental protection.