

26-27 MARCH 2025

Prosperity through Diversity



CAPITALISATION WORKSHOP

Boosting Knowledge
and Competitiveness
in the Danube Region

GeoNetSee

An AI/IoT-based system of GEOsensor
NETworks for real-time monitoring of
unStable tErrain and artificial structures

Prof. Dr Vladimir Rajović

Interreg
Danube Region



Co-funded by
the European Union


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Project Summary

Project budget: 1.791.280 EUR

Interreg funding: 1.433.024 EUR

Project duration: January 2024 – June 2026

Lead partner: School of Electrical Engineering, University of Belgrade

14 Project Partners + 12 Associate Partners from 9 Danube countries



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14

Project Partners



SURVIOT



nast consulting
Zvitechniker GmbH für Verkehr-, Umwelt- und Raumplanung



- University of Belgrade School of Electrical Engineering, Serbia
- Geological Institute of Romania, Romania
- University of Novi Sad Faculty of Technical Sciences, Serbia
- Geosolutions, Serbia
- Geological Survey of Federation of B&H, Bosnia and Herzegovina
- International Burch University, Bosnia and Herzegovina
- SURVIOT Monitoring, Hungary

- Budapest University of Technology and Economics, Hungary
- nast consulting, Austria
- University of Montenegro Faculty of Civil Engineering, Montenegro
- MoDrone, Montenegro
- VSB Technical University of Ostrava Faculty of Electrical Engineering and Computer Science, Czech Republic
- Geological Survey of Slovenia, Slovenia
- Croatian Geological Survey, Croatia

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(source: www.kleinezeitung.at)



(source: www.total-croatia-news.com)



(source: www.meinbezirk.at)



(source: www.orf.at ,
www.diepresse.com ,
www.kurier.at)

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Objectives

- Establish a transnational geosensor network for real-time geohazard detection.
- Enhance institutional capacities and foster collaboration across the Danube Region.
- Integrate advanced technologies (AI, IoT, GNSS) into monitoring systems.

Expected outcomes

- Operational geosensor network with permanent CORS stations linked to EPOS.
- Danube Collaborative Center (DCC) for data sharing and visualization.
- Improved safety and resilience through faster response to geohazards.

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Innovations

- Pioneering AI/IoT integration for geohazard monitoring in the Danube Region.
- Advancing real-time data processing and transnational technology transfer.
- Building on prior projects (e.g., GIMS, GeoTwinn) with cutting-edge solutions.

EUSDR links

- **PA 1B (Rail-Road-Air Mobility):** Supports safe transport infrastructure via structural monitoring.
- **PA 5 (Environmental Risks):** Enhances flood and landslide prevention through real-time monitoring.
- **PA 7 (Knowledge Society):** Advances research and tech innovation.
- **PA 8 (Competitiveness):** Promotes smart, sustainable solutions.
- **PA 10 (Institutional Capacity):** Strengthens cooperation and capacity via the DCC.

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- **Good practices**
 - Establish a transnational geosensor network leveraging AI/IoT and GNSS, integrating 14 partners across 9 Danube countries for real-time data sharing via the Danube Collaborative Center (DCC).
- **Inspirations**
 - Built on prior projects (e.g., GIMS, GeoTwinn, safEarth), adapting cutting-edge tech to regional needs, and linked CORS stations to the European Plate Observing System (EPOS).
- **Achievements**
 - Deployment of operational pilot sites for terrain and structural monitoring; development of the DCC as a hub for visualization and collaboration; enhanced institutional capacities through training and knowledge exchange.

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Interesting?

- **Scalable Technology**
 - AI/IoT-based monitoring system adaptable to diverse geohazards (floods, landslides, earthquakes) beyond the Danube Region.
- **Data Ecosystem**
 - The DCC offers a replicable real-time data sharing and decision-making model, useful for environmental or infrastructure projects.
- **Cross-Border Collaboration**
 - Partnership framework (14+12 partners) provides a blueprint for multi-stakeholder cooperation in tech-driven initiatives.
- **Resilience Tools**
 - Real-time alerts and predictive analytics could benefit transport, urban planning, or climate adaptation projects.

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Cooperation with others

- Lead Partner contact with **SpinIT**
- Lead Partner contact with **BrAIIn**
- PP contact with **Safety4TMF**
- Danube Region Transport Days 2024, organized by **EUSDR PA1B**
 - **EUSALP AG4** meeting
- Croatian national meeting of DRP projects in few days

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Offers

- Expertise in geosensor networks, AI/IoT monitoring, and GNSS-based solutions
- Real-time geohazard data collection and analysis
- A transnational Danube Collaborative Center (DCC) for data sharing
- Tested methodologies for early warning systems

Needs

- Access to stakeholders in disaster management and urban resilience planning.
- Industry partners for commercialization of AI-based geohazard solutions
- Expansion of pilot sites for broader regional coverage
- Policy-level engagement to integrate findings into national strategies

Contact details



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