

Study Visit to the Surveying and Mapping Authority of the Republic of Slovenia within the DELEF Project

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A delegation of the Federal Administration for Geodetic and Real Property Affairs (Working Group for SDI within the DELEF project) visited the Republic of Slovenia from December 2-4, 2025 as part of the implementation of the DELEF project. The host of the study visit was the Surveying and Mapping Authority of the Republic of Slovenia, with participation from partner institutions as well as representatives from academia and the private sector. The programme included attendance at the SLO4D conference, working meetings at the Surveying and Mapping Authority headquarters in Ljubljana, visits to various geodetic companies, and a working session at the Faculty of Electrical Engineering and Computer Science (FERI) of the University of Maribor.

On the first day of the visit, the FGA delegation participated in the SLO4D conference held in Brdo pri Kranju. Within the conference programme were presented the concept and experiences of the SLO4D project, the use of satellite imagery (PlanetScope), and the application of 3D building models in different sectors. Particularly valuable was a brief discussion with the Director General of Surveying and Mapping Authority of the Republic of Slovenia, during which experiences were exchanged on reforms in cadastral and cartographic infrastructure and the role of digital transformation in modernization of land administration.

On the second day, at the Surveying and Mapping Authority of the Republic of Slovenia headquarters in Ljubljana, an introductory session was held focusing on horizontal integration and the common building blocks of the SLO4D system, as well as the national geoportal platform Geo Slovenia. The Authority's team, led by spatial data experts, presented the system architecture, the establishment of common components, and data and service management models at the national level. The programme also included a presentation by Flycom dedicated to LiDAR surveying and 3D building modelling, with emphasis on data quality, applications in spatial planning and environmental protection, and integration with other official datasets.

Later that day, the FGA delegation held a working meeting with the company IGEA, focused on geoportal infrastructure and software architecture. Topics discussed included system design, security and authentication, monitoring and supervision, as well as the implementation of vector tiles and 3D visualization. Special attention was given to web services and data sharing (OGC/OGC API), INSPIRE workflows, ETL harmonization and publishing processes, and performance optimization. The exchange of experiences on these topics is of particular importance for the further development of the SDI Geoportal of the Federation of Bosnia and Herzegovina and for establishing modern spatial data services.

On the third day of the visit, the delegation visited the Faculty of Electrical Engineering and Computer Science (FERI) at the University of Maribor. FERI experts presented advanced concepts for managing and serving large spatial datasets- point clouds (LAZ/E57), ortho photos, digital terrain and surface models (DTM/DSM), as well as 3D objects and city models. They also introduced approaches to data processing, visualization and access patterns, as well as the Gemma Fusion solution and the new supercomputing infrastructure.

The study visit to Surveying and Mapping Authority of the Republic of Slovenia provided the FGA delegation with valuable insight into practical solutions and best practices in the field of spatial data infrastructure, 3D data management, and modern geoportal services. The knowledge will serve as an important contribution to the continued implementation of the DELEF and GIVE projects, the improvement of the SDI of the Federation of Bosnia and Herzegovina, and the development of new digital services for citizens, institutions and the private sector.



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