



GreenSLO4D

Green Slovenian Location Framework (GreenSLO4D)

Digitally connecting spaces, environment, water and nature for a green location.



2021–2026



Strategic Rationale

Interconnected infrastructure, digital technologies and a common data environment are key to achieving climate goals, supporting the circular economy, preserving ecosystems and biodiversity, and using energy efficiently. Developing and deploying modern innovative technologies that will help accelerate a green and digital transformation is therefore a strategic objective pursued by the UN, the EU, and the Republic of Slovenia. In order to implement the Integrated Location Framework strategic guidelines of the United Nations Committee of Experts on Global Geospatial Information Management (UN GGIM), the then Ministry of the Environment and Spatial Planning (today the Ministry of Natural Resources and Spatial Planning) and its bodies in 2021 drafted the Strategic Plan for the Digitalization of Spaces and Environment.

The plan served as the basis for the EUR 48m **Green Slovenian Location Framework (GreenSLO4D)** project. Funded by the Recovery and Resilience Plan (EUR 33.5m), namely Component 2 - Digital Transformation of the Public Sector, integral funds (VAT), and the Climate Fund. The project will be implemented in several phases between 2022 and 2026. Headed by the Surveying and Mapping Authority of the Republic of Slovenia,

the project also involves the Ministry of Natural Resources and Spatial Planning, the Ministry of the Environment, Climate and Energy, the Slovenian Water Agency, and the Slovenian Environment Agency.



Challenge

Spatial development trends have in recent decades been characterized by suburbanization and areas of dispersed settlement outside of compact settlements. Such trends have put pressure on spaces as well as the environment – and not just in Slovenia. This global megatrend presents one of the main challenges for development policies of every country. This project addresses the challenge not only by creating a digital spatial planning, environment, nature, and water map and protecting the environment, but also by using modern geolocation services to support spatial investments.

Its results will contribute to jumpstarting a green, digital and resilient economy. The project will make the country more resilient to climate change.

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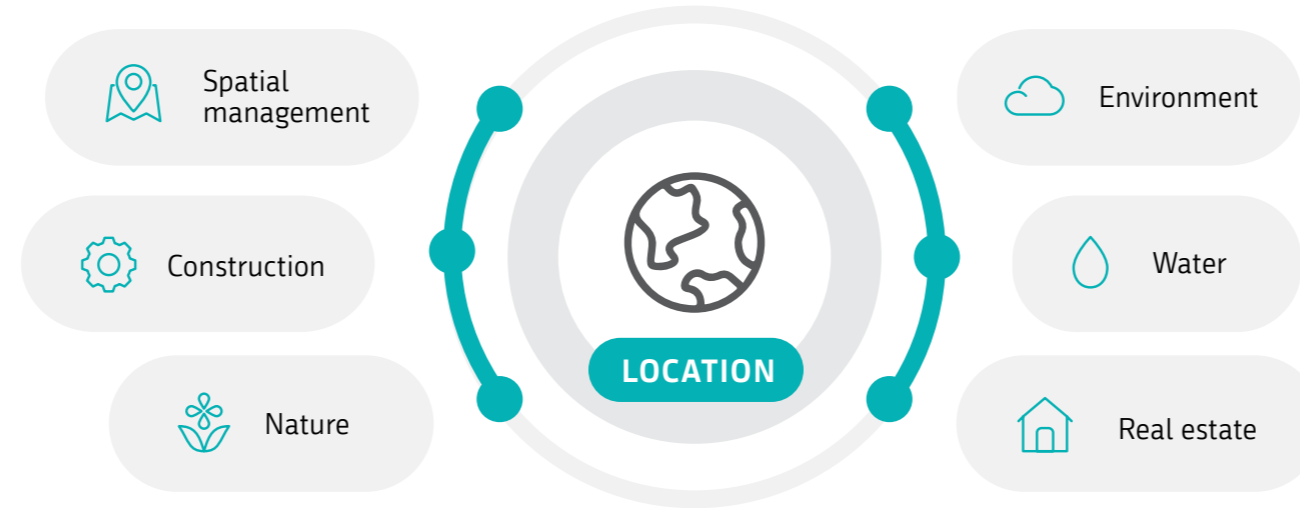


Aim

The main aim of the GreenSLO4D project is establishing horizontal digital connectivity between spaces, environment, real estate, water and nature in order to enable intelligent use of space (a limited natural resource), reduce the construction on greenfield sites and thus increase resistance to climate change.

The project will create a horizontal connection between systems to unlock the significant potential of connected processes and data so as to support the priority actions of the European Green Deal in the areas of climate change, circular economy, zero pollution, biodiversity, and ensuring compliance with the Union acquis.

This will help to reduce greenfield and increase brownfield construction. At the same time, insight into data and digital connections will ensure easy access to digital data and services for companies, general population and other decision-makers to facilitate quality and quick decisions.



Expected Results

Key results expected from the project by 2026:

- Link the key digital data infrastructure of spaces and environment in order to connect the key processes and databases in spaces, environment, water and nature;
- Open and enable access to digital data and services;
- Establish the required environment for spatial and other services;
- Set up the fourth component of the National Coordinate System as a basis for digitalization and provide the missing digital data for the national spatial and environmental data infrastructure (topography, Lidar - Light Detection and Ranging, public utilities, floor plans).

Project Schedule

The project started on 8 April 2022 and is scheduled to finish on 30 June 2026. The key tasks according to its phases are:

2021-2022

Set up the organizational infrastructure, prepare documentation and bring equipment up to date. Prepare the documentation for setting up the regional infrastructure needed to create links between the state and municipalities. Draft public procurement contracts in the field of digitization of key databases.



April 2022

MON	TUE	WED	THU	FRI	SAT	SUN
28	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	→	

2023-2024

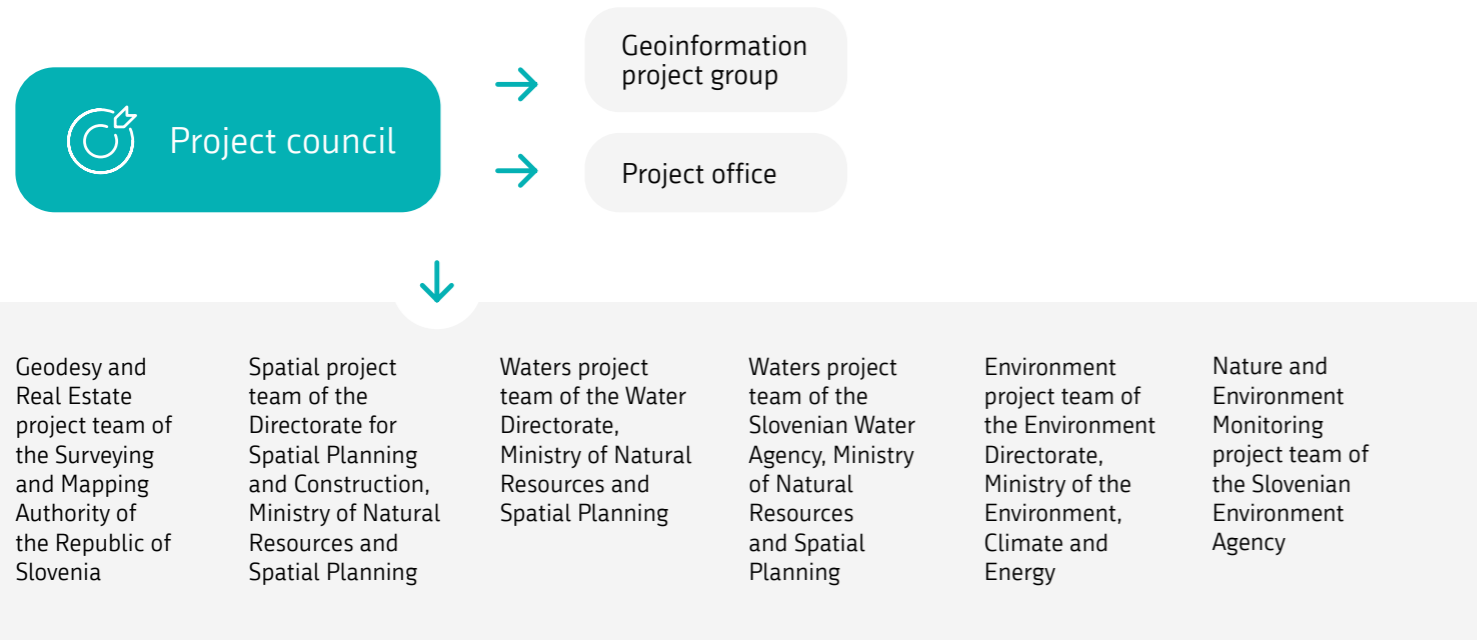
Complete the first stage of the required infrastructure and perform public procurement contracts for amending national spatial planning and environmental databases. Develop common code lists, registers and a draft model for 4D national coordinate system. Perform public procurement contracts regarding the integration of processes between key information systems with platforms and services. User training.

2025-2026

Link the processes in the areas of spaces, environment, water and nature. Set up the environment and develop process-related services. Set up a single platform and entry point for the green and digital economy transition in the area of spatial investments. Set up a data visualization system. Connect the local and state data infrastructure (spatial records at the local and state level). User training.



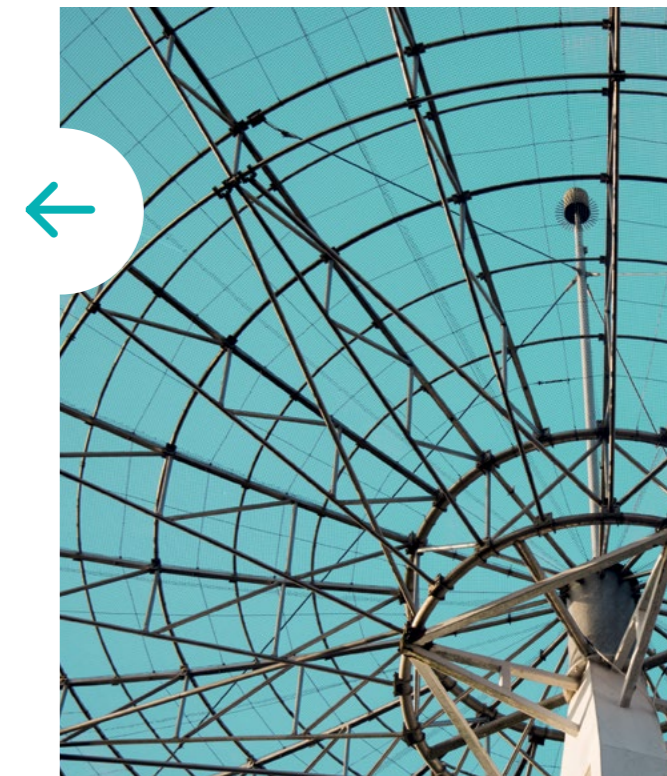
Organizational Chart



Due to its considerable scope, the project is divided into eight project groups - **two horizontal and six vertical**. The key tasks of individual project groups are:

Common geo-information infrastructure: The project will link processes and data in the areas of spaces, construction, environment protection, water management and nature conservation. As part of the project, horizontal integration of existing information systems will be carried out, and easy access to digital data and services will be opened and enabled. Standards for connecting processes, data and services will be harmonized and services for data access and exchange, a joint point of entry, and easily accessible and open data will be made available. Since the project includes digitalization of the state administration, the ministry responsible for the national information infrastructure and the national computer cloud will also be involved.

The **project office** will manage the coordination of this substantial investment as well as provide administrative, informational, legal and professional assistance. It will moreover promote the project, both at the level of professional users and the general public.



The Surveying and Mapping Authority of the Republic of Slovenia will provide the fourth dimension (time) of the national coordinate system as the basic building block for a digital location. It will create a modern nation-wide topographic system, connect the system of topography and spatial monitoring, digitize the national topographic data model for areas which are out-of-date, and digitize the laser scanning (Lidar - Light Detection and Ranging) data.

Missing civil engineering facilities and the process of recording these facilities will be digitized. For the needs of digitalization and visualization of real estate, vectorization and visualization of floor plans will be carried out, and a cadastre quality system will be introduced. A system for analysis and modelling of real estate values will be created with the aim of increasing the transparency of the real estate market. This will allow the provision of location-based foundation for connecting data and services. In order to increase and improve the way digital data and services are used, the Surveying and Mapping Authority of the Republic of Slovenia plans to pursue the goal of lifelong learning for employees regarding the use of geospatial data at its educational centre (knowledge centre).

The Ministry of Natural Resources and Spatial Planning, Directorate for Spatial Planning and Construction will provide assistance to local communities, especially regarding technical updates to municipal spatial acts and the establishment of a record of building land. Data from zoning acts and building land records will be made accessible to all citizens, but is mainly expected to serve as an important source of information for investors looking for suitable locations for investments. Regional centres will be established with the aim of increasing the use, usability and interoperability of digital location data and services and to provide users with the required support in using spatial information system services. By establishing such regional centres, the ministry will, among other things, connect the state and local levels in the area of spaces and ensure a unified way of performing tasks at the state and local level. The project will moreover connect the processes and data regarding location, environment, water, nature, and real estate as well as connect the spatial information system to other information systems.



The Ministry of Natural Resources and Spatial Planning, Water Directorate will finalize its information system for public environmental protection services, aimed at more effectively monitoring and managing data in carrying out the public environmental protection service, while at the same time enabling support for management and analytical processes to various bodies at home and abroad.

The Slovenian Water Agency will provide data layers regarding landslide hazards and erosion for land that consists of rocks susceptible to weathering, and land affected by sea waves (cliffs). The upgraded eVode (eWaters) information system will enable connections with other systems in the area of spaces and environment, issuing of water management opinions, approvals and other procedures, while also intertwining them more tightly. The services developed will thus facilitate decision-making. The online portal Atlas voda (Water Atlas), will meanwhile provide suitably curated data for the general public. Appropriate equipment will also be provided as part of the project.

Ministry of the Environment, Climate and Energy, Environment Directorate will establish an information system to support the processes of drafting and publishing documentation, public participation, publishing decisions, insight, management and distribution of data for issuing/amending environmental permits and other decisions, comprehensive environmental assessment procedures, environmental impact assessment procedures and issuing environmental protection consents and preliminary these procedures. The information system will serve to support these procedures, inform the public and prepare reports to the European Commission in line with its directives.

In the area of comprehensive assessment, the system will be linked with the system for spaces, public discussions and hearings, with public announcements being made through the spaces digital system. On the basis of the Environmental Protection Act (ZVO-2), a special platform will be created in the field of comprehensive environmental impact assessment, which will be linked to the Atlas of the Environment and data for Natura 2000.



Slovenian Environment Agency will provide a comprehensive information system and establish a database and applications for managing data regarding the state of the environment (water, soil, operational monitoring and nature). The aim is to ensure the interconnectivity of systems with various external stakeholders as a starting point for accelerating investments in development with a digital and green transition, improving the business environment and cut some of the red tape for target groups. Digitalization will make it possible to optimize the processes to plan monitoring and data control, increase efficiency and reduce risks. Its services will at the same time help decision-makers in planning and monitoring the implementation of policies and measures to improve the quality of water, air and soil, in accordance with the requirements of the Republic of Slovenia and EU acquis, as well as, as part of website redesign, increase the awareness of the general public and decision-makers about the quality of water, air and soil.



Green Slovenian Location Framework (GreenSLO4D)



brings digitalization of business and connects spaces, land and environmental policies with the aim to improve the business environment and facilitate investments, as well as encourage sustainable investments with higher added value.

The project solves Slovenian development challenges regarding spaces, water, nature, environment and real estate.



www.gov.si/drzavni-organi/organi-v-sestavi/geodetska-uprava
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The investment is included in the Slovenian plan, funded by the Recovery and Resilience Mechanism.