

The background image shows a close-up of a surveying instrument, specifically a black metal tripod-mounted prism or reflector, positioned on a paved road. The instrument is angled towards the viewer. In the background, there is a concrete curb and some green grass. The image is partially overlaid by green geometric shapes: a horizontal bar at the top, a large curved shape on the left, and a diagonal shape at the bottom right.

ACTIVITIES REPORT

2020

**SURVEYING AND MAPPING
AUTHORITY OF THE
REPUBLIC OF SLOVENIA**

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ADDRESS FROM THE GENERAL MANAGER



*Tomaž Petek, General Manager
Surveying and Mapping Authority of the
Republic of Slovenia*

2020 was strongly marked by the COVID-19 epidemic and measures to prevent spreading this new virus. These also affected the work of the Surveying and Mapping Authority of the Republic of Slovenia (SMA) in 2020, but when reading the annual activities report, you will see that we have responded well to the changed circumstances. When looking at our set goals, the year 2020 was successful. We can be very proud of the completed tasks, which we managed to realize to a greater extent than planned. At the SMA, we have shown our capability to overcome such unforeseen problems and obstacles, all thanks to the employees of the SMA.

“

In Slovenia, the tasks of the national land survey service are performed by the Surveying and Mapping Authority of the Republic of Slovenia (SMA).

We submitted a proposal for a new **Real Estate Cadastre Act** for adoption by the National Assembly, which will provide a legal basis for e-commerce, a modernized real estate registration processes and the use of a new, unified real estate cadastre information system. We successfully completed procedures of the second cycle of mass real estate valuation and performed a **test calculation of real estate values**. However, due to enacted preventive measures, the public display of new values and the consideration of special circumstances have been postponed until after the epidemic. In the field of the **topographic cartographic system and national reference system**, we realized all tasks for which we had secured funds in the 2020 program of geodetic.

As part of the Programme of projects eProstor (eProstor), we successfully completed all activities planned for 2020. eProstor entered the last year of its five-year period, which means that by the end of 2020 we had successfully completed 4/5 of the planned tasks. In regard to the achieved goals, I should mention that we have successfully completed the improvement of the **graphical part of the land cadastre** and the **process of scanning archival documents**, meaning that today we have 22 million digitized documents, which is one of the prerequisites for e-commerce. Our spatial data infrastructure provides network services that enable

direct **use of spatial data sets** in individual business processes and a **Slovenian metadata profile** has been created, which could also be called a national standard based on the ISO standard for metadata. The capture and control of 63% of all inhabited land was carried out, so that at the end of 2020 a **total of 77% of all inhabited land in Slovenia was captured. Modeled and simplified real estate registration processes** were the basis for preparation of IT solutions for the real estate cadastre, and on their basis the Real Estate Cadastre Act was written and harmonized, which is being prepared for consideration by the Government of the Republic of Slovenia.

In the scope of eProstor, an extensive publication titled **Slovene Land on Cadastral Maps** was created, which contains 280 pages of interesting facts about cadastral plans, from their inception to the present day. The content is enriched with more than 180 color images. Most of the content is informative in nature, as good knowledge of our rich past is a prerequisite for even better and more successful business in the future. This is the reason the SMA decided to create a publication, which is the result of the efforts of our employees. The material is available in both printed and digital form.

You can read about everything mentioned above and more in this annual

activities report. I hope you get a lot of useful information and maybe even ideas on how to use our knowledge and products.

Tomaž Petek, General Manager
Surveying and Mapping Authority of the
Republic of Slovenia



PRESENTATION AND ORGANIZATION

The Surveying and Mapping Authority of the Republic of Slovenia is a body within the Ministry of the Environment and Spatial Planning. The area of work of the Surveying and Mapping Authority of the Republic of Slovenia encompass the tasks of the national land survey service, which include the

creation, management and maintenance of databases pertaining to the Basic Geodetic System, real estate, the State Border, spatial units and house numbers, and the Consolidated Cadastre of Public Infrastructure, as well as the Topographic and Cartographic System.

The Surveying and Mapping Authority of the Republic of Slovenia is responsible for the surveying, maintaining, managing and providing basic data on space and real estate in their datasets, provides services pertaining to the registration of changes in physical space and real estate, and performs the role of coordinator for the Real Estate System and Spatial Data Infrastructure.



The Surveying and Mapping Authority of the Republic Slovenia maintains the Mass Real Estate Valuation System, records and monitors real estate sales and lease transactions, analyzes and reports on the state of the real estate market and provides data regarding the real estate market and the market values of real estate. It manages the National Coordinate System which is the foundation to locate data in space, and provides the infrastructure to carry out land surveys.



**SURVEYING AND MAPPING
AUTHORITY OF THE REPUBLIC
OF SLOVENIA**
Ministry of the Environment
and Spatial Planning



ADDRESS
Zemljemerska ulica 12
1000 Ljubljana



PHONE
+386 1 478 48 00

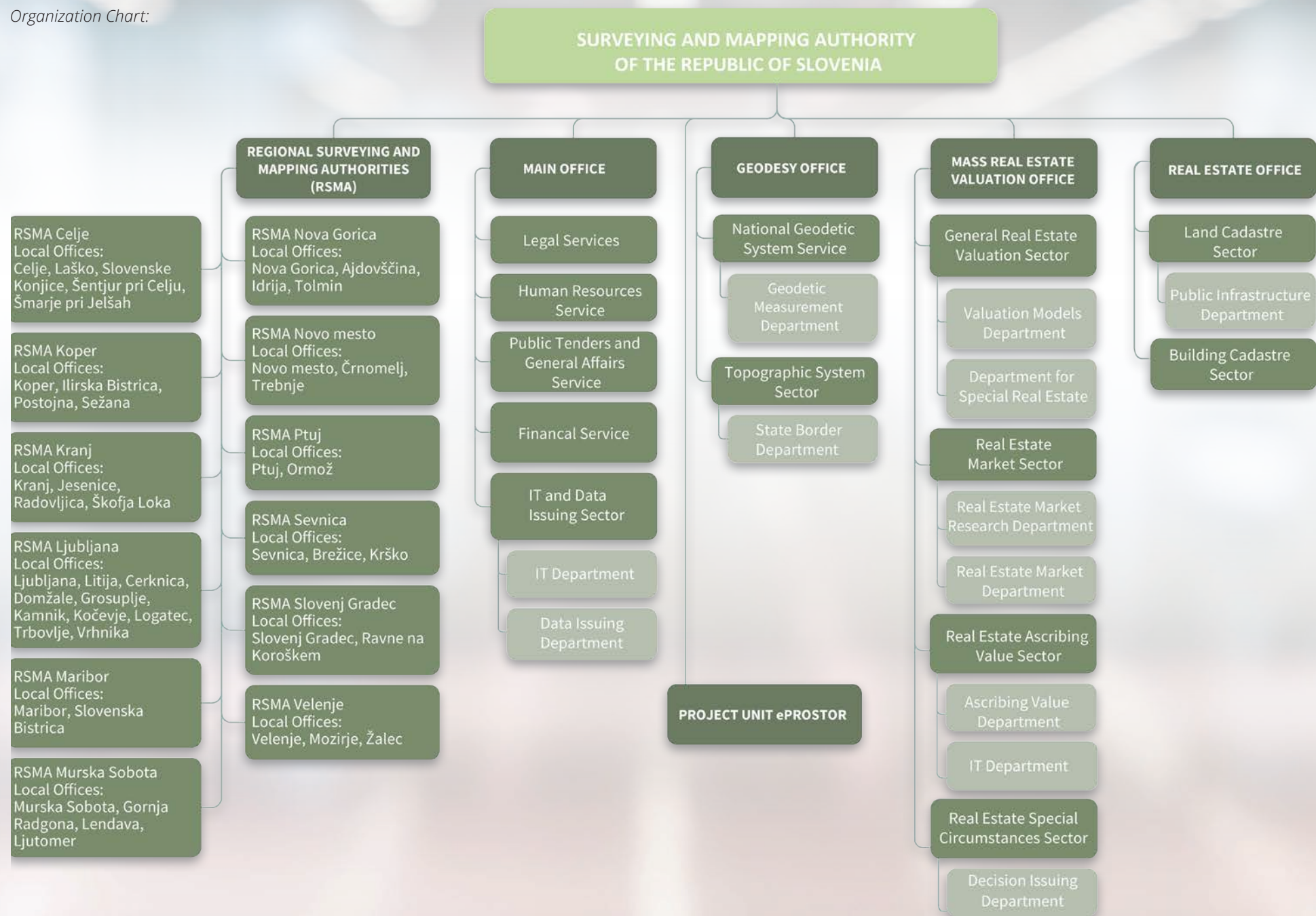


E-MAIL
pisarna.gu@gov.si



WEB PAGE
Surveying and Mapping Authority |
GOV.SI

Organization Chart:



WORK OVERVIEW



MAIN OFFICE



REAL ESTATE OFFICE



GEODESY OFFICE



**MASS REAL ESTATE
VALUATION OFFICE**

The Surveying and Mapping Authority of the Republic of Slovenia comprises of the Main Office, the Geodesy Office, the Real Estate Office, the Mass Real Estate Valuation Office and twelve regional surveying and mapping authorities.



12 REGIONAL SURVEYING AND MAPPING AUTHORITIES

streamline operations and increase the accessibility of administrative and professional tasks and services implemented by the Surveying and Mapping Authority of the Republic of Slovenia. Regional Surveying and Mapping Authorities perform the tasks of accepting applications, informing, providing data to clients and performing individual actions in administrative procedures related to direct contact with the client at their headquarters and in all surveying offices.

In 2020 the COVID-19 epidemic affected the workings of the Surveying and Mapping Authority of the Republic of Slovenia. Despite certain restrictions on our operations due to preventive measures for COVID-19, the scope and quality of work of the Surveying and Mapping Authority achieved the expected results comparable to previous years.

The goal of the Surveying and Mapping Authority of the Republic of Slovenia is to provide the Infrastructure for Spatial Information, efficient services and quality referential spatial data in ways that meet the high standards of a geoinformatically enabled society and to become a reference organization in the field of official spatial data infrastructure and real estate management in Slovenia.

Within eProstor, the Surveying and Mapping Authority has successfully completed the project **Positional improvement of the graphic part of land cadastre** for the entire territory of the Republic of Slovenia.

In 2020, two interdepartmental proceedings on the proposal of the Real Estate Cadastre Act (ZKN) were carried out, along with coordination of comments and proposals received in both hearings. Material for discussion at the Government of the Republic of Slovenia were prepared accordingly. At its session on January 7 2021, the Government determined the content of the proposal and sent it to the National Assembly of the Republic of Slovenia for consideration.

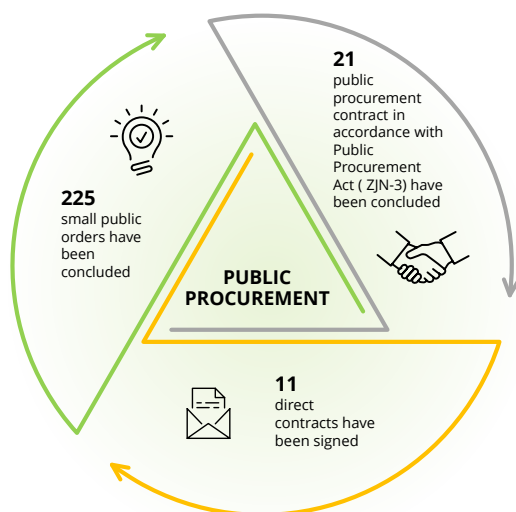


In 2020, the SMA **resolved 128,015 administrative procedures** (at the request of clients and ex officio), which is more than the planned **113,340** administrative procedures. We received **114,646** administrative procedures for resolution.

MAIN OFFICE

The Main office implements administrative, professional, technical and supervisory assignments related to the linking of spatial databases and spatial data infrastructure. It is responsible for issuing of data and certificates in analogue and digital form, e-commerce with spatial data, spatial data infrastructure and informatization of the land survey service. It is the administrator for the information and telecommunication infrastructure, provides systemic, application and user support along with IT training and education.

Additionally, it implements the assignments for providing assistance in resolving legal matters of all the offices and regional surveying and mapping authorities, financial operations, public tenders, human resources issues, education, office operation, health and safety in the workplace and other organizational assignments, important for the operation of the Surveying and Mapping Authority of the Republic of Slovenia.



In the past year, **in the field of information technology and data issuance**, the Surveying and Mapping Authority of the Republic of Slovenia provided uninterrupted access to geodetic data to public and professional users, companies, state administration and wider public administration with the help of its distribution system network services and classically at all locations of the Surveying and Mapping Authority of the Republic of Slovenia. In the past year, activities were carried out to **inform the public on the**

existence of data and services and support their use by spatial data users. The gradual **digitization of archived data (aerial photographs)** was continued. Funds were transferred for the concessional management of the GEOSS area. In cooperation with the Ministry of Public Administration, the basic infrastructural conditions were provided for the operation of IT systems and support was provided to users of this IT infrastructure.



LEGAL FIELD IN 2020:



daily legal assistance to RSMA and Local offices, on average **10 legal issues per day**,



legal aid in conducting administrative proceedings for the annulment of adopted administrative decisions (**11 cases**) or in proceedings for consideration of proposals for reopening of proceedings (**19 cases**),



preparation and publishing of many **draft templates for decisions** (around 40) envisioned by the General Administrative Procedure Act, to assist officials in conducting administrative procedures and for their easier, faster and more professional work,



cooperation with the Information Commissioner and concern for the **protection of personal data** and legal assistance to officials according to the Public Information Access Act.

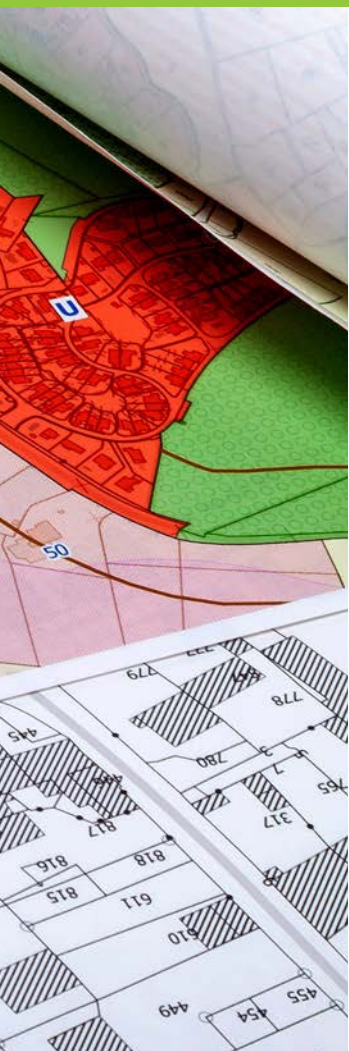


REAL ESTATE OFFICE

The Real Estate Office implements administrative, professional, technical, coordination and supervisory assignments pertaining to the administration of the Land Cadastre, the Building Cadastre, Real Estate Register and other records on real estate. It implements assignments of administration of the Register of Spatial Units, the Register of House Numbers, the Consolidated Cadastre of Public Infrastructure and carries out different tasks relating to real estate. It operates in an inter-agency capacity in the work of international committees and other assignments and projects. One of its assignments is also the substantive management and coordination of the work of the regional surveying and mapping authorities in the field of real estate.

In the field of real estate registration, the Real Estate Office and the Regional SMA Offices have carried out regular procedures for managing and maintaining data in real estate records along with activities to improve data quality.

Some minor but necessary software upgrades for the management and maintenance of real estate records were implemented.



In the field of providing ICT, geodetic and general infrastructure, minor additions were made to existing IT solutions due to changes in data management of the Land Cadastre, Building Cadastre and Real Estate Register (actual land use, scope of buildings and parts of buildings data in the Building Cadastre and Real Estate Register, changes in data management of real estate value in Real Estate Register) and consequently, due to the changed exchange formats, also IT solutions for processing and editing of surveyed data of land cadastre and building cadastre elaborates.

As part of the improvement of real estate data sets, new land surveys were completed in several smaller areas. Several different tasks of control and harmonization of

recorded data were performed (review of the results of automatic re-classification of data on buildings and parts of buildings, revisions of already submitted elaborates due to changes in the database as a result of the project to improve positional accuracy of the graphical part of the Land Cadastre, elimination of discrepancies between recorded data on buildings - areas, actual use and unallocated space). An automatic classification of unregistered buildings was performed for about 1/3 of the country. The boundaries of municipalities from the register of spatial units were harmonized with the boundaries of parcels from the land cadastre. In cooperation with the Faculty of Civil Engineering and Geodesy, a research project from the Target Research Program 2019 was

CRP 2019 – Workzone Kandrše: Detailed view of target locations (recorded March 16 2020).





carried out (Assessment of the cadastral boundary stones marking for photogrammetric data acquisition using unmanned aerial vehicles, and the analysis of their effect on the positional accuracy of the point clouds and orthophoto).

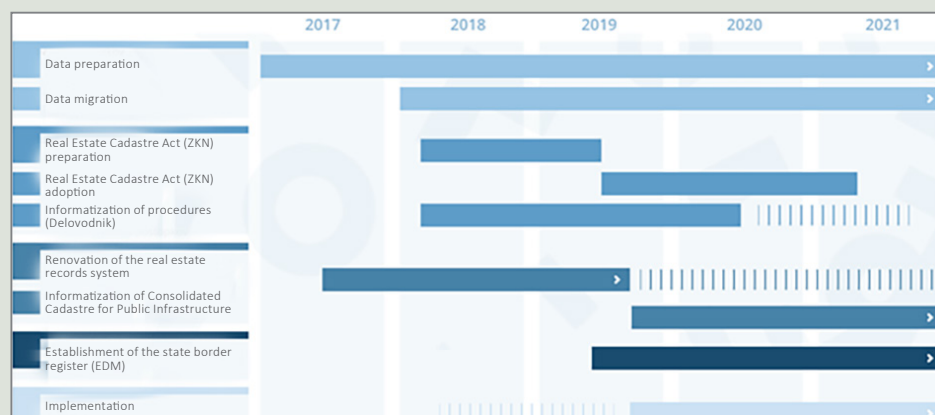


The day-to-day management and maintenance of the Consolidated Cadastre of Public Infrastructure was ensured, which included the registration of infrastructure facilities into the Consolidated Cadastre and registration of network connection points (OPT) - a total of 906 elaborates were submitted for registration of infrastructure facilities and 72 elaborates for OPT registration.



Activities related to the preparation of the **Real Estate Cadastre Act** (consideration of comments from the first interdepartmental reading and coordination of received comments from individual institutions, implementation of the second interdepartmental reading, preparation of the bill together with draft bylaws, submission of the bill to the government procedure) were carried out along with tasks related to the **Renovation of the real**

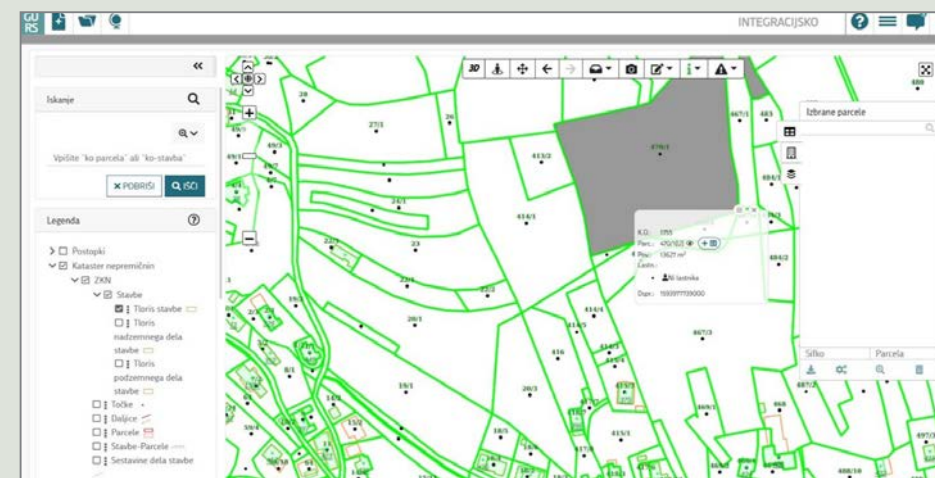
Timetable for the implementation of the project Renovation of the real estate records system:



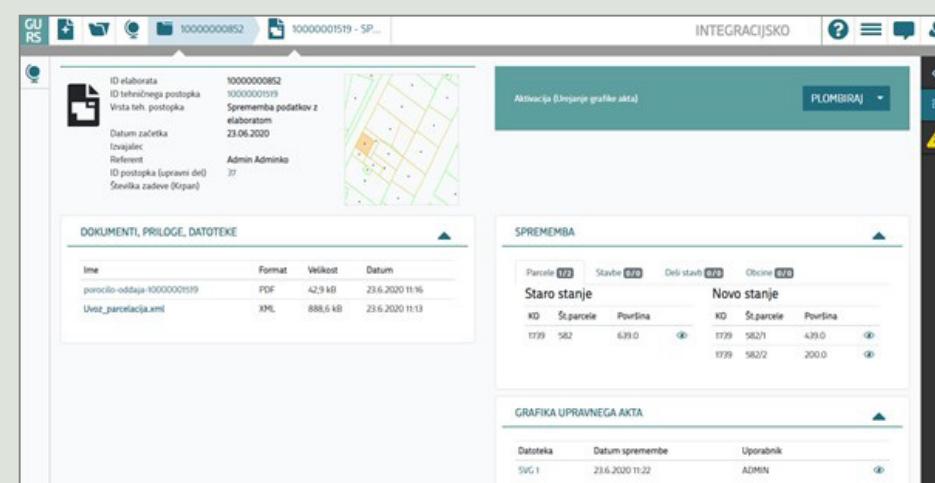
estate records system (implementation of planned activities of eProstor, development of the Cadastre Information System - informatization of procedures, implementation of data migration to the

new information system and the resolution of resulting data discrepancies, implementation of a pilot project).

Example of 2D display of graphic data from the Information system Kataster:



Example of a phase from the Information system Kataster:





GEODESY OFFICE

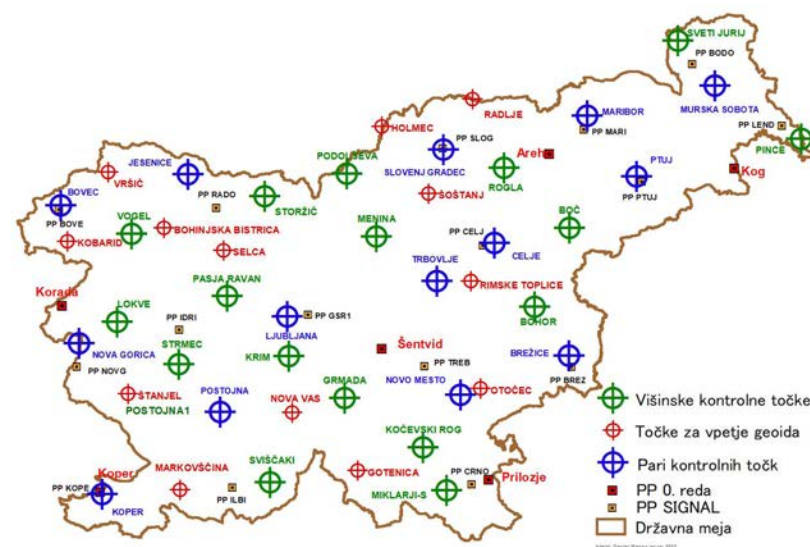
The Geodesy Office is responsible for the state geodetic reference system. **The national spatial coordinate system is the basis for the placement of objects and phenomena in space. Spatial placement means determining or assigning coordinates to points that describe objects or phenomena in the selected coordinate system. The national spatial coordinate system is the official valid coordinate system in the country and is in line with the European Coordinate system. The national topographic reference system provides** databases of topographic data on the natural and constructed environment, geographical names, national topographic and base maps. In accordance with ratified international treaties, it performs the tasks of keeping records of the state border, marking, maintaining and restoring the state border, and participates in the work of such international commissions.

In the fields of **geodesy, topography and cartography**, the Geodesy Office ensured the operation of 16 permanent stations of the GNSS network SIGNAL and 5 permanent stations of the GNSS network of the National Combined Zero Order Geodetic Network. It provided real-time data for satellite positioning via a mobile network. The purchase, upgrade and maintenance of the necessary technical equipment for the smooth operation of both GNSS networks and regular maintenance and service work of geodetic measuring instruments were carried out. Geodetic field surveys were carried out for the maintenance of geodetic networks, verification of land cadastral points and gravimetric measurements. An overview of height points and control of cyclical aerial photography produ-

cts (CAS) was performed. The geodetic base was harmonized with additional reference points in the border zone. Two research projects within the Target Development Programs continued.

In the field of the national coordinate system, a new realization of the D96-17 coordinate system was introduced in 2020 and consequently the coordinates of the permanent stations of the SIGNAL network were updated. The new coordinates are based on both the old (D96) and the new (D17) implementation of ETRS89 and have been designated D96-17. In accordance with the required measurement accuracy in the land cadastre, all coordinates of land cadastre points determined so far in

D96 will remain unchanged. The main benefit of updating the coordinates in the key GNSS networks is the possibility for better accuracy of positioning in the future, greater homogeneity and, above all, the elimination of tension in geodetic networks. A new network of GNSS control points has been set up to check the accuracy of the SIGNAL network and to control the GNSS coordinate determination instruments. Some shorter sections of levelling polygons were also repaired. For the transformation of heights determined by GNSS technology, the SiVis web application was created and published, which enables the calculation between the new (SVS2010/Koper) and the old (SVS2000/Trieste) height system.



The network of 45 GNSS control points on 31 locations (some contain multiple points) for quality control of the SIGNAL network operation.



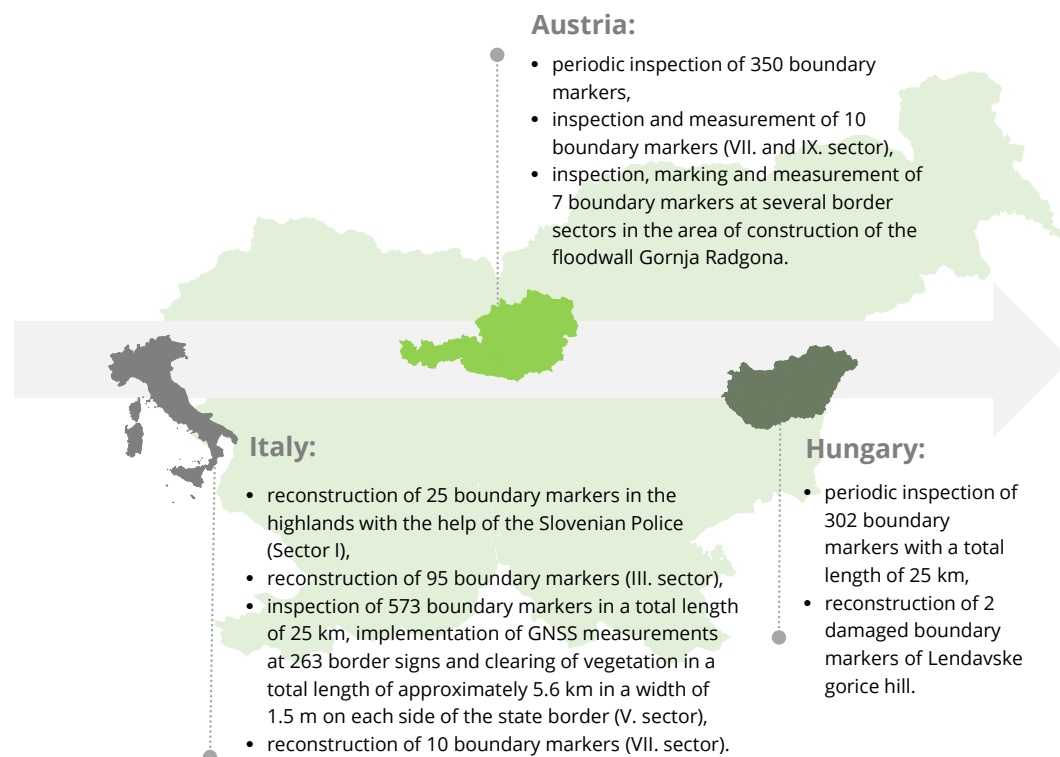
Maintenance of the state border in the highlands with the help of the Slovenian police.

In the field of the **national topographic system**, the CAS project produced aerial photographs for the western part of Slovenia, aero triangulation, a digital relief model, color and infra-red orthophotos, and quality control of the project. Due to the budget rebalance in 2020, the topographic data of the national topographic model were not included, but the methodology of the base map system was prepared and appropriate maps and rules for the visualization of topographic data were prepared. The implementation of an applied research project in the field of voluntary geographic information in connection with topography continued. Two sheets of the state / military topographic map at a scale of 1 : 50,000 (DTK/VTK 50) were restored. Work was carried out in the Commission for the Standardization of Geographical Names. Slovene and Italian geographical names were standardized for a scale of 1 : 25,000 (REZI 25) in the area where the Slovene and Italian national communities live, and geographical names along the entire state border between Slovenia and Austria were being harmonized. A list of Hungarian geographical names was prepared, but tasks did not continue on the Hungarian side. In the area of state borders with the Republic of Italy, the Republic of Austria and Republic of Hungary, maintenance work and other tasks were carried out by joint international commissions.

Much field geodetic work was done on the southern border to establish a geodetic basis, specifically: surveying the area along the border, searching for various existing signs (cadastral municipalities borders, historical border signs, visible borders of use) and measuring their coordinates, on-site marking of those signs and measurement of technical polygons. Temporary technical barriers were measured.



Preparation and measurements at the southern border.



Maintenance work on the Italian, Austrian and Hungarian borders.



MASS REAL ESTATE VALUATION OFFICE

The Mass Real Estate Valuation Office carried out **tasks of recording data from sales and lease agreements regarding real estate, analyzing the real estate market and preparing reports on the real estate market**. On the basis of real estate market data and methods of mass valuation, which are based on statistical and other mathematical methods, the Mass Real Estate Valuation Office **develops and calibrates valuation models** and carries out processes to define the models adhering to defined criteria.

The valuation models are managed and maintained in the **Register of valuation models**. The management and maintenance of the mass real estate valuation is being carried out in the Valuation Register. Real estate values are calculated based on real estate data and valid valuation models. The valuation models do not consider special circumstances, which are considered through administrative procedures. These special circumstances influence real estate value and their impact and expiration date

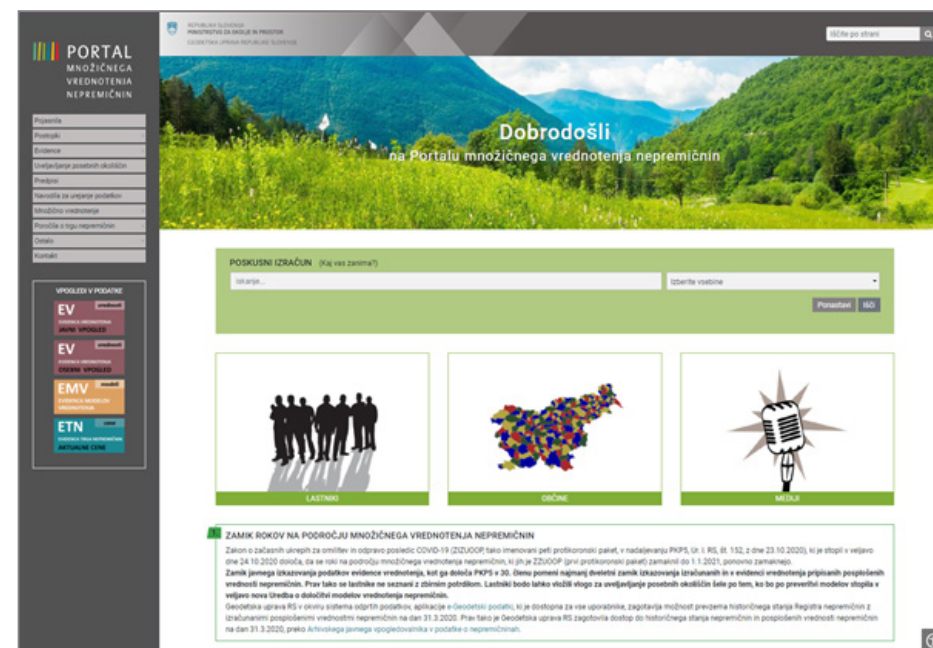
are recorded in the Valuation Register.

In 2020, the Mass Real Estate Valuation Office carried out system maintenance tasks and ascription of the generalized values into the Real Estate Register due to provisions from the Real Property Mass Valuation Act ZMVN (National Gazette RS, No. 50/06, 87/11, 40/12-ZUJF, 22/14 – Constitutional Court decision and 77/17 – ZMVN-1) until the conclusion of the process for defining valuation models in accordance with the Real Property Mass Valuation Act ZMVN-1 (National Gazette RS, No. 77/17, 33/19 and 66/19).

As part of the maintenance of the "old" system of mass real estate valuation on the basis of ZMVN, the IT application for calculating real estate value is maintained, which allows real-time attribution of

generalized values according to changes in real estate data and the currently valid valuation models until the time, the management of mass real estate valuation data will be changed to the new register based in ZMVN-1.

In 2020, the consideration of all received comments on the valuation models was completed after the public disclosure of these models and the implementation of the test calculation of values in accordance with the prescribed criteria. Substantiated comments and suggestions were taken into account in the preparation of the final proposal of valuation models, which were sent to the Government of the Republic of Slovenia for adoption in February 2020. The Government of the Republic of Slovenia determined the valuation





models with the Decree on the Determination of Real Estate Valuation Models (Official Gazette of the Republic of Slovenia, No. 22/20).

Following the defining of the new valuation models, the value was ascribed to all Real Estate Valuation register records on April 1 2020. On this date, the maintenance of (old) values in the real estate register also ceased.

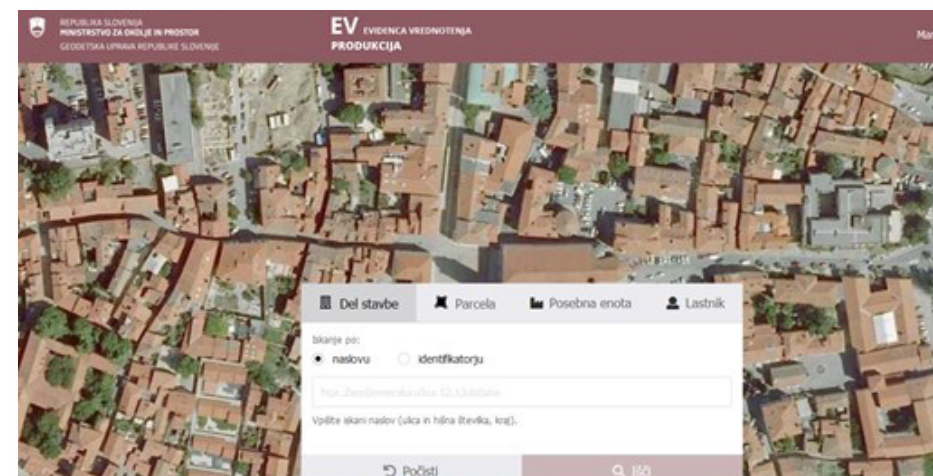
At its session on April 2 2020, the National Assembly of the Republic of Slovenia adopted the Act on Intervention Measures to Contain the COVID-19 Epidemic and Mitigate its Consequences for Citizens and the Economy - ZIUZEOP (Official Gazette of RS, No. 49/20 and amendments), which also had consequences regarding mass real estate valuation. Among other things, ZIUZEOP sets a time delay regarding mass real estate valuation. The new generalized real estate values were supposed to be publicly disclosed on April 2020, and all property owners were supposed to receive summary reports of the new generalized real estate values. As funding for these purposes has been temporarily reallocated to address the aftermath of the COVID-19 epidemic, the public disclosure of the new generalized real estate values has been delayed.

Due to the delay in the public disclosure of new generalized values, archival data of values from March 31 2020 was made available for use in providing rights from public funds. This archival data uses real estate data and the old methodology for calculating real estate value, both of which were valid on March 31 2020. Consequently, new plots or parts of buildings created after that date are not available in the archival data viewer.

Due to the reduction of financial resources, only the necessary tasks of maintaining the Real Estate Market Records Information System, Valuation Records, Valuation Model Records and the General Valuation Information System were performed after April 2020.

The purchase and sale of real estate and lease transactions for commercial real estate for the purposes of modeling the real estate market in the Republic of Slovenia and for the preparation of regular reports on the real estate market

were reviewed and processed. A more detailed state of affairs in the real estate market was empirically presented in the annual report on the real estate market for 2019 and in the semi-annual report for 2020.



Mass Real Estate Valuation Register.



Semi-annual report on the Slovenian Property Market for year 2020.

HUMAN RESOURCES

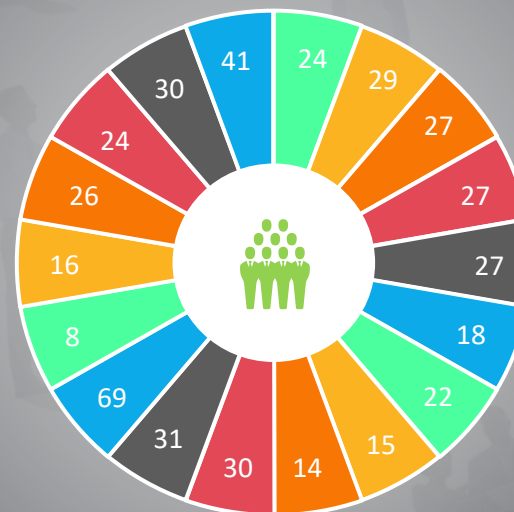
On December 31, 2020 the Surveying and Mapping Authority of the Republic of Slovenia employed 478 people, consisting of 333 employees at the twelve regional surveying and mapping authorities and 145 employees at the central SMA Offices. The personnel structure is subjected to the adopted human resources plan of Public Administration. Compared to 2019, the number of employees has decreased by 2.8% due to the conclusion of fixed-term employment.

In the personnel structure, the main part represents surveyors with college or high professional education. In addition, the Surveying and Mapping Authority of the Republic of Slovenia employs lawyers, economists, agronomists, IT specialist and to a smaller degree administrative workers.

478

*employees in offices
and regional geodetic
administrations
(December 31 2020).*

Main Office >
Real Estate Office >
Mass Real Estate
Valuation Office >
Geodesy Office >
Project unit eSpatial >
Outside of the
organizational units >
Regional Office
Ljubljana >
Regional Office
Celje >
Regional Office
Kranj >

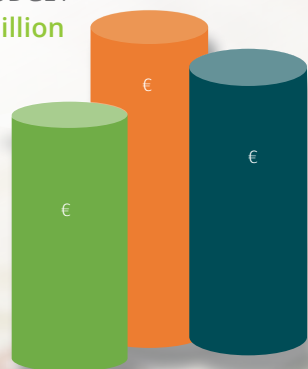


Regional Office
Koper >
Regional Office Nova
Gorica >
Regional Office
Murska Sobota >
Regional Office
Maribor >
Regional Office
Novo mesto >
Regional Office
Sevnica >
Regional Office
Ptuj >
Regional Office
Velenje >
Regional Office
Slovenj Gradec >

FINANCE

ADOPTED BUDGET
EUR 28.8 million

VALID BUDGET
EUR 28.2 million



FINANCIAL REALIZATION
EUR 26.8 million



The adopted budget of the Surveying and Mapping Authority of the Republic of Slovenia for the year 2020 was € 28,808,708, while the valid budget after allocation of funds due to Government resolutions was € 28,249,666. The total financial realization of the valid budget was 95.1% (€ 26,864,234).

FINANCIAL REALIZATION OF THE BUDGET IN 2020

58.4%	Salaries ¹
3.6%	Material cost ²
0.3%	Investments and investment maintenance
0.6%	Own activity
37.2%	Surveying works programme

¹ Includes additions according to Article 71 of ZIUZEOP – COVID-19
² Includes funds for battling the COVID-19 epidemic



The Surveying and Mapping Authority of the Republic of Slovenia is financed primarily from the National Budget and to a lesser extent from income generated by its own activities with the operation of permanent GNSS stations of the SIGNAL network. The annual geodetic work plan is confirmed by the Government of the Republic of Slovenia.



INTERNATIONAL ACTIVITIES

The Surveying and Mapping Authority of the Republic of Slovenia performs the tasks of the National Contact Point.



“ The Surveying and Mapping Authority of the Republic of Slovenia participates in many international organizations.

By contributing and engaging in the international community, the SMA governs over the **implementation of European guidelines and directions in the fields of real estate registration, cartography and geoinformatics**. The SMA is also the **National Contact Point (NCP)** regarding the implementation of the INSPIRE Directive and as such coordinates the establishment of the Infrastructure for Spatial Information in the Republic of Slovenia.

In accordance with the guidelines of the declaration of the National Assembly regarding Foreign politics of the Republic of Slovenia and tasks defined in the geodetic work plan, the SMA contributes

to many international organizations, among other **EuroGeographics**, United Nations Group of Experts on Geographical Names (**UNGEGN**), Working Party on Land Administration (**UN/ECE**), Permanent Committee on Cadastre in the European Union (**PCC**), European Regional Committee of the United Nations Initiative on Global Geospatial Information Management (**UN GGIM Europe**), **EuroSDR**, **EUPOS** and the Reference Frame SubCommission for Europe (**EUREF**) of the International Association of Geodesy (**IAG**).

As in previous years, the SMA has continued its active participation and collaboration with similar institutions in the

European space and in the South-West Balkan region and carried out activities in accordance with the guidelines and strategic goals defined in the Programme of the national geodetic service. Funds for international cooperation were allocated for the annual subscription in EuroGeographics and participation in its activities. Funds were also used for active participation in the UN GGIM Europe and for collaboration in the frame of EuroSDR. The SMA was also involved with activities of other international associations and incentives (EUREF, WPLA etc.) and carried out tasks for regional cooperation in the South-East Europe region and West Balkan region.

On June 22 2020, the Seventh Regular Plenary Session of the United Nations Regional Committee for Global Spatial Information Management (UN GGIM Europe) took place, at which the General Manager of the SMA was re-elected as Chairman of the UN GGIM Europe Executive Committee for a period of three years. The web session was attended by 110 participants from 36 UN member states from the European area and representatives of 11 international and observer organizations.



Seventh Virtual Plenary Meeting of the United Nations Regional Committee of Experts on Global Spatial Information Management (UN-GGIM Europe).



Web session with 110 participants from 36 UN member states from the European area and representatives of 11 international and observer organizations.

The SMA is also involved with the International Association of Geographical Names UNGEGN and in the work of the Reference Frame Sub-Commission for Europe EUREF and in the activities of the Permanent Committee on Cadastre in the European Union PCC. Representatives of the Surveying and Mapping Authority also participated in the ISA2 Intergovernmental Public Administration Group and the Permanent Committee for INSPIRE, which operate within the European Commission. Due to the

COVID-19 virus epidemic, most of the listed activities took place online.

In 2020, the SMA was also actively preparing for the organization of the international symposium EUREF 2021 in Ljubljana. Due to the COVID-19 epidemic, the event will be organized at the end of May 2021 as a three-day web conference. More than 100 participants from all European countries are expected to attend.



Website of the international EUREF 2021 Symposium in Ljubljana (<https://euref2021.si/>).



THE PROGRAMME OF THE PROJECTS eProstor

The Programme of the projects **eProstor** is part of the Operational Programme for the Implementation of the EU Cohesion Policy 2014-2020 (CCI 2014SI16MAOP001), specifically the second Priority Axes titled »Enhancing access to, and use and quality of, information and communication technologies«. A detailed description of activity implementation is provided in the Implementation Plan for the Operational Programme for the Implementation of the EU Cohesion Policy in the Period 2014-2020, which was passed by the Government of the Republic of Slovenia.

SHARING THE SPACE



In 2020 The Surveying and Mapping Authority of the Republic of Slovenia, together with the Ministry of the Environment and Spatial Planning, continued with the implementation of the eProstor, which is successful in establishing a common and unified information infrastructure for spatial data in Slovenia in accordance with the European INSPIRE Directive. This will enable shortening of real estate and spatial management procedures and make them more efficient and simple.

At the end of 2020, the Programme of the projects eProstor is entering the last fifth of its five-year period, the phase to implement all that has been done so far, within which it is necessary to transform existing business processes in accordance with new IT solutions. Hereinafter, the tasks of individual projects carried out in 2020 are described.

The Programme of the projects eProstor is comprised of four projects, which are interconnected and interdependent, and a fifth project meant for management support and informing. Within the Programme, tasks were performed in the field of establishing spatial data infrastructure and connecting to the national computing cloud, establishing information infrastructure for real estate records and improvements to the positional accuracy of the graphical part of the land cadastre.

- 1 COMMON INFRASTRUCTURE FOR SPATIAL INFORMATION
- 2 RENOVATION OF THE REAL ESTATE RECORDS SYSTEM
- 3 DATA ACQUISITION AND DATA QUALITY IMPROVEMENT
- 4 SPATIAL INFORMATION SYSTEM
- 5 PROJECT MANAGEMENT AND INFORMATION

COMMON INFRASTRUCTURE FOR SPATIAL INFORMATION

The Spatial Information Infrastructure consists of **metadata, spatial data sets and network services, technologies, agreements for reuse of spatial data and services and coordination, monitoring mechanisms and procedures to ensure compliance with the Spatial Information Infrastructure Act (ZIPI)**, which is the basis for systematic work in the field of spatial information infrastructure in the Republic of Slovenia.

The fundamental goal of SDI is to establish an infrastructure that provides spatial data to public institutions, business entities, organizations and citizens with the help of standardized online services. The reference organization and the **national contact point** is the Surveying and Mapping Authority of the Republic of Slovenia, which manages and coordinates all activities for the establishment and operation of SDI.

In 2020, the Surveying and Mapping Authority of the Republic of Slovenia regularly performed the tasks of the National

Contact Point in the implementation of obligations from the INSPIRE Directive. Representatives of the National Contact Point regularly attended INSPIRE working meetings of the MIG-T and MIG-P groups.

Activities continued in the field of coordination with other spatial data managers, which are obligated to provide spatial data and services in accordance with the INSPIRE Directive.

The Slovenian Geoportal was regularly updated, which provides access to all information on the SDI in one place. The Metadata system for spatial metadata was also regularly updated and maintained in accordance with the valid Slovenian metadata profile. Spatial metadata is regularly harvested from the Slovenian INSPIRE metadata system to the European INSPIRE geoportal and to the Slovenian Open Data Portal.

Within SDI, the “Slovenian Metadata Profile for Spatial Data” was adopted as a mandatory document for spatial metadata management, which fully complies with the requirements of the INSPIRE Directive and its implementing rules, as well as the rules and requirements of the Slovenian Access to Public Information Act (ZDIJZ). The metadata profile is mandatory for all spatial data managers who publish spatial metadata in the Slovenian INSPIRE metadata system. The document is also published on the National Interoperability Portal (NIO) at <https://nio.gov.si/nio/asset/slovenski+metapodatkovni+profil>.

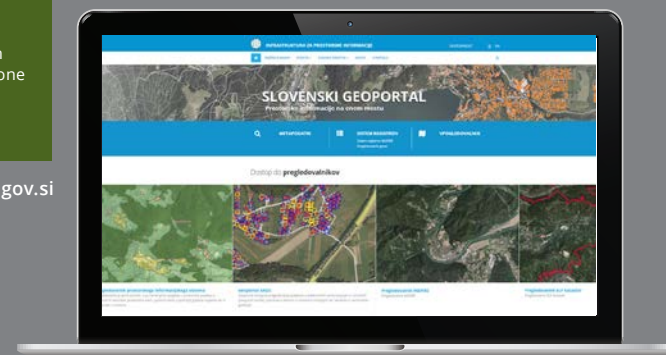
In the second half of the 2020, several workshops were organized with individual managers on the topic of setting up online services in accordance with the INSPIRE Directive. In December, together with the 4th Conference of the Programme of the projects eProstor,



SLOVENE GEOPORTAL

provides access to all information regarding SDI in one place.

www.geoportal.gov.si



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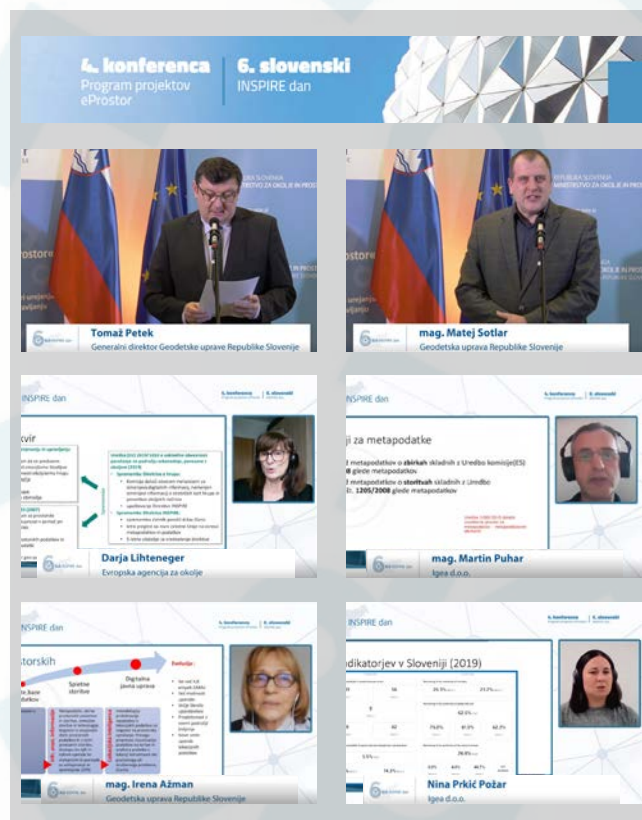
spatial datasets
are compliant
with the INSPIRE
Directive in
the Republic of
Slovenia.

74

**view and
download services,**
compliant with the
INSPIRE Directive,
exist for spatial
datasets.



the **6th Slovenian INSPIRE Day** was organized. The event presented the progress and the development of the National Spatial Information Infrastructure (NIPI). Special attention was paid to the interoperability and accessibility of spatial data and the possibility of applications in new areas. A brochure on the compliance of spatial data sets and related services with the INSPIRE Directive has also been prepared.



Introductory activities have begun as part of the task "Data exchange and network services", which aims to establish and ensure conditions for the smooth flow of spatial data between public administration bodies and other stakeholders in Slovenia, their exchange with European Commission bodies and between Member States. Permanent coordination tasks were carried out in the field of individual projects and with the Ministry of Public Administration. Public tenders were conducted for the purchase, supply and installation of the necessary hardware, system and licensed equipment for the installation of software solutions developed within eProstor.

Decades ago, the Surveying and Mapping Authority of the Republic of Slovenia, in cooperation with the then Government Informatics Center, established

the Distribution Environment of the Surveying and Mapping Authority, which is now part of the common information infrastructure of the Ministry of Public Administration. The distribution environment is used by various users, from the general public to State Bodies, including the Ministry of the Environment and Spatial Planning, as a source of representative data for different environments: view services, for the integrated spatial planning viewer and system for recording construction administrative acts. As part of eProstor, a technological and content-wise renovation of the distribution system is being carried out. For this purpose two contracts have been signed in 2020, one for the first project - Infrastructure for Spatial Information and one project - Portals, and projects for implementation were prepared for both projects.

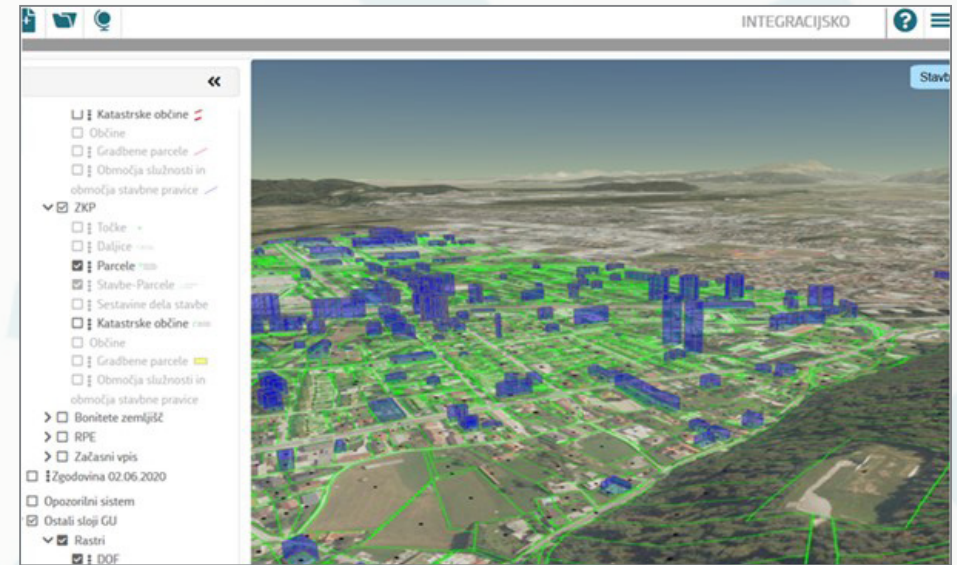


Brochure on data compliance with the INSPIRE Directive.



RENOVATION OF THE REAL ESTATE RECORDS SYSTEM

The aim of the project is to **renovate the real estate records system of the Surveying and Mapping Authority of the Republic of Slovenia** and thus the establishment of a unified IT solution that will enable modern operation of the new real estate system and will represent a unified fundamental national spatial infrastructure. This will establish a single platform, a **single-entry point**, through which communication will take place between the Surveying and Mapping Authority of the Republic of Slovenia and the private sector and surveying service providers. A **connection with other IT systems** will be established via real estate identifiers (Spatial Information System, eGovernment, Land Register, Slovenian Business Register, Central Population Register...). All this will facilitate e-commerce and in doing so remove many administrative barriers.



IT solution IR Kataster - 3D display of terrain, land plots, buildings.

In 2020 contracts were signed regarding financing public power tasks and public service tasks for development and technical tasks in the field of renovation of real estate records, which encompassed tasks in the field of regulation and preparation of real estate data for migration to the new data system, migration of procedural data and archival data, control of vectorized floor plans and monitoring and control of activities of the renovation of real estate records.

Based on the project for implementation, an IT solution was developed to support the maintenance of real estate records, called **IR Delovodnik**. The IT solution IR Delovodnik is linked with the IT solution (**IR Kataster**), which was designed to manage all attribute

and graphic data of the new real estate cadastre (land plot data, buildings and parts of buildings data, spatial units and address data). Both applications had issues when they were installed inside the national cloud computing information environment.

In the scope of implementation of the renewed system of real estate records, the contractor participated in the review of IT solutions IR Kataster and IR Delovodnik. Detailed implementation plans were prepared along with initial user education.

As part of modeling the real estate registration processes and the organizational changes of the Surveying and Mapping Authority of the Republic of

	GOALS OF THE RENOVATION OF THE REAL ESTATE RECORDS SYSTEM
Unified information solution (IR Kataster)	A single-entry point for communication between all users
	Digital submission of all expert elaborates – proposal for record updates
Expert elaborate control in all phases of updating records	Connection with other information systems
e-commerce between actors and users of the system	Optimization and a unified way of data maintenance and process management

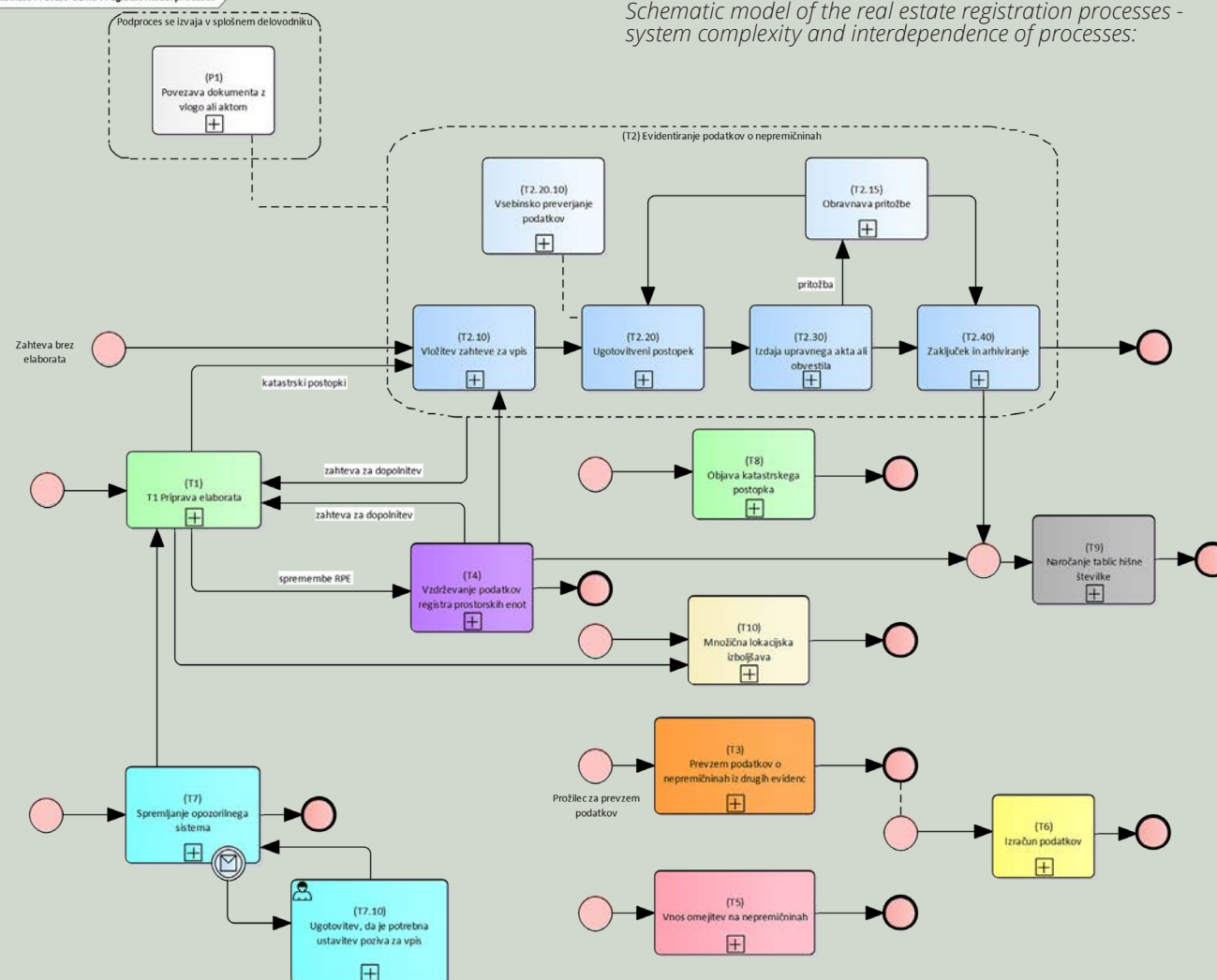
Slovenia, models of key processes regarding real estate registration were supplemented due to minor changes to the Real Estate Cadastre Act (based on interdepartmental reading). Activities were continued for the establishment of a system of user support on data and services of the Surveying and Mapping Authority of the Republic of Slovenia continued.

Regarding the Consolidated Cadastre for Public Infrastructure, a public tender for the renovation of the IT solution was carried out, a contractor was selected and a project for implementation was prepared.

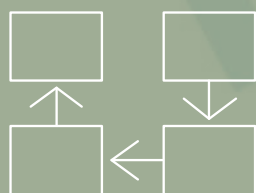
On the basis of the project for implementation for the IT solution for recording state border data the construction of such an application has begun.

Two interdepartmental readings we carried out on the proposal of the Real Estate Cadastre Act. The resulting comments and proposals in both hearings have been harmonized and material was prepared for discussion at the Government of the Republic of Slovenia.

Business Process GURS Pregledni model procesov



Schematic model of the real estate registration processes - system complexity and interdependence of processes:



DATA ACQUISITION AND DATA QUALITY IMPROVEMENT

One of the goals of this project was already met in 2019, when the scanning of the land cadastre and building cadastre archives along with data from the national spatial plan acts archive was completed. In 2020, the acquisition of actual use of built-up land data continued along with the positional improvement of the graphical part of the land cadastre.

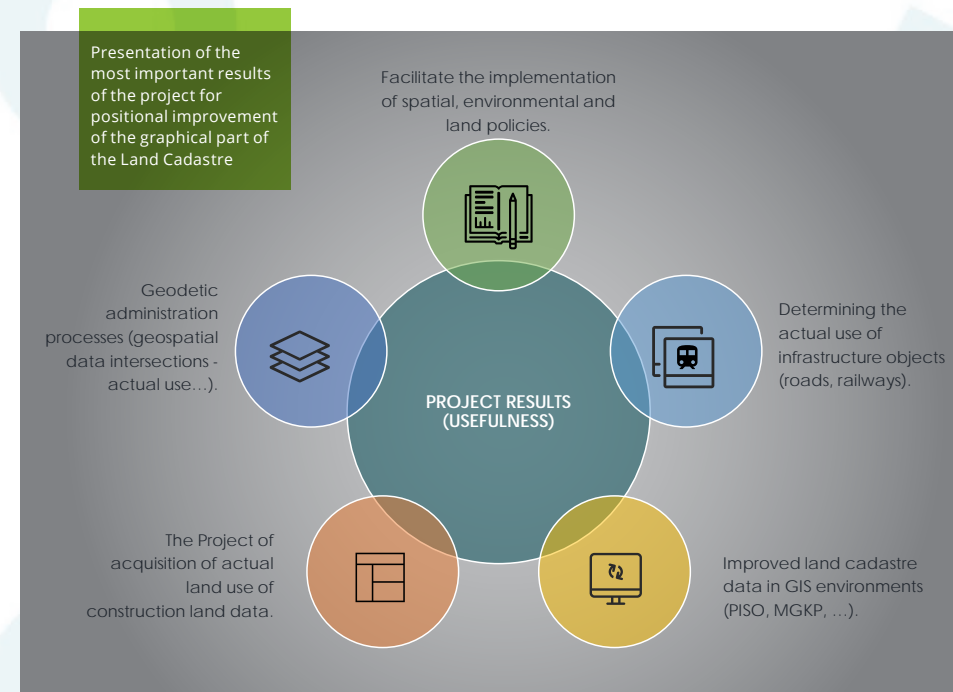
The contract for **mass acquisition of inhabited land and the actual use of inhabited land** contains the tasks of acquiring inhabited land and the actual use of inhabited land and control of recorded data in phases and submission of the captured data to external review. In the scope of the project land associated with objects is captured for the entire territory of Slovenia. The mass acquisition is divided into 11 phases and will be completed till April 2021.

From the beginning of the mass acquisition until the end of 2020, **85% of all land associated with objects was recorded**, just in 2020 40% of all land associated with objects in Slovenia was captured. In 2020, the data acquisition was demanding

both in terms of scope and difficulty, as, among other things, the survey was carried out in the area of the two largest cities, Ljubljana and Maribor. Mass acquisition was carried out in the area of five regions, of them three regions were carried out in full (phase 6: Savinjska Region and part of Posavska Region, phase 7: Osrednjeslovenska Region and part of Primorsko-Notranjska Region, phase 8: Podravska Region), and in the area of two regions the capture started (phase 9: Gorenjska Region and part of Osrednjeslovenska Region, phase 10: Goriška Region).

The multi-year **project of positional improvement of the graphical part of**

the land cadastre was fully completed in 2020, which means that location data were improved in all cadastral municipalities throughout the country. All contractual obligations of the external contractor were fulfilled - determination of additional connection points for transformation by recalculation of old elaborates, field surveying and measurement of connection points, determination of auxiliary connection points using orthophoto and lidar data, and determination of additional transformation parameters, such as collinearity, perpendicularity and parallelism. All these data were used by the operational group of the Surveying and Mapping Authority of the Republic



of Slovenia, which in 2020 performed data processing and improved the positional accuracy of the graphical part of the land cadastre in the territories of SMA Offices Ptuj, Maribor, Radovljica, Kranj, Škofja Loka, Tolmin, Idrija, Ajdovščina, Nova Gorica, Sežana, Postojna and Koper.

Improved graphical data of the land cadastre is publicly published and available for use for the entire country.

The Geodetic Institute of Slovenia continuously carried out and completed an independent control of the results of the collection of additional data (connection points) for all data produced by external contractors.



Example of positional improvement in the area of built-up land (settlement).

OVERALL NUMBER OF COLLABORATORS

(not necessarily all the time)



- » project management: 3
- » improvement desk officers: 30
- » desk officers of geodetic offices: 74
- » additional helpers for geodetic offices: as necessary, but min 37
- » controllers: 3



- » Geodetic Institute of Slovenia (GIS) - improvement desk officers: 3
- » GIS - controllers: 9
- » GIS - administration of the IT system IzBA: 3
- » administration of the IT system SysGeoProTM: 1
- » external contractors: approx 50

7,359
elaborates

were reviewed.



3,291
elaborates

were suitable for
calculation and
ready for further
processing.



13,309
points

were measured
in the field.



11,014
points

were
transformed.



POSITIONAL
IMPROVEMENT
OF THE
GRAPHICAL
PART OF LAND
CADASTRE

SPATIAL INFORMATION SYSTEM



Single-Entry Point, rules and regulations, expert opinions, legal regimes, jurisdictions ...



ePlan, collection of spatial acts



eGraditev, construction database



Build-up land records



Spatial Development Monitoring System, indicators

The Project is being carried out by the Ministry of the Environment and Spatial Planning, namely the Spatial Planning, Construction and Housing Directorate. The current situation in the field of spatial planning and construction is reflected in the fragmented data sets and supporting services, non-standardized and missing data, functional orientated solutions and systemic lack of transparency. These are the reasons the Ministry started planning necessary support system for e-commerce. The new spatial and construction legislation adopted at the end of 2017, provides an appropriate legislative framework for the **Spatial Information System with spatial data sets** (spatial acts data set, construction data set, collection of actual use of inhabited land, building land records) and **e-commerce in the field of spatial planning and construction**.

e-commerce in the field of spatial planning and construction includes:

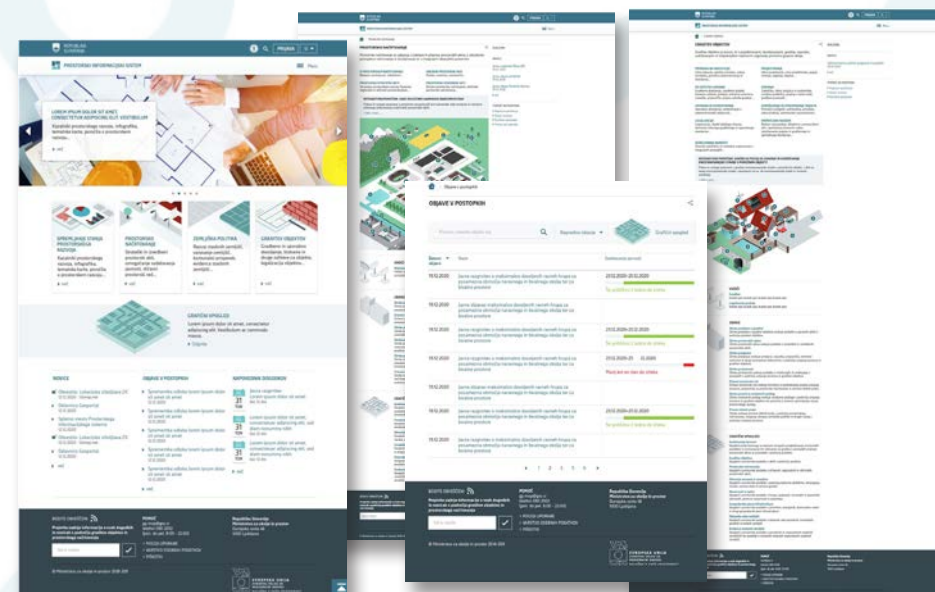
- » **Single-entry point** in the form of a web portal,
- » the **ePlan** system, which supports processes in the field of spatial planning,
- » the **eGraditev** system, which supports processes in the field of construction,
- » **joint spatial status display**,
- » **Spatial Development Monitoring System**.

As part of the contract for IT support in the field of spatial planning and construction, a Single-Entry Point was created with a data connection to ePlan, eGraditev and Spatial Development Monitoring systems. Most activities were aimed at testing systems, redeveloping and upgrading systems, integration with external systems and preparing data for migration. Activities have begun related to the introduction and system integration of systems inside user IT environments.

In 2020, the development has begun on an IT solution to support the management of data on inhabited land and records of building land. A project for implementation was prepared, along with personnel, organizational and fi-

nancial plans, rules for harmonization of mass acquisition of data with the latest land cadastre data and data migration. An activities plan was prepared for build-up land records. The base infrastructure for the development environment was established and a physical model of the database, user interface templates have been prepared.

In 2020, the necessary data bases for mass acquisition were prepared in accordance with the time schedule, and controls were performed to ensure the quality of the data (external control). Regular and necessary maintenance of the monitoring system for mass acquisition was performed.



Spatial Information System – the central web portal.

A person is working at a desk, looking at documents. A pencil is resting on a document with a table. A yellow highlighter is also visible. The table has various documents, including one with a pie chart and another with a table of data. The person is wearing a watch and a bracelet.



SLOVENSKA ZEMLJA
NA KATASTRALSKIH NAČRTIH

SLOVENIAN LAND
ON CADASTRAL MAPS

Geodetska uprava Republike Slovenije
Surveying and Mapping Authority of the Republic of Slovenia





ACCES TO DIGITAL DATA

The main mission of the SMA is providing the Infrastructure for Spatial Information, effective services and high quality authoritative spatial data, provided in a manner that meets quality standards of a geoinformation-enabled society. The demand for digital spatial data has been constantly increasing over time. This demand has only increased due improvements made regarding accessibility of spatial data over different digital channels.

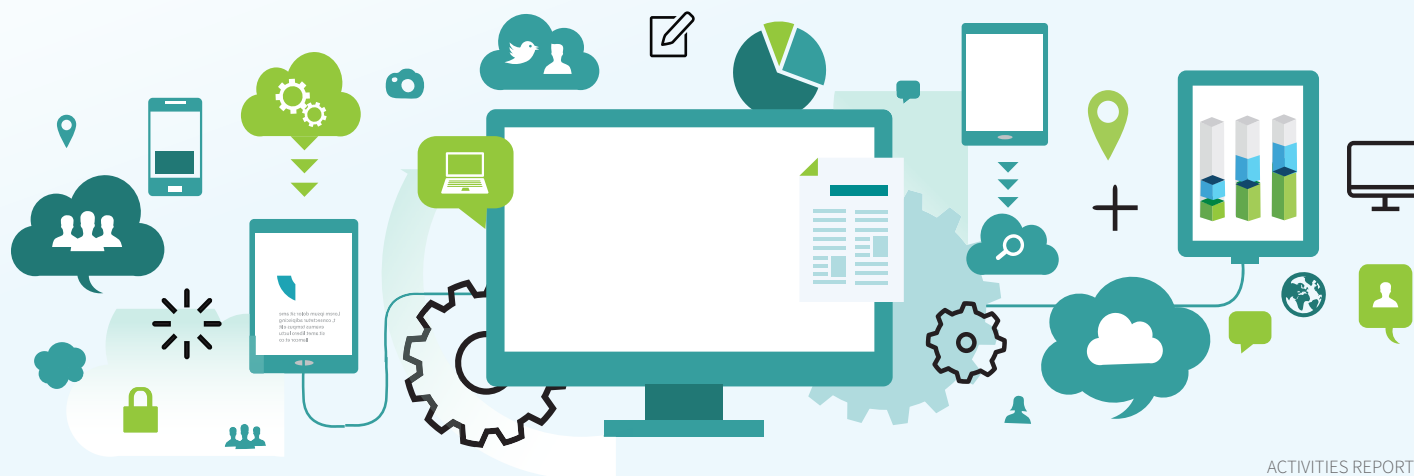


The SMA still provides access to spatial data through written order at the **Department for processing data orders**. In 2016 there were 1,772 such orders and in 2020 the number was 492. If we look in a longer timeframe, from 2009 till 2020, there is a clear trend of reduction in the number of written orders and on the other hand an increase in digital viewing and downloading of data over all available digital channels the SMA provides.

A direct comparison of the number of data requests using written orders and downloading via the web portal shows positive trends in the digitalization of operations of the SMA, increased use of spatial data and thus an increase in the value of spatial data.

An heavily digital business process provides cost savings to the SMA and on the other hand, such an exponential growth in usage of spatial data could not be met in the classic, analog manner.

A constant increase in traffic and use can be also seen at the web portal for accessing and downloading spatial datasets of the SMA called **PORTAL e-GEODETSKI PODATKI**, which was established at the end of 2016 with the goal to provide free, regularly refreshed and open access to public spatial data of the SMA in the form of prepared packets.

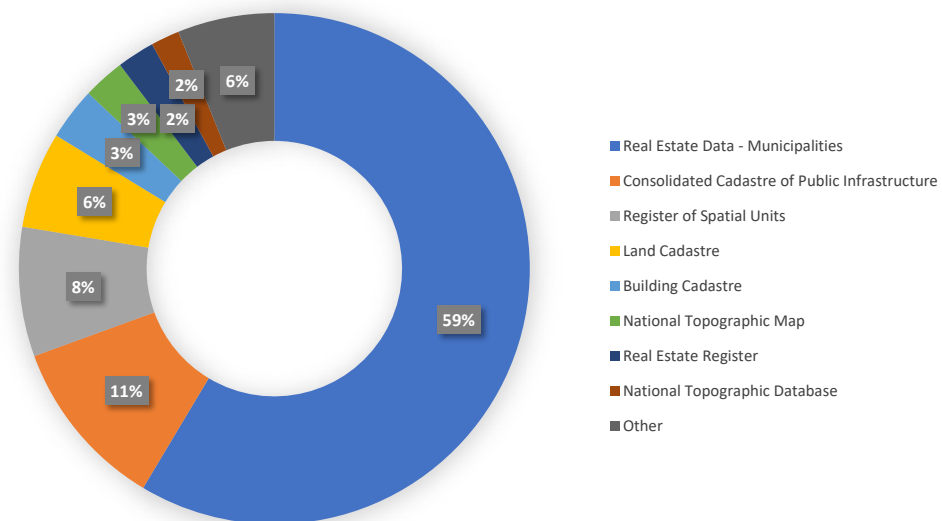


DOWNLOADS INQUIRIES, USERS

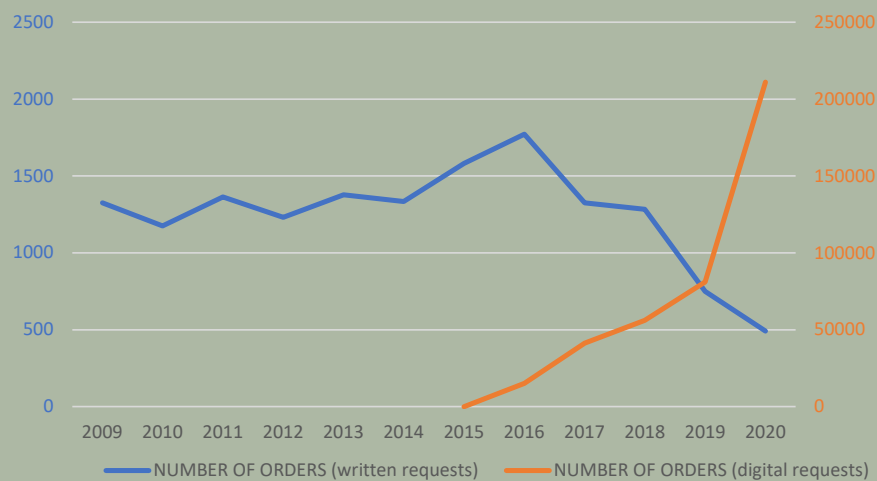
142,000,000 **inquiries** have been made into digital spatial data of the SMA.

More than **210,000** **spatial data packets** of the SMA were downloaded.

More than **38,000** **active users** have the web portal for downloading spatial data packets of the SMA.



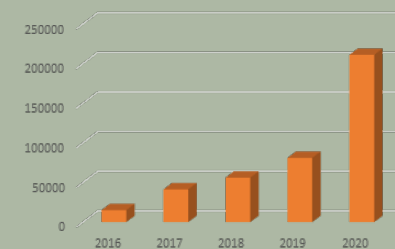
Distribution of digital data download by spatial datasets.



Joint display of data requests using written orders and downloading via the web portal.



Number of orders at the Department for processing data orders (written requests).



Number of orders over the web portal e-Geodetski podatki (digital requests).

SLOVENIA IN NUMBERS

ON DECEMBER 31th 2020

- 
- » **563,721**
house numbers
 - » **10,425**
streets
 - » **6,036**
settlements
 - » **212**
municipalities
 - » **5,738,788**
land plots
 - » **1,190,406**
buildings
 - » **1,891,394**
parts of buildings
 - » **2,698**
cadastral municipalities

Activities Report 2020

Text

Surveying and Mapping Authority of
the Republic of Slovenia,
Digi data d.o.o.

Conceptual and Design Concept

Digi data d.o.o.

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Surveying and Mapping Authority of
the Republic of Slovenia

Ljubljana, 2021



Guidelines of the Government of the Republic of Slovenia regarding preparation for the spread of COVID - 19

