GEODETSKA UPRAVA REPUBLIKE SLOVENIJE

SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA

LETNO POROČILO

ACTIVITIES REPORT

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ADDRESS FROM THE DIRECTOR GENERAL

1. ADDRESS FROM THE DIRECTOR GENERAL

The work of the Surveying and Mapping Authority of the Republic of Slovenia in the year 2014 was marked by the turbulent response towards the mass real estate valuation and the informational calculation of the real estate tax and consequently by the changes to real estate data in the Real Estate Register. But we must not forget that the surveying profession and the tasks of state surveying service are much more than just the registration of real estate and its valuation for taxation purposes. More than ten years ago we came to the conclusion that the only true path of development for the state surveying services the transition from a spatial data set administrator to a data manager that enables urban and rural land development as well as land management. This report before you will present the many activities and tasks that were done by the Surveying and Mapping authority of the Republic of Slovenia in the year 2014.

In the fields of geodesy, topography and cartography the Geodesy Office monitored the establishment of 16 GNSS SIGNAL network stations and performed the procurement and upgrade of the technical equipment. The National Land Survey Reference System Act took into force. A geodetic measurement of 155 km of levelling lines of high accuracy was made, GNSS measurements of benchmarks, gravimetric measurements on 184 benchmarks as well as the control of 22 sheets of digital orthophoto. Areal images of 85% of the territory of Slovenia have been taken along with areal triangulation and a digital relief model, color and infrared orthophoto and quality control of the execution of the project. In accordance with the EuroGeographics standards updates to specific spatial data layers, which are produced in co-operation between SMA and EuroGeographics, were done. The Consolidated cadastre of public infrastructure has been and still is being updated trough detailed reports for the registration of public infrastructure and registration of network access points (omrežnih priključnih točk – OTP). In the scope of the project “Modernization of spatial data infrastructure to reduce risks and impacts of floods” all planned activities for the year 2014 were carried out by the Surveying and Mapping Authority of RS in cooperation with the Ministry for the Environment and Spatial Planning and our Norwegian and Icelandic project partners.

In the field of real estate registration the Real Estate Office and the Regional Surveying and Mapping Authorities carried out regular real estate data management and

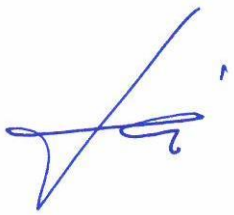
maintenance procedures along with activities to improve data quality. In the field of managing and maintaining data regarding national borders with Italy, Austria and Hungary activities defined by mixed international commission were carried out, among which are individual control measurements of border points as well as regular periodic border marker controls and the preparation of proposals for border documentation for individual national border sectors.

In the field of IT solutions' overhaul and creation the production of a graphical model of the Land Cadastre was carried out, many smaller adjustments of existing IT solutions were done as well as the preparation of substantial public tender conditions for the comprehensive IT overhaul and the preparation for the migration of Land Cadastre graphical data. Procedures for abolishing data errors and data inconsistencies in the existing real estate registers (Land Cadastre, Buildings Cadastre, Real Estate Register and Register of Spatial Units) were carried out in the scope of data improvements. A lot of graphical data intersections were done in the context of data maintenance as well as data quality control.

In the field of mass real estate valuation the Mass Real Estate Valuation Office performed mainly tasks related to the implementation of the Real Estate tax in the start of 2014 which were suspended on the basis of the Slovenian Constitution Court's decision. The Slovenian Constitution Court's decision did not have a direct effect on the system of mass real estate valuation but imposed constitutionally appropriate changes to the Real Property Mass Valuation Act (ZMVN, Official Gazette RS 50/2006, 87/2011, 40/2012 – ZUJF and 22/2001 – Constitution Court decision) which are in the jurisdiction of the Ministry of Finance. The IT system of property market register was updated so it enables the systematic registering of all real estate sales agreements, which are subject to transfer of real estate tax and added value tax, as well as all rental agreements for buildings and individual apartments. The production and distribution environment of the public register of the real estate market was managed and maintained to provide a good foundation for improvements to the transparency of the real estate market in the Republic of Slovenia. The Mass Real Estate Valuation Office performed analysis and calculations on which the Government of the Republic of Slovenia will base the new value indexes for calculation the real estate value changes due to the state of the real estate market in 2014. Further explanations regarding the real estate market state in the year 2014 will be given in this activities report.

In the field of data issuing the Surveying and Mapping Authority ensured users data access through electronic means – system of data distribution, as well as the traditional way at all locations of the Surveying and Mapping Authority. Many activities were carried out to promote and inform (potential) users and the public regarding spatial data and services. The Surveying and Mapping Authority continued its activities in the year 2014 regarding the implementation of a common information infrastructure on the basis of ZIPI – Infrastructure for Spatial Information act (Official Gazette 8/2010). In the field of Information technology appropriate IT conditions were provided for the operation of the information system.

The surveying profession, of which the National surveying services are also a part of, has demonstrated in the past that it is capable of successfully collecting and registering land surface and other spatial data which have been an appropriate base for high quality decision making in environmental and spatial policies. Surveyors are from the profession's beginning acknowledged as collectors of land data which were used for land taxation and as a profession which prepared maps and charts for military uses and for exploration – new territories and continents. Discovering of new continents has not been a current topic for a bit over 250 years, at least on our planet, but sadly states services need operational resources which are provided through taxation including real estate taxes. One of the reasons for the tumultuous reaction of the public regarding the proposed Real Estate Tax may have been because of spatial data which was provided by responsible entities did not clearly define the responsibility for data quality of individual registers as well as clearly stating the lack of interoperability of data sets. Today's paradigms relating to spatial and real estate data management are emphasizing the need for an organized infrastructure for spatial information upon which appropriate land policy can be enacted and directed spatial development and non the les for an efficient and just real estate taxation. With the establishment of the spatial data infrastructure many activities still lie ahead of us and the surveying profession is ready to accept these challenges and positions itself at the forefront of the infrastructure. Spatial data infrastructure has a place alongside other important infrastructures like transportation and telecommunication infrastructures. The only issue with the establishment of any infrastructure is that usually takes a long time and is costly but is done outside of the public spotlight. All too often we forget the designers and maintainers of infrastructure even though they are a necessary component of the system and become of interest to the end user only in the case of malfunctions and errors. The fast development of new technologies on one side and the development of society on the other have confronted the surveying profession, the state, local government and other participants with many challenges and opportunities and this is the moment for us to embrace and accept these challenges and opportunities.



Anton KUPIC
Director General
SMA
Republic of Slovenia

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ABOUT THE SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA

2. ABOUT THE SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA

2.1 IDENTITY CARD

The Surveying and Mapping Authority of the Republic of Slovenia is a body within the Ministry of the Environment and Spatial Planning. The competence of the Surveying and Mapping Authority of the Republic of Slovenia comprises the tasks of the national land survey service, which include the creation, management and updating 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 basic data on space and real estate in the finalized databases, provides services pertaining to the registration of changes in physical space and on real estate, and performs the role of coordinator for the real estate system and spatial data infrastructure. In cooperation with the Ministry of Finance, it is carrying out a mass real estate appraisal with the aim of creating the foundations for successful and efficient real estate management, to provide data for objective and comprehensive real estate taxation and improve the efficiency of the real estate market. It provides for the national coordinate system and its compliance with the European coordinate system and creates the conditions for implementing land surveys.

Figure 1: Information provided by the Surveying and Mapping Authority of the Republic of Slovenia

2.2 MAIN TASKS AND ACTIVITIES

The Surveying and Mapping Authority of the Republic of Slovenia comprises: the Main Office, the Real Estate Office, the Mass Real Estate Valuation Office, the Geodesy Office and twelve regional surveying and mapping authorities. The latter have been set up to 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.

In cooperation with the regional surveying and mapping authorities, the regional offices implement the following joint tasks:

- preparing the national land survey service annual program and the report on its implementation,
- organizing the work of the regional surveying and mapping authorities, monitoring their work and ensuring the uniform implementation of national land survey service assignments,
- directing the implementation of development assignments pertaining to surveying and mapping activities,
- implementing operational, professional and administrative assignments from the offices' fields of work,
- drafting regulations on surveying and mapping activities,
- meeting international obligations in the field of national land survey services.

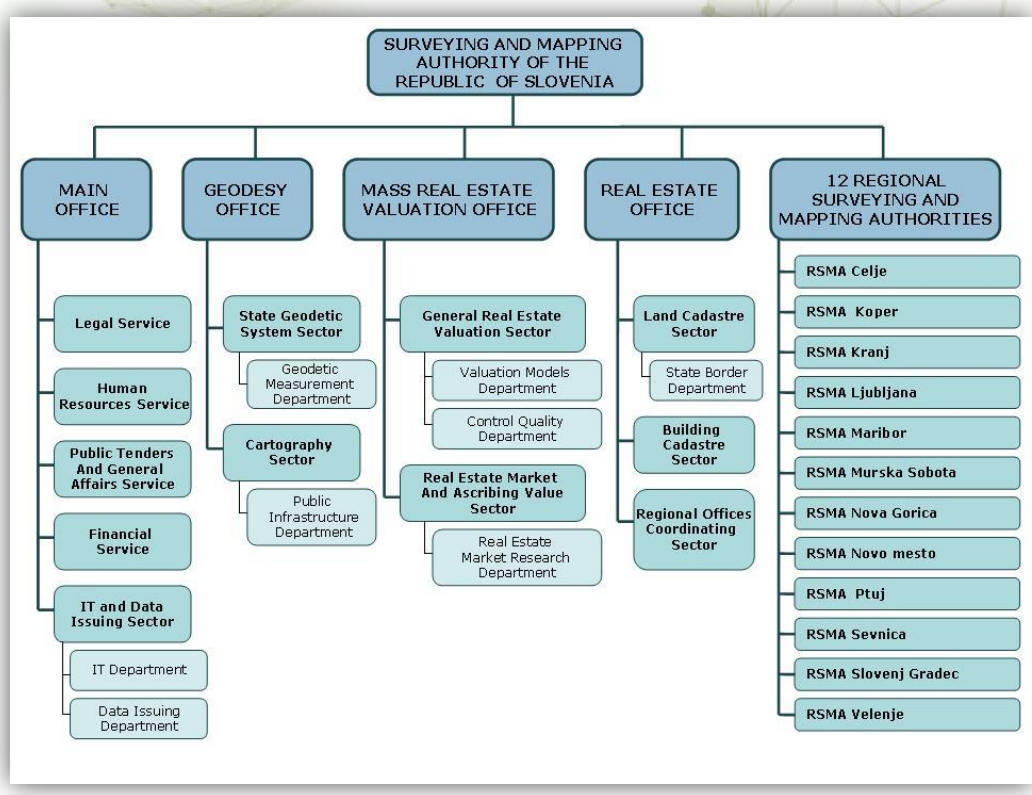

Figure 2: Organization chart of the Surveying and Mapping Authority of the Republic of Slovenia

2.3 ORGANISATIONAL STRUCTURE

Main Office

The Main Office deals with administrative, professional, technical and supervisory activities relating to the linking of spatial databases, the issuing of certificates and data in analogue and digital form in relation to e-commerce with spatial data, the spatial data infrastructure and developing electronic land survey services. It administers the information and telecommunication infrastructure and provides systemic, application and user support and IT training and education. Additionally, it implements activities pertaining to providing assistance in resolving the substantive legal matters of all offices and regional surveying and mapping authorities, financial operations, public procurement, human resources issues, education, office operations, health and safety at work and other organisational activities important for the functioning of the Surveying and Mapping Authority of the Republic of Slovenia.

Figure 3: The headquarters of the Surveying and Mapping Authority of the Republic of Slovenia

Real Estate Office

The Real Estate Office is responsible for administrative, professional, technical, coordination and supervisory activities pertaining to the management of the Land Cadastre, the Building Cadastre, the Real Estate Register and other records on real estate, the Consolidated Cadastre of Public. It is also engaged in managing the Register of Spatial Units and the Register of House Numbers. It operates in an interagency capacity in the work of international commissions and in other activities and projects, and is responsible for the training and education of employees of the regional surveying and mapping authorities. It prepares subject matter and material for the mandatory training of geodesists with a geodetic permit in cooperation with the Slovenian Chamber of Engineers. The substantive management and coordination of the work of regional surveying and mapping authorities in the field of real estate is another of its tasks.

Mass Real Estate Valuation Office

The Mass Real Estate Valuation Office implements the tasks of general real estate valuation and the tasks of ascribing value to real estate properties. The main tasks comprise the preparation of real estate valuation models, determination of real estate value indices and monitoring of the Slovenian real estate market. The main products are valuation models for individual types of real estate that, on the basis of data from the Real Estate Register, provide for the calculation of the market value of real estate, calculated indices of the value of real estate that enable updating of market values with regard to price trends in the real estate market during the period between general valuations of real estate and periodic reports on developments in the market based on systematic monitoring and analysis of data on the market. The Office manages and maintains the Real Estate Market Record, which is a multi-purpose public database on purchases and rental agreements pertaining to real estate. The Real Estate Market Record is managed in order to provide data on realized prices and rents in the real estate market for the purposes of mass valuation and other public purposes determined by law. On account of the changes in real estate markets, the Office verifies individual real estate valuation models at least every four years. The Office manages and updates the Real Estate Valuation Database, which is a public database on real estate valuation models and data on value indices. The Office provides for the procedure of ascribing values, whereby the values of all recorded real estate are calculated on the basis of data on real estate entered in the Real Estate Register by using the mass valuation model for calculation of generalized market value, and enters the calculated values into the Real Estate Register.

Geodesy Office

The Geodesy Office is responsible for the geodetic reference system represented by the national coordinate system and the national topographic system. In these fields, it implements legislative, professional, technical and coordination, implementation and supervisory assignments. It is responsible for establishing and updating the national coordinate system and its accessibility through the system of permanent global satellite positioning stations and other geodetic networks (the SIGNAL network). It coordinates and implements activities pertaining to the transition to the European coordinate system ESRS (European Spatial Reference System) and is responsible for linking the national coordinate system with the coordinate systems of neighboring countries. It carries out field work required to set up the horizontal and vertical (geometric and physical) components of the national coordinate system, provides transformation parameters between the existing (old) national and (new) European coordinate system and captures spatial data of the Surveying and Mapping Authority for the purpose of controlling. It manages a collection of data on geodetic points. It also implements organisational and coordination activities regarding the capture, management and integration of topographic data. It manages a collection of topographic data and the Consolidated Cadastre of Public Infrastructure. It is responsible for the national cartographic system and ensures the creation of national topographic and cartographic products for the needs of the state, ministries and local government. It provides for the

compliance of the basic geo-information infrastructure with the European guidelines. It manages the national border register and carries out activities pertaining to marking, renewing and maintaining the national borders with Italy, Austria and Hungary. It prepares legislation in its area of work and contributes to European and transnational projects being conducted.

Regional Surveying and Mapping Authorities

- Create, manage and update the Land Cadastre, the Building Cadastre, the Register of Spatial Units and other databases provided by law; provide information from the Land Cadastre, the Building Cadastre and the Register of Spatial Units and other databases,
- Implement administrative procedures and make first instance rulings in administrative matters for which they are competent,
- Provide professional assistance to clients and information to users,
- Participate in the planning and programming of land survey activities, primarily in cooperation with local communities,
- Coordinate activities in the land survey offices,
- Implement individual activities in the areas of financial operation, personnel matters, office operation and other organisational activities,
- Implement other activities as stipulated by the Director General of the Surveying and Mapping Authority.

Regional surveying and mapping authorities receive applications, provide information, provide data to clients and carry out individual tasks in administrative procedures pertaining to direct contact with customers at their head offices and all other geodetic offices.

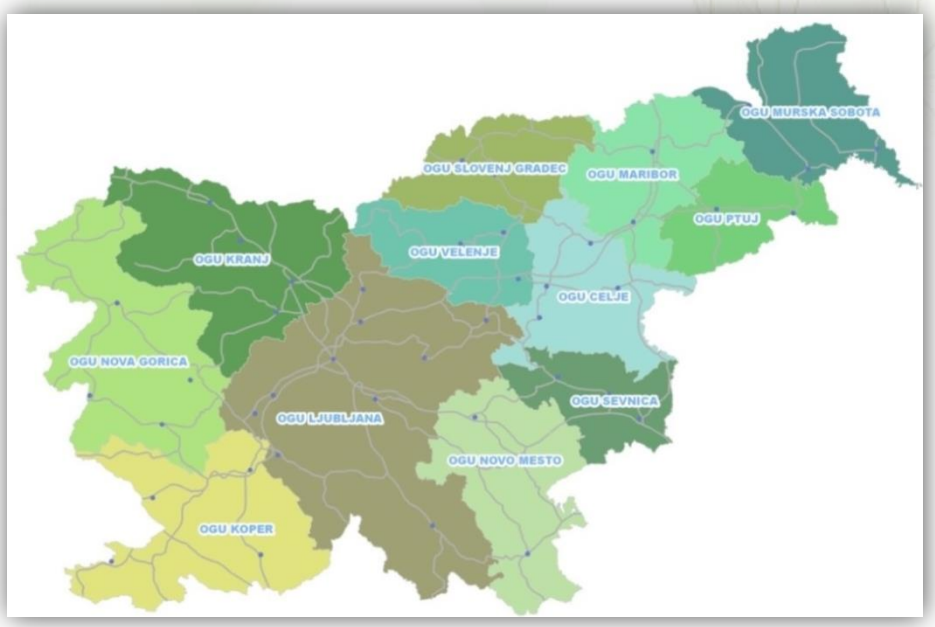

Figure 4: The territorial division of the regional surveying and mapping authorities

2.4 HUMAN RESOURCES

On **31 December 2014** The Surveying and Mapping Authority of the Republic of Slovenia employed **472** public employees with employment for an indeterminate term, **9** with employment for determinate term and did not employ any interns. **16** employees ended their employments in 2014 (indeterminate and determinate term), **1** new employee has been employed for an indeterminate term. In comparison with the end of 2013 the number of employees for an indeterminate term dropped for **2.28 %.**

Table 1: Number of employees in offices and regional surveying and mapping authorities on 31 December 2014 in terms of expertise and level of education

Staff structure by field of expertise in 2014	
Surveyors	263
Agronomists	8
IT specialists	10
Lawyers, financial and administrative staff	200
Total	**481**

Staff structure by level of education in 2014	
University/Bachelor's degree	299
First level university	37
Secondary	140
Primary	5
Total	**481**

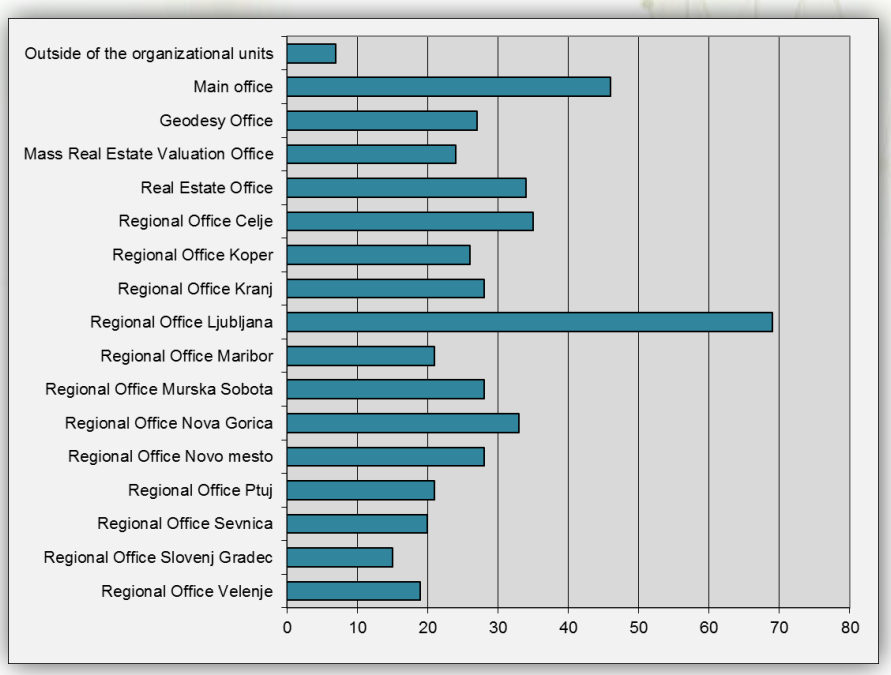

Diagram 1: Number of employees in offices and regional surveying and mapping authorities on 31 December 2014

2.5 FINANCE

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. The surveying works program is prepared for a period of two years and is approved by the Government of the Republic of Slovenia.

Revenue generated from issuing geodetic data from the Land Cadastre, the Building Cadastre, the Real Estate Register, the state border records and the Register of Spatial Units for payment is revenue generated by our own activity. In accordance with the Budget Implementation Act and Rules on the procedures of implementing the budget of the Republic of Slovenia revenue deriving from an entity's own activities may be used only to cover material costs, the costs of storing and issuing data and investments in property, plant and equipment as well as investment management for the needs of the Surveying and Mapping Authority of the Republic of Slovenia in implementing its own activities.

Table 2: Budget expenditure in 2014

Budget 2014	**€**
Surveying works programme	5,001,443
Wages	12,944,949
Material costs	2,226,946
Investments and investment maintenance	243,798
Own activity	67,886
Total	**20,485,022**

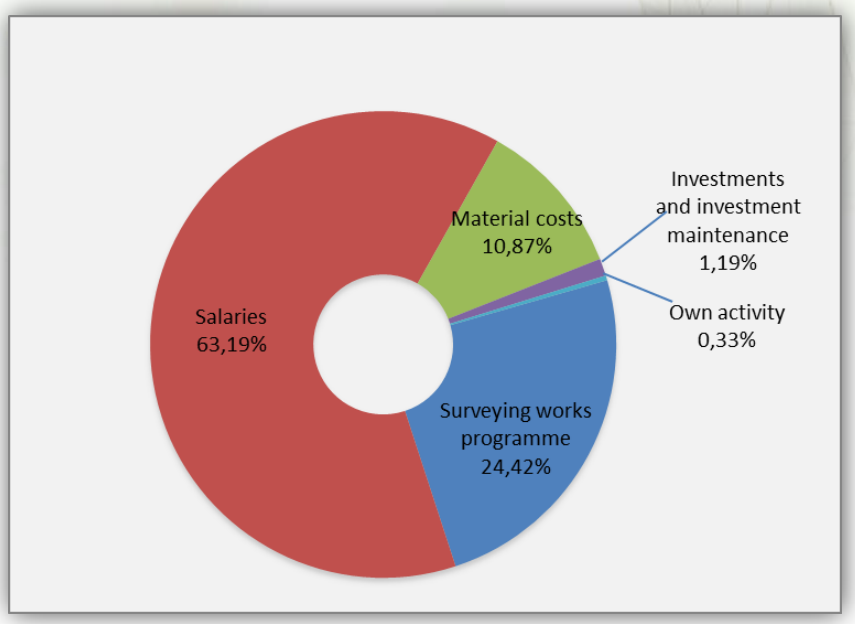

Diagram 2: Shares of expenditure by purpose in 2014

Table 3: Budget expenditure by year (all figures in €)

	2009	2010	2011	2012	2013	2014
Surveying works programme	3,488,762	3,870,418	2,363,387	2,235,824	4,596,195	5,001,443
Wages	14,137,920	14,098,625	13,976,793	13,538,511	12,801,770	12,944,949
Material costs	3,004,407	2,753,562	2,697,185	2,602,459	2,189,059	2,226,946
Investments and investment maintenance	161,390	109,496	101,145	108,782	413,590	243,798
Own activity	110,512	113,558	230,820	167,292	101,768	67,886
Total	**20,902,991**	**20,945,659**	**19,369,330**	**18,652,868**	**20,102,382**	**20,485,022**

2.6 INTERNATIONAL ACTIVITIES

The Surveying and Mapping Authority of Republic of Slovenia performed activities of international cooperation in accordance with directions and strategic goals, written in Programme of work for state surveying services for 2014 and 2015.

In 2014 international cooperation covered inclusion in activities, performed by EuroGeographics: Association of National Mapping, Cadastral and Land Registry Authorities (such as European global and regional map, European administrative borders, European digital model of relief, European geographic names and work on European projects of horizontal and vertical network and cooperation with project ELF). Representative of The Surveying and Mapping Authority of Republic of Slovenia in current mandate held the role of a member of executive board of this association. Funds of international cooperation were used for payment of membership fee for membership in EuroGeographics. The Surveying and Mapping Authority of Republic of Slovenia also cooperated with work of other international organizations and associations, but, because of saving measures, its employees did not participate in those meetings. Contacts were made and maintained by means of electronic communication.

General assembly of EuroGeographics

From the 29 to 30 September 2014 the Moldavian city of Chişinău was hosting the annual general assembly of the Association of National Mapping, Cadastral and Land Registry Authorities, referred to with the name »Eurogeographics«. Almost 160 attendants from 50 different countries were at the general assembly. The main talking points were connected to expected changes and the search for appropriate responses to these changes which are anticipated in the fields of National Cadastres, Cartography and Surveying Authorities.

Participants of the general assembly were introduced to the details regarding the ELF project and with the roles of agencies, which are already members of the consortium as well as with the possible gains for members which are not part of the project's consortium. The EuroGeographics community is faced with the need to encompass as many data managers as possible in the ELF project to achieve the results which will fulfill the user needs for Pan-European products and services in the field of spatial data.

The presented themes at the general assembly related to the future of cadastre and the challenges this will present to the national surveying, mapping and cadastral authorities. The presentations were also showing the role of »brokers« in the field of spatial data, the management of big data sets (»big data«) and their interconnectivity (»linked data«) as well as what effect new technologies have on the work of surveying, cadastral and mapping authorities.

The representative of the EU Joint Research Center (JRC) emphasized the need to connect the implementation of the INSPIRE Directive with the role of national cadastral and surveying authorities especially relating to the tasks for the interoperability of the Public Sector as it is envisioned in the document Digital Agenda for Europe . The JRC is certain that the key to successfully implement duties which come from the INSPIRE Directive is in the measures and activities carried out by the European Surveying authorities as members of EuroGeographics. At this point there are two viewpoints on the level of the European Commission regarding data policy to ensure public services which in the future have to be harmonized and considered in the establishment of national visions for spatial data in individual countries. The first viewpoint is presented in the document »Vision for public services« and proposes a fully open in mostly free of charge access to data for providing public services. The other viewpoint is a proposition for a public-private partnership for providing public services which is summarized in the document »Towards a thriving data-driven economy«, which talks about the opportunities for establishing and connecting public sector services in collaboration with the private sector in regards to processing big databases. In the past year the Association carried out many activities pertaining to the identification of services on the basis of spatial data and the coordination between managers of spatial data sets.

Figure 5: Participants of the general assembly 2014 (photo: EuroGeographics)

In the scope of the general assembly the founding meeting of experts for the global management of spatial data at the UN (United Nation Global Geospatial Management - UN GGIM) for Europe was carried out. Besides the formal confirmation of the Rules of Procedure, the election of the Executive Board of the UN GGIM Europe was carried out as well as the confirmation of the work program for the next three years. Tomaž Petek was voted into the Executive Board as the representative of the SMA of the Republic of Slovenia. The strategic work guidelines of the group were presented in the document »UN GGIM Vision document«.

INSPIRE

»**INSPIRE for good governance!**« was the title of last year's INSPIRE conference which took place in Aalborg, Denmark from the 18 till 20 Jun 2014. It was organized by the JRC and the European Commission.

More than 600 attendees were even before the start of the conference able to participate in many workshops and seminars relating to different projects which are funded through different programs of the European Union regarding spatial data and services. The emphasis of the comference was access to standardized spatial data for spatial management needs and environmental decision making.

One of the more important themes was the connection between INSPIRE and the COPERNICUS program. The collaboration so far was carried out through two projects – HELM and ELGE, but there is still need for a more effective collaboration of both programs and activities. The main focus was on data access for interventions in natural or other disasters and the »Open Data Policy«, which was outlined in the COPERNICUS program. This program advocates the »Full open and free of charge« principle.

The interim results were presented - »INSPIRE Midterm evaluation report« and the full report was published in September 2014. The main areas addressed in the Midterm report ascertained the access and quality of spatial data and their availability, the organization and coordination of spatial data as well as the exchange of spatial data and services.

Figure 6: Impressions from the INSPIRE conference in Aalborg

The European Commission wrote the guiding thought »Knowledge Based Economy« in all of the development strategies for economic growth and development. The importance of open access to spatial data was emphasized, especially official data on real estate which can significantly contribute to economic growth and foreign investments. These baselines will be taken into account in the execution of all projects in the scope of the HORIZON 2020 program.

The Slovenian representatives at the conference were from the Faculty of Electrical Engineering and Computer Science at the University of Maribor (UM FERI), Ministry for Interior, Surveying and Mapping Authority of the Republic of Slovenia (SMA), Geological Institute and the Ministry for Agriculture, Forestry and Food. The SMA presented a paper regarding the preparation of a program for building necessary capacities for the implementation of the INSPIRE Directive which is being prepared in the scope of the project **Modernization of Spatial Data Infrastructure to reduce risks and impacts of floods** which is being partly financed through the EEA financial mechanism.

Figure 7: Tomaž Petek, SMA Representative presenting his paper

Solemn Academy

The Slovenian Federation of Surveyors and the Surveying Association of Ljubljana organized the Solemn Academy and the 42nd Surveyor day in acknowledgement of the Day of the European Surveyor and GeoInformation. The events happened on the 3rd and 4 of April 2015 in Hotel MONS, Ljubljana and were sponsored by the Minister of the Environment and Spatial Planning.

Speeches on the Solemn Academy in honor of the Day of the European Surveyor and GeoInformation were given by Secretary at the Ministry of the Environment and Spatial Planning, representative from the Urban Planning department from the Ljubljana

Municipality, Director of Riko, representative from the German association for land management and the president of the Slovenian Surveyor Association. They gave their opinions on the complexity of land rearrangement as a challenge for the surveying profession. On Friday, the 4 April 2014 an expert conference with the main theme **»Land rearrangement - a challenge for land surveying«.** Eleven different reports regarding land rearrangement were presented in which the authors presented the state in this area in Slovenia and two other countries.

Regional cooperation

Between the 2nd and 4 Jun 2014 the seventh regional conference of cadastre and national spatial data infrastructure took place in Tirana. The conference was organized by the Albanian Agency for real estate registration IPRO. It was attended by representatives of national cadastre and mapping authorities from Albania, Bosnia in Herzegovina, Republic of Serbia, Slovenia, Kosovo, Macedonia, Montenegro as well as representatives for EuroGeographics and the Swedish surveying authority »Lantmäteriet« and the Swedish International Development Cooperation Agency »SIDA«. During his speech the Secretary General of EuroGeographics Dave Lovell emphasized the need for the establishment of an interoperable European spatial infrastructure, which is also being established with the help of the ELF project, run by EuroGeographics. He also pointed out the need for national cadastre and mapping authorities to participate in the UN GGIM and EU initiative - the COPERNICUS program. The guiding thought of the conference was the linking of registers and data bases as well as achieving interoperability between these register on national and international levels.

Figure 8: Tomaž Petek during his presentation

The Surveying and Mapping Authority of the Republic of Slovenia was represented by the director general Anton Kupic and Tomaž Petek. In the Slovenian presentation we showed our experiences with linking different spatial data sets and registers, which were carried out for the purpose of the project »e-sociala« (»e-social«) and with the informational valuation of the real estate tax.

The start of the project IMPULS was also announced at the conference. This is a regional project which will be financed by the Swedish International Development Cooperation Agency (SIDA) and will be carried out between 2014 and 2018. The project consists of six working packets and is valued at 4 million €. The project's purpose is to support the execution of the INPSIRE Directive, which provides the technical interoperability and exchange of spatial data on the national and regional levels. The directors of surveying authorities from countries which are still eligible to receive development support from Sweden signed a treaty of cooperation with SIDA and an agreement for the implementation of the IMPULS project. This project will be carried out as a test of interinstitutional cooperation between the surveying authorities in the region and the Swedish surveying authority Lantmäteriet.

Figure 9: Representatives of surveying authorities during the signing of the IMPULS agreement of cooperation

The director general of the Surveying and Mapping Authority of the Republic of Slovenia attended a meeting with the directors of the Croatian, Macedonian and Slovenian surveying authorities on 10 October 2014.

The event was organized by the Surveyor Association Celje and the Association of Surveyors of Slovenia in Hotel Thermana, Laško with the help of sponsors. During the discussion the counterparts touch on the organization of state surveying services and its role in establishing the spatial data infrastructure in all three countries. The individual experiences of all three authorities regarding existing mutual cooperation, the exchange of knowledge and collaboration on joint projects were presented. Some time was also given to future plans and activities which will be carried out in order to adapt the organization regarding future challenges and trends in the field of national surveying services in all three countries.

The cooperation continues between the Surveying and Mapping Authority of the Republic of Slovenia and the National Surveying Authority of the Republic of Croatia. The now traditional meeting of the two surveying authorities took place in November 2014 on the castle Bogenšperk in Slovenia. The meeting was informative in nature, as each party reported about recent activities and achievements in the last year.

The Surveying and Mapping Authority of the Republic of Slovenia was in the beginning of December visited by a delegation from the Serbian surveying authority, with whom we exchanged opinions and experiences regarding the field of geographic names register. Because Slovenia is currently hosting the East-Central European and South-East European geographical and lingual department of the expert group on geographic names of the UN, the Serbian Commission for standardizing geographical names requested the Slovenian Commission for standardizing geographical names and the Surveying and Mapping Authority of the Republic of Slovenia to present their experiences and activities in this field to their delegation. In this spirit two delegates from the Republic of Serbia came to Slovenia on the 4 and 5 December 2014. Serbia has only recently started to actively engage in the area of geographical names. They are in the process of establishing a geographical names register and they have appointed a Commission for standardizing geographical names. At the start of their visit at the Surveying and Mapping Authority of the Republic of Slovenia they were presented with all the areas of work as well as the topographical database which is being established with the help of the EEA 2009-2014 financial mechanism. Following the introduction came the presentation on the geographical names register (establishment, data model, management and maintenance of geographical names), legislation in the field of geographical names, the cooperation between the Surveying and Mapping Authority and the Commission for standardizing geographical names and the cooperation of the Surveying and Mapping Authority in international projects regarding geographical names (EuroGeoNames, ELF, INSPIRE). During this meeting we agreed that further cooperation between the two surveying authorities and the two Commissions will be carried out.

Slovenia continued with activities to establish cooperation with neighboring countries. On 17 December 2014 in the city of Badacsony on the North shore of Lake Balaton in Hungary, Slovenia participated at the signing of an agreement of cooperation between Slovenia, Croatia and Hungary.
The agreement of cooperation in the field of real estate registering was signed by the Surveying and Mapping Authority of the Republic of Slovenia, National Surveying Authority of Croatia and the Hungarian Institute of Geodesy, Cartography and Remote Sensing. The agreement is meant to improve the cooperation were there are common interests and will be based on the principle of equality. The goal of the agreement is to encourage tripartite cooperation regarding surveying services, management of land and real estate registers as well as cartographic and topographic activities in accordance with national legislation.

Figure 10: The signing of the agreement of cooperation

EEA financial mechanism

The Surveying and Mapping Authority of the Republic of Slovenia organized in cooperation with the Ministry for Infrastructure and Spatial Planning, the Ministry for Agriculture and the Environment and the Norwegian and Icelanding surveying authorities a launching conference of the project »Modernization of spatial data infrastructure to reduce risks and impacts of floods« on the 3rd and 4 February. The project's purpose is to improve water management, reduce the risks and impacts of floods and to improve data coherence in regards to the INSPIRE Directive. The conference was opened with introductory speeches from Dejan Židan, MSc, minister for Agriculture and the Environment, Bojan Babič, MSc, State Secretary at the Ministry of Infrastructure and Spatial Planning and Aleš Seliškar, Director General of the Surveying and Mapping Authority of the Republic of Slovenia.

The Ministry for Infrastructure and Spatial Planning, the Surveying and Mapping Authority of the Republic of Slovenia and the Ministry for Agriculture and the Environment have in the year 2013 successfully attained a multi-year project which is financed out of the European Economic Area (EEA) financial mechanism. Partners form the Norwegian surveying authority Statens kartverk and the Icelandic surveying authority Landmælingar Íslands are also cooperating in this project.

The project will contribute to the better harmonization of topographical and especially hydrographical data with the INSPIRE Directive and in doing so ensure high quality and reliable data for assessing flood risk, spatial planning and other spatial activities.

The project is divided into four subprojects: Geodetic reference system (GRS), Topographic dataset (TOPO), INSPIRE (INSP) and Hydrography (HIDRO) and will be carried out until May 2016. The total sum meant for the modernization of the spatial data infrastructure is 3,060,000 EUR (out of this the European funds and national co-financing present 2,085,882 EUR, the contribution from the project leaders, the Surveying and Mapping Authority of the Republic of Slovenia and the Ministry for Agriculture and the Environment, is 974,118 EUR).

The project is also meant to accelerate the fulfillment of European and Slovenian environmental legislation, the partial establishment of the spatial data infrastructure as a prerequisite for comprehensive management and supervision, with emphasis on managing flood risks and spatial planning, as well as increase the possibility for information sharing regarding environmental impacts between Slovenia and other countries.

Between the 5 and 6 November 2014 a working visit for the participant of the project »Modernization of spatial data infrastructure to reduce risks and impacts of floods« was organized in Oslo.

The purpose was to inform the project partners with the achievements of the subprojects during the first year of the project's implementation and the overview,

analysis and harmonization of the project with both of the partner authorities form Iceland and Norway for the year 2015. Individual representatives from the subprojects Geodetic reference system (GRS), Topographic dataset (TOPO), INSPIRE (INSP) and Hydrography (HIDRO) presented their respective results and emphasized areas of work where they expect additional cooperation from Norway and Iceland in the future implementation of the subprojects.

Figure 11: Project partners on the working visit in Oslo

The presentation of the subproject Geodetic reference system showed the measured levelling lines of high accuracy, which run almost exactly as expected. The measurements made by the Surveying and Mapping Authority as well as measurement done by outside contractors are showing good results. The report by the Icelandic expert, which took a look at the building sites of two points of the zero order national geodetic network (Prilozje in Kog), has given a positive feedback regarding the subproject's activities so far. For the remaining three points of the zero order network the necessary permits and technical documentation is being prepared. Besides the zero order network, absolute gravimetric measurements were also carried out on six absolute gravimetric points by the Austrian surveying authority, because Slovenia does not possess the necessary equipment. But we did procure equipment in order to carry out GNSS measurements on the points of the zero order network. Because the obtaining of necessary permits and the issuing of public tenders for the adjustments to the levelling lines of high accuracy and the concentration of gravimetric measurements (relative gravimetric measurements) still have to be carried out all the necessary data for calculating the new geoid of Slovenia will not be available at the end of 2015.

In the subproject INSPIRE the planned activities regarding the establishment of network services and the capacity building program have been done. The information infrastructure which serves as the basis for establishing and functioning of the INSPIRE adherent network services is prepared and is the same as the one used in the existing distribution environment of the Surveying and Mapping Authority of the Republic of Slovenia (open source infrastructure Geoserver and GeoNetwork). Some network services are already available for specific data of the Surveying and Mapping Authority

for testing purposes. The capacity building program is meant to inform stakeholders which produce and manage spatial information and end users of the importance to consider standards and the necessity of collaboration and cooperation for more efficient business processes.

The subproject Topography presented work relating to the preparation of the new data model for topographic data set of the Surveying and Mapping Authority of the Republic of Slovenia. A logical model of the new data set has been prepared as well as an estimate of the financial repercussions of implementation. A quality data model has also been prepared. The next phase consisted of preparing a physical model of the topographic database and the development of software solutions for managing data in accordance with the new topographical database data model which will be realized in the distribution environment of the Surveying and Mapping Authority of the Republic of Slovenia till the end of 2014. Following these steps the migration of existing topographic data will be carried out and the new rules for data accusation will be prepared.

The representatives of the subproject Hydrography met with the foreign partners for the first time in the new composition. Even though changes to some of the project goals were made they reiterated that they will be met. They structural compliance of hydrographic data is ensured and a draft method for the acquisition and maintenance of data regarding water objects was presented. They also reported on the public tenders and contracts that were executed so far and shown interest in the exchange of experiences with the foreign partners regarding modeling hydrographic data and the use of LIDAR data.

The issue of the implementation of the project as a whole was also presented at the working visit. Because of the late commencement of the project in comparison with the project's implementation plan it is running behind 5 months and consequently some of the funds in the years 2013 and 2014 were not used, in part also due to the closing of integral budgetary rates of the Surveying and Mapping Authority of the Republic of Slovenia. The Slovenian delegation along with the project partners agreed that to ensure the realization of all set goals of the project the unrealized funds and with them the corresponding unrealized tasks need to be transferred into the year 2016, and along with that the project needs to be extended until November 2016. The partners form Norway and Iceland agreed and supported the proposition.

EuroSDR

One of the more important events is certainly the joining into the EuroSDR association. The 125th Conference of the EuroSDR (European Spatial Data Research) association took place in the Belgian town of Leuven from 22 to 24 October. EuroSDR is an all European organization which was established under the name OEEPE with an international agreement in Paris in the year 1953. The interests of spatial data of European countries are represented trough national institutions which are members of the EuroSDR. The result is a network of representatives from European organizations and institutions.

Joint research projects are conducted which cover the acquisition, management and provision of spatial data and services and international workshops are carried out to debate key issues. EuroSDR provides the means to connect state surveying authorities with research institutions and the private sector, a state of the art research program, the capability for timely designing, broadening and conducting of research projects, workshops, publishing of expert standards and education. 5 groups are working in the scope of the association. As part of the Slovenian delegation dr. Dalibor Radovan from the Geodetic Institute of Slovenia and the Department for Geodetic Engineering of the Faculty for Civil and Geodetic Engineering participated in the conference. The Surveying and Mapping Authority of the Republic of Slovenia, Geodetic Institute of Slovenia and the Department for Geodetic Engineering the Faculty for Civil and Geodetic Engineering have come to an agreement of collaboration in the areas of common interests in the EuroSDR association. In signing the agreement all three organizations committed to participating in international surveying activities, manage registers of land and real estate as well as cartographic and topographic activities, in the scope of the EuroSDR association. On 18 September Slovenia send a joining request to the EuroSDR which was addressed and confirmed on the regular meeting on 23rd October 2014. From that day on Slovenia has become a member of the EuroSDR association.

EUREF

The 24 annual symposium of the Reference Frame Sub-Commission for Europe (EUREF) took place from the 4 until 6 Jun 2014 in Vilna, Republic of Lithuania. The organizers were the Agricultural Ministry of the Republic of Lithuania and the Research Institute of Geodesy. The city of the symposium, Vilna, was presented as one of the most visited cities of the North-Eastern part of Europe.

The annual symposium of EUREF are of utmost importance for the surveying profession as they provide expert lectures and an opportunity to get informed and to discuss the current activities regarding the common European reference system between representatives from different European countries. The annual symposiums are also an opportunity to present national activities reports in the field of reference systems and to form and renew contacts with colleagues from other countries.

The experts focused mostly on the importance of developing global satellite navigation systems in real time, the development of the ETRS89, the high system and gravimetric. The representatives from Slovenia on the symposium were from the Surveying and Mapping Authority of the Republic of Slovenia, Jurij Režek, MSc, and Klemen Medved, MSc. They presented the national activities report regarding the geodetic reference system.

3

WHAT WAS ACCOMPLISHED IN 2014?

3. WHAT WAS ACCOMPLISHED IN 2014 ...

3.1 REVIEW OF THE ACTIVITIES OF THE SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA IN 2014

In the field of **drafting of regulations**, the Surveying and Mapping Authority of the Republic of Slovenia prepared the National Land Survey Reference System Act (Official Gazette of the RS , No. 25/2014), which was later adopted by the Government of the Republic of Slovenia.

Rules and Regulations which were adopted by the Government of the Republic of Slovenia:

- Decree amending the Decree on data on property characteristics in the real estate register (Official Gazette of the RS , No. 7/2014),
- Programme of work of the national land survey service for 2014 and 2015 (Government of Republic of Slovenia decision No. 35301-2/2014/6 from 15 March 2014),
- Report on the implementation of the programme of work of the national land survey service for 2013 and 2014 in part, that refers to year 2013 (Government of Republic of Slovenia decision No. 35301-1/2014/6 from 15 March 2014),
- Decree amending the Decree on data on property characteristics in the real estate register (Official Gazette of the RS , No. 41/2014),
- Decree amending the Decree determining real estate valuation models (Official Gazette of the RS , No. 41/2014),
- Decree determining parameters of the horizontal component and the gravimetric part of the vertical component of the national spatial coordinate system, the names of these components and the national geographical projection (Official Gazette of the RS , No. 57/2014),
- Decree on the transcription of geographical names on national maps in ethnically mixed areas in the Republic of Slovenia (Official Gazette of the RS, No. 57/2014),
- Report on registering real estate transactions and prices of border administrative units for the year 2013 (Government of Republic of Slovenia decision No. 42303-1/2014/4 from 13 November 2014).

Moreover, five sets of rules, adopted by the minister of infrastructure and spatial planning, or the minister of the environment and spatial planning were prepared:

- Rules on the detailed content of the remote sensing database (Official Gazette of the RS, No. 54/2014),
- Rules on the detailed content of the remote sensing database (Official Gazette of the RS, No. 54/2014),
- Rules on the topographic data catalogue and topographic key (Official Gazette of the RS, No. 54/2014),
- Rules on the mapping key (Official Gazette of the RS, No. 54/2014),
- Rules amending the Rules on registration in the building cadastre (Official Gazette of the RS, No. 87/2014).

One bill and a regulation have been also prepared, but failed to be adopted in the year 2014 for various reasons.

The Surveying and Mapping Authority of the Republic of Slovenia also actively participated in the preparation of regulations by other ministries and state bodies.

In the field of geodesy, topography and cartography, the Geodesy Office performed control of the configuration of sixteen permanent GNSS stations of the SIGNAL network and purchased and upgraded the necessary technical equipment. The operation of the network and the GPS Service at the Geodetic Institute of Slovenia, which monitors the network operation and transmits data to users and the mobile phone network, was ensured. Regular maintenance and service works on geodetic measuring instruments and equipment were performed. Geodetic measurements of high accuracy were carried out on 155 km of levelling lines, GNSS measurements on EUREF points, gravimetric measurements on 184 benchmarks and the control of 22 DOF sheets. We also executed measurements for the recording of land underlying a building and we renewed one of the trigonometers of the Ist order. Maintenance of the application for the management of geodetic points and transformations was performed.

We made aerial images for 85% of Slovenia, aero-triangulation and digital model of relief, colour orthophoto and infrared orthophoto. We did the quality check on execution of project. In line with standards of EuroGeographics we supplemented some of the data layers of EuroRegionalMap (ERM), EuroGlobalMap (EGM) and EuroBoundaryMap (EBM). We renew 5 sheets of public/military topographic maps of scale 1 : 50,000. We renewed public review map of scale 1 : 500,000, 1 : 750,000 and 1 : 1,000,000. We did some work for Commission for standardization of European geographic names. We captured topography data for 100 sheets of scale 1 : 5,000 and special tasks for Ministry of Defence on the field of cartography and topography. 410 studies for registering public infrastructure buildings into the Consolidated Cadastre of Public Infrastructure and 73 studies for registering network access points (OPT) were forwarded and 416 studies were entered into the Cadastre. Together with Ministry for Education, Science and Sport we executed two tasks: »Informational support for management of network access points (OPT) and system upgrades« and » Informational support for network solutions for access to OPT data and the upgrade of the system for registering and analyzing market interest in GOŠO (construction of an open broadband network).

We passed the National Land Survey Reference System Act

In the scope of the project »Modernization of spatial data infrastructure to reduce risks and impacts of floods« (a project out of the Financial mechanism of EEA 2009-2014, carried out by the Surveying and Mapping Authority of Republic of Slovenia in cooperation with the Ministry for the Environment and Spatial Planning and our Norwegian and Icelandic project partners) which is divided into four subprojects many, activities were done in the year 2014. In the subproject Geodetic reference system (GRS) the first two points of the zero order geodetic network have been built. The needed technical equipment for all five stations has been procured. Measurements on the

levelling lines of high accuracy have been performed in a total length of 153 km (outside contractor). Absolut gravimetric measurements were also done on six gravimetric points. In the scope of development tasks some of the activities for the implementation of the European reference coordinate system were carried out. In the topographic database subproject (TOPO) we carried out changes to the data model in accordance with INSPIRE specifications. The physical model of the topographic database has been established and the necessary software solutions for data management have been developed. We have begun contemplating the migration of the existing topographic data into the new data model. In the INSPIRE (INSP) subproject two activities have been concluded »Organizing, informing and educating in the subproject INSPIRE« and »Common infrastructure – analysis and planning in the subproject INSPIRE«. In the subproject Hydrography (HIDRO) we bought equipment for storing and editing LIDAR data. A pilot system to display data has been developed and we bought an application for data capture of water infrastructure in the field with the help of mobile platforms (android). A web application for administration and data import for water infrastructure with integrated GIS viewer was developed. A test of all the acquired equipment and programs has been conducted as well as a test capture of data. We also carried out technical support and guidance, project management, informing the public regarding the projects and activities in cooperation with our project partners for all the subprojects.

In the field of registering real estate, the Real Estate Office and the regional surveying and mapping authorities implemented regular procedures to manage and maintain data from real estate records and activities to improve the quality of data. The envisioned tasks which were determined as part of the revised budget were fully implemented.

The planned tasks in the field of managing and maintaining data on the state borders with Italy, Austria and Hungary as determined by intergovernmental commissions were implemented. Minor measurements of border posts and regular periodical control of border stones were carried out, and border documentation for individual sectors on the state border was drafted.

It was ensured that current operations in the field of information support for the functioning of real estate registers – management and maintenance of real estate registers – run smoothly.

In the field of renovation and creation of new informational solution we started with the creation of graphic module of land cadastre and we performed many small supplementations of existing information solutions as well as preparing substantive conditions for drafting public tender for full informational renovation, and the preparation of graphical land cadastre data migration.

During the data improvements we also carried out procedures for abolishing errors and incongruences in data managed in the real estate databases (land cadastre, buildings cadastre, real estate register and the register of spatial units). We have done many graphical overlays in the scope of data maintenance as well as data quality analysis. We

also prepared a presentation regarding novelties in the system of managing and maintaining real estate databases for the expert public.

In the field of mass real estate valuation, the Mass Real Estate Valuation Office operatively implemented the tasks of general real estate valuation under the Real Property Mass Appraisal Act – ZMVN (Official Gazette of the Republic of Slovenia, No. 50/2006, 87/2011 and 40/2012 – ZUJF. The constitution court judged the constitutionality of the Real Property Mass Appraisal Act – ZMVN. It decided that the following rules are unconstitutional which are directly or indirectly connected with the ZMVN:

- Legal status of taxpayer
- Defining mass valuation models with a government executive order
- Different tax rates for residential and non-residential housing buildings and for energy real estates
- Enabling the right of appeal

The constitution court's decision does not have a direct effect on the mass real estate valuation system because the main changes are connected with making the ZVMN constitutional and those changes lie in the jurisdiction of the Ministry of Finance.

In the beginning of the year 2014 most of activities were connected with the implementation of the real estate tax which was interrupted with the constitution court's decision.

The information system of the real estate market record has been maintained so it enables the systematic recording of all sales of real estate which are bound for taxation on the transit of real estate and the added value tax as well as enabling the registering of rental agreements of buildings and parts of buildings. We managed and maintained the production and distribution environment of the public register of the real estate market which is a good foundation for improvements in transparency of the real estate market in the Republic of Slovenia. We reviewed and processed the sales of real estate with the purpose to model the real estate market in the Republic of Slovenia and to calculate the value index for individual valuation models of real estate. In substantive and informational-technological sense the system for general valuation of real estate has been maintained and upgraded. We carried out analysis and calculation which will be the basis for the Government to determine the value indexes of real estate for the consequent adjustment of the real estate values based on the market situation in the year 2014. The application for adding the value data was maintained. It enabled the viewing of generalized market values for data changes of objects registered in the real estate register in real time. Real estate valuation models and indexes were managed and publicly accessible with the help of the internet. The existing real estate market analysis shows a small decline in sales but not a significant drop of real estate prices. A more detailed presentation on the state of the real estate market will be empirically shown in a report which will be published presumably in March 2015.

Because of insufficient human resources and their utilization in the process of informing the public regarding the informative valuation of the real estate tax the Surveying and Mapping Authority of the Republic of Slovenia did not carry out the overhaul of all the 21 real estate valuation models which is the basis for calculation the generalized market value of 6.5 million real estates which are recorded in the real estate register in the year 2014. This task will be gradually carried out in the next years.

On the basis of the Real Property Tax Act the Surveying and Mapping Authority of the Republic of Slovenia carried out an extensive set of tasks relating to the supplementing of data in the real estate register, upgrades to software solutions, informing owners regarding the real estate tax value of their real estate and changing data by owners and other institutions, who have the legal right to manage and maintain relevant data. After the repeal of the Real Property Tax Act the data, which did no longer have a legal basis for storing have been deleted.

In the field of issuing data The Surveying and Mapping Authority of Republic of Slovenia guaranteed the users access to geodetic data through electronic means with the distribution system and in classic form at information windows on all the locations of The Surveying and Mapping Authority of Republic of Slovenia.

We carried out activities for informing users and the broader public about data and services, we prepared bilingual Annual report (report about work of The Surveying and Mapping Authority of Republic of Slovenia) for year 2013, funds for implementation of concession for management of GEOSS were guaranteed.

The Surveying and Mapping Authority of Republic of Slovenia in 2014 continued with activities for establishment of common informational structure on the base of Infrastructure for Spatial Information Act – ZIPI (The Official Gazette of RS, No. 8/2010).

In the field of informational technology we guaranteed adequate informational conditions for operation of informational systems.

3.2 IMPORTANT ACTIVITIES OF THE MAIN OFFICE

Electronic Access to Data

The Surveying and Mapping Authority of the Republic of Slovenia established a computer-supported distribution system for the purposes of accessing data online. It is based at the Ministry of Foreign Affairs as part of the national information system. It provides access to data in various ways. Almost all the databases are included in the distribution environment: the Land Cadastre, the Building Cadastre, the Real Estate Register, the Register of Spatial Units with Addresses, the Register of Geographical Names, geodetic points, the Real Estate Market Record, the Consolidated Cadastre of Public Infrastructure, as well as the vector and raster topographic data. They are updated daily. Secure and controlled access to personal data is also ensured, and

individual solutions, developed jointly with e-administration, are used. The distribution system is separated from the production data and as independent as possible from the systems and changes in production, of the organization of data suppliers and changes in the manner of administration and data updating. Through the creation and use of special interfaces, online services and user applications, it enables the simple, secure and correct use of geodetic data.

The Surveying and Mapping Authority of the Republic of Slovenia provides its users with electronic access to online data in two ways:

- access to data, and
- distribution of data (data transfer to the user's system) trough network services

In the year 2014 we recorded over 130 million inquiries for surveying data trough network access.

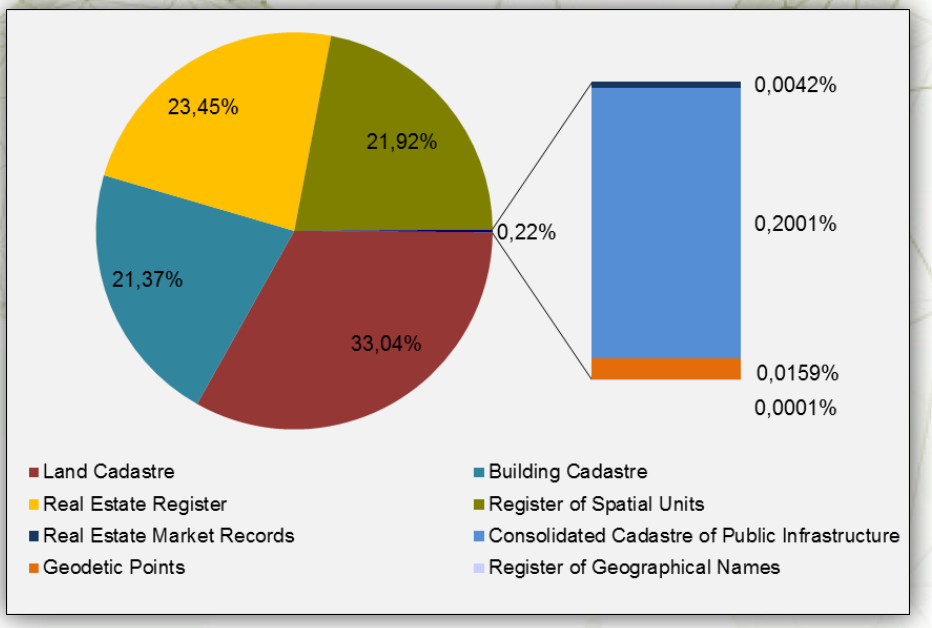

Diagram 3: Shares of inquiries for all data in the year 2014

Metadata for all data is regularly managed and updated. Metadata enables search by data, provider and production areas. Metadata contains descriptions of data characteristics, data accuracy, the method and frequency of database updating, etc.

Metadata is available at http://prostor3.gov.si/cepp/ or, when needed in English, at http://prostor3.gov.si/cepp_ang/.

Metadata as well as other information, services and applications relating to geodetic and real estate data are available to users online at the **Prostor portal** at http://e-prostor.gov.si.

Access to Geodetic Data

- **A map browser** enables all users to search for a location and display of this location on the selected cartographic basis (orthophoto, a basic topographic plan, national topographic maps, etc.) free of charge. It is possible to search a location in two ways: using an address or a geographical name. This, for example, makes it possible to obtain an image and a location of a building on an orthophoto map by supplying its address. This service is available at http://prostor3.gov.si/iokno/iokno.jsp.

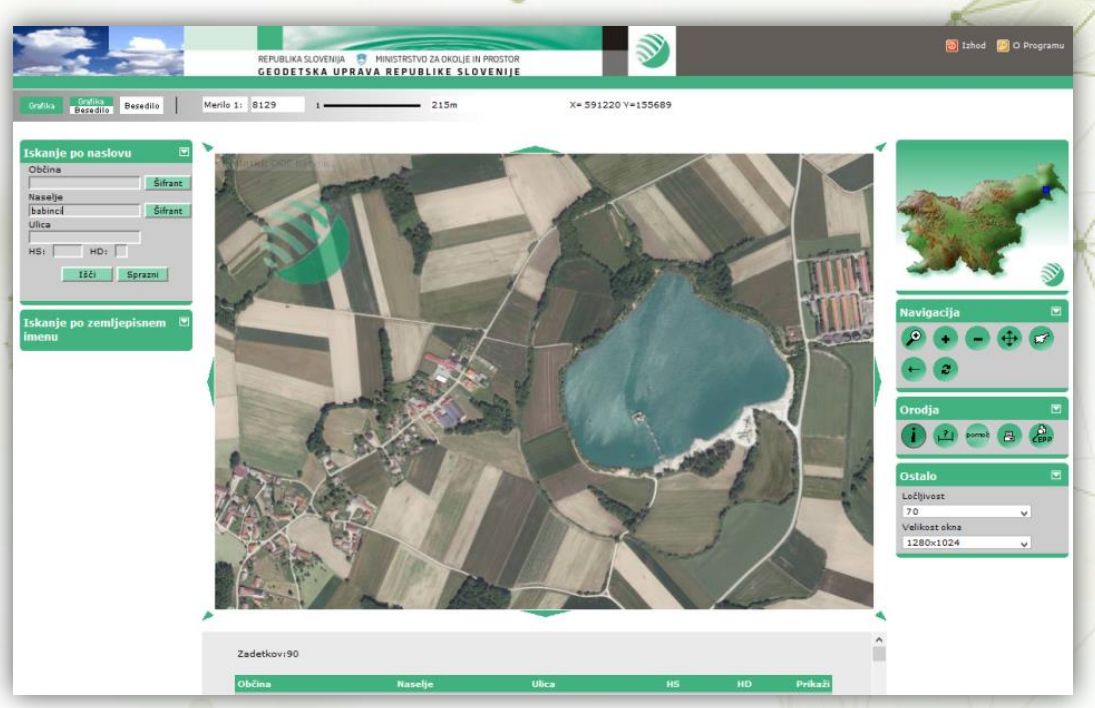

Figure 12: Location search and display of orthophoto

- **Public access to real estate data** is a free online service that enables users access to descriptive and graphic data from the Land Cadastre, the Building Cadastre, the Real Estate Register, the Register of Spatial Units and the Consolidated Cadastre of Public Infrastructure. The application allows public access to generalized market values of real estate that were determined using the procedures and methods of mass real estate valuation, cadastre income for current year, coefficient of forests growth, openness of forest, special regimes for farming and production area. In the year 2014 the graphical display of the public browser of real estate has been supplemented so that it enables the simultaneous display of land parcel and building graphical data as well as borders of cadastral units.
  Data on real estate is available to the public at http://prostor3.gov.si/javni/.

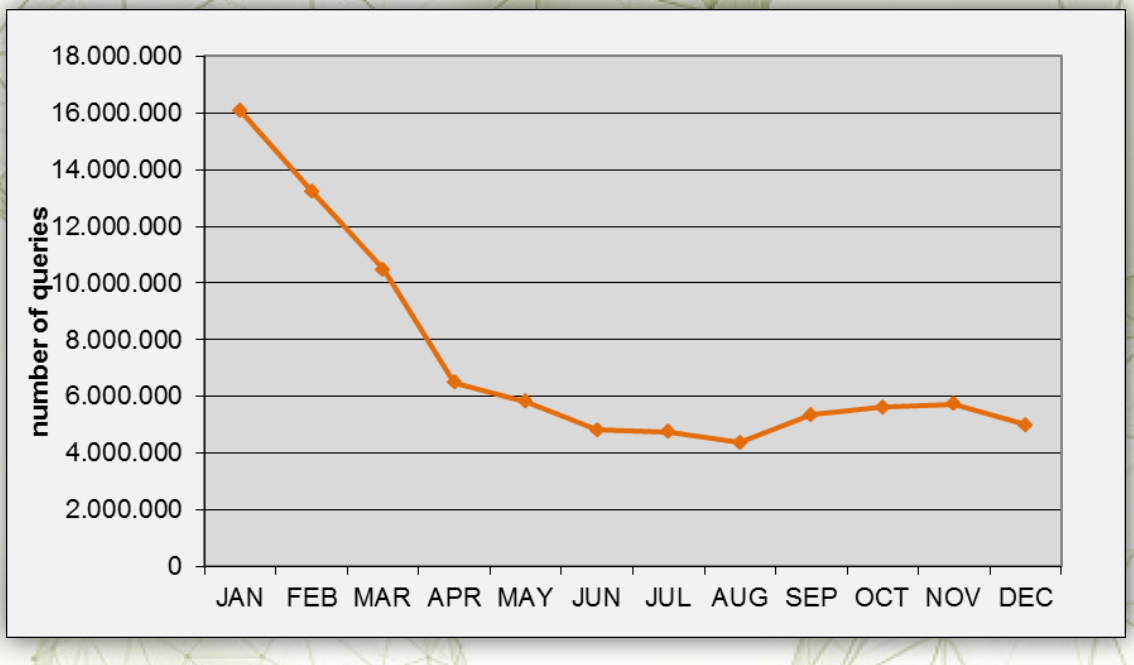

Diagram 4: Number of public access inquiries by month

Increase of the number of queries in the beginning of the year 2014 was a consequence of publishment of indexed general real estate market values in October 2013 and the reviewing and editing of real estate data because of the proposed real estate tax

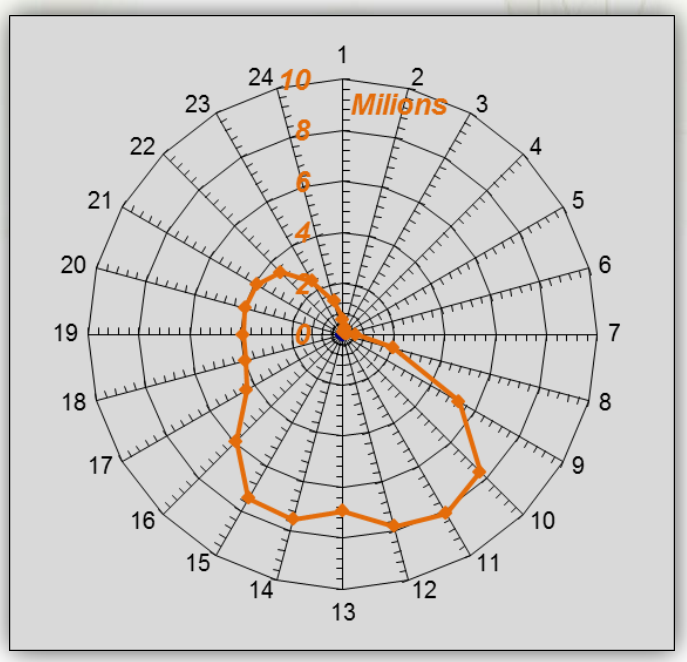

Diagram 5: Number of public access inquiries by hour

- **Personal insight into data about real estate** enables the individual free insight into graphic and descriptive data on real estates, which he/she owns and are managed in our evidences. The Surveying and Mapping Authority of Republic of Slovenia in September 2013 established renovated personal insight into data about real estate with upgraded contents, which enables the owners of real estates, that they through access with web digital certificate SIGOV-CA or SIGEN-CA simply review at which parcels and/or buildings are in land cadastre or cadastre of buildings written as owners. Data about cadastre income for current and following year are also available. In the year 2014 the personal insight has been supplemented with the following novelties:
  - Access into the application with **all digital certificates** which are reigistered in the Register of Certification Service Providers in the Republic of Slovenia (SIGEN-CA, SIGOV-CA, AC-NLB, POSTA-CA or HALCOM),
  - list of real estate for which the owner is registered in the Real estate register with the **value for individual real estate parts, value for the ownership share and the value of the real estate as a whole**
  - **simultaneous graphical display of land parcels and building** as well as the addition of graphical layer of borders of cadastre units

With personal insight into data about real estate owners can check correctness of data and they can, if they found same incorrect data, go to the nearest unit of the Surveying and Mapping Authority of Republic of Slovenia (http://e-prostor.gov.si).

Diagram 6: Number of personal access inquiries by month

Number of personal access inquiries also jumped in the beginning of the year 2014 which is the consequence of publishment of the updated application in October 2013 and the reviewing of real estate data because of the real estate tax.

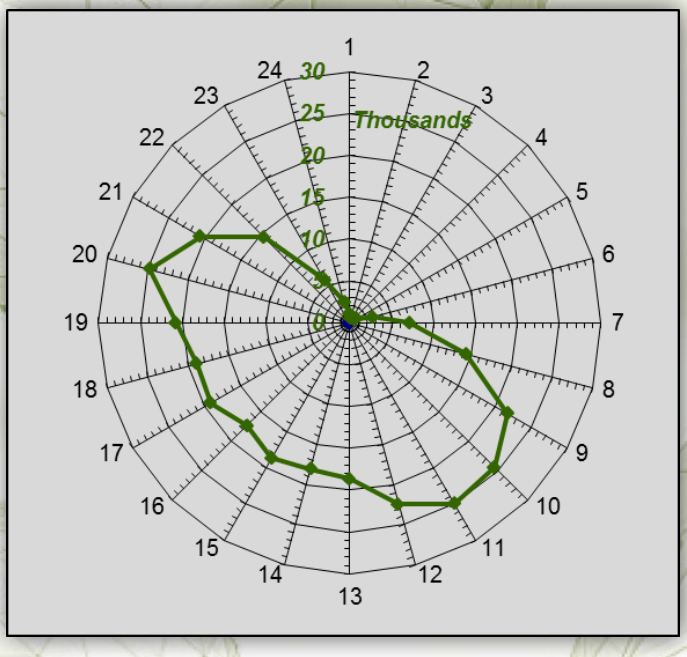

Diagram 7: Number of personal access inquiries by hour

- **Access to real estate data for registered users** (http://e-prostor.gov.si) enables access to all geodetic data in the multi-purpose, user-adapted distribution system. This service of access to geodetic data enables browsing by attributes and graphics in all databases that are included in the system: the Land Cadastre, the Building Cadastre, the Real Estate Register, the Register of Spatial Units, the Consolidated Cadastre of Public Infrastructure, the Real Estate Market Record, and the Register of geographical names and geodetic points. In addition to searching for data, the graphic section of the browser also offers the user all standard spatial functions (navigation, maximizing, minimizing, shifting, choice of scale, distance measurements, choice of image quality, facility selection, etc.).

  The browser also displays the selected data in graphic form and, depending on the level of detail of the information displayed, it is possible to select an appropriate cartographic basis (orthophoto, basic topographic plan, topographic map, etc.) for such a display (e.g. plot boundaries). This service of access for registered users is intended primarily for users in public administration (state and local level), commercial users (real estate agents, lawyers, insurance companies, banks, etc.) and land survey service providers.

  In the year 2014 we enabled surveying companies that comply with the conditions for performing geodetic activities in regards to ZGeoD-1 and are as such registered in the security scheme of the Surveying and Mapping Authority, the **acquisition of reports directly out of the digital archive of the land cadastre in PDF file format.**

We also simplified the search by ownership function so that the users with the right to search by ownership can view results from all three registers at the same time (land cadastre, building cadastre and real estate register) with only one inquiry.

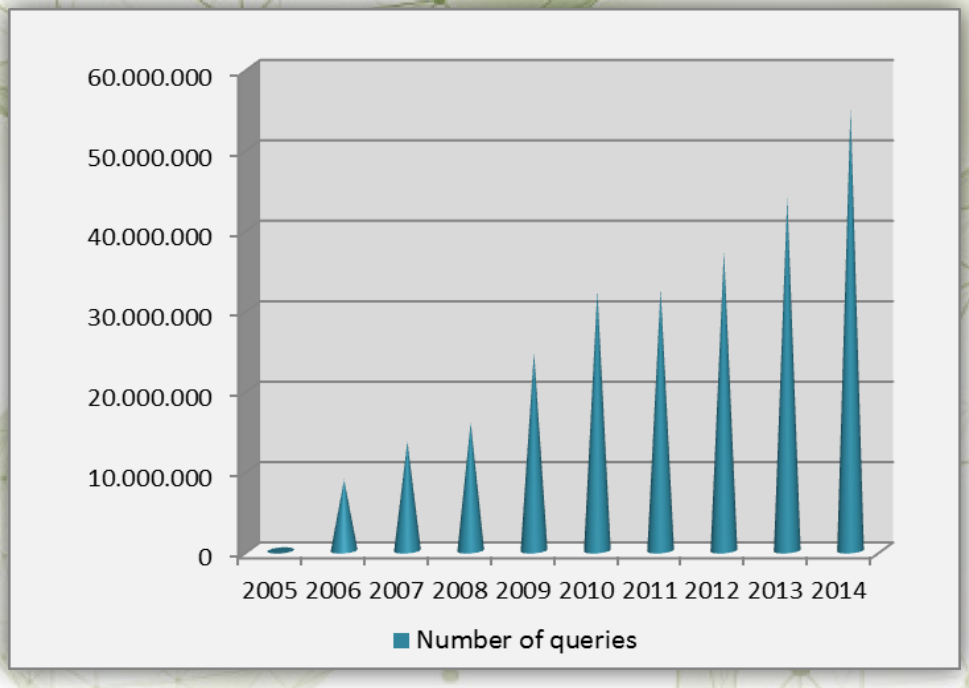

Diagram 8: Number of all inquiries in the PREG application by years

A total of 4,568 registered users from 904 organizations made data inquiries in 2014.

The 'Access to real estate data for registered users' service is also intended for all bodies that, in addition to the Surveying and Mapping Authority, are permitted by law to issue certificates from **geodetic databases** (state bodies, notaries and geodetic companies performing geodetic activities).

In the year 2014 we enabled the issuing of certificates for the geodetic databases under the Rules on Types and Contents of Certificates from Geodetic Databases and on the Manner of Data Designation (Official Gazette RS, No. 69/2012).

In 2014, 153,570 certificates from geodetic databases were issued, together with 98,700 plot outlines – unofficial certificates.

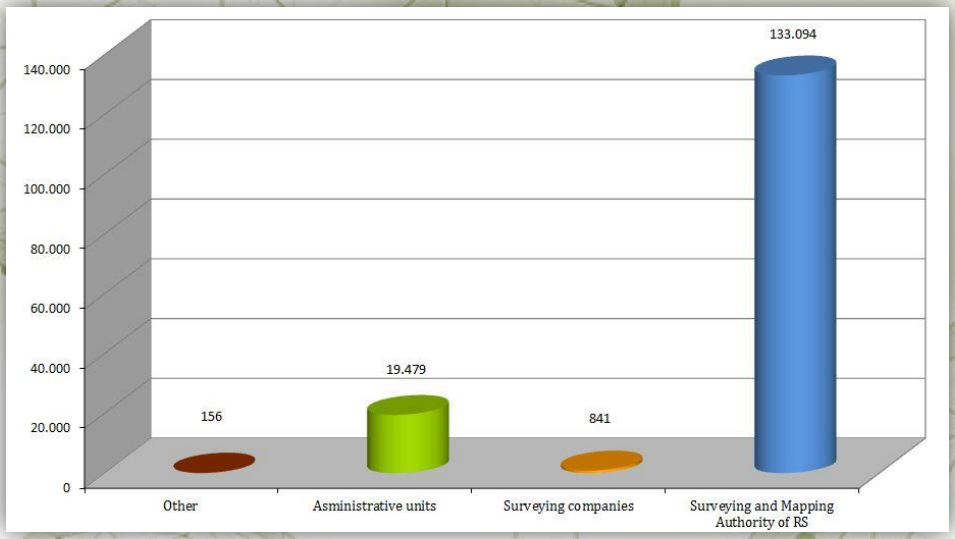

Diagram 9: Number of issued certificates from the geodetic databases form different authorities

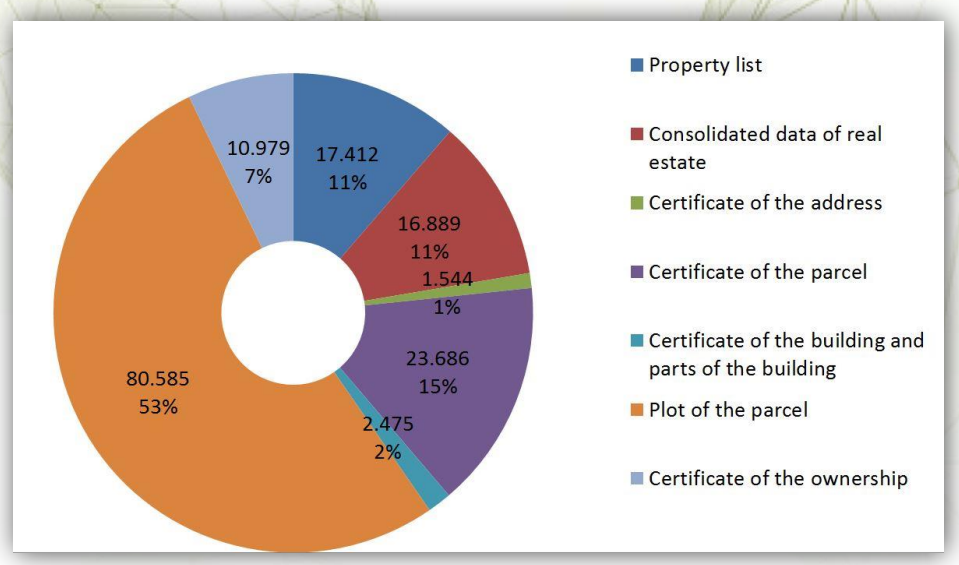

Diagram 10: Quantity and share of issued certificates from geodetic databases by type of certificate

Distribution of Geodetic Data

The distribution of geodetic data is intended for registered users. It is possible with special online services which enable secure and controlled access to make transfers from the distribution system to the user's system. Based on requests from the user, the distribution system creates standardized files, which the users then copy to their system.

The online services that the Surveying and Mapping Authority of the Republic of Slovenia began developing in 2006 are in compliance with the recommendations of OGC

(Open Geospatial Consortium). Online services enable access to digital data in accordance with the standards and recommendations pertaining to the field of geographical information systems and online services, taking into consideration the standards of SIST (Slovenian Institute for Standardization), CEN (European Committee for Standardization) and ISO (International Organization for Standardization), as well as recommendations made by OGC and W3C (World Wide Web Consortium).

In the initial phase, the Surveying and Mapping Authority of the Republic of Slovenia developed a WFS type (Web Feature Service) online service for the majority of the data provided to users. The basic web services are developed for the Land Cadastre, the Building Cadastre, the Register of Spatial Units with House Numbers, the Consolidated Cadastre of Public Infrastructure and the Real Estate Market Record. Simultaneously with the development of web services, the Surveying and Mapping Authority of the Republic of Slovenia also defined the basic interoperability framework based on the XML and GML data exchange format.

The practical use of web services began in the last quarter of 2006, when the larger partners within the public administration (both at state and local level) started using these services to update and manage important national and local registers and records.

We are also planning to provide these online services to users outside the public administration and also to develop WMS web services.

3.3 IMPORTANT ACTIVITIES OF THE REAL ESTATE OFFICE

Land Cadastre, Building Cadastre and Real Estate Register

In 2014 we focused our attention in the field of Real Estate Register on **upgrade of data on buildings and parts of buildings and parcels**.

In the field of Land Cadastre the Surveying and Mapping Authority of Republic of Slovenia implemented a **project for upgrading data in the land cadastre.** The project's foundation was the analysis of the land cadastre data which was carried out in the year 2013. The analysis encompassed approximately 9.5 million land cadastre points and approximately 5.5 million land parcels and has shown the need to arrange the land cadastre point data (coordinates of these points in different coordinate systems), to edit the topography of individual land parcels and the topology between different cadastral municipalities. The reason is mainly the different managing and maintaining methods of registers used in different time periods and were influenced by at that time relevant legislation and management regulations as well as technical capabilities. A small portion of inconsistencies are due to daily maintenance of the land register.
In this project outside contractors cooperated with the employees of regional offices of the surveying and mapping authority. The procedure was carried out in individual steps. The following scheme presents the executed steps: blue steps were carried out by outside contractors, grey ones by the employees of the surveying and mapping authority

and the step »manual elimination of inconsistencies with the help of a SMA expert – regional SMA offices« in cooperation between the two parties.

The final analysis after both parties have concluded with their work has been done in many iterations.

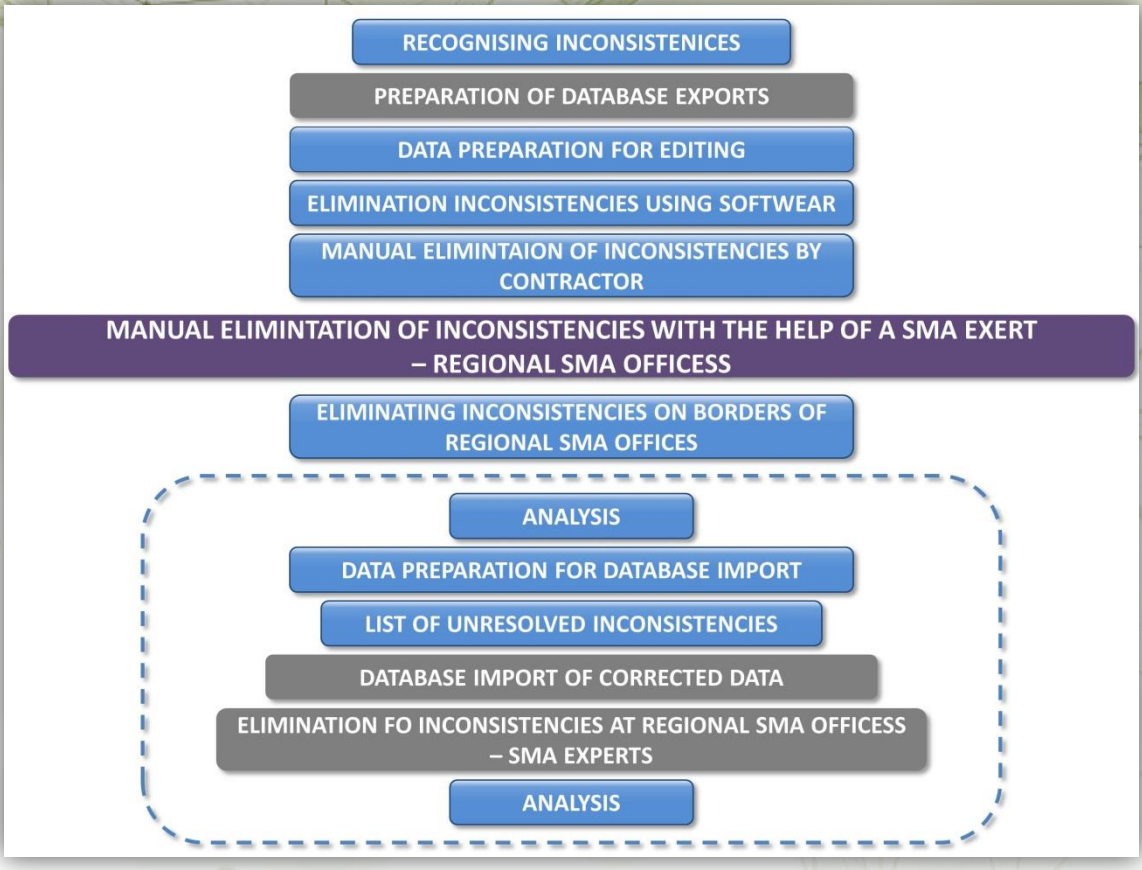

Figure 13: The process of regulating the land cadastre data

The project registered 294,648 discrepancies in data of land cadastre points and in topology of land parcels and borders of cadastral municipalities. During the project the cooperating two parties manage **to abolish 283,681 (96.3%) of the discrepancies.** After the conclusion of the project 10,967 (3.7%) of the most difficult inconsistencies remain uresolved. These will be addressed by the employees of the surveying and mapping authorities in the scope of their regular work processes.

In the field of capturing data we digitalized (scanned) 109,307 elaborates of land cadastre.

In the scope of regular workload the surveying and mapping authority resolved **64,614 requests** for changes in the land cadastre (request for parcelling, border regulation, recording land underlying a building …)

In the field of cadastre of building and register of real estates we carried out several activities for simplification of data management and quality upgrades of data regarding buildings and parts of buildings.

The introduction of the geodetic expert on the basis of the National Land Survey Reference System Act – ZDGRS (Official Gazette RS, No. 24/2014) meant changes to the Rules on registration in the building cadastre (Official Gazette RS, No. 73/2012 and 87/2014). Only a geodetic expert can determine points of land underlying buildings.

In the second half of the year 2014 we started the process to enable the submitting of digital reports for building cadastre. We provided a system to submit reports for the building cadastre together with the real estate register forms. This process started in the beginning of the year 2015.

Adjustments to real estate data regarding buildings and parts of buildings were made on the basis of optical sensing of lidar recordings with an automated identification process of new or changed buildings which are not yet recorded in the building cadastre and the real estate register or the comparison between the stored outline of the building in the building cadastre and the new sensing data showed change.

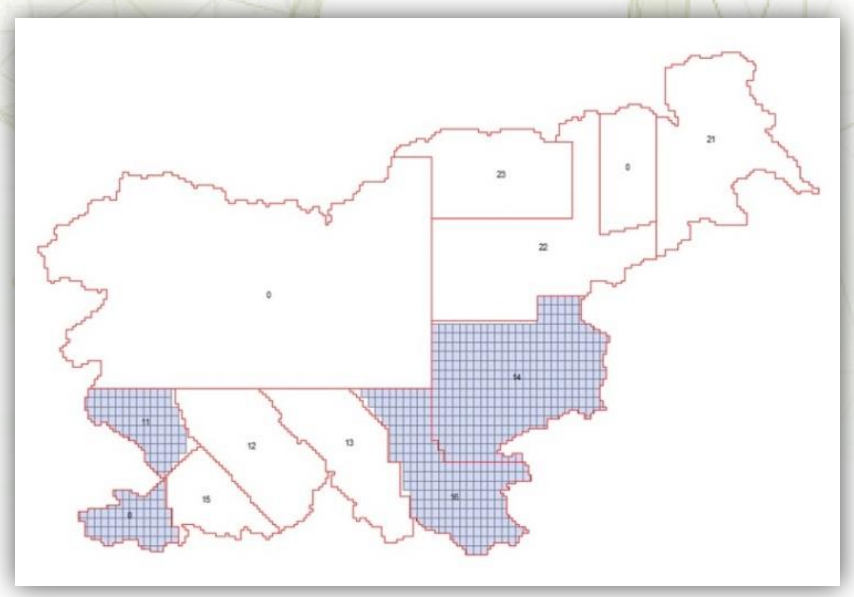

Figure 14: Inspection areas

These data were with help from field inspections of regional geodetic offices used for recording of buildings and parts of buildings in the register of real estates.

In 2014 we continued activities of reporting of the owners to Geodetic Inspection because of the not yet recorded buildings in the cadastre of buildings or because owners did not pass the data into the register of real estates. 232 reports regarding unregistered

buildings in the building cadastre were submitted to Geodetic Inspection and 19 reports for not forwarding the questionnaires of the real estate register.

Some statistics:
On the 31 December 2014 was in the cadastre of buildings 1,171,301 buildings, 103,644 were registered in cadastre.

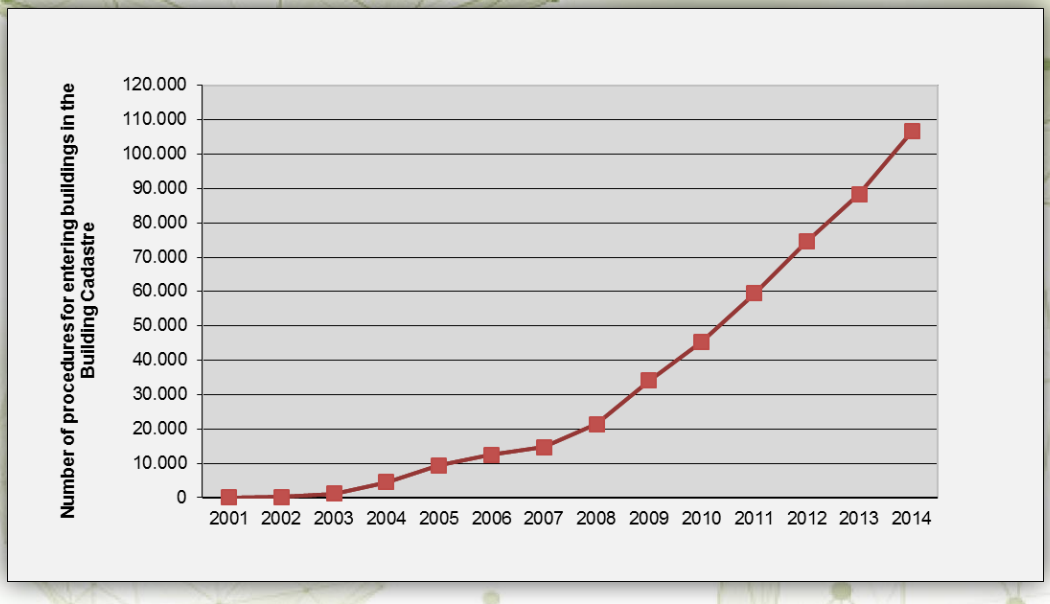

Diagram 11: Number of cadastre registrations through the years

On the 31 December 2013 there were 1,832,779 parts of buildings registered in the buildings cadastre, 623,721 of them were recorded in the cadastre and in according with ZPPLPS.

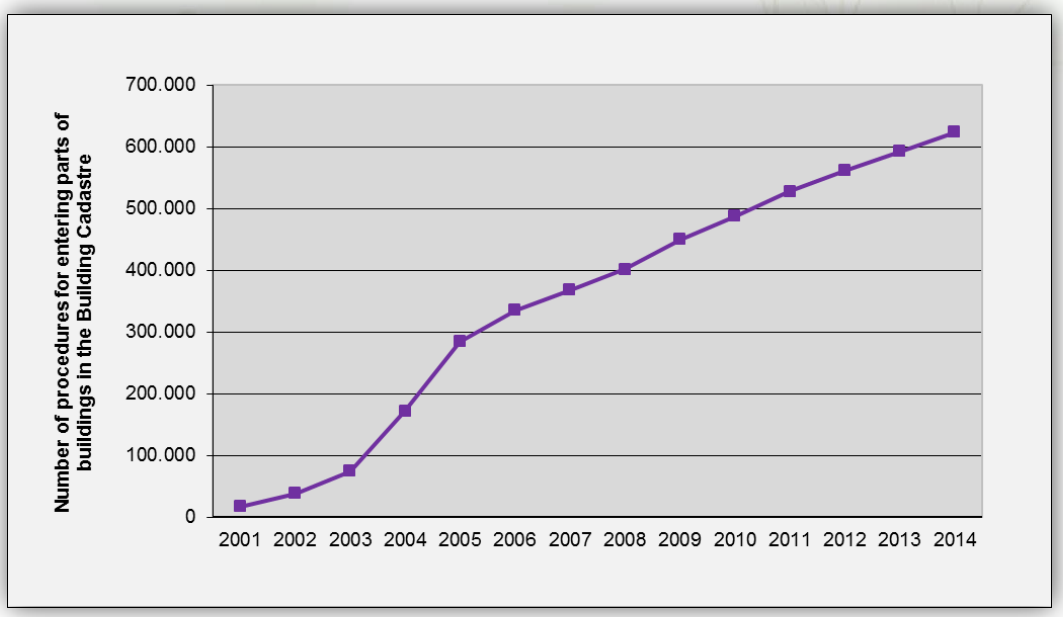

Diagram 12: Number of cadastre registrations of parts of buildings through the years

Number of cadastre registrations in 2014: 20,003.

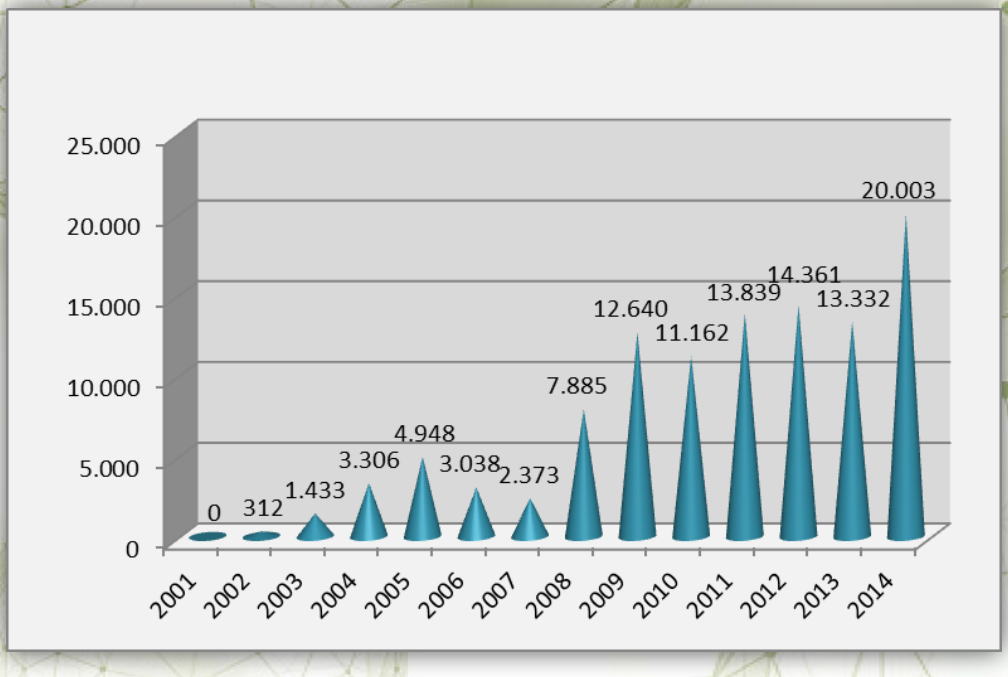

Diagram 13: Number of procedures for entering buildings in the Building Cadastre by year

In the field of **real estate register** the activities were mainly connected with taxation of real estates. With the passing of Real estate tax act The Surveying and Mapping Authority of Republic of Slovenia were trusted with the tasks of establishment, management and maintenance of new data, which had to be in very short time frame recorded in real estate register. Consequently we had to replenish and change the existing software for support of all new predicted data and services.

After the repeal of the Real Property Tax Act the Surveying and Mapping Authority of the Republic of Slovenia deleted all the data from the real estate register which lost their legal basis. The repeal was also the reason for two changes to the Decree on data on property characteristics in the real estate register (Official Gazette RS, No. 95/2011, 109/2011, 7/2014 and 41/2014) in 2014.

In 2014 the Surveying and Mapping Authority maintained real estate data because of the implementation of the real estate tax. 1.2% of all real estate data which affect real estate value and 0.3% of other data. During the implementation of the real estate tax in 2014 the Surveying and Mapping Authority provided support and information to 100,000 real estate owners.

In the frame of processing and harmonization of data The Surveying and Mapping Authority of Republic of Slovenia successfully controlled the quality of data of the real estate register in 2014, mostly:

- suppression of errors and imperfections, found out at recording of new and changed data on real estates, which demand special procedures – 20,602 parcels and 3,845 buildings;
- review of data and elimination of imperfections for parts of buildings and parcels, with which in the real estate register the owner is registered as "unknown person" or the owner is not registered with a legitimate an unique personal identification number (PIN) or unique business identification number (BIN) (registered with fictitious PIN or BIN), are current place of living of the owner is unknown – 123,963 real estates;
- review of data and elimination of imperfections for real estates, which value is not calculated – 19,551 real estates;
- review of data and elimination of imperfections for parts of buildings, of which the determined usable area is zero, but on the address (house number or number of apartment) persons have registrated their residence – 3,125 buildings;
- variability of data KS – REN – 5,641 corrections;
- review of completeness of records of buildings – review on orthophoto – 157 sheets of orthophoto and 952 buildings;
- field review – determination of completeness and correctness of records of buildings – 35,861 buildings;
- elimination of other errors and imperfections, which cause trouble with regular work or use of data – 36,705 buildings.

In frame of exchange of data between cadastres (land cadastre and building cadastre) and land register we, at the start of 2014, transferred to an electronic means of data acquisition regarding real estate ownership. Changes of the identifications of real estates into land register are done electronically from the year 2013 on.

For this purpose an upgrade to the software packages Devo Servis and CB Stavbe (CB buildings) was done. The issuing of decisions in the form of pdf messaging rather than in paper form has also been preserved.

State border

With maintenance of state border we executed only part of the work, determined by interstate commissions:

On **Austrian** border we performed periodical field control of XII. border sector (7 km and 143 boundary stones) and of XIII. border sector (6 km and 172 border stone). In office we prepared a draft for the updating of the document »Instructions for the work of Mixed technical units for the control, measurement and marking of the Slovenian-Austrian border«.

On **Italian** border we performed field GPS control measures in III, V, VI, VII and VIII border sector. We renovated 3 boundary stones (29/2, 18RS, 51/45). In office we prepared the final draft of technical documentation for all unmarked breaking points on

whole border line with Italy. During our field work we removed part of the wall at the former border crossing Erjavčeva cesta **(Nova Gorica I/San Gabriele).**

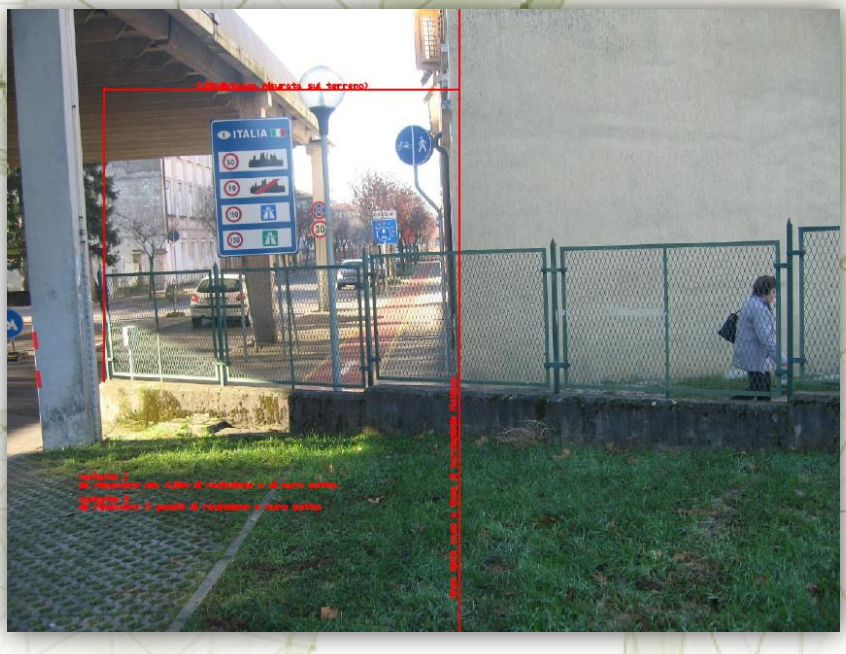

Figure 15: Before the removal

Figure 16: after the removal

On the **Hungarian** border we performed periodic control on the border section from A325 – A357 (107 border stones, approximately 6 km) instead of the border section A199 – A357 (781 border stones, 25 km). Lack of budget funds prevented us from

performing any cleaning of the vegetation on any border section with Italy, Austria or Hungary. Visibility and recognisability of state border has to be assured according to international treaties with neighboring states. We did not do any vegetation cleaning in the past seven (7) years at state borders with our neighboring countries. Because of the vegetation overgrowth field access to border stones is not guaranteed so maintenance and control measurements are hard or even impossible to do.

This year we continued our professional help with preparation of evidences for arbitration court for the defining of the state border with **Croatia** in basically an »on - line« maner.

Arrears and coordination of OGU work

In 2014 we continued our special programme for elimination of arrears for administration tasks, in which regional surveying and mapping authorities cooperated with solving of administration tasks by the inflow of requests on individual location. OGUs Celje, Nova Gorica, Kranj and Sevnica helped OGU Ljubljana; OGUs Murska Sobota and Slovenj Gradec helped OGU Maribor; OGU Celje helped OGU Ptuj.

Until the middle of the year the trend of arrears did not increase, but in the second one it did by 29% because of the increased workflow in the field of changing register data as a result of the implementation of the real estate tax.

In diagram Decrease of unsolved requests and arrears the number of arrears, outlined in the table, is smaller than the number of unsolved requests, because some of the unsolved requests, which are in phase of waiting for legal effects or in phase of issuing orders, do not count as arrears.

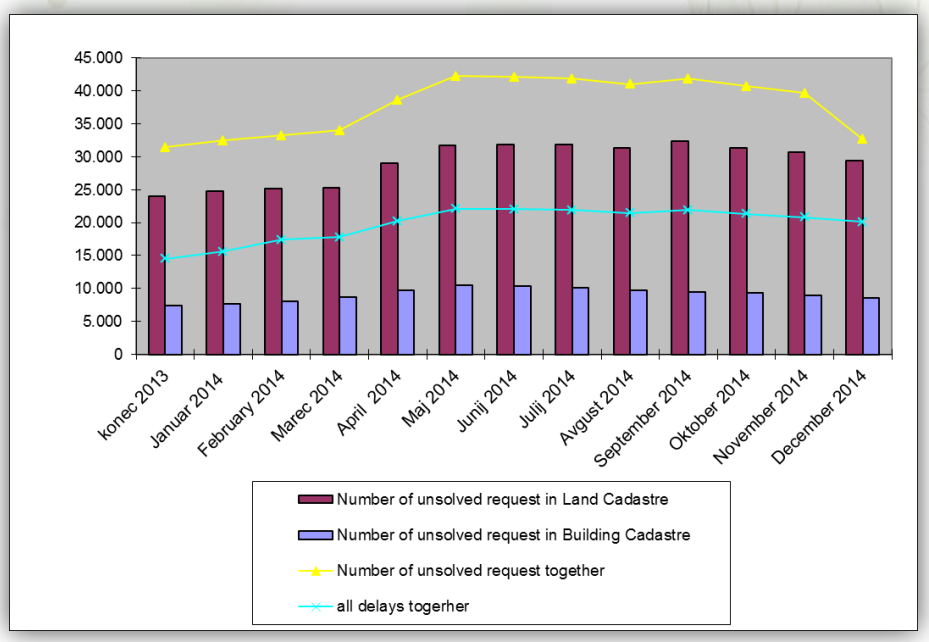

Diagram 14: Decrease of unsolved requests and arrears

Training of Geodesists with a Geodetic Permit and Employees of the Surveying and Mapping Authority

As regards the mandatory training of geodesists holding a geodetic permit, whose organisation and implementation was transferred to the jurisdiction of the Slovenian Chamber of Engineers in accordance with the provisions of the Land Survey Service Act – ZGeoD-1, the Surveying and Mapping Authority participated in the preparation of the training programme. Representatives of the Authority also participated as lecturers in individual training sessions on real estate registration.

In the scope of the Education, training for the year 2014 we performed a seminar for the employees of the regional surveying and mapping authorities regarding data editing in real estate register (removing data inconsistencies, editing land underlying a building, bonificatino of land, graphical intersection of layers, preforming changes in databases and the connection between production and distribution databases). The education seminars were executed in the form of workshops in 5 different locations (Radovljica, Maribor, Ljubljana, Koper and Novo mesto) and were attended all in all by 291 public employees.

3.4 IMPORTANT ACTIVITIES OF THE MASS REAL ESTATE VALUATION OFFICE

Mass real estate valuation is in Slovenia relatively new systemic field, which is connected to real estates and their value and as such affects the decisions and work of practically every state authority, municipalities, owners and users of real estates as well as other business subjects and citizens. Public data about market values of real estates ensure visibility of real estate market and are one of basic elements of real estate system of every developed market-oriented economy. These data represent important information for every participant on real estate market and in Slovenia they put management of real estates into whole new perspective. System for mass valuation is multi-user designed. Data about generalized market values are important for whole array of other areas, such as assessment of wealth for social transfers, assessment of loan risks of real estate portfolio, assessment of economy of interventions into space and so on. System of mass valuation establishes a base for methodological upgrade for various means, and so it represents an important reference base for procedures and activities, related to real estates.

In line with legislation the main task of Mass Valuation Office of Real Estates is determination of market values of Slovenian real estates and systematic monitoring of Slovenian real estate market and formation of models for real estates valuation. Models of real estates valuation define the influence of features of real estates on value of real estates. They are managed in collection of real estates valuation. It is determined by law that models of real estates valuations are checked (basing on supply and demand) at

least every four years. In the meantime changes between supply and demand ration on the real estates market are being coordinated through indexes of real estate value.

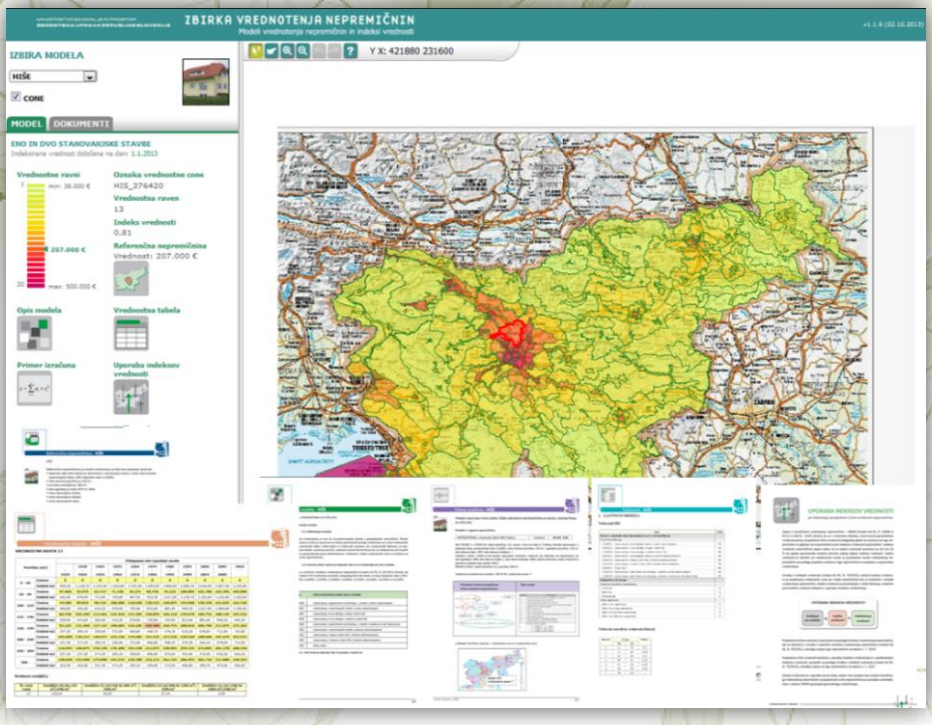

Figure 17: Public viewer into the collection of real estates valuation

First calculation of generalized real estate market values on base of models of real estate valuation and data about real estates from real estates register was performed in 2011. All real estates, recorded in the real estate register, were given generalized market value. System of real estates mass valuation was finally introduced in practice. It was used for various public purposes, determined by law. First important use of generalized market values was in the field of social transfers for determination of welfare and in the field of taxes for determination of taxable base for taxes on trades with real estates. In 2012 and 2013 the data about generalized market values were used for taxation of real estates with higher values and with determination of taxes on profit because of the change in purpose of the lands.

Most important systemic source of data for real estates mass valuation is real estate market record. This is a collection of data about legal business with real estates, which is managed by The Surveying and Mapping Authority of Republic of Slovenia from 2007 onwards. Checked and improved data of real estates market record are base for models of real estates mass valuation and analysis of real estate market, on which regular periodical reports about Slovenian real estates market are based. Those reports are prepared by Mass Valuation Office.

In the year 2014 the Office prepared an annual report about Slovenian real estate market for 2013 and report for the first half of the year 2014.

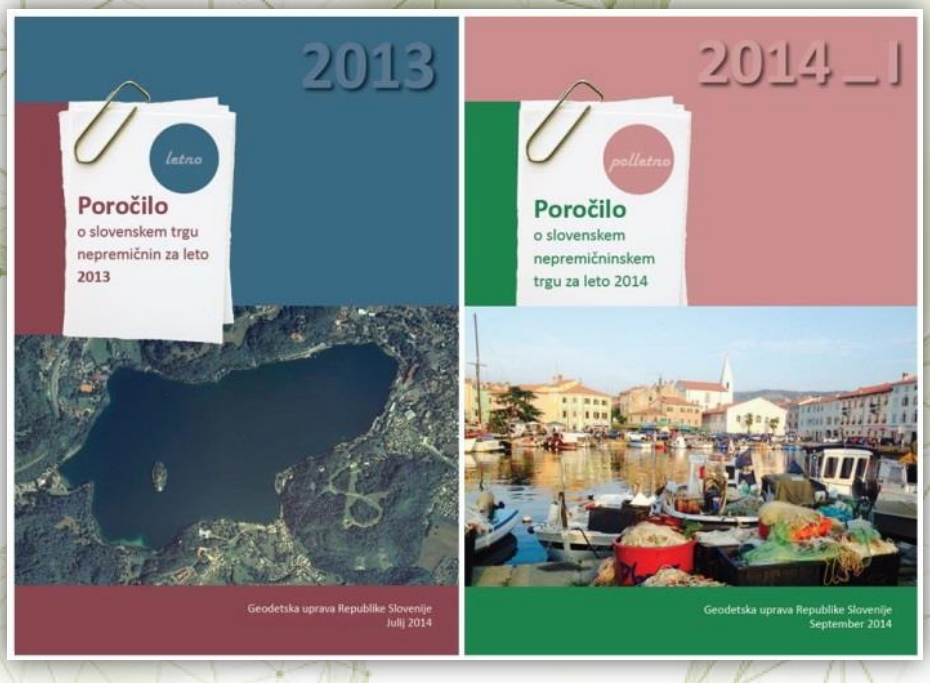

Figure 18: Reports on the real estate market in Slovenia

In October we carried out the second indexation of real estate values for the individual value models in line with regulations. The values of real estate that in comparison to the initial defining of the value models of real estate and from the last value indexation of real estate changed for at least 10% have been adjusted. We did not propose an increase in value for any of the real estate types.

3.5 IMPORTANT ACTIVITIES OF THE GEODESY OFFICE

In the field of the national geodetic reference system, activities in 2014 focused mainly on the transition to the new national coordinate system. Regarding the topographic system, the activities included the capture, maintenance and management of spatial data.

In April 2014 the Surveying and Mapping Authority of the Republic of Slovenia enacted the National Land Survey Reference System Act. This is a new act in the field of surveying services which defines the establishment of the national spatial coordinate system (horizontal, vertical and gravimetric components).and the national topographic system (topographic data, geographical names, remote sensing, state maps). This Act lays down the complete renovation of the national spatial coordinate system, provides new conformity with European guidelines and practices and prescribes the establishment and management of topographical datasets. Most of the Rules and Regulations defined in the Act have been adopted as well.

The project Modernization of spatial data infrastructure to reduce risks and impacts of floods

The surveying and Mapping Authority of the Republic of Slovenia has in the scope of the financial mechanism 2009 – 2014 of the EEA in cooperation with the Ministry for the Environment and Spatial Planning began the project *Modernization of spatial data infrastructure to reduce risks and impacts of floods.* The main goal of this project is the establishment of the height component of the national spatial coordinate system, in accordance with the National Land Survey Reference System Act, and updating the infrastructure for spatial information for the support in managing waters and the reduction of flood risks and dangers as it is defined in INSPIRE. This project is mainly funded through the co-financing of the financial mechanism of the European economic area for the time interval 2009-2014. The project is valued at 3,060,000 EUR, out of which 1,773,000 EUR is co-financed by the financial mechanism, the remainder will be provided by the Ministry of economic development and technology, the Surveying and Mapping Authority and the Ministry of the Environment and Spatial Planning. The project began in the year 2013. In 2014 we had the project's opening conference with participation from all the collaborating national institutions, the education sector and private sector. We signed all the envisioned contracts with outside companies and all the planned internal works of the Surveying and Mapping Authority have been done. . We have to emphasize the work that has been done on the establishment of the Slovenian height system, the combined geodetic network of the zero order and the renovation of the data structure of topographical datasets in accordance with the INSPIRE directive. Because of the reorganization of governmental departments some delays have been in the hydrography part of the project and necessary adjustments to the time plan have been done accordingly. In the financial sense 46% of the project has been executed by the end of 2014 but many more activities have to be done until the conclusion of the project and for that reason the project management sent their justifications for the extension of the project to the national contact point.

The project is comprised out of four subprojects: Geodetic reference system (GRS), Topographical database (TOPO), Hydrographical database (HIDRO) and the Infrastructure for spatial information (INSPIRE).

In the GRS subproject there are envisioned implementations of many tasks in the areas of horizontal and vertical components of the national spatial reference system which can be outlined as the establishment of the national combined geodetic network of the zero order, the establishment of the vertical component of the national spatial reference system and the establishment of the high quality national geoid model. More detailed presentations of the executed tasks are presented in the chapter regarding the geodetic reference system.

In the TOPO subproject we prepared a new topographic data model in regard to the INSPIRE rules and regulations. In accord with the new model we also established a physical model of the topographic database and produced the necessary software for data management compliant to the new data model.

In the INSPIRE subproject two activities have been carried out in 2014. The first with the main goal of promoting, informing and educating and the second which was meant to build the system of network services. A capacity building program has been made which will contribute to the better awareness of partners and producers of spatial data. Some network services for some spatial data content have been made as well as updates to the metadata descriptions.

The HIDRO subproject is being carried out by the Ministry of the Environment and Spatial Planning in compliance with the project's plan.

Geodetic reference system

In 2014, the bulk of activities pertaining to the national geodetic system were marked by the transition to the new national, European coordinate system, which is gradually being introduced into geodetic practice. Activities in the following areas were implemented:

- **Horizontal component of the national coordinate system:**
  - provision of data of the SIGNAL network to users via mobile service operators,
  - inclusion of a new GNSS station into the SIGNAL network,
  - processing of GNSS observations for determining ellipsoidal heights of levelling points,
  - renovation of some trigonometric points of Ist order.
- **Altitude part of the vertical component of the national coordinate system:**
  - processing and evaluating the measured leveling line data,
  - restoration of the leveling line of high accuracy Murska Sobota-Lendava-Ormož-Ptuj,
  - restoration of the leveling line of high accuracy Vrhovo-Brestanica,
  - restoration of the leveling line of high accuracy Kranj-Medvode,
  - restoration of the leveling line of high accuracy Celje-Zidani most,
  - restoration of the leveling line of high accuracy Arja vas-Dravograd-Maribor,
  - new stabilization of benchmarks on the leveling line of high accuracy Most na Soči-Kalce,
  - new stabilization of benchmarks on the leveling line of high accuracy Grosuplje-Novo mesto-Metlika.
- **Gravimetric part of the vertical component of the national coordinate system:**
  - analysis and evaluation of the gravimetric measurement data,
  - implementation of gravimetric measurements at high-altitude points (benchmarks) on the route Celje-Zidani most
  - implementation of gravimetric measurements at high-altitude points (benchmarks) on the route Arja vas-Dravograd-Maribor
  - implementation of regional gravimetric measurements in the South-West part of Slovenia for the purpose of defining the new geoid

National combined geodetic network

The national coordinate system is traditionally split into two components, the horizontal and the vertical components which are represented in the national horizontal (classical terrestrial and GNSS networks) and the vertical (levelling lines and gravimetric networks). The new combined geodetic network will enable the connecting and merging of individual national geodetic networks on a higher level. It will ensure a high quality realization of the national spatial reference system. It will present the foundation of the national geoinformation infrastructure and provide a long term high quality georeferencing (long term horizontal coordinates and heights) with the vision for the implementation of a 4D reference system.

The network will be comprised from six points. Their locations have been determined on the basis of many different criteria: geometrically optimal placement regarding the shape and size of the state, relief features, vegetation and climate features (accessibility, visibility, layout…), geological, hydrological and geotectonic features (local stability, groundwater, fracture distance…), geodetic criteria (horizon openness, possibility to perform vibration measurements, electromagnetic radiation…) and other important factors (public ownership, infrastructure proximity, accessibility, conformity with spatial plans of the municipality and the issuing of building permits…). In the year 2014 project documentation was produced for every point in collaboration with surveyors, geologists, geophysicists, constructors and hydrologists.

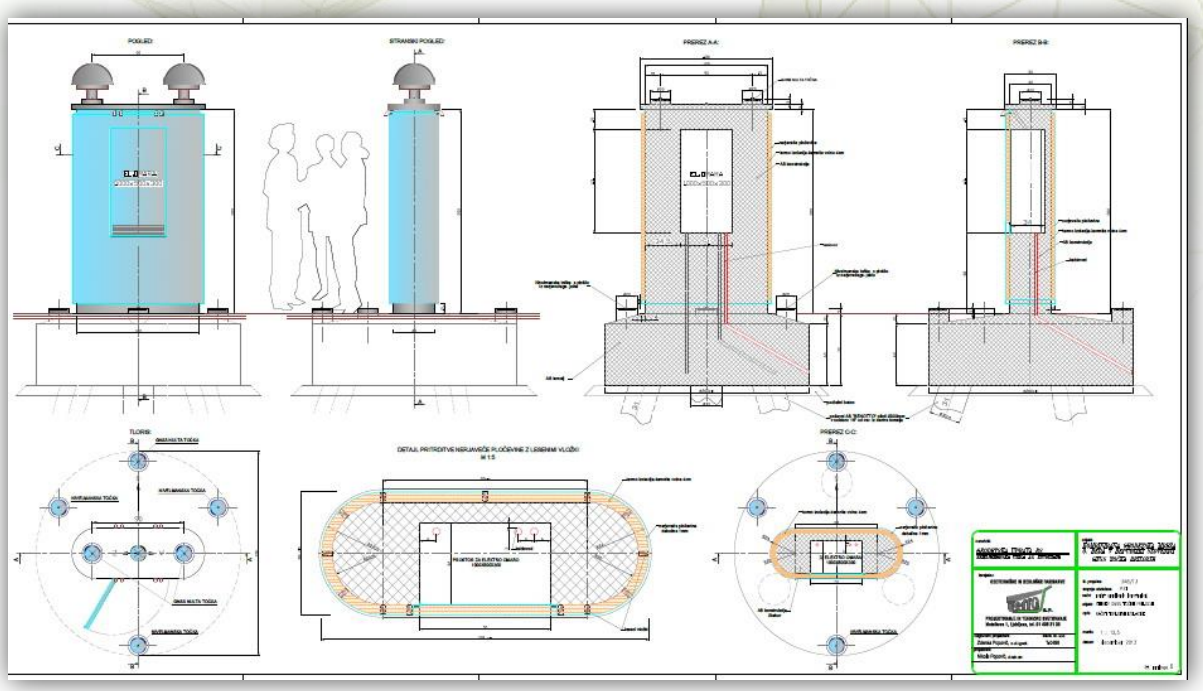

Figure 19: Excerpt from the project for the implementation of the zero order point Prilozje

The locations of the points in Slovenia are: Prilozje, Kog, Areh na Pohorju, Šentvid pri Stišni, Korada and Koper. The stabilization of the combined geodetic network points of

the zero order in Slovenia must ensure long lasting local stability of the points. All the points have to have deep foundations, build sturdy enough out of reinforced concrete. Each point of the combined geodetic network of the zero order is supplemented by additional reference points, on which different observations will be carried out: GNSS measurements, geometric levelling lines, gravimetric measurements and terrestrial measurements in the local micro network.

The construction work on the first two points of the network has already been completed which means that the points are physically stabilized and the only thing left is to attach the appropriate equipment and execute the needed measurements. These two points are Prilozje and Kog.

Figure 20: Point on the zero order network in Prilozje

Horizontal component

The SIGNAL network enables the determining an accurate positioning anywhere on the territory of Slovenia by using the global navigation satellite system (GNSS). It comprises a network of 16 permanent GNSS stations (receiver and GNSS aerial), the monitoring and distribution center, and the GPS Service at the Geodetic Institute of Slovenia in Ljubljana. The Ljubljana GNSS station is included in the European network of permanent GPS stations – EPN (European Permanent Network). The GPS service provides for real time data exchanges with five other networks of the Austrian APOS network, six stations

of the Croatian CROPOS national network and with a network station of the Hungarian GNSSNet.hu (ZALA).
In the year 2014 we included an additional station in Idrija (IDRI). With this we were able to cover an area of Slovenia which was the most critical regarding network signal strength. This increased the count of permanent GNSS stations in the SIGNAL network from 15 to 16. We executed tasks of regular maintenance of network and perform regular control of functioning of network SIGNAL.

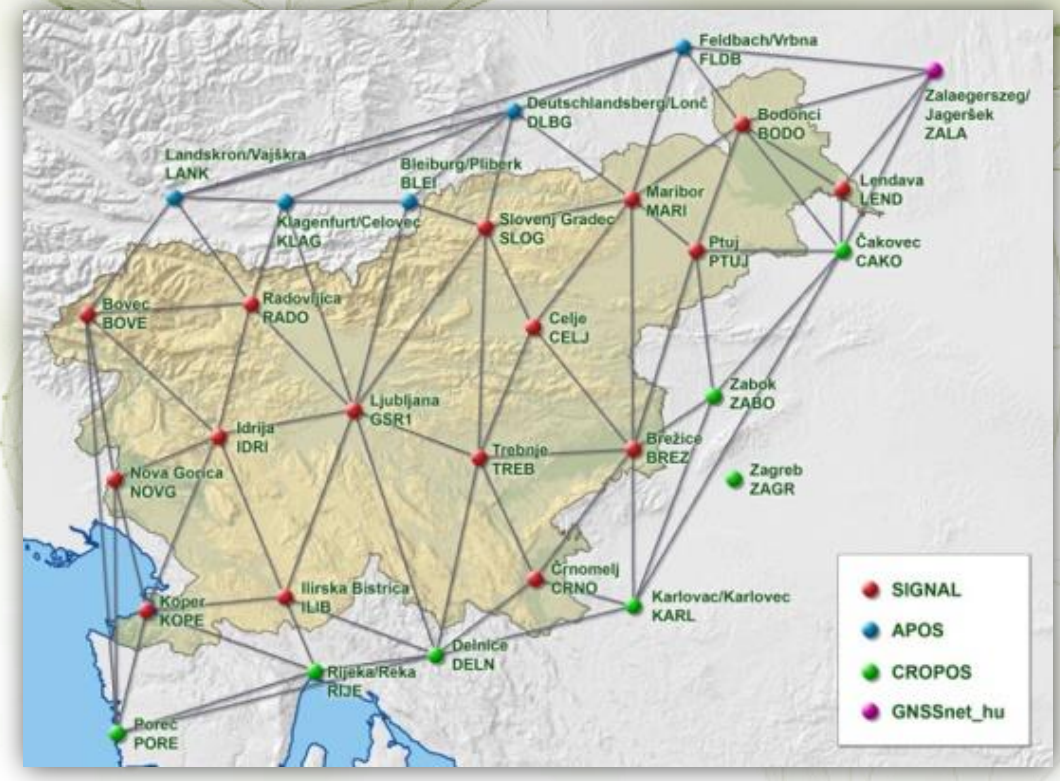

Figure 21: The SIGNAL network stations with connections to stations in neighboring countries

For the means of upgrading of geoid and mostly data quality control we performed measurements at specific GNSS points (benchmarks).

In the year 2014 we finisher with the refurbishment of the trigonometric point of the 1st order TT515 – Kladivo

Altitude part of the vertical component

In line with the transition to the new coordinate system, the Surveying and Mapping Authority of the Republic of Slovenia will continue to carry out corrections to the levelling network. In 2014, several levelling lines of the 1st order with a total length of 300 km were measured. We performed control calculations of all measured levelling lines polygons, the consolidation of these polygons into loops and performed analysis of these closed loops. On the basis of this analysis we can conclude that the results of

levelling line measurements so far are excellent. Up until this point 70% of the levelling line network has been measured.

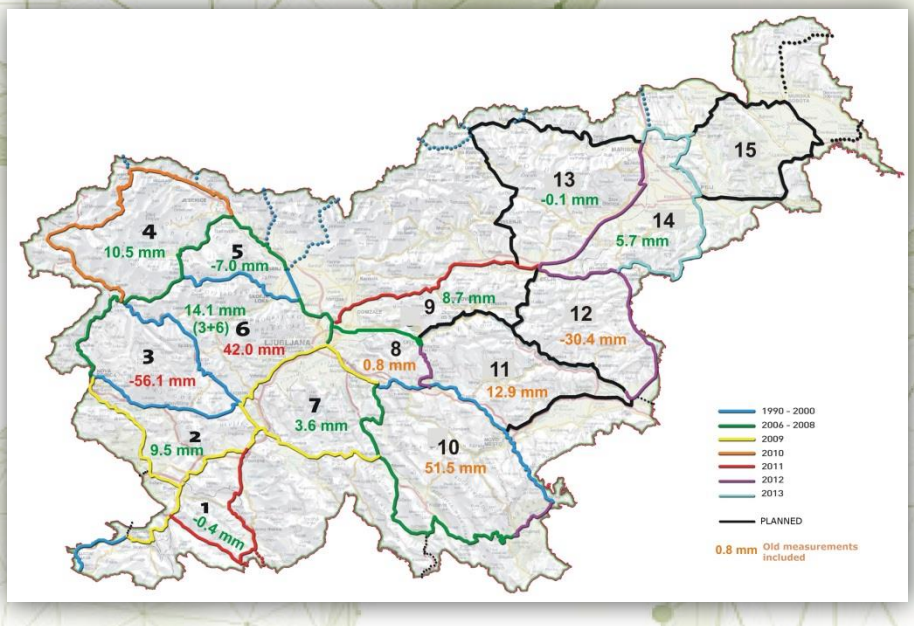

Figure 22: The new levelling network and the deviation at the loop closing

Gravimetric part of the vertical component

In the year 2014 we performed an absolute gravimetric measurement on all six absolute gravimetric points in Slovenia. This points present the basis (date) for all further gravimetric measurements in Slovenia.

Figure 23: Absolute gravimetric measurements on the AGT300 point in Sevnica

We began the regional gravimetric measurements which will condense the badly covered parts of Slovenia with a raster of gravimetric points (4X4 km). These points will also be used in the defining of the new qualitative geoid.

We also continued taking relative gravimetric measurements at high-altitude points (benchmarks) for the needs of introducing the new altitude system and determining the new geoid. The measurements were conducted using two relative gravimeters, the Scintrex CG-3 and Scintrex CG251, on more than 200 benchmarks.

Figure 24: Relative gravimetric measuring

Aerial Photography and Orthophoto Production

In 2014 we continued with three-year-period of aerophotographing of Slovenia which began in 2011. The plan was to photograph the North-West part of Slovenia but due to bad weather conditions we could only carry out the southern part of the planned area. Alongside this we also performed aerial photography and designing of the digital relief model and orthophoto for the southern and north-eastern part of Slovenia. The Aerophotographs are in colour (panchromatic + three colour channels – RGB+proximity infrared channel), with a ground sample distance (GSD) of 0.25 m. A digital terrain model (5 x 5 m) and a colour orthophoto with a GSD of 0.25 m (DOF025) and 0.5 m (DOF050) were made for the area covered by aerial photography. An infrared orthophoto with a GSD of 0.5 m was also made. Quality control for all products was carried out in cooperation with the Geodetic Institute of Slovenia.

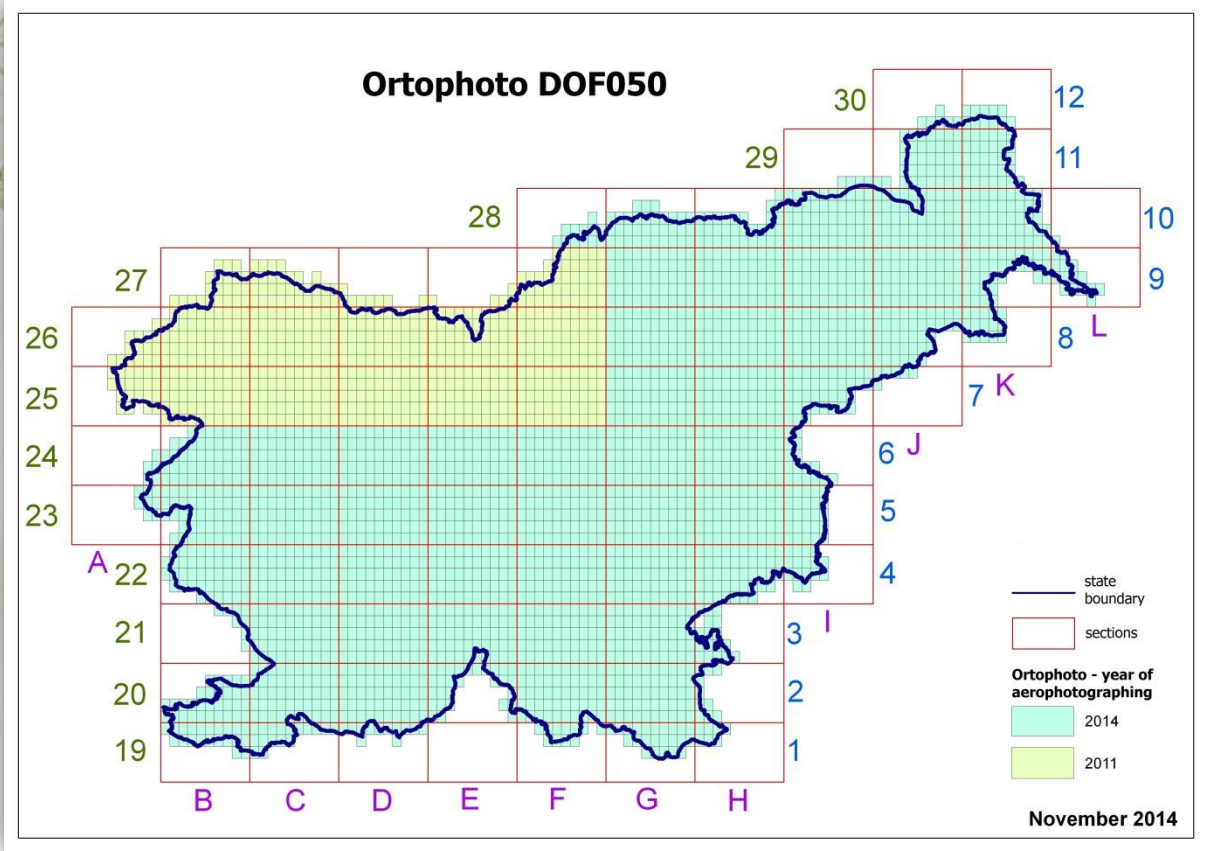

Figure 25: Aerial photography sectors in the 2011–2014 period

Topographic Data of the DTK 5 Collection

DTK 5 is a national vector collection of topographic data with homogenous precision and particularity, on a scale of 1 : 5,000, and is established uniformly for the entire territory of the country. Data is captured from stereo-pairs of cyclic aerial photographs, but other sources can also be used in data capture in accordance with specifications. The unit of capture is a sheet with a scale of 1 : 5,000. DTK 5 data have been captured in the new coordinate system since 2009. In terms of content, DTK 5 is divided into four areas: buildings, transport, ground cover and hydrography. Each of the areas is further divided into types. DTK 5 data is one of the basic sources of information on the spatial situation. In addition to the content which individuals can upgrade according to their own needs, DTK 5 data also provide the geolocation basis for all other spatial data and are useful as a supplement to outdated basic topographic plans.

In the period from 2001 up to and including 2014, the Authority captured more than 2,200 sheets, which represents more than 70% of the entire territory of the country.

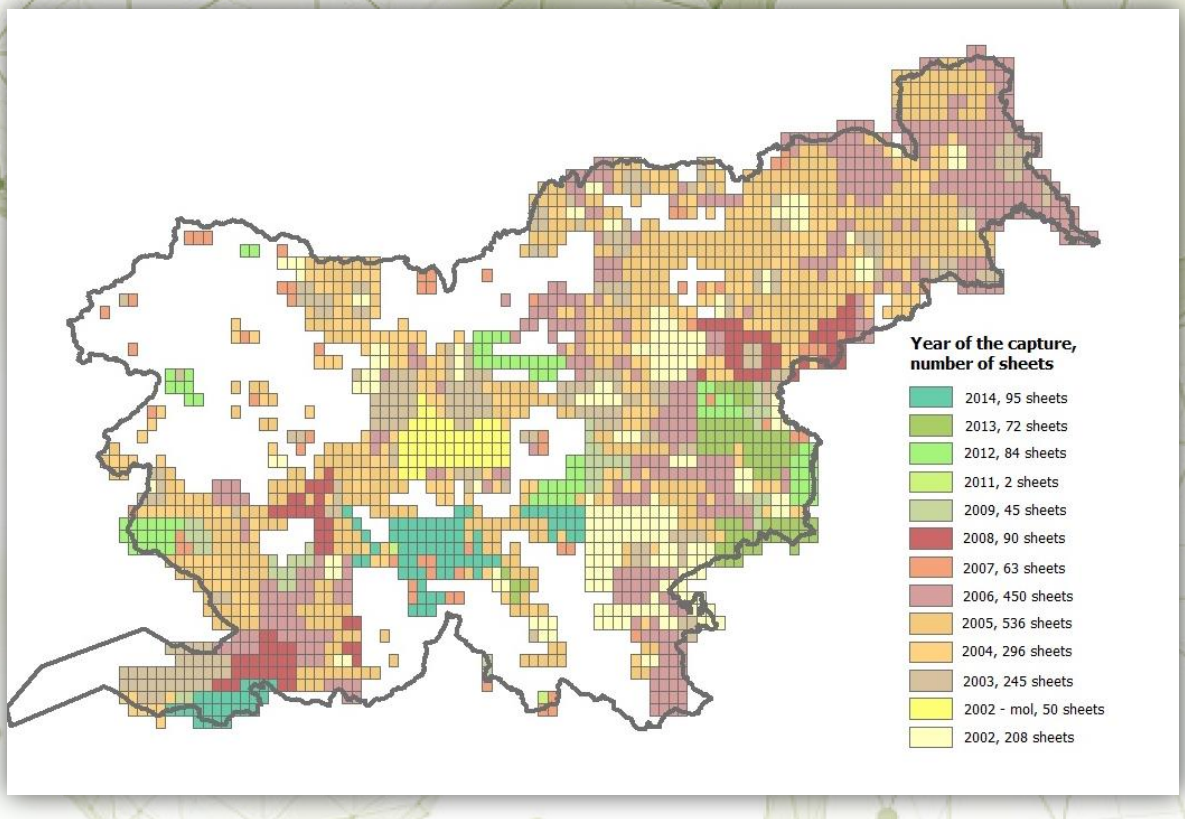

Figure 26: A map of the coverage of Slovenia with DTK 5

State topography card of scale 1 : 50,000 (DTK 50)

Slovenia and parts of neighbor countries are cowered with 58 sheets DTK 50. In 2014 we renewed five sheets:

Sheet number	Sheet name
46	Sežana
52	Izola
53	Koper
54	Ilirska Bistrica
58	Karlovec

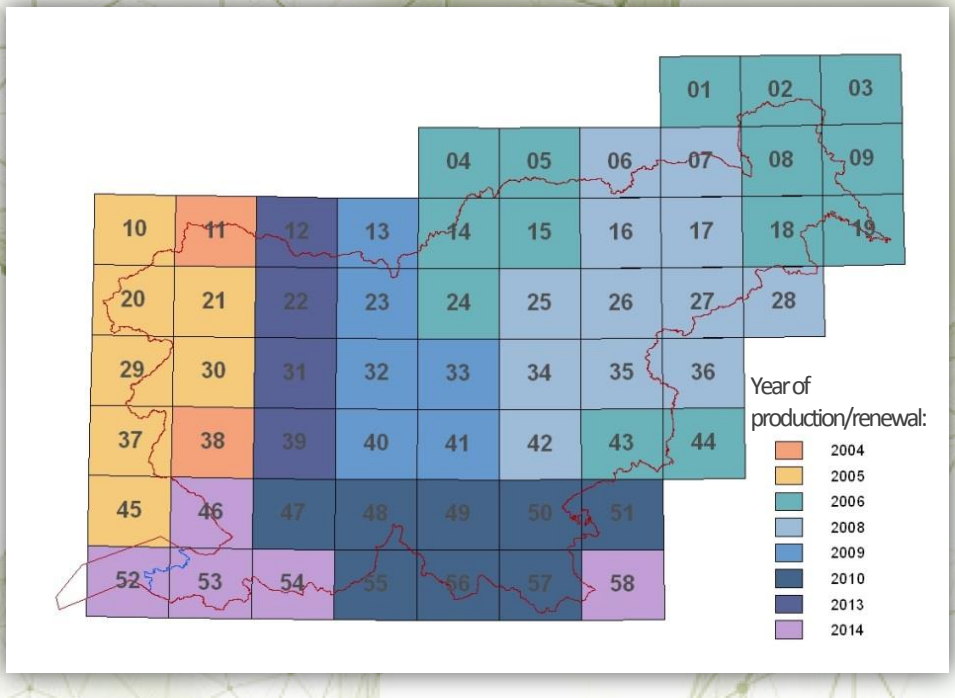

Figure 27: Scheme of coverage of Slovenia with DTK 50 sheets

National transparent map of the Republic of Slovenia, EuroRegionalMap (ERM), EuroGlobalMap (EGM) and EuroBoundaryMap (EBM)

In 2014 we continued maintenance of ERM, EGM and EBM, which are European collections of topographic data. ERM consists of data with the scale of 1:250,000 and EGM with data of scale 1:1,000,000. EBM is a collection of data about administrative borders in the scale of 1 : 1,000,000. Collections are maintained in frame of EuroGeographics. Capture and renewal of data must be done by members of EuroGeographics, and so The Surveying and Mapping Authority of Republic of Slovenia takes care of capturing and renewal of data for the area of Slovenia. In ERM in 2014 we renovated layers of administrative borders, towns, interesting objects, vegetation, diversified objects and geographic names. EGM data, data is gained through the generalization of ERM data. Into the EBN we renewed administrative borders in relation to the actual state on 1st January 2015.

In 2014 we renovated national transparent maps of smaller scale: national transparent map in scale of 1 : 500,000 (DPK 500), national transparent map in scale of 1 : 750,000 (DPK 750) and national transparent map in scale of 1 : 1,000,000 (DPK 1000).

Recording of Public Infrastructure

A legislative framework for the systematic recording of public infrastructure was created in recent years with the adoption of new spatial legislation. The Surveying and

Mapping Authority was assigned the task of ensuring technical and organizational conditions for the operation of the system at the national level. In cooperation with the relevant ministries, local communities and providers of public services, the Authority:

- ensured conditions for recording public infrastructure,
- created the Consolidated Cadastre of Public Infrastructure, and
- ensured the conditions for access to data from the Consolidated Cadastre of Public Infrastructure.

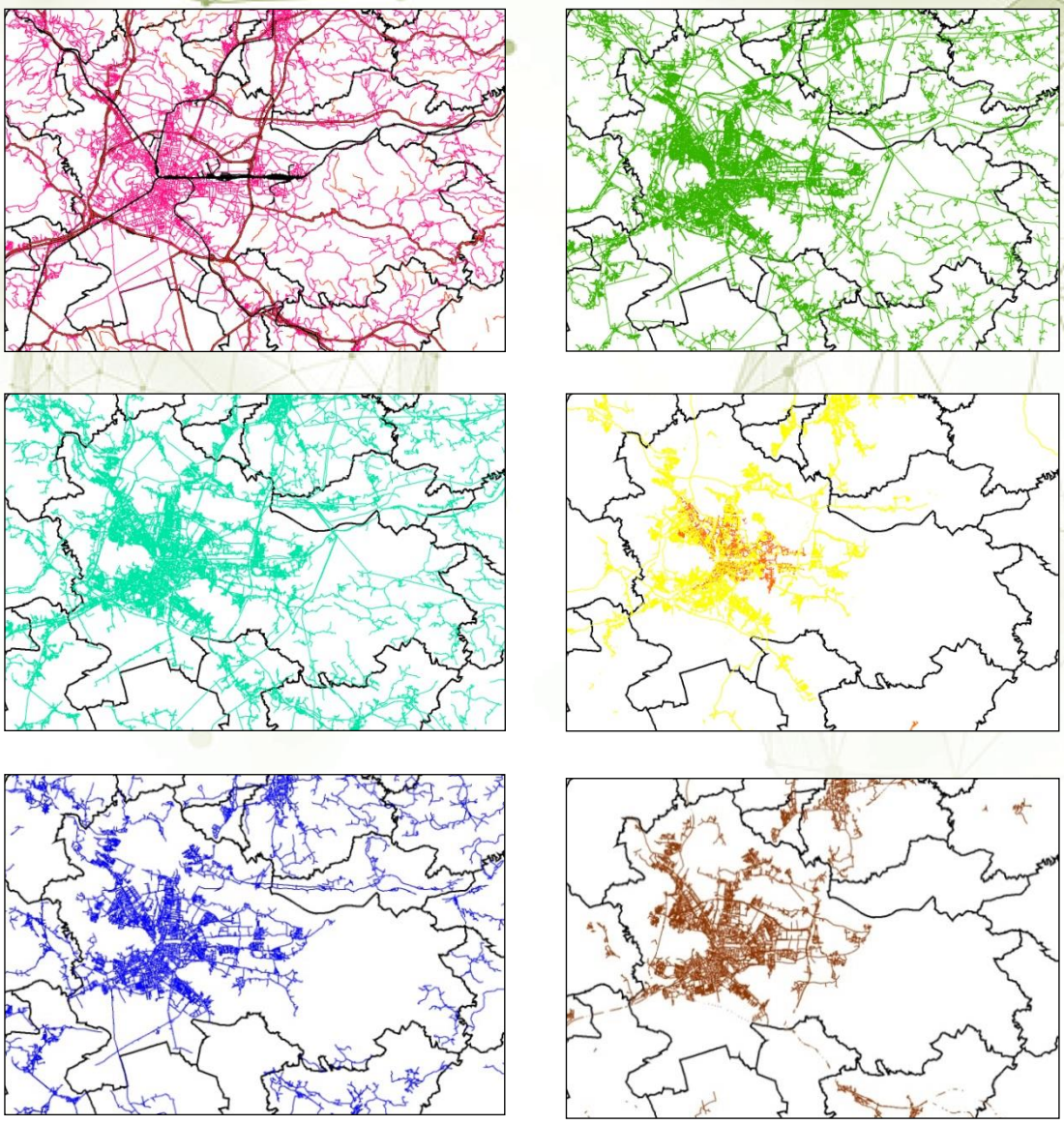

Figure 28: The Consolidated Cadastre of Public Infrastructure in the case of the Municipality Ljubljana:

	LEFT	RIGHT
1st row	roads + railroads	electricity
2nd row	electronic communication	gas lines and hot water lines
3rd row	water lines	waste water lines

The owners of public infrastructure are responsible for administrating their own infrastructure data and sharing it within the Consolidated Cadastre of Public Infrastructure. The legislation obligates public infrastructure owners to submit data on facilities to the consolidated cadastre within three months of any modification. Therefore, the integrity and quality of data in the consolidated cadastre depends on individual infrastructure owners. In 2014, we received 410 studies on the entry of modifications in the Consolidated Cadastre of Public Infrastructure. A total of 6,925,558 facilities were registered in the Consolidated Cadastre of Public Infrastructure by the end of 2014, with the total length of linear facilities amounting to 194,679 km.

Table 4: Length and number of infrastructure facilities by type in the Consolidated Cadastre of Public Infrastructure on 31 December 2014

Type	Number of facilities	Infrastructure length (km)
Roads	134,119	49,905
Railways	7,545	2,495
Airports	127	
Ports	1,096	
Cableways	164	11
Electricity	1,455,909	40,478
Natural gas	434,264	5,006
Thermal energy	71,507	1,009
Petroleum products	218	
Water distribution system	973,285	24,278
Sewage system	790,078	9,576
Waste management	4,253	
Water infrastructure	9,479	61
Electronic communications	3,043,514	61,860
Total	**6,925,558**	**194,679**

The Consolidated Cadastre of Public Infrastructure contains most of the public infrastructure of national importance (e.g. state roads, railways, gas pipelines, water infrastructure, transmission and distribution of electricity) and infrastructure belonging to municipalities or private owners.

Figure 29: Data in the consolidated cadastre of public infrastructure in the case of Ljubljana municipality – Prešeren square with surroundings

The system for recording public infrastructure is designed to enable infrastructure owners:

- greater protection of infrastructure against damage (if their infrastructure is recorded, any person carrying out land development activities can obtain information on the location of such infrastructure and protect it against damage during the activities),
- greater legal security in managing infrastructure.

Project »Upgrading the Consolidated Cadastre of Public infrastructure for the need of sharing of data by owners of electronic communications«

The information system of the consolidated cadastre of public infrastructure is a data source which can help improve investment decisions, enables the protection of infrastructure during construction, achieves investment synergies in different categories of public infrastructure and strives towards the efficient sharing of existing infrastructure. The European Union demands that the member states produce detailed overviews of existing electronic communication infrastructure and does not allow investment in regions where appropriate infrastructure already exists or private entities have an interest to construct such infrastructure with private funds. With data from the consolidated cadastre of public infrastructure it is possible to view the available electronic communication infrastructure which is an intricate part in discovering white spots. These enable the targeted planning for the development of broadband infrastructure with public fund investments.

For those reason the department for public infrastructure began implementation of the project »Upgrading the Consolidated Cadastre of Public infrastructure for the need of sharing of data by owners of electronic communications« in 2012. The upgrade was supposed to be executed on the basis of the following European regulations: Community guidelines in relation to rapid deployment of broadband networks (C235/7), commission recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA) (2010/572/EU), European Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive), Decision No 1376/2002/EC of the European Parliament and of the Council of 12 July 2002 amending Decision No 1336/97/EC on a series of guidelines for trans-European telecommunications networks and the umbrella strategic document of the European digital agenda which sets the goals to ensure broadband internet access by the year 2020.

This was the reason we established a database with data regarding the state of broadband internet accessibility of all networks from all providers of electronic communications in Slovenian in the year 2014. The project executed a census of broadband accessibility of all Slovenian electronic communication providers and the planned development of the broadband electronic communication infrastructure and the development of access to next generation networks. By the end of 2014 we recorded 1,127,854 objects with the data for broadband accessibility into the consolidated cadastre of public infrastructure. The established database enables the State supervision over the services providing broadband electronic communication. Beside the upgrade of the existing consolidated cadastre of public infrastructure with data for broadband availability of all networks in Slovenia we also established a system for periodic and individual (if the need arises) renewal of data by all the operators of electronic communication and in cooperation with the Ministry of Education, Science and Sport implements a system for the management needs of data regarding the market interest of electronic communication owners.

Figure 30: Graphical presentation of availability of electronic communications in the consolidated cadastre of public infrastructure

Introduction of the Directive Establishing the Infrastructure for Spatial Information in Europe (INSPIRE) at the Surveying and Mapping Authority of the Republic of Slovenia

The INSPIRE Directive determines basic guidelines for establishment of collective infrastructure for spatial information. The Surveying and Mapping Authority of Republic of Slovenia is responsible for fundamental reference data for space, which is important for locating objects and occurrences in space, and therefore this data has the highest priority. This means, that they have to be the first to follow with the demands of the INSPIRE Directive. In 2017 most of the data has to be available designed and demanded by the INSPIRE Directive.

In 2014 we regularly maintained Slovenian geoportal INSPIRE and the information system for metadata, which is available through geoportal. Metadata, managed in Slovenian metadata system, is regularly copied and published on European geoportal INSPIRE. We added a translator, so users can watch the contents of metadata in various languages. A report was prepared on the implementation of the Directive and the collected data from all managers of data collections regarding the establishment of a national infrastructure of spatial information in its use.

The Office for geodesy is in charge of establishment of the INSPIRE Directive at The Surveying and Mapping Authority of Republic of Slovenia. In line with the assignments the Office cooperates in the work of the National point of contact INSPIRE. It is also in charge of managing the INSPIRE geoportal, where among others, the list of data collections is published, which is a part of the Slovenian infrastructure for spatial information. The List of collections is topically arranged, as is directed by the INSPIRE Directive and Slovenian Infrastructure for Spatial Information Act – ZIPI (Official Gazette of the RS, No. 8/2010), where besides every collection there is also the name of its manager. All collections from the list have to follow implementation rules of INSPIRE (decrees and orders of European Commission) and provisions of ZIPI. Important activities are regularly published on geoportal, connected with the execution of the Directive and geoinformations, materials from the European Commission are also published for public discussion. Geoportal is an important tool for informing all stakeholders of national infrastructure for spatial information and to increase awareness regarding the meaning of the INSPIRE Directive in Slovenia.

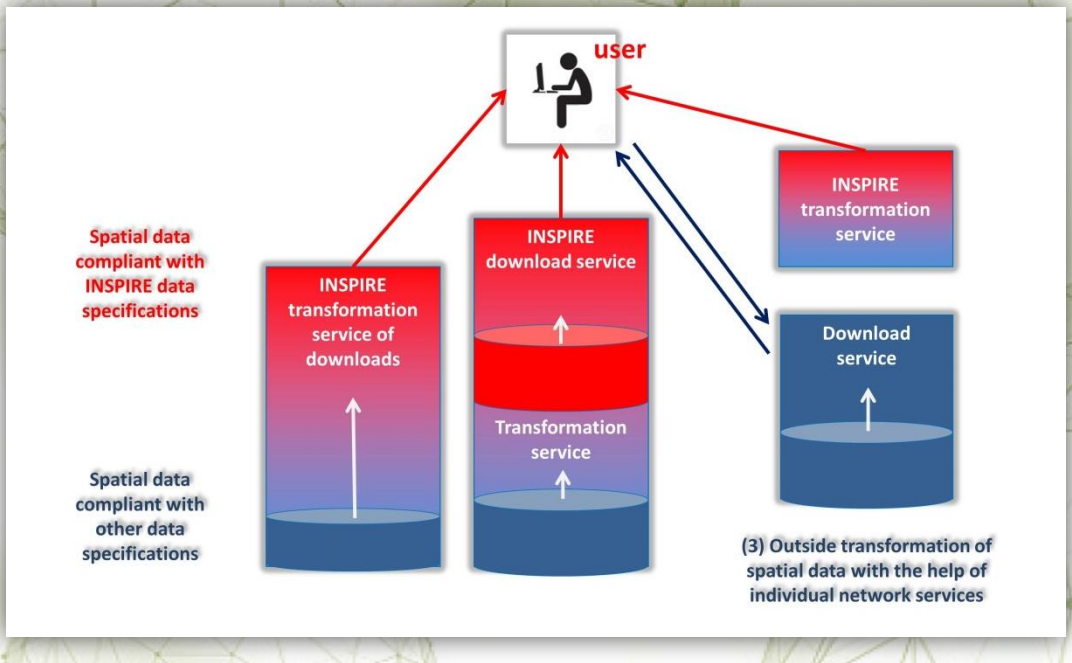

Figure 31: The different ways to ensure data compliant with INSPIRE

The representative of the Office for geodesy is participating in the EuroGeographics group for INSPIRE, which deals with demands, that are common for European geodetic authorities, and are connected with INSPIRE. She also prepares recommendations for its implementation.

4

STEPS FORWARD IN 2015?

4. STEPS FORWARD IN 2015?

4.1 MAIN AND STRATEGIC OBJECTIVES OF THE SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA

The national surveying and mapping authority is responsible for maintaining basic data on land surfaces, facilities and real estate (stored in orderly databases) and for providing services pertaining to the recording of changes made to real estate. Furthermore, it acts as a coordinator of the real estate system and spatial data infrastructure, performs real estate mass evaluations and provides data for an objective and comprehensive real estate tax assessment and improvement of the performance of the real estate market. It establishes and manages topographic system data and national maps, establishes and maintains the national spatial coordinate system, ensures the compliance of this system with the European coordinate system and provides for conditions for implementing land surveys.

The strategic objectives support the development of a comprehensive real estate system and national spatial data infrastructure with regard to providing basic and derived data and services to all users, and especially to support the implementation of spatial planning policy, agricultural and land policies and efficient management of real estate.

The strategic goals in individual activities of the national land surveying service are:

Geodesy Office

In the field of the national spatial coordinate and topographic system, we wish to:

- continue to set up the new national coordinate system (the horizontal, altitude and gravimetric component) as part of the European coordinate system ESRS (Spatial Reference System),
- ensure conditions for implementing national geodetic measurements (horizontal and vertical component, geoid); ensure the operation of the national network of permanent GNSS stations (Global Navigation Satellite System) and the GPS Service, which provides for the control of the functioning of the network, the use of the network for implementing national geodetic measurements and the provision of data for implementing geodetic measurements and location services,
- continue to establish and maintain national data on the features of land surface and facilities (topographic data) in topographic databases, on geographical names and on remote sensing, and provide national maps created in accordance with international standards,
- further develop and maintain the cartographic system of the Republic of Slovenia for defence purposes in accordance with NATO standards and Slovenian military standards,
- continue to ensure conditions for implementing the requirements of the INSPIRE Directive relating to the topographic system.

The attainment of these strategic objectives will enable the easier capture, quality maintenance and efficient use of data in real estate records and other spatial records for establishing the geolocation of data and phenomena in the ESRS. National topographic data, cumulative economic infrastructure data and state maps will be used as expert bases in spatial and environmental planning and management, flood safety and agricultural policy and will thus serve as a basis for producing various topical maps or displays for navigation.

In the field of recording public infrastructure, we wish to:

- ensure the functioning of the system of recording public infrastructure,
- ensure control of the quality of data on public infrastructure in the Consolidated Cadastre of Public Infrastructure,
- establish a system to protect public infrastructure.

The attainment of these strategic objectives will enable more efficient planning, the safer implementation of investment into land and more economical management of public infrastructure facilities. The System for protection of public infrastructure will better safeguard infrastructure from damage, ensure conditions for protection of the environment and protect people from injuries.

When introducing the INSPIRE Directive, we wish to:

- ensure the conditions to fulfilling the requirements of the Infrastructure for Spatial Information Act and the INSPIRE Directive,
- provide access to spatial data and metadata in accordance with the requirements of the Infrastructure for Spatial Information Act and of the INSPIRE Directive,
- cooperate with the European Commission in the process of enforcing the regulations for the implementation of the INSPIRE Directive,
- participate in the establishment and functioning of the national spatial information infrastructure, harmonized with the INSPIRE Directive,
- implement the activities of national contact points in accordance with the Infrastructure for Spatial Information Act.

The attainment of the above-mentioned strategic goals will provide data infrastructure for spatial information. This will lay the foundations for a comprehensive spatial data infrastructure at the national level in accordance with the INSPIRE Directive.

The attainment of strategic goals will enable simpler, more accurate and faster capture of data for the needs of updating of geodetic and other spatial records, establishing the geolocation of data in the European spatial reference system, integration of data and exchange of data in international projects.

Real Estate Office

In the field of real estate registration, we wish to:

- improve the quality and completeness of data regarding real estate,
- simplify procedures, and arrange and update data on all real estate in the Land Cadastre, the Building Cadastre and the Real Estate Register,
- participate in the process of ensuring the conditions for fulfilling the requirements of the INSPIRE Directive in the field of real estate registration,
- create the core of a comprehensive real estate system linked to the Land Cadastre, the Building Cadastre and the Land Register,
- enable dynamic upgrading of real estate data in basic databases (guest data) or the entering of new data by linking data from other databases with basic databases (linked data).

By achieving strategic objectives in real estate registration, we will meet the requirements for the greater legal security of real estate owners, greater security of real estate investments and investments related to real estate; make the real estate market more efficient; make real estate taxation fairer and more efficient; create the pre-conditions for adopting a more appropriate land and housing policy and the planning of land development activities; quickly detect and register all unauthorized activities in the physical environment and effectively perform activities for protection and rescue services.

The strategic objectives in the field of quality and completeness of data and coordination of the integration of real estate registers will, in relation to the appropriate information infrastructure, be achieved as part of the implementation of the e-space group of projects. Regarding the quality of data of real estate records we will emphasize the upgrade of locational precision of the graphic part of the land cadastre. For implementation of this task we will prepare an action plan which will take into account the experience and starting points, gained in 2013, when we implemented locational upgrade of the graph part of land cadastre in field of permanent plantations in Slovenia (connection with establishing cadastre income) and areas of two municipalities (Jesenice in Škofja loka). Developed and used methodology will be upgraded on the basis of experience and will be used to upgrade data in the projects e-space and it will be implemented in regular procedures for maintenance of land cadastre.

Mass Real Estate Valuation Office

In the field of mass real estate valuation, we wish to:

- establish, manage, maintain and develop a mass real estate valuation system for the purpose of real estate taxation,
- managing real estate market records with data regarding sales and rental market of real estate in Slovenia,
- managing the record of high quality data about events on real estate market,

- managing and maintaining of data about generalized market values of real estates,
- efficiently adjust the mass real estate valuation system to situations in the real estate market.

The attainment of our strategic objectives will ensure the conditions for the transparent functioning of the real estate market, data on realized prices and rents in the real estate market and data on the generalized market value of all real estate in Slovenia for the purposes of objective taxation of real estate and other purposes.

Main Office

In the field of issuing geodetic data, we wish to:

- provide quality services and data,
- ensure an efficient, user-friendly system for issuing data,
- ensure that geodetic data is used as reference data in the Republic of Slovenia.

The attainment of these strategic objectives will enable the wide use of data for various purposes in a standardized, efficient and user-friendly manner. Data will be available via the entire entry point, while the better understanding of information and wider use of data will enable the faster development of other services as part of the information society.

In the field of information science, we wish to:

- ensure a uniform and effective information system,
- standardize procedures and solutions,
- ensure comprehensive management of the field of information science and information technology.

The attainment of the listed strategic objectives will provide a stable information environment, which will enable the cost-efficient and procedurally efficient implementation of organisational processes determined by law, undisturbed operations and quality data for our own needs and external users.

In the field of the organisational structure of the national land survey service, we wish to:

- develop an optimal organisation of the national land survey service as part of public administration in connection with other institutions recording real estate and spatial data,
- establish an organisational structure that will allow the efficient communication of data, implementation of services and provision of information to our users.

The attainment of the strategic objectives will ensure more economical implementation of the activities of the national land survey service and better implementation of services for user.

In the field of education and training, we wish to:

- ensure an appropriate level of education and competence of employees of the Surveying and Mapping Authority of the Republic of Slovenia with regard to the effective and efficient performance of land survey services,
- improve users' knowledge of the possibilities of using real estate and spatial data and records.

The attainment of the strategic objectives will ensure adequately trained personnel for the Surveying and Mapping Authority of the Republic of Slovenia, providers of the land survey service and users.

In the field of international cooperation, we wish to:

- implement European guidelines on recording real estate, mapping and geo-informatics,
- participate in establishing European and cross-border data sets, taking into account the interoperability of spatial and real estate data and services,
- ensure that we are involved in developing Slovenian and European e-government projects,
- implement NATO guidelines in cooperation with the Ministry of Defence, taking into account interoperability in the preparation of topographic and cartographic products,
- provide professional assistance to other countries both in cooperation with the private sector and independently,
- encourage and support the private sector in penetrating and establishing themselves in foreign markets.

Applying European and other international guidelines and actively contributing to their development will enable the comparable and coordinated development and performance of the land survey service in Slovenia.

4.2 FUTURE PROJECTS

Geodesy Office

In the frame of the Financial mechanism EEA 2009-2014 The Surveying and Mapping Authority of Republic of Slovenia in cooperation with Ministry for Agriculture is performing a four year long project »Update of spatial data infrastructure to decrease the risks and consequences of floods«. Goal of this project is establishment of a vertical component of the state spatial coordinate system in line with the demands of INSPIRE Directive and with recommendations of international organisations (IAG and EUREF) and with the demands of the same Directive to coordinate upgrades of the infrastructure for spatial information to support the decreasing risks of floods and management of

waters. The project presents an important part for the implementations of the National Land Survey Reference System Act from the year 2014.

With execution of the project the modern geodetic reference will be coordinated with European spatial reference system. In the years 2015 and 2016 the national combined geodetic network ("zero level" of horizontal and vertical network) will be established with a long term vision of establishment of 4R reference system. Five physical national geodesy point of the »zero« order will be physical build and operationally connected to the national network of reference stations GNSS. National combined geodetic network will serve as basic national geodetic infrastructure for regular monitoring of geodynamic processes in the area of the state. It will ensure quality georeferences. Vertical component of ESRS will also be established, and a new national altitude system will be determined, which will be based on normal heights. Model of geoid for Slovenia will be established; high quality national geoid is a precondition to assure the expected accuracy of altitude data and the use of satellite and other geodetic techniques (highly accurate GNSS-leveling…) determining location. With this we will assure geodetic groundwork for data on vertical component for all spatial data and we will enable the use of satellite technologies in determination of coordinates for vertical component of location, not only for horizontal, as is in practice now with GNSS network. We will establish topographical database of high accuracy (accuracy 1 : 5000). Existing topographical model will be changed in a way that it will be in great measure compliant with demands of INSPIRE Directive. Existing topographical data which cover approximately 2/3 of Slovenia's territory will be conveyed into new data model, and new topographical data for suitable data topics from Annexes of INSPIRE Directive in line with responsibilities of The Surveying and Mapping Authority of Republic of Slovenia will also be captured. Data infrastructure for hydrographical data will be updated with establishment of new data model, which will be compliant with INSPIRE Directive, and 10 percent of existing hydrographical data will be conveyed into that model. Managers of hydrographical data will be given roles and authority. This will enable easier reporting about water management, which is demanded by European directives. For access to spatial data we will made internet services with emphasis on topographical and hydrographical data. Services will be compliant with INSPIRE demands on internet services for spatial data. Internet services will be included in Slovenian INSPIRE Geoportal and publicly accessible. Project will finish in 2016.

In the field of **establishment of new national coordinate system** we will carry out basic geodetic measurements especially in the field of leveling line networks of high accuracy, gravimetric measurements for the purpose to define the new Slovenian geoid and connection of horizontal, vertical and gravimetrical components of coordinate system. Operation of permanent GNSS stations of SIGNAL network and their use in private and public sector will be ensured. Control over operation of network and long term monitoring of stability of network will be ensured. We will make new EUREF measurements for needs of new realization of coordinate system in Slovenia. We will perform time analysis of data of horizontal and vertical component of coordinate system for modeling of geokinematic model of Republic of Slovenia. Activities in the field of

detailed transformation parameters for the transformation of locational data of the land cadastre from the old (D48) into the new (D96) coordinate system will be performed.

In the field of **topographical system** we will establish a three year cycle of taking aerial photographs and producing orthophoto. We will capture topographic data for part of Slovenia, for which the existing data are outdated. We will continue with update of informational system for management of topographical data of the highest level and establish web services for data publishing of topographic data. In cooperation with the Ministry of Defence we will maintain the national and military topographic maps of scale 1 : 50,000 and the national transparent map of scale 1 : 250,000. We will continue to maintain the geographical name register in with our participation in the Commission for the standardization of geographical names. Will also contribute in the international border commission with Italy, Austria and Hungary, we will also maintain these borders and manage the national border register.

Mass Real Estate Valuation Office

Because of restrictions in personnel the Office will continue only with execution of legally prescribed tasks for establishment, management, maintenance and development of Mass Real Estate Valuation in the year 2014. New projects are not planned.

Real Estate Office

In the field of real estate activities we will continue with the focus into the field of quality and completeness of data and assuring suitable support with management and maintenance of data in the year 2015. We would like to realize both fields of work in the frame of the **program of projects e-space**, in the projects Informational renovation of real estate records and Improvement of real estate records data.

In the framework of the **information overhaul**, whose purpose is to ensure appropriate information support for work processes and the more efficient use of real estate and spatial data that provide the basis for recording data on real estate and ownership of real estate, we will continue in the year 2015 with the preparation of substantive documentation and the execution of public tender for the next phase of the overhaul of information solutions for the attribute part of the land cadastre, building cadastre, real estate register and the register of spatial units. Before the implementation of the new module for managing and maintaining of the graphical data of the land cadastre activities in the field of data migration will be carried out (control of data harmonization, abolishment of inconsistencies of data, transformation of data into the new national coordinate system).

Over the next few years the planned **data overhaul** includes the gradual transfer of archival studies of the Land Cadastre and the Building Cadastre from analogue to digital form, which will enable the Surveying and Mapping Authority to carry out more efficient

e-commerce in the field of recording real estate and the functional integration of the information system for real estate record management and the spatial information system. On the basis of organizational changes with the publishing of archive data part of the process of converting analog in to digital form is carried out in the scope of regular maintenance activities of the real estate registers.

Graduate improvement of location accuracy of graphical data of land cadastre is included in the frame of improvement of data. In the year 2015 we will supplement the methodology for improvement of location data and field test it on predefined areas. In the following years we are planning improvement for the Slovenian area and prioritize areas, where interest will be expressed and the needs of users and the willingness to co-finance the execution. This will ensure the locational accuracy of data and enable direct use of location data of land cadastre for execution of graphic sections of land cadastre with other spatial data.

Among the regular tasks of recording real estate, which are done by the regional surveying and mapping authorities, emphasis will be mostly on the elimination of the backlog in resolving requests and in doing so enable and ensure the timely addressing of formal requests as well as consequently improve the quality of data in the registers of real estate.

4.3 REGULATIONS IN PREPARATION

4.3.1 Regulations and Acts to be Adopted by the National Assembly of the Republic of Slovenia

- **Act on Recording Public Infrastructure**
  The Consolidated Cadastre of Public Infrastructure was established in 2007 as a technical record of all public infrastructure facilities in the Republic of Slovenia. None of the regulations deals with the uniform (systemic) recording of public infrastructure, and the existing spatial legislation primarily regulates the construction of public infrastructure facilities.

  The Act on Recording Public Infrastructure will thus comprehensively regulate the recording of public infrastructure; define the recording of facilities and networks of public and private infrastructure; regulate the obligation of operators to provide data and the issuing of data from the Consolidated Cadastre of Public Infrastructure, and organize the Consolidated Cadastre as an official record. The act will also establish a system to protect public infrastructure from activities affecting space and for the exchange of data on public infrastructure. This will improve safety in land development works and reduce the amount of damage to public infrastructure facilities, which will protect the infrastructure from damage or destruction and the population from injuries and have a positive impact on environmental protection.

The act will not regulate property rights relationships for public infrastructure facilities and networks, because the preparation of civil legislation (preparation of regulations on property law) is under the jurisdiction of the Ministry of Justice.

The adoption of the Act on Recording Public Infrastructure is planned in the Normative program of work of the Government of the Republic of Slovenia for the year 2015

- **Act Amending the Real-Estate Recording Act**
  Real-Estate Recording Act – ZEN (Official Gazette RS, No. 47/06, 65/07 – C Court decision 106/10- ZDoh-2H, 47/12 - ZUKD-1A, 79/2012 – C Court decision and55/13 - ZUKD-1B) legislates the recording of land plot, building and part of building data in to real estate databases which are managed and maintained by the Surveying and Mapping Authority of the Republic of Slovenia. For the preparation of the new systemic arrangement of real estate taxation activities for improvements to data quality are planned. With the amendments to the Real Estate Recording Act the normative foundations for a more appropriate recording of ownership data, it will enable the reduction of data in the real estate register, which are not essential and for which we cannot guaranty quality maintenance and at the same time they will provide conditions which will enable implementation of activities in 2016:
  - Regulating the formal status of real estate data
  - More efficient interventions of inspector services
  - Improve the recording of actual use data for buildings and parts of buildings

  Significant changes to ZEN or the enactment of a new ZEN are planned for the years 2016 and 2017 in connection with the information overhaul of real estate databases which will include new IT solutions as well as renewal of the processing part of real estate recording. For 2015 we plan to adopt a novelation of ZEN in which only prepared changes will be enacted along with changes that will be necessary for the adoption of the new Real Property Tax Act and possible changes to the Real Property Mass Valuation Act. So the dynamic of passing the novelation of ZEN will the adjusted depending on the adoption of regulations regarding real estate taxation and mass valuation acts.

  The adoption of the Act Amending the Real-Estate Recording Act is planned in the normative program of work of the Government of the Republic of Slovenia for the year 2015.

- **Act Amending the Infrastructure for Spatial Information Act**
  The European union has for the purpose of establishing an »infrastructure for spatial information in the European Union« adopted the Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE). The infrastructure for spatial information in the European Union is designed to

be a connection of national spatial information infrastructure which are interoperable and build on common procedural regulations and strengthened with actions on the level of the European Union.
The INSPIRE Directive was transferred into the Slovenian legal system in its entirety with the Infrastructure for Spatial Information Act – ZIPI (official Gazette RS, No. 8/10) which regulates the establishment, management and maintenance of the spatial information infrastructure in the Republic of Slovenia as an integral part of the European infrastructure for spatial information.

With the adoption of the Act Amending the Infrastructure for Spatial Information Act Slovenia will address the issues from the inquiry procedure of the European commission EU PILOT 4472/13/ENVI and ensure the complete and accurate translation of the INSPIRE Directive into the Slovenia legislative system. In the inquiry procedure EU PILOT 4472/13/ENVI which started in January 2013 the European Commission's opinion was that individual provision from the INSPIRE Directive were omitted in ZIPI and some provisions were translated incorrectly or incompletely.

The Republic of Slovenia produced written replies to the questions of the European Commission in three documents:

- reply no. 542-5/2013/18-00611143, 25 March 2013,
- reply no. 542-5/2013/31, 10 September 2014
- reply no. 542-5/2013/45, 10 December 2014.

The dynamic of the adoption of the ZIPI novelation will be adjusted based on the input from the European commission regarding our response on the EU pilot project 4472/13/ENVI, dated 10 December 2014. Because the questions were also regarding the translation of Article 13 of the INSPIRE Directive regarding access to public information spatial datasets and the defining of services as well as the translation of Article 17 (7) of the INSPIRE Directive the amendments of ZIPI will be adjusted to the possible changes to the Public Information Access Act (Official Gazette RS, No. 51/06, 117/06 - ZDavP-2, 23/14 and 50/14; ZDIJZ).

The passing of the Act Amending the Infrastructure for Spatial Information Act is planned in the Normative program of work of the Government of the Republic of Slovenia for the year 2015.

4.3.2 Regulations and Acts to be Adopted by the Government of the Republic of Slovenia

- **Report on the implementation of Change to the programme of work of the national land survey service for 2014 and 2015 in the part which relates to 2014**
  Article 29 of the Land Survey Service Act – ZGeoD-1 (Official Gazette of the RS, No. 77/2010) requires that the Government of the Republic of Slovenia adopt the

report on the implementation of the annual programme of the national land survey service at the latest on 1 February of the current year.

The report on the implementation of the annual programme of the national land survey service for 2014 in 2015 where it refers to 2014, comprises reporting on the substantial and financial implementation of tasks determined by the Government of the Republic of Slovenia with the adoption of the Change to the programme of work of the national land survey service for 2014 in 2015 (Government of the Republic of Slovenia decision, No. 35301-2/2014/6 from the15 March 2014).

- **Changes and amendments of the Programme of work of the national land survey service for 2014 and 2015 where it refers to the year 2015**
  Article 29 of the Land Survey Service Act – ZGeoD-1 (Official Gazette of the RS, No. 77/2010) stipulates that a detailed definition and planned volume of tasks of the national land survey service and the planned amount of funds for the implementation of these tasks be determined in the annual programme of the national land survey service, which is adopted by the Government of the Republic of Slovenia for the current year at the latest on 1 February of the current year.

  The Government of the Republic of Slovenia adopted on its 58 Regular session the Programme of work of the national land survey service for 2014 and 2015. Because of the change in the financial situation in the rebalancing of the budget of the Republic of Slovenia for the year 2015 (Official Gazette RS, No. 14/15) the Surveying and Mapping Authority has 15% less funds at its disposal that at the confirmation of the program. This is the reason for the cutting of some activities of the national geodetic services for the year 2015. In the Changes and amendments of the Programme of work of the national land survey service for 2014 and 2015 where it refers to the year 2015, a Program for the preparation of Regulations will be added (which until now did not exist) in the year 2015. The program will be changed for specific tasks. This will happen in cases, where the extend or the basic purpose of the tasks has changed and as a whole the new financial plan for the year 2015 will be complying with the adopted rebalancing of the budget of the Republic of Slovenia for the year 2015

4.3.3 Regulations and Acts to be Adopted by the Minister for Infrastructure and Spatial planning

- **Rules amending the Rules on the terms and methods of computer access to data from geodetic data records and data bases**
  With the change of the Rules on the terms and methods of computer access to data from geodetic data records and data bases (Official Gazette RS, No. 25/08 and 10/11), which was issued on the basis of the Real Estate Recording Act (Official Gazette RS, No. 47/06 and changes) the still open questions will be addressed regarding the direct computer access to geodetic data stored in the

databases and registers. The content of the Rules will be supplemented in the field of user management, specifically with the option to exclude users which have not used the direct access to data in a certain amount of time automatically out of the system. This amendment is reasonable because of security reasons as many users do not unsubscribe the end users which for many different reasons do not use their access anymore. The terminology used in the Rules will also be reviewed in relation to other passed bills and if necessary corrected accordingly.

The adoption of the Rules is planned in the Normative program of work of the Republic of Slovenia for the year 2015

5

REGULATIONS ON SURVEYING AND MAPPING ACTIVITIES

5. REGULATIONS ON SURVEYING AND MAPPING ACTIVITIES

5.1 VALID REGULATIONS CURRENTLY APPLIED IN PERFORMING LAND SURVEY ACTIVITIES

ACTS
Land Survey Service Act – ZGeoD-1 (Official Gazette of the RS, No. 77/2010)
Basic Geodetic Measurement Act – ZTGI (Official Gazette of the SRS, No. 16/1974, 23/1976 – ZGS, 42/86 and Official Gazette of the RS, No. 25/2014 – ZDGRS)
Act on georeference system – ZDGRS (Official Gazette of the RS, No. 25/2014)
Land Cadastre Act - ZZKat (Official Gazette of the SRS, No. 16/1974, 42/1986; Official Gazette of the RS, No. 17/1991– ZUDE, 52/2000 – ZENDMPE and 47/2006 – ZEN)
Recording of Real Estate, State Border and Spatial Units Act – ZENDMPE (Official Gazette of the RS, No. 52/2000, 87/2002 – SPZ and 47/2006 – ZEN)
Real-Estate Recording Act – ZEN (Official Gazette of the RS, No. 47/2006, 65/2007 – Constitutional Court Decision, 106/2010 – ZDoh-2H, 47/2012 – ZUKD – 1A, 79/2012 – Constitutional Court Decision and 55/2013 – ZUKD – 1B)
General Administrative Procedure Act – ZUP (Official Gazette of the RS, No. 24/2006 – official consolidated text, 105/2006 – ZUS-1, 126/2007, 65/2008, 8/2010 in 82/2013)
Administrative Fees Act – ZUT (Official Gazette of the RS, No. 106/2010 – official consolidated text and 14/2015 - ZUUJFO)
Civil Servants Act – ZJU (Official Gazette of the RS, No. 63/2007 - official consolidated text, 65/2008, 69/2008 - ZTFI-A, 69/2008 – ZZavar-E in 40/2012 - ZUJF)
Law of Property Code - SPZ (Official Gazette of the RS, No. 87/2002 and 91/2013)
Spatial Management Act - ZUreP – 1 (Official Gazette of the RS, No. 110/2002, 8/2003 – amend., 58/2003-ZZK-1, 33/2007-ZPNačrt,108/2009-ZGO-1C and 80/2010-ZUPUDPP and 106/2010 – amend. ZUPUDPP)
Construction Act – ZGO-1 (Official Gazette of the RS, No. 102/2004 - official consolidated text, 14/2005 - amend., 92/2005-ZJC-B, 93/2005-ZVMS, 111/2005 - Constitutional Court Decision, 120/2006 - Constitutional Court Decision, 126/2007, 108/2009, 61/2010-ZRud-1, 62/2010 - amend., 20/2011 - Constitutional Court Decision and 57/2012 and 110/2013)
Agricultural Land Act – ZKZ (Official Gazette of the RS, No. 71/2011 – official consolidated text and 58/2012)
Housing Act – SZ-1 (Official Gazette of the RS, No. 69/2003, 18/2004 – ZVKSES, 47/2006 – ZEN, 9/2007 – Constitutional Court Decision, 45/2008 – ZVEtL, 57/2008, 90/2009, 62/2010 – ZUPJS, 56/2011 – Constitutional Court Decision, 87/2011 and 40/2012 - ZUJF)
Land Registry Act – ZZK-1 (Official Gazette of the RS, No. 58/2003, 37/2008 – ZST-1, 28/2009 and 25/2011)
Act on the Acquisition of the Strata Title of a Part of a Building on the Proposal of the Owner and on Determining the Land Belonging Thereto - ZVEtL(Official Gazette of the RS, No. 45/2008, 59/2011)
Real Property Mass Valuation Act – ZMVN (Official Gazette of the RS, No. 50/2006, 87/2011, 40/2012 – ZUJF,22/2014 – Constitutional Court Decision, 24/2015 – Constitutional Court Decision)
Public Information Access Act – ZDIJZ (Official Gazette of the RS, No. 51/2006 - official consolidated text 117/2006 – ZDavP-2, 23/2014, 50/2014 in 19/2015 – Decision of the Constitutional Court)
Spatial Planning Act - ZPNačrt (Official Gazette of the RS, No. 33/2007, 70/2008-ZVO-1B, 108/2009, 80/2010 - ZUPUDPP, 106/2010 - amend., 43/2011 - ZKZ-C, 57/2012 and 57/2012 – ZUPUDPP-A and 109/2012 in 35/2013 – Decision of the Constitutional Court)
Act Regulating Designation of Areas and Naming and Marking Settlements, Streets and Buildings – ZDOIONUS (Official Gazette of the RS, No 25/2008)

Cadastral Income Act - ZUKD-1 (Official Gazette of the RS, No. 9/2011, 47/2012, 55/2013 and 41/2014)
Act regarding the siting of spatial arrangements of national significance in physical space - ZUPUDPP (Official Gazette of the RS, No. 80/2010 (106/2010 amend.) and 57/2012)
Infrastructure for Spatial Information Act - ZIPI (Official Gazette of the RS, No. 8/2010)
Geometric Centre of Slovenia Act - ZGSS (Official Gazette of the RS, No. 101/2003)

IMPLEMENTING REGULATIONS
REGULATIONS ISSUED ON THE BASIS OF THE LAND SURVEY SERVICE ACT (ZGeoD-1)
Rules on the programme and method of taking an exam in land surveying (Official Gazette of the RS, No. 10/2011)
Rules on Terms and Procedures for Scoring, Monitoring, Certification and Registration of Mandatory Proficiency Education of Certified Land Surveyors (Official Gazette of the RS, No. 10/2011)
Rules on the Programme and Method of Taking Proficiency Examination for the Performance of Land Surveying Services (Official Gazette of the RS, Nos. 11/2011 and 23/2011)
Rules on the Content, Form and Issuing Procedure of the Land Survey Licence (Official Gazette of the RS, No. 14/2011)
Decision on the Change of the Status of the Land Survey and Photogrametry Institute of the Faculty of Civil Engineering and Geodesy into the Land Survey Institute of Slovenia (Official Gazette of the RS, No. 38/2011)
REGULATIONS ISSUED ON THE BASIS OF THE BASIC GEODETIC MEASUREMENTS ACT (ZTGI)
Decree on the Use of Geographical Names in Plans and Maps in Multinational Areas in the Socialist Republic of Slovenia (Official Gazette of the SRS, No. 11/1980) – on the basis of ZDGRS it is still valid until the enforcement of regulation enacted by the Government
REGULATIONS ISSUED ON THE BASIS OF THE NATIONAL LAND SURVEY REFERENCE SYSTEM ACT (ZDGRS)
Rules on the detailed content of the remote sensing database (Official Gazette of the RS, No. 54/2014)
Rules on the detailed content of the remote sensing database (Official Gazette of the RS, No. 54/2014)
Rules on the topographic data catalogue and topographic key (Official Gazette of the RS, No. 54/2014)
Rules on the mapping key (Official Gazette of the RS, No. 54/2014)
Decree determining parameters of the horizontal component and the gravimetric part of the vertical component of the national spatial coordinate system, the names of these components and the national geographical projection (Official Gazette of the RS, No. 57/2014)
Decree on the transcription of geographical names on national maps in ethnically mixed areas in the Republic of Slovenia (Official Gazette of the RS, No. 57/2014)
Rules on the detailed content of the national spatial coordinate system database (Official Gazette of the RS, No. 26/2015)
REGULATIONS ISSUED ON THE BASIS OF THE LAND CADASTRE ACT (ZZKat)
Instructions Concerning Location and Marking-Out of Land Property Boundaries (Official Gazette of the SRS, Nos. 2/1976, 6/1987, Official Gazette of the RS, Nos. 52/2000 – ZENDMPE and 47/2006 – ZEN)
Rules for Cadastral Classification of Land (Official Gazette of the SRS, Nos. 28/1979, 35/1983; Official Gazette of the RS, Nos. 52/2000 – ZENDMPE and 47/2006 – ZEN)
Rules on Maintaining the Types of Use of Land Properties in the Land Cadastre (Official Gazette of the SRS, No. 41/1982; Official Gazette of the RS, Nos. 52/2000 - ZENDMPE and 47/2006 - ZEN)
Rules for Evaluation of Soil in Identifying the Production Capability of Pilot Land Parcels (Official Gazette of the SRS, No. 36/1984; Official Gazette of the RS, Nos. 52/2000 – ZENDMPE and 47/2006 – ZEN)
Instruction on the Beginning of the Official Use of the Digital Cadastral Register (Official Gazette of the RS, Nos. 57/1999, 52/2000 - ZENDMPE and 47/2006 - ZEN)

REGULATIONS ISSUED ON THE BASIS OF THE RECORDING OF REAL ESTATE ACT (ZEN)
Decree on the Marking of Apartments and Business Premises (Official Gazette of the RS, No. 63/2006)
Decree on Cadastral Area Territories and Names (Official Gazette of the RS, No. 100/2006)
Rules on the Register of the State Border (Official Gazette of the RS, No. 118/2006)
Rules on the Contents and Method of Administration of the Register of Spatial Units (Official Gazette of the RS, No. 118/2006)
Decree on the Method of Registration of Administrators of Real Estate into the Land Cadastre and Building Cadastre (Official Gazette of the RS, No. 121/2006 and 104/2013)
Rules on Boundary Settlement and Changing and Recording Data in the Land Cadastre (Official Gazette of the RS, Nos. 8/2007 and 26/2007)
Rules on the Land Rating Exam and the Power to Implement Land Rating (Official Gazette of the RS, No. 29/2007)
Rules on the Terms and Methods of Computer Access to Data from Geodetic Data Records and Databases (Official Gazette of the RS, Nos. 25/2008 and 10/2011)
Rules on Establishing Land Rating (Official Gazette of the RS, No. 35/2008)
Rules on Determining and Administering Land Rating (Official Gazette of the RS, No. 47/2008)
Rules on the Types and Contents of Certificates from Geodetic Databases and on the Manner of Data Designation (Official Gazette of the RS, No. 69/1012)
Rules on Building Cadastre Registration (Official Gazette of the RS, No. 73/2012)
REGULATIONS ISSUED ON THE BASIS OF THE GENERAL ADMINISTRATIVE PROCEDURE ACT (ZUP)
Rules on the keeping of records of administrative procedures (Official Gazette of the RS, No. 18/2003 and 7/2006)
Decree on administrative operations (Official Gazette of the RS, No. 20/2005, 106/2005, 30/2006, 86/2006, 32/2007, 63/2007, 115/2007, 122/2007 - amend. 31/2008, 35/2009, 58/2010, 101/2010 and 81/2013)
Rules on confirming finality and final decisions in administrative procedure (Official Gazette of the RS, No. 43/2005 and 94/2007)
Rules on costs in administrative procedure (Official Gazette of the RS, No. 86/2005)
Regulation on online address designation of unifed national e-government web portal (Official Gazette of the RS, No. 36/2008)
Decree on Education and Proficiency Exam to Head and Decide in the Framework of Administrative Procedure (Official Gazette of the RS, No. 12/2013)
REGULATIONS ISSUED ON THE BASIS OF THE CIVIL SERVANTS ACT (ZJU)
Rules on a Particular Part of the Exam for Inspectors in the Fields of Environment and Nature, Construction, Mining, Energy, Land Survey and Housing (Official Gazette of the RS, Nos. 125/2004 and 62/2006)
REGULATIONS ISSUED ON THE BASIS OF THE SPATIAL PLANNING ACT (ZUreP-1)
Rules on Land Consolidation in the Area of the Municipality Location Plan (Official Gazette of the RS, Nos. 21/2004 and 33/2007 - ZPNačrt)
Rules on the Land Register of the Public Communications Network and Associated Facilities (Official Gazette of the RS, Nos. 56/2005, 64/2005 – amend. and 33/2007 – ZPNačrt)
Rules on the Content and Method of Keeping a Database on Actual Land Use (Official Gazette of the RS, Nos. 9/2004 and 33/2007 – ZPNačrt)
Rules on Land Survey Plan (Official Gazette of the RS, Nos. 40/2004 and 33/2007 – ZPNačrt) – used until the issuing of implementing regulations on the basis of ZPNačrt, if this is not in violation of ZPNačrt
REGULATIONS ISSUED ON THE BASIS OF THE CONSTRUCTION ACT (ZGO-1)
Decree amending the Regulation on classification of construction with regard to their complexity (Official Gazette of the RS, No. 18/2013, 24/2013 in 26/2013)

Rules on the Form and Content of Identity Card and Uniform Stamp of Certified Engineers (Official Gazette of the RS, Nos. 51/2004, 60/2005, 73/2005 and 55/2011)
Rules on the Form and Content of the Identity Card and Uniform Stamp of Certified Architects, Certified Landscape Architects and Certified Spatial Planners (Official Gazette of the RS, Nos. 114/2004 and 53/2005)
Rules on Land Survey Plan (Official Gazette of the RS, Nos. 40/2004 and 33/2007 – ZPNačrt) – used until the issuing of implementing regulations on the basis of ZPNačrt, if this is not in violation of ZPNačrt
REGULATIONS ISSUED ON THE BASIS OF THE HOUSING ACT (SZ-1)
Decree on the Marking of Apartments and Business Premises (Official Gazette of the RS, No. 63/2006)
REGULATIONS ISSUED ON THE BASIS OF THE LAND REGISTER ACT (ZZK-1)
Rules of Land Register (Official Gazette of the RS, Nos. 30/2011 and 55/2011)
Rules on Electronic Exchange of Data Between the Land Register and Cadastres (Official Gazette of the RS, No. 30/2011)
REGULATIONS ISSUED ON THE BASIS OF THE REAL PROPERTY MASS APPRAISAL ACT (ZMVN)
Rules on Criteria of Real Property Mass Valuation (Official Gazette of the RS, No. 94/2008)
Rules on General Valuation of Real Estate Questionnaire (Official Gazette of the RS, No. 15/2010)
Decree on Data about Real Estate Characteristics in the Real Estate Register (Official Gazette of the RS, Nos. 95/2011 and 109/2011 and 7/2014)
Real Estate Valuation Models Determination Decree (Official Gazette of the RS, No. 95/2011)
Rules on Managing the Real Estate Market Register Data and on the Method of Sending Data (Official Gazette of the RS, No. 68/2012 and 51/2013)
Declaratory decision for the beginning of the application of the adjusted records of the real estate market (Official Gazette of the RS, No.51/2013)
Rules on determiming building plots (Official Gazette of the RS, No. 66/2013)
Decree on Real Estate Valuation Indexes Determination (Official Gazette of the RS, No. 79/2013)
Rules on the Method of Calculating Annual Real Estate Price Indices and on the Method of Determining Real Estate Value Indices (Official Gazette of the RS, No. 4/2013)
Rules on Criteria of Real Property Mass Valuation (Official Gazette of the RS, No. 94/2008)
Rules on General Valuation of Real Estate Questionnaire (Official Gazette of the RS, No. 15/2010)
REGULATIONS ISSUED ON THE BASIS OF THE ACT ON ACCESS TO INFORMATION OF A PUBLIC NATURE (ZDIJZ)
Decree on Communication and Re-use of Information of a Public Nature (Official Gazette of the RS, No. 76/2005, 119/2007 and 95/2011)
REGULATIONS ISSUED ON THE BASIS OF THE SPATIAL PLANNING ACT (ZPNačrt)
Rules on the Content, Format and Drawing-up of Municipal Detailed Spatial Plan and on Criteria for Specifying Dispersed Settlement Areas in Need of Restoration and for Specifying Areas for New Settlements (Official Gazette of the RS, No. 99/2007)
Rules on the Content, Format and Drawing-up of Municipal Detailed Spatial Plan (Official Gazette of the RS, No. 99/2007)
Rules on the Detailed Content, Format and Method of Drawing up the Regional Spatial Plan (Official Gazette of the RS, No. 99/2007)
Decree on the Content and Management of Spatial Data System (Official Gazette of the RS, Nos. 119/2007 and 8/2010-ZIPI)
Rules on land Use and legal Regimes Data (Official Gazette of the RS, No. 50/2008)
Rules on the Cadastres of Public Infrastructure for Environmental Public Services (Official Gazette of the RS, No. 28/2011)
Rules on Land Survey Plan (Official Gazette of the RS, Nos. 40/2004 and 33/2007 – ZPNačrt) – used until

the issuing of implementing regulations on the basis of ZPNačrt, if this is not in violation of ZPNačrt
REGULATIONS ISSUED ON THE BASIS OF THE ACT ON DESIGNATING AREAS AND NAMING AND MARKING SETTLEMENTS, STREETS AND BUILDINGS (ZDOIONUS)
Regulation on Settling Issues of Determining Areas of Settlements, Determining of House Numbers and Street Layouts and House and Street Markings (Official Gazette of the Republic of Slovenia, No. 76/2008)
Regulation on Terms and Ways to Determine an Official Short Name of a Settlement and Official Short Name of a Street (Official Gazette of the Republic of Slovenia, No. 78/2008)
REGULATIONS ISSUED ON THE BASIS OF THE CADASTRA INCOME ACT (ZUKD – 1)
Decree on the calculations determination for the cadastral income calculation of land and for lump sum estimation of income per hive (Official Gazette of the RS, No. 71/2013)
Decree on cadastral income scale tables determination and lump-sum estimation of income per hive for the year 2014 (Official Gazette of the RS, No. 71/2013)
REGULATIONS ISSUED ON THE BASIS OF THE ACT REGARDING THE SITING OF SPATIAL ARRANGEMENTS OF NATIONAL SIGNIFICANCE IN PHYSICAL SPACE (ZUPUDPP)
Rules on the Content, Format and Drawing-up of Spatial Plan of National Importance (Official Gazette of the RS, No. 106/2011)
REGULATIONS ISSUED ON THE BASIS OF THE INFRASTRUCTURE FOR SPATIAL INFORMATION ACT (ZIPI)
Decree on the criteria and conditions for determining costs for the use of network services and for determining charges for spatial data sets and services sharing (Official Gazette of the RS, No. 66/2012)
REGULATIONS ISSUED ON THE BASIS OF THE GEOMETRIC CENTRE OF SLOVENIA ACT (ZGSS)
Decree on the Concession for the Management of Area Belonging to the Geometrical Centre of the Republic of Slovenia (Official Gazette of the RS, No. 112/2004)

6

CONTACTS

6. CONTACTS

6.1 ADDRESSES OF THE SURVEYING AND MAPPING ADMINISTRATIVE BODIES

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7

STATISTICAL DATA ABOUT SLOVENIA

7. STATISTICAL DATA ABOUT SLOVENIA

7.1 SLOVENIA 2014 IN NUMBERS

Surface area of the Republic of Slovenia	20,273 km²
Population*	2,062,731

* Number of residents on 1 October 2014.
Source: Statistical Office of the Republic of Slovenia.

Geographical Coordinates of Extreme Points

	Latitude	Longitude
north	46º53′	16º14′
south	45º25′	15º10′
East	46º28′	16º36′
West	46º17′	13º23′
GEOSS	46º07′	14º49′

GEOSS — Geometrical Centre of the Republic of Slovenia

Length of the state border

Austria	318 km
Croatia*	670 km
Italy	280 km
Hungary	102 km
TOTAL	1,370 km
Length of coastline **	46,6 km

* Border not marked on land; the length was calculated on the basis of the borders of cadastral communities.
** The length of the maritime border has not yet been determined.

Highest peak	Triglav (2,864 m)
The longest Karst cave (together with Pivka and Črna Jama)	Postojna cave (20,570 m)
The largest intermittent Karst lake	Lake Cerknica (24 km²)
The largest natural lake	Lake Bohinj (3,28 km²)
The longest river	Sava (947 km, of which 221 km run through Slovenia)

House numbers	548,535
Streets	10,368
Settlements	6,035
Municipalities	212
Plots	5,508,954
Buildings	1,171,301
Cadastral communities	2,698

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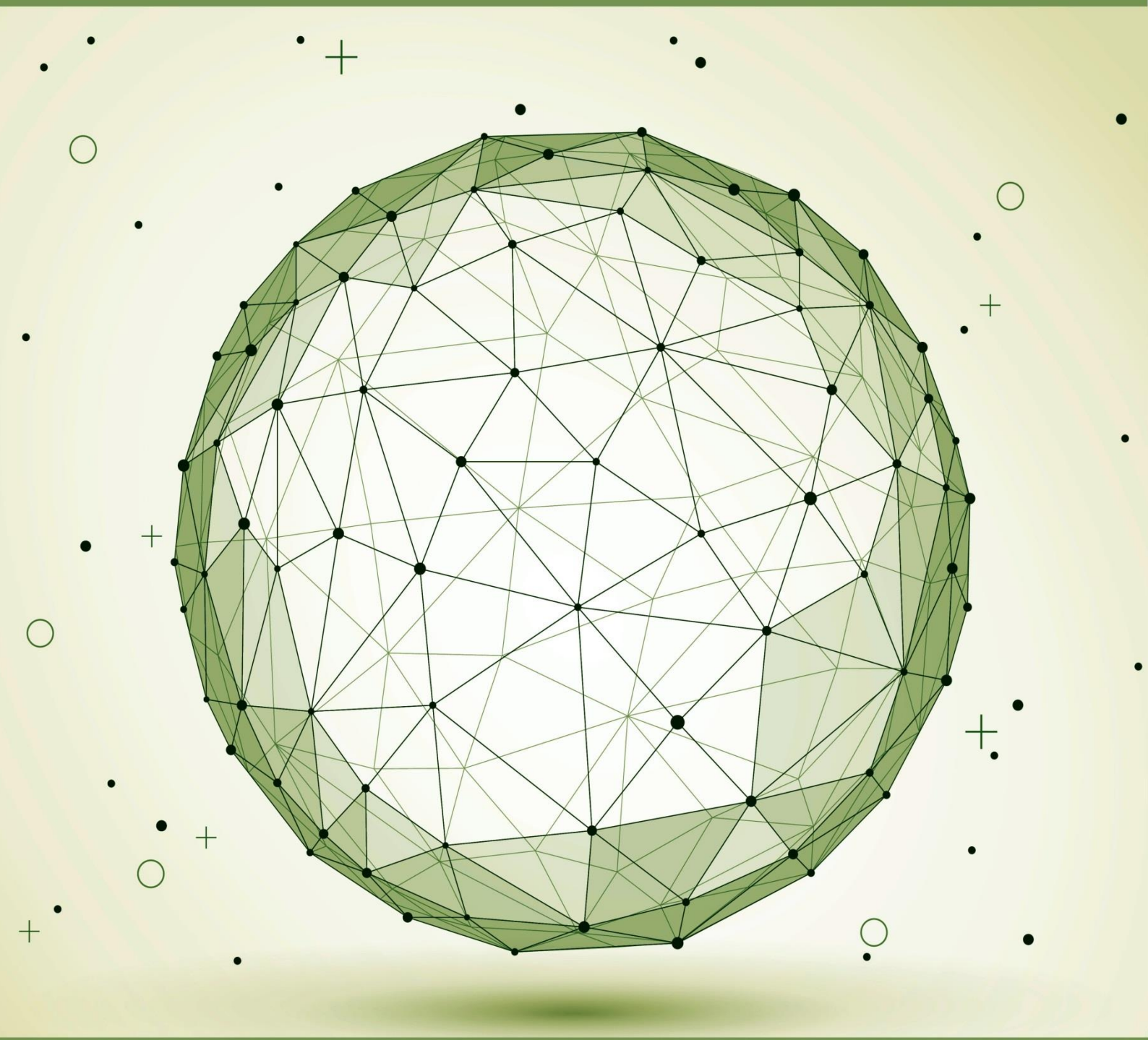
Ljubljana, 2015

Republic of Slovenia
Ministry of the Environment and Spatial Planning

SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA



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