REPUBLIKA SLOVENIJA
MINISTRSTVO ZA INFRASTRUKTURO IN PROSTOR

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Datum:	6.5.2013

GENERALNI SEKRETARIAT VLADE REPUBLIKE SLOVENIJE

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ZADEVA: Poročilo o evidentiranem prometu in cenah nepremičnin v obmejnih upravnih enotah v letu 2012 – predlog za obravnavo

1. Predlog sklepov vlade:

Na podlagi 2. in 21. člena Zakona o Vladi Republike Slovenije (Uradni list RS, št. 24/05 – uradno prečiščeno besedilo, 55/09 – odločba US, 38/10 – ZUKN, 8/12 in 21/13) je Vlada Republike Slovenije na ….. seji dne ……. sprejela naslednji sklep:

1. Vlada Republike Slovenije je sprejela poročilo o zagotavljanju infrastrukture za prostorske informacije v Republiki Sloveniji za obdobje 2010-2012 in naložila Ministrstvu za Infrastrukturo in prostor, da ga pošlje Evropski komisiji.

Tanja Šarabon
GENERALNA SEKRETARKA

Sklep prejmejo:

– Generalni sekretariat Vlade RS
– Ministrstvo za infrastrukturo in prostor, Langusova ulica 4, Ljubljana
– Ministrstvo za infrastrukturo in prostor, Geodetska uprava Republike Slovenije, Zemljemerska ulica 12, Ljubljana

Priloga:

- predlog **Poročilo o zagotavljanju infrastrukture za prostorske informacije v Republiki Sloveniji za obdobje 2010 - 2012**

2.a Osebe, odgovorne za strokovno pripravo in usklajenost gradiva:

- Aleš Seliškar, predstojnik po pooblastilu ministra, Geodetska uprava Republike Slovenije
- Tomaž Petek, sekretar in Andreja Osolnik, sekretarka

2.b Predstavniki vlade, ki bodo sodelovali pri delu Državnega zbora: /

3. Gradivo se sme objaviti na svetovnem spletu:	**DA**

4.a Predlog za obravnavo predloga zakona po nujnem oziroma skrajšanem postopku v Državnem zboru RS z obrazložitvijo razlogov: /

4.b Predlog za skrajšanje poslovniških rokov z obrazložitvijo razlogov: /

5. Kratek povzetek gradiva

V skladu z določili 19. člena Zakona o infrastrukturi za prostorske informacije (Ur.l. 8/2010 z dne 5.2.2010) mora nacionalna točka za stike vsaka tri leta pripraviti **"Poročilo o zagotavljanju infrastrukture za prostorske informacije v Republiki Sloveniji za obdobje 2010-2012".** Zakon določa da mora poročilo sprejeti Vlada RS, nakar ga je potrebno poslati Evropski Komisiji. To poročilo predstavlja zbirko informacij o trenutnem stanju v Sloveniji v zvezi z nacionalno infrastrukturo prostorskih podatkov. Vsebuje podrobnosti o slovenski točki za stike in koordinacijski strukturi, ki podpira točko za stike. Podan je opis odnosov s tretjimi osebami in pregled delovnih praks in postopkov usklajevalnega organa. Navedene so tudi nekatere informacije o postopkih zagotavljanja kakovosti, vključno z opisom vzdrževanjem infrastrukture za prostorske informacije in analizo težav pri zagotavljanja kakovosti, povezane z razvojem infrastrukture za prostorske informacije. Direktiva 2007/2/ES od držav članic zahteva, da spremljajo izvajanje in uporabo svojih infrastruktur za prostorske informacije ter da poročajo o izvajanju INSPIRE. Da bi zagotovili skladen pristop k takemu spremljanju in poročanju, Slovenija pripravila seznam zbirk prostorskih podatkov in storitev prostorskih podatkov, ki ustrezajo temam iz prilog I, II in III Direktive 2007/2/ES. Podatkovne zbirke so razvrščene po temi in prilogi. Omrežne storitve, navedene v členu 11 (1) Direktive 2007/2/ES, so razvrščene glede na vrsto storitve.

Izhodiščno poročilo je Slovenija pripravila maja 2010, Vlada Republike Slovenije ga je obravnavala na seji dne 27.5.2010 in ga sprejela s sklepom številka 35300-6/2010/5. Geodetska uprava Rs kot Nacionalna točka za stike vsako leto izdela in posreduje evropski komisiji tabele za spremljanje, letos maja pa se izteka triletno obdobje v katerem moramo izpolniti obveznost poročanja.

Ministrstvo za infrastrukturo in prostor predlaga, da Vlada RS sprejme predlagan sklep.

6. Presoja posledic

a)	na javnofinančna sredstva v višini, večji od 40 000 EUR v tekočem in naslednjih treh letih	**NE**
b)	na usklajenost slovenskega pravnega reda s pravnim redom Evropske unije	**NE**
c)	administrativne posledice	**NE**
č)	na gospodarstvo, posebej na mala in srednja podjetja ter konkurenčnost podjetij	**NE**
d)	na okolje, kar vključuje tudi prostorske in varstvene vidike	**NE**
e)	na socialno področje	**NE**
f)	na dokumente razvojnega načrtovanja: - na nacionalne dokumente razvojnega načrtovanja - na razvojne politike na ravni programov po strukturi razvojne klasifikacije programskega proračuna - na razvojne dokumente Evropske unije in	**NE**

	mednarodnih organizacij.	

7.b Predstavitev ocene finančnih posledic, nižjih od 40 000 EUR

Predlog gradiva nima finančnih posledic.

8. Predstavitev sodelovanja javnosti

Gradivo je bilo predhodno objavljeno na spletni strani predlagatelja	**NE**
Razlogi za neobjavo: Gradivo ni takšne narave, da bi bila potrebna predhodna objava.	

9. Predstavitev medresorskega usklajevanja

Gradivo ni takšne narave, da bi bila potrebna medresorska obravnava.

10. Gradivo je lektorirano		**NE**
11. Zahteva predlagatelja za		
a)	obravnavo neusklajenega gradiva	**NE**
b)	za nujnost obravnave	**NE**
c)	obravnavo gradiva brez sodelovanja javnosti	**NE**
12. Pri pripravi gradiva so bile upoštevane zahteve iz Resolucije o normativni dejavnosti		**NE**
13. Gradivo je uvrščeno v delovni program vlade		**NE**

14. Gradivo je pripravljeno na podlagi sklepa, ki ga je Vlada RS sprejela na svoji 13. seji dne 10.5.2012 pod točko 1.6.

Samo Omerzel
MINISTER

PRILOGA:

Poročilo o zagotavljanju infrastrukture za prostorske informacije v Republiki Sloveniji za obdobje 2010 – 2012

ANNEX

REPUBLIC OF SLOVENIA
GOVERNMENT OF THE REPUBLIC OF SLOVENIA

Number:
Ljubljana, 6.5.2013

Report on providing infrastructure for spatial information in the Republic of Slovenia for the period of 2010 - 2012.

TABLE OF CONTENTS

INTRODUCTION

Background

This document represents a collection of information on the current status in Slovenia concerning its national spatial data infrastructure. It gives details about the Slovenian contact point and coordination structure supporting the contact point, a description of relations with third parties and an overview of working practices and procedures of the harmonisation body. It also provides some information about quality assurance procedures, including the description of the maintenance of infrastructure for spatial information and analysis of quality assurance problems related to the development of the infrastructure for spatial information.

Directive 2007/2/EC requires Member States to monitor the implementation and use of their infrastructures for spatial information and to report on the implementation of the INSPIRE Directive. In order to assure a coherent approach to such monitoring and reporting, Slovenia has prepared a list of spatial data sets and spatial data services corresponding to the themes listed in Annexes I, II and III of Directive 2007/2/EC. The data sets are grouped by theme and Annex, and the network services referred to in Article 11 (1) of Directive 2007/2/ES are grouped by service type.

Method used to compile the report

The work method for compiling the report was a questionnaire and interviews with major stakeholders, managers of data sets and the related services according to the themes from the Annexes of the INSPIRE Directive in Slovenia.

COORDINATION AND QUALITY ASSURANCE (ARTICLE 12)

Coordination (Article 12.1.)

National contact point

The Infrastructure for Spatial Information Act (Official Gazette of RS, No. 8/2010, hereinafter, the ISI Act), which transposed in the Slovenian legal order the Directive 2007/2/ES of the European Parliament and of the Council establishing an Infrastructure for Spatial Information in the European Community (hereinafter the INSPIRE Directive), determines a national contact point for contacting the European Commission regarding the INSPIRE Directive and for efficient implementation of the infrastructure for spatial information.

The ISI Act specifies that the tasks of the national contact point shall be implemented by the ministry responsible for land survey, which in this case means the Ministry of Infrastructure and Spatial Planning and the Surveying and Mapping Authority of the Republic of Slovenia as its affiliated body.

Name and contact information of the national contact point

National contact point	
Name of public authority	MINISTRY OF INFRASTRUCTURE AND SPATIAL PLANNING SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA
Mailing address	Zemljemerska ulica 12, LJUBLJANA
Telephone number	+386 1 478 48 00
Fax number	+386 1 478 49 09
E-mail	Pisarna.gu@gov.si
Website address	http://www.gu.gov.si/
Contact person	Tomaž Petek
Telephone number	+1 478 4903
E-mail	Tomaz.petek@gov.si
Contact person substitute	Mag. Irena Ažman
Telephone number	+386 478 4804
E-mail	Irena.azman@gov.si

Role and responsibility of the national contact point

The tasks of the national contact point are determined by the ISI Act, specifying in Article 18 that the national contact point shall perform the following tasks:

- managing and maintaining the list of spatial data sets,
- managing the detailed descriptions of the spatial data themes,
- managing the spatial information geo-portal,
- managing and maintaining the metadata information system,
- providing the interoperability of the spatial data sets and the services related thereto,
- preparing the proposals of operational programmes of the Government under Article 20 of this Act,
- executing the implementing rules of the INSPIRE Directive in the Republic of Slovenia,

- preparing and supplementing the strategy of the infrastructure for spatial information,
- preparing the programme of activities and measures to meet the requirements for establishing the infrastructure for spatial information,
- preparing reports on providing the infrastructure for spatial information for the European Commission.

Coordination structure

The Ministry of Infrastructure and Spatial Planning appointed a Slovenian intersectoral INSPIRE project group, with the responsibility of providing cooperation of all managers of spatial data sets and services, and the users thereof. The group is a strategic body authorised to steer the measures for sharing spatial data sets and services related to spatial data and to implement the INSPIRE Directive in practice. Such coordination group has provided and will continue to provide guidance and assistance to individual public authorities in the preparation of legal acts for the regulation and management of spatial data sets as well as their use. In addition to the Ministry of Infrastructure and Spatial Planning, the coordination group consists also of the following authorities:

- Ministry of Defence – Administration of the Republic of Slovenia for Civil Protection and Disaster Relief
- Ministry of Agriculture and the Environment
- Ministry of Agriculture and the Environment – Slovenian Environment Agency
- Statistical Office of the Republic of Slovenia
- Ministry of Culture
- Ministry of the Interior and Public Administration
- Geological Survey of Slovenia

If necessary, the group can also invite to cooperation other representatives from other public authorities, when the subject dealt with relates to their field of work. Administrative support for the work of the coordination group is provided by the national contact point.

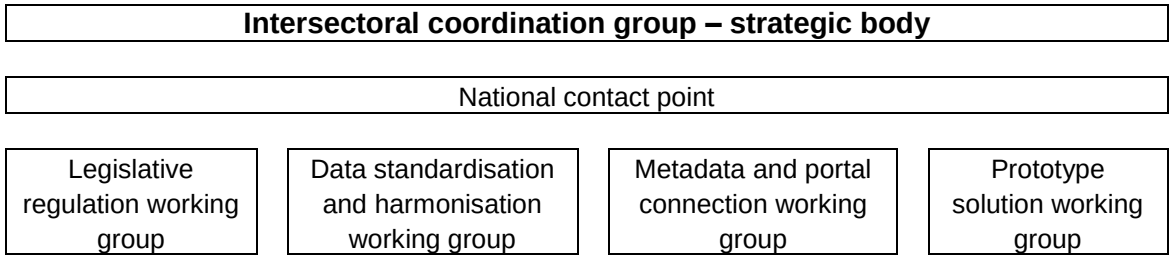
Name and contact information of the coordination structure

Coordination structure	
Name of coordination structure	Intersectoral INSPIRE project group
Mailing address	Zemljemerska ulica 12, LJUBLJANA
Telephone number	+386 1 478 48 00
Fax number	+386 1 478 49 09
E-mail	Pisarna.gu@gov.si
URL	http://www.gu.gov.si/
Contact person	Tomaž Petek
Telephone number	+1 478 4903
E-mail	Tomaz.petek@gov.si
Contact person substitute	mag. Irena Ažman
Telephone number	+386 478 4804
E-mail	Irena.azman@gov.si
Date and period of mandate	from appointment in April 2013 until revocation

Role and responsibilities of the coordination structure

The intersectoral coordination group performs the tasks of a strategic body authorised to steer the measures for sharing spatial data sets and services related to spatial data and implementing the INSPIRE Directive in practice. The group offers guidance and assistance to individual public authorities managing spatial data and services, so that such data and services comply with the provisions of the ISI Act and the INSPIRE Directive. It steers their work related to the preparation of legal acts in the field of regulating and managing spatial data sets and their use.

Organisation chart



Relations with third parties

In order to implement the tasks of strategic importance, the national contact point and the intersectoral INSPIRE project group have invited to cooperation also many private sector institutions as contractors of technically demanding tasks of establishing and operating the Slovenian infrastructure for spatial information, as well as the Geodetic Institute of Slovenia as public institution offering professional administrative support in the implementation of development and research tasks.

Overview of working practices and procedures

During the period covered by the report a lot of effort and energy were invested in communication activities and raising the awareness of managers of current and potential data sets as part of INSPIRE, about their obligations according to the implementation of the INSPIRE Directive and about the advantages of harmonised infrastructure for spatial information.

Comments on the monitoring and reporting process

Slovenia has no comments on the established monitoring and reporting system.

Quality Assurance (Article 12.2.)

Description of quality assurance procedures

At the time of preparing this report it was determined that individual managers of spatial data sets provide quality assurance in accordance with internal rules and instructions established in the past years. The most stringent quality control of spatial data is implemented by the Slovenian Environment Agency, setting out in its internal instructions detailed procedures for each spatial data set and its maintenance. The Surveying and Mapping Authority of the Republic of Slovenia also defined specific quality assurance procedures for its registers based on internal instructions. A few years ago it also implemented the control of positional accuracy of GPS measurements used in the maintenance of the data from the land cadastre and in creating orthoimagery. When a number of discrepancies to be harmonised and eliminated are discovered, additional quality control is provided by using and exchanging data and by interconnecting data in various national registers.

Analysis of problems related to quality assurance for spatial information

The most common problem in the quality assurance of spatial information is the diversity of norms and procedures established for this purpose by individual managers. Therefore, the quality of individual spatial data sets is sometimes difficult to compare. At the time of preparing this report, no other problems related to quality assurance in establishing the infrastructure for spatial information encountered by the spatial data managers were identified.

Description of measures for improving quality assurance

At the time of preparing this report, no measures for improving quality assurance adopted by the managers of spatial data set were identified.

Description of quality certification mechanisms

At the time of preparing this report only one quality assurance certification mechanism for spatial data sets was identified, i.e. at the Slovenian Environment Agency, which has implemented the ISO 9001 certificate for its operating activities.

Functioning and coordination of ISI (Article 13)

General overview and description of infrastructure for spatial information in Slovenia

The Slovenian National Assembly adopted the ISI Act on 26 January 2010. The Act defines the tasks related to the establishment and operation of a metadata system, network services to access the data and their use, coordination in establishing the infrastructure for spatial information (ISI) and the use of this infrastructure. It also defines the tasks of individual public entities responsible for establishing, managing and using spatial data and services, which have to be provided as an integral part of the Slovenian and, thus, also European infrastructure for spatial information.

Since the adoption of the Act, several steps have been taken in Slovenia towards modern infrastructure for spatial information. The Surveying and Mapping Authority has established the national INSPIRE Geoportal (www.geoportal.gov.si), as foreseen by the ISI Act. The portal includes a metadata system, INSPIRE glossary, link to some web applications for data access and key information related to the INSPIRE Directive and its implementation in Slovenia (list of events, data set managers, list of data sets, regulations and materials, and other information). For the majority of data sets in the list of the INSPIRE data sets and for some services related to them the metadata system contains metadata descriptions consistent with the INSPIRE Directive.

The Surveying and Mapping Authority has established portal Prostor (Space) (http://e-prostor.gov.si/), providing access to its data, information on data and the possible methods of access to the data. Users have access to specific free data and data samples for all data sets. The portal also allows access to some public services, mainly different types of data accesses.

The Slovenian Environment Agency as the second largest INSPIRE data set manager in the country has also established its Geoportal (gis.arso.gov.si) for the data sets within its competence, which is compliant with the demands of the INSPIRE Directive. The portal includes a metadata system, a search engine and a browser through data sets, WMS and WFS Internet services (browsing and downloading) and a link to the web data viewer (Environmental Atlas). The portal allows access to more than 150 data sets.

The Geological Survey of Slovenia has established its metadata portal of geological data compliant with the INSPIRE Directive, available to users at http://peridot.geo-zs.si/geonetwork/srv/sl/main.home.

In addition to the above mentioned institutions there are in Slovenia also several other data set managers, who have established metadata descriptions for their spatial data sets as well as publicly available software solutions that provide search engines through metadata and access to spatial data. They have been developed by the Statistical Office of the Republic of Slovenia, Ministry of Agriculture and the Environment, Administration of the Republic of Slovenia for Civil Protection and Disaster Relief, Ministry of Infrastructure and Spatial Planning, Ministry of Culture, the Institute of the Republic of Slovenia for Nature Conservation and some other public authorities.

Through their data downloading services the Slovenian Environment Agency and the Surveying and Mapping Authority of the Republic of Slovenia allow access to data for their users. A number of Web Feature Services (WFS) have been developed, allowing users standardised downloading of spatial data sets and parts thereof. The services are used by numerous public authorities to

access the data of the land cadastre, buildings cadastre, register of spatial units, aggregate economic cadastre of public infrastructure, and others. In this time also the Geological Survey of Slovenia has developed several Web Feature Services (WFS) and Web Map Services (WMS).

Access services are offered by private sector as well. Some of the largest providers are Geopedia and Bioportal, as well as systems for spatial data access for the needs of municipalities. Some of the largest systems that provide such services to municipalities are the Spatial Information System for Municipalities (PISO) and the Internet system iObčina. Some larger municipalities, such as Ljubljana, Maribor and Koper, have developed their own systems.

INSPIRE Stakeholders

Different stakeholders cooperate in Slovenia in the implementation of the INSPIRE Directive. These are: the national contact point, the Intersectoral INSPIRE project group, managers of data sets, individual public institutions and interested users. As key holders mainly the following public authorities should be mentioned:

- Ministry of Infrastructure and Spatial Planning, (www.mzip.gov.si/) and the bodies affiliated to it:
  - Surveying and Mapping Authority of the Republic of Slovenia, (www.gu.gov.si)
  - Slovenian Road Agency (www.drsc.gov.si)
- Ministry of Agriculture and the Environment, (www.mko.gov.si/) and the body affiliated to it:
  - Slovenian Environment Agency (www.arso.gov.si)
- Ministry of Defence (www.mo.gov.si/) the body affiliated to it:
  - Administration of the Republic of Slovenia for Civil Protection and Disaster Relief, (www.sos112.si),
- Ministry of Culture, (www.mk.gov.si)
- Ministry of Economic Development and Technology, (http://www.mgrt.gov.si/)
- Ministry of Health, (www.mz.gov.si)
- Ministry of the Interior and Public Administration, (www.mnz.gov.si), (www.mju.gov.si)
- Geological Survey of Slovenia, (www.geo-zs.si
- Geodetic Institute of Slovenia, (www.gis.si/)
- Biotechnical Faculty, (www.bf.uni-lj.si
- Slovenia Forest Service, (www.zgs.gov.si/)
- Fisheries Research Institute of Slovenia, (www.zzrs.si),
- Institute of the Republic of Slovenia for Nature Conservation, (www.zrsvn.si/)
- Statistical Office of the Republic of Slovenia, (www.stat.si)
- other ministries and local communities.

Role of various stakeholders

Currently, for the most part, managers of spatial data sets and services in Slovenia are involved in establishing a joint infrastructure based on spatial data. Individual public institutions offer professional and technical support. The Intersectoral INSPIRE project group serves as a platform for the exchange of opinions and needs among all stakeholders. Slightly less organised are the users of this infrastructure, which is why future activities will be directed to forming a group of users that can cooperate with other stakeholders in establishing the ISI in a more productive way.

General description of the main measures to facilitate exchange and sharing

Thus far, appropriate support has been provided to include the ISI to the priority tasks of the Slovenian public administration, as well as to the e-commerce strategy in state administration, the e-Administration strategy and other national strategic development documents.

The limited access to the spatial data still has to be regulated and re-examined, and, thus, the opening of the market itself and providing free access to information of public character will have to be defined. In addition to the public authorities, the products shall also be accessible to other users who require them, which can be achieved as soon as possible by establishing the market of spatial data and products. The logic of such business model must be followed, because the public administration provides the basic data, while the private sector is the provider of added value to these data. Of course, this cannot be achieved unless sources of long-term and stable financing are provided. In the first stage, wider participation of the public administration is foreseen, and later also stronger private initiative.

For an appropriate coordination of work, a clear organisational structure of all participants is required. The national contact point and the Intersectoral INSPIRE project group already represent the basic framework of the above mentioned organisation structure. However, we still need to assure better organisation of the wider circle of participants and their involvement in the organisation of joint projects. In order to find answers to each of the complex technological questions, individual working groups are being established. All listed tasks are already being implemented with the participation and engagement of the national land surveying service.

Foreign experience shows that national land surveying services are most frequently responsible for the organisation and the technical aspects of establishing the ISI and supporting the processes in the field of data and services. The private sector, on the other hand, participates to the fullest possible extent in the processes of standardisation and harmonisation of spatial data during their capture and maintenance through projects commissioned by the public administration, as well as in providing value-added services. We believe that this can be achieved in our country, too.

To facilitate the communication and description of contents, it is essential that the GEMET vocabulary is updated and all terms relating to the data sets and services are entered into it. In its present form the vocabulary is limited in use or even useless for land surveying. It does not even contain some basic surveying terms, such as parcel.

It is essential that detailed criteria and conditions for determining the fee for data and service sharing by public authorities of other countries or the European Community institutions and bodies is established, and the bill of costs for using the network services and the bill of costs for data and service sharing by the public authorities of other countries or the European Community institutions and bodies are prepared.

The cooperation between the Surveying and Mapping Authority of the Republic of Slovenia and the Slovenian Environment Agency as LMO (Legally mandated organisation) in implementing the INSPIRE Directive at the EU level enables better support to the national coordination structure in activities related to the introduction of the INSPIRE Directive in Slovenia. The Geological Survey of Slovenia is also registered as LMO and has cooperated in the process of testing data specifications for the themes of Geology and Mineral resources.

Stakeholder cooperation

Even though a formal coordination structure on the national level (intersectoral working body) has already been established and the cooperation

between the managers of spatial data sets has been active for many years, their mutual cooperation still has to be improved.

Despite well defined tasks in the national legislation, it still occurs that the data of particular ministries are not interconnected and are managed in different ways with different software tools. The result is poor interconnectivity of spatial data. Therefore, to provide interoperability, a more formal coordination of data providers and cooperation of all interested parties have to be provided.

The basic national registers provide good coordination and a connection to the basic national registers linking addresses, citizens, commercial entities and real estates. For example, a commercial entity cannot register its head office at an address that does not exist in the register of addresses. In addition, a natural person or commercial entity cannot own a real estate if they do not exist in civil register or business register, respectively.

The most common form of cooperation is participation in the Intersectoral INSPIRE project group. The cooperation of experts in substance-related and technical matters is still insufficient, thus, this aspect of cooperation will have to be addressed in the future activities of the national contact point and the intersectoral working body.

Access to services through the INSPIRE Geo Portal

In 2011 the Surveying and Mapping Authority of the Republic of Slovenia established the national INSPIRE Geoportal (http://www.geoportal.gov.si), as foreseen by the ISI Act. According to its function it is and will continue to be an assembly center and a "window to the world" for those managers and users of the INSPIRE data sets who wish to have overview of and access to all INSPIRE contents in the country at one place. In the same year the Slovenian Environment Agency as the second largest manager of the INSPIRE data sets in the country established its own Geoportal (gis.arso.gov.si) for the data sets in its competence, corresponding to the demands of the INSPIRE Directive. Different national spatial data sets and individual web services are available to the public also through different other web portals and entry points of public authorities.

The data and services are available to the users at the following websites:

- Portal of the National Meteorological Service (http://meteo.arso.gov.si/)
  - Data access
- Spatial portal "Prostor": (e-prostor.gov.si)
  - Metadata system
  - Map Viewer
  - Electronic data access
  - Requesting of data
  - SIGNAL – GNSS network of permanent stations
  - data on the real estate value and market (Real Estate Market Register)

The Geologic Survey of Slovenia offers the users access to and browsing through geological data at the following interactive web atlases:

- Basic geological map of Slovenia - http://ogk100.geo-zs.si
- General thematic geological maps of Slovenia - http://ptgk.geo-zs.si
- Deposits of mineral resources - http://akvamarin.geo-zs.si/ms/
- Geohazard - http://akvamarin.geo-zs.si/geohazard/Default.aspx.

Access to data is also possible through private sector portals, such as:

- www.geabios.com,
- www.geoprostor.net,
- www.geopedia.si,

  and many others.

Use of the infrastructure for spatial information (ARTICLE 14)

All existing elements of the Slovenian infrastructure for spatial information are used mainly by the institutions of the public administration. For several years, individual elements of the infrastructure for spatial information have been available to the public. Such information contains mainly joint fast communication network of public authorities (HKOM), managed and maintained by the Ministry of the Interior and Public Administration, which has been connecting all public authorities and some other public institutions for many years. On the basis of the Act on the Access to Information of Public Character and according to the Decree on re-use of information of public sector, every public authority must publish on its website the »Catalogue of Public Information«, which enables the users a more transparent access to the information managed and maintained by a particular public authority. In these data, spatial information occupies an important position. The Ministry of the Interior and Public Administration is actively working on establishing a national interoperational framework (NIO) and it represents Slovenia in the EU ISA program »Interoperability Solutions for European Public Administrations«. Cooperation of the national administration in the EU ISA program offers an additional dimension of the ISI use in Slovenia.

In the field of information and communication technology (ICT) and e-commerce, interoperability represents one of the most important conditions for a successful development of information society, as it brings positive effects to the users (greater choice of services, increased competition and, thus, also better quality at lower price, enabling the closing of information systems and applications), as well as for the ICT industry (facilitating the entry to the market, sharing knowledge, basis for the development of new innovative and competitive products and services). This allows faster development and implementation of innovation (technological, organisational, procedural) in the public administration and economy, which shall ensure faster dissemination of knowledge, involvement, innovation and competition for society as a whole. The Ministry of Higher Education, Science and Technology and the Ministry of the Interior and Public Administration implemented a project "Concept of national interoperability framework and test interoperability of the e-Kindergartens application". From the outset of systematic elaboration of the national e-administration, the interconnection of official records has been one of the main problems impeding faster development of electronic services of the types G2G, G2B and G2C. Due to lack of connectivity standards there appear, as a rule, in the interconnection of data bases or applications technical and organisational problems related to harmonising interests, duties and rights of national (public) institutions.

Use of spatial data services

By taking into consideration general and specific indicators, it can be determined that, with regard to the use the spatial data services for the infrastructure, today there are already a number of search and review services in Slovenia, which are not yet in full compliance with the requirements of the INSPIRE Directive. According to the provisions of the INSPIRE Directive and the ISI Act, up to this moment only the review services have been finalised within the Slovenian INSPIRE Geoportal. The use of services relating to the data of the two largest managers of spatial data sets has been growing. The Surveying and Mapping Authority of the Republic of Slovenia provides re-use of

its data sets through its website service to almost 30 public authorities and some private associations with the average of almost 100,000,000 requests per year. Monitoring hits at their geoportal, the Slovenian Environment Agency recorded almost 8000 hits per month. Some hits are generated also by service users.

During the implementation of their tasks of public character, public authorities in Slovenia need uninterrupted access to appropriate spatial data sets and spatial data services.

At the Slovenian Geoportal INSPIRE (www.geoportal.gov.si) users can access the following web applications and services:

- Public access to real estate data
- Access to data on own property
- Nature Conservation Atlas
- Environmental Atlas
- Map Viewer
- Public access to the Real estate market records
- Access to real estate data for registered users

Several years ago the Surveying and Mapping Authority of the Republic of Slovenia established its web portal Prostor (Space) (www.e-prostor.gov.si). PROSTOR is a web portal, intended to improve access to geographical, surveying and other spatial information in Slovenia. Beside access to data, PROSTOR offers also access to web services developed according to orthodox standard and geographical information systems. The web services are being developed according to the recommendation of OGC (Open Geospatial Consortium), by taking into account the standards from the field of geographic information systems ISO/TC211.

Standard basic web services are WMS (Web map service), a service that returns a map image made from spatial data, WCS (Web coverage service), a service that returns actual raster data, and WFS (Web feature service), a service that returns vector and descriptive data.

For the moment the web services of the Surveying and Mapping Authority are available only to registered users within the public administration linked to the fast communication network (HKOM). The WFS web services of version 1_0. WFS allow users direct access to data. The data are generated in the XML or GML format. An example of such format with parcel data is available here. The web services of the portal Prostor are available only to users inside HKOM.

Apart from the Slovenian INSPIRE portal, the largest number of web services is for the moment available at the Geoportal of the Slovenian Environment Agency (http://gis.arso.gov.si/geoportal/catalog/main/home.page). The Geoportal is intended for browsing, searching and downloading metadata. The metadata refer to layers under the responsibility of the Agency and are available in the Environmental Atlas or downloadable through the WFS application. Within this Geoportal also the web object service (WFS) for issuing environmental spatial data http://gis.arso.gov.si/geoserver/ows is active.

In the last few years the Geological Survey of Slovenia has developed web services for downloading geological data (WMS/WFS), which has also allowed access of the users to the data. They have set up an open-code spatial

server for downloading geological spatial data, MapServer, which offers access to the following services:

- View Service
  - WMS of basic geological maps http://pektolit.geo-zs.si/
  - WMS of hydrogeological data http://pektolit.geo-zs.si/
  - Onegeology Europe WMS http://pektolit.geo-zs.si/
  - Geological metadata http://peridot.geo-zs.si/geonetwork/srv/sl/main.home

- Download service
  - Mineral resources WFS http://pektolit.geo-zs.si/
  - Onegeology WFS http://pektolit.geo-zs.si/

Use of spatial data sets

The main purpose why the public authorities use the spatial data consistent with the theme of the INSPIRE Directive is to perform their tasks from the fields of spatial planning, agricultural policy, implementation of environmental policies, court and tax procedures, and many other activities of national authorities.

For the moment the list of the data sets includes more than 55 spatial data sets. The table below shows the list of the data sets, including the managers of the data sets.

NO	THEME	DATA SET	MANAGER
GROUP I			
1	coordinate reference systems,	Geodetic points	SMARS
2	geographical grid system	Grid	SMARS and SORS
3	geographical names,	Register of Geographical Names	SMARS
4	spatial units,	Register of Spatial Units	SMARS
5	addresses,	Register of Spatial Units	SMARS
6	cadastral parcels,	Land Cadastre	SMARS
7	transport network,	Register of Public Roads	Slovenian Roads Agency and municipalities
7		Aggregate Economic Cadastre of Public Infrastructure	SMARS
7		Topographical data	SMARS
8	hydrography,	Water Cadastre	SEA
8		Water Bodies	SEA
8		Digital Base of Watersheds	SEA
8		System for groundwater data storing and processing	SEA
8		Topographical data	SMARS
8		Aquifer systems, aquifers and ground water sources	Geological Survey of Slovenia
9	protected sites;	Register of areas of ecological importance	SEA
9		Register of special protection areas	SEA
9		Register of natural values	SEA
9		Register of protected areas	SEA
GROUP II			
1	digital elevation model,	DMV 12.5	SMARS
2	land cover,	CORINE Land Cover	SEA
3	orthoimagery,	Orthoimagery	SMARS
4	geology	Lithological and Tectonic Map	Geological Survey of Slovenia
4		Hydrogeological and Geothermal Map	Geological Survey of Slovenia
GROUP III			
1	statistical units,	Register of Spatial Units	SMARS
2	buildings,	Buildings Cadastre	SMARS
2		Register of Spatial Units	SMARS
3	ground,	Pedological map	MAE

3		Pedological data (1:25,000, 1:250,000, point layer)	Biotechnical Faculty
4	actual and planned use of space,	Areas with limited possibilities for agricultural activity	MAE
4		Records of actual use of agricultural, water and infertile forest land	MAE
4		Records of actual use of built-up land	MISP
4		Land identification system	MAE
4		Wine-growing units	MAE
4		Land Consolidation Records	MAE
4		Forestry records and databases	MAE
4		Cadastre of Bee Pastures	MAE
4		National spatial planning documents	MISP – SPAT. PLAN. DIRECT.
4		Municipal spatial planning documents	MUNICIPALITIES and MISP
5	human health and safety,		MH
5		Air pollution areas	SEA
5		Noise charts	SEA
6	utility and public services,	Aggregate Economic Cadastre of Public Infrastructure	SMARS
6		Small combustion installations	MESP
7	environmental monitoring facilities,	Database of automatic stations	SEA
7		Sampling measuring site for determining water quality	SEA
8	production and industrial facilities,	Water permits	SEA
9	agricultural and aquaculture facilities,	Records of irrigation and drainage systems and devices	MAE
9		Fishery Cadastre	Fisheries Research Institute
10	population distribution – demographical data,	Central Population Register	MoI
11	management areas/closed areas/regulated areas and reporting units,	hydrography	SEA
11		Aggregate Economic Cadastre of Public Infrastructure	SMARS
12	natural risk zones	earthquakes, design acceleration	SEA
12		landslide areas	Geological Survey of Slovenia
12		debris flow areas	Geological Survey of Slovenia
13	atmosphere,		SEA
14	meteorological features,		SEA
15	oceanographic features,		SEA
16	sea regions,		
17	biogeographical regions,	biogeographical regions	SEA

18	habitats and biotopes,	Databases of plants and animal species	MAE
19	species distribution,	Databases of plants and animal species	MESP
20	energy resources		MISP
21	mineral resources.	Locations of mineral resources	Geological Survey of Slovenia

Use of infrastructure for spatial information by the general public

The general public in the Republic of Slovenia already uses all the existing elements of infrastructure for spatial information under the conditions defined by the Act on the Access to Information of Public Character (Official Gazette of RS, No. 51/2006 UPB-2) and the Personal Data Protection Act (Official Gazette of RS, No. 94/2007 UPB-1). Thus, mainly the services of data searching, accessing and downloading are available to users.

Examples of cross-border use

In the framework of the project OneGeology-Europe, in 2010 the Geological Survey of Slovenia harmonised the geological data with 20 European geological surveys and established web feature services (WFS). The data specification relies on the GeoSciML standard, which was the base for the INSPIRE data specification for Geology. The data model does not fully comply with the INSPIRE data model, but the harmonisation tasks are planned to start already in 2013.

In 2012 the Geological Survey of Slovenia established web feature services (WFS) for mineral resources within the EuroGeoSource project. The data model is harmonised with 11 European geological surveys and complies with the INSPIRE data specification v2.0, which was available at the time. The differences between the v2.0 and the final version of the INSPIRE data specification for mineral resources are small, thus, the data model is expected to be finally harmonised in 2014.

Use of transformation services to achieve interoperability

Currently, there are no examples of using transformation services to achieve data interoperability in Slovenia recorded.

Data sharing agreements (ARTICLE 15)

Data sharing agreements among public authorities

According to the information collected thus far, the Surveying and Mapping Authority of the Republic of Slovenia has concluded the largest number of data sharing agreements, i.e. 17. The agreements concern the cooperation in the exchange and use of topographical data and mutual exchange of data or cooperation in the field of using geodetic data and requesting geodetic data for the needs of municipalities.

Data sharing agreements between public authorities and Community institutions and bodies

Currently, there are in Slovenia no examples of concluded data sharing agreements between public authorities and Community institutions and bodies recorded.

Barriers to the sharing of spatial data sets

The established infrastructure for spatial information represents one of the preconditions for sustainable management of natural and built resources. To ensure the appropriate sharing of spatial data sets, it is essential to provide for an efficient cooperation of all participants, and this, we believe, will be one of the most difficult tasks. For this reason, the Ministry of Infrastructure and Spatial Planning and especially the Surveying and Mapping Authority of the Republic of Slovenia have been actively monitoring the process of creating the initiative as well as establishing and adopting the Directive. Namely, they are aware that the recent global progress in switching from paper data and information to digital data and information has been revealing for quite some time yet unknown possibilities for a reversal in data accessing, information forwarding and decision-making based on received information at all levels of society.

Individual spatial data sets are still of unsatisfactory or undefined quality; they are based on privately-owned geographic information systems and are not available to the public or other users at the local, regional, national and international levels. Therefore, projects that combine data from different sources in order to provide adequate data and tools for the policies are often excessively long and expensive. Slovenia is aware of these barriers and will make its best effort to solve them. .

Costs and benefits (Article 16)

Costs related to implementing the INSPIRE Directive

Cost item	One-off estimated cost of establishment	Estimated cost structure	Estimated annual maintenance and implementation cost	Estimated cost structure +
INFORMATION INFRASTRUCTURE	*Establishment of information infrastructure (hardware and software).*		*Maintenance of information infrastructure.*	
	453,230 €	• internal hours: 23% • external hours: 32% • hardware: 20% • software: 24%	**181,666 €**	• internal hours: 36% • external hours: 25% • hardware: 6% • software: 33%
METADATA FOR DATA AND SERVICES	*Establishment and management of metadata (creation, valuation and use), compliance testing, including external assistants (individual or institution).*		*Software maintenance (adapting, development, preparing a catalogue), data maintenance, compliance testing.*	
	88,740 €	• internal hours: 68% • external hours: 30% • hardware: 1% • software: 1%	**24,900 €**	• internal hours: 91% • external hours: 9%
DATA ACQUISITION AND HARMONISATION	*Definition (definition of data model, acquisition methodology, etc.) and establishment of data sets, development of software for data modification, compliance testing, inclusion of external assistants.*		*Maintenance of software, data sets and supporting services, compliance testing.*	
	631,280 €	• internal hours: 43% • external hours: 43% • hardware: 4% • software: 10%	**246,280 €**	• internal hours: 48% • external hours: 45% • hardware: 2% • software: 5%
WEB SERVICES	*Development of web services (searching, reviewing, modifying, downloading, retrieving), compliance testing, including external assistants (individual or institution).*		*Maintenance of web services.*	
	144,550 €	• internal hours: 18% • external hours: 65% • hardware: 6% • software: 11%	**28,150 €**	• internal hours: 15% • external hours: 68% • hardware: 6% • software: 11%
MONITORING AND REPORTING	*Establishment of monitoring and reporting mechanisms.*		*Adapting the monitoring and reporting mechanisms, collecting and managing stakeholder responses, coordinating the collection of examples of good practice, remedy measures, recording advantages / disadvantages, etc., based on stakeholder responses.*	

	211,160 €	• internal hours: 28% • external hours: 72%	/	/
COORDINATION	*Establishment of coordination infrastructure (national contact point), activities relating to data management and sharing.*		*Supporting activities (providing feedback and experiences of stakeholders in public and private sectors, participation at thematic workshops / trainings, coordination of activities at different government levels, consulting and support to stakeholders, etc.)*	
	42,933 €	• internal hours: 45% • external hours: 55%	/	/

Benefits and advantages observed

Since the field of monitoring the advantages and benefits is not systematically regulated in Slovenia at this time, the advantages and benefits can only be assessed on the basis of experiences from our country and from abroad. Due to coordinated updating of the data sets and interoperability implementation, the information solutions will be more rational and the duplication of data and information solutions will be eliminated. In the long-term the enforcement of the Act will reduce the need for financial resources for providing spatial data and the related information. Due to the unification of the data sets and the related services, the future management of all data sets will be more rational.

For the moment it is difficult to give a financial estimate, but the first benefits are already noticeable in the following forms:

- reduced number of requests for data transmission, since users are redirected to web services,
- reduced burden on internal resources,
- eliminated need for each individual data preparation as response to external or internal request,
- accessibility of data to the wider public and professional environment,
- better responsiveness and availability of the system,
- at the time of their establishment the data are more up-to-date and have larger applicable value – more contents,
- beginning of interoperability introduction,
- unified rules for the INSPIRE data are taken into account with each data set renewal.

CONCLUSIONS

Although a lot of work has been done in the past period, a large portion of the task of completing the establishment of the spatial data infrastructure still lies ahead of us. The basic coordination structure for the implementation of this task has already been established, but there is still a lot to be done. In accordance with detailed specifications brought by the INSPIRE Directive and the ISI Act adopted on the basis thereof, technical details of spatial data sharing have to be defined, while unifying the rules of accessing the spatial data managed by the public authorities in Slovenia, as well as the pricing policy rules related to these data. The preparation and modification of the data representing the main component part of ISI will also require a lot of effort. The Surveying and Mapping Authority of the Republic of Slovenia and the Slovenian Environment Agency have continuously supported the harmonisation of the spatial data, and have promoted their sharing and accessibility for as many users as possible. Slovenia already meets most of the guidelines and requirements defined by the INSPIRE Directive. Today, there are enough fundamental spatial data available in Slovenia that are easily available to the users and fairly regularly maintained. The metadata system can also be assessed positively, as it simplifies the search for the users and provides information on the existence of individual data sets, their quality and access terms as well as the pricing policy. The division of the pricing policy to commercial and non-commercial methods of using the spatial data and the financing method of the first establishment of data sets were also in Slovenia resolved in a similar manner as foreseen by the proposal of the change of the Directive related to the access to information of public character. The recent accelerated development of web services has enabled simpler use of data and is paving the path to better and wider use of data. All this gives us a good starting point for further work on the establishment of a quality spatial data infrastructure in Slovenia. A lot of hard work and harmonisation efforts still lie ahead of us, as well as opportunities to open new fields of operations of the Slovenian public administration. Of course, the precondition for this is to provide adequate coordination structure, to be aware of all stakeholders and their obligations, as these are actually opportunities for the development, and to assure sufficient financial resources for implementing these tasks.

Annexes

List of managers of data sets and services

MISP	Ministrstvo za infrastrukturo in prostor (Ministry of Infrastructure and Spatial Planning) (www.mzip.gov.si/)	Langusova ulica 4, LJUBLJANA	
SMARS	Geodetska uprava Republike Slovenije (Surveying and Mapping Authority of the Republic of Slovenia) (www.gu.gov.si)	Zemljemerska ulica 12, LJUBLJANA	
MAE	Ministrstvo za kmetijstvo in okolje (Ministry of Agriculture and the Environment) (www.mko.gov.si/)	Dunajska 22, LJUBLJANA	
SEA	Agencija Republike Slovenije za okolje (Slovenian Environment Agency) (www.arso.gov.si)	Vojkova 1b, LJUBLJANA	
MD	Ministrstvo za obrambo (Ministry of Defence) (www.mo.gov.si/)	Vojkova cesta 55, LJUBLJANA	
ARSCPR	Uprava RS za zaščito in reševanje (Administration of the Republic of Slovenia for Civil Proteciton and Disaster Relief)(www.sos112.si),	Vojkova cesta 61, LJUBLJANA	
MC	Ministrstvo za kulturo (Ministry of Culture) (www.mk.gov.si)	Maistrova ulica 10, LJUBLJANA	
MEDT	Ministrstvo za gospodarski razvoj in tehnologijo (Ministry of Economic Development and Technology) (http://www.mgrt.gov.si/)	Kotnikova 5, LJUBLJANA	
MH	Ministrstvo za zdravje (Ministry of Health) (www.mz.gov.si)	Štefanova 5, LJUBLJANA	
MIPA	Ministrstvo za notranje zadeve in javno upravo (Ministry of the Interior and Public Administration) (www.mnz.gov.si), (www.mju.gov.si)	Štefanova 2, LJUBLJANA	
GeoSS	Geološki zavod Slovenije (Geological Survey of Slovenia) (www.geo-zs.si)	Dimičeva ulica 14, LJUBLJANA	
GI	Geodetski inštitut Slovenije (Geodetic Institute of Slovenia) (www.gis.si/)	Jamova cesta 2, LJUBLJANA	
BF	Biotehniška fakulteta (Biotechnical Faculty) (www.bf.uni-lj.si	Jamnikarjeva 101, LJUBLJANA	
SFS	Zavod za gozdove Slovenije (Slovenia Forest Service) (www.zgs.gov.si/)	Večna pot 2, LJUBLJANA	
FRS	Zavod za ribištvo Slovenije (Fisheries Research Institute) (www.zzrs.si),	Spodnje Gameljne 61 a, LJUBLJANA-ŠMARTNO	
IRSNC	Zavod RS za varstvo narave (Institute of the Republic of Slovenia for Nature Conservation) (www.zrsvn.si/)	Tobačna ulica 5, LJUBLJNA	
SORS	Statistični urad RS (Statistical Office of the Republic of Slovenia) (www.stat.si)	Litostrojska 54, LJUBLJANA	

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