

**INSPIRATION** – Spatial Data Infrastructure in the Western Balkans



# INSPIRE implementation & coordination in Slovakia

1st National INSPIRATION Workshop Croatia  
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Martin Koška, SAŽP



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# Outline

- Basic information about Slovak environmental agency
- What is INSPIRE?
- Background for implementation of EU directive in Slovakia
- Legislative aspects of INSPIRE directive – transposition in Slovakia
- Organizational aspect of INSPIRE implementation
- Technical aspects of INSPIRE implementation
- Relations between INSPIRE and NSDI
- INSPIRE applications in Slovakia
- Involvements at European level in order to support INSPIRE development and implementation
- Conclusion – next steps, related topics – eGovernment services



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## SAZP, Slovak Environmental Agency



Type of organization: subsidized organization co-financed by the MoE SR

Structure: 4 units (centers), 200 employees

- Centre of Environmental Sciences and Informatics
- Centre of Natural and Energy Resources Planning
- Centre of Landscape Creation and Environmental Education
- Centre of Waste Management and Environmental Management

Field of Activity:

- Environmental monitoring and informatics
- Inspire implementation
- Biodiversity Data Information management
- Reporting papers and analyses
- Environmental IS projects development and administration
- Environmental education and publicity
- Waste management and Basel convention implementation
- Landscape planning, natural and energy resources
- Environmental policy development
- Assessment of Regions' Environmental Quality
- Rural & Urban environment protection projects



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## SAZP, Slovak Environmental Agency



### Roles and Experiences on national and EU level regarding INSPIRE

- INSPIRE MSCP
- INSPIRE Committee Member
- IOC TF Member
- Data Quality CP
- INSPIRE transposition in Slovakia
- Coordination of INSPIRE implementation in Slovakia
- Implementation of INSPIRE national metadata catalogue
- Implementation of national geoportal
- Publishing OGC and INSPIRE services

### Experiences in EU projects regarding INSPIRE:

- EnviroGeoPortal
- NATURESDI+
- HLANDATA
- SmeSPIRE
- EnvPlus



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# What is INSPIRE

## INSPIRE as expression

- Infrastructure for Spatial Information in the European Community

## INSPIRE as legislation

- INSPIRE directive
- Commission Decision implementing INSPIRE directive ..... as regards monitoring and reporting
- EC regulations (as regards metadata, network services, interoperability, access to spatial data sets and services)

## INSPIRE as organization

- EC - The INSPIRE team consists of staff of the European Commission from the three DGs.
- DG Environment - acts as an overall legislative and policy co-ordinator for INSPIRE. The establishment of the legislative act and its follow-up is led by DG Environment, supported and advised by Eurostat. Eurostat
- Eurostat acts as the overall implementation co-ordinator for INSPIRE. Eurostat and JRC jointly prepare the programme of work taking into consideration the technical approach proposed, and solutions provided for, by the JRC.
- The JRC acts as the overall technical co-ordinator of INSPIRE. The JRC ensures the viability and evolution of the technical infrastructure for INSPIRE and guarantees the liaison with the European and international research community.



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# What is INSPIRE

## INSPIRE contact points

- **INSPIRE Committee (IC)** - The regulatory nature of the Implementing Rules requires the Commission to present them to a Regulatory Committee of Member States representatives, referred to as the INSPIRE Committee.

Role: The INSPIRE Committee has the general task to assist the Commission and to deliver its opinion on the draft Implementing Rules proposed by the Commission. This opinion shall be delivered in the form of a vote.

- **Member State Contact Points (MSCP)** - Each member state must designate a Contact Point, usually a public authority, to be responsible for contacts with the Commission in relation to INSPIRE.

Role: The role of the contact points is to provide results about the transposition of INSPIRE in National legislation.

- **Initial Operating Capability Task Force (IOC TF)**

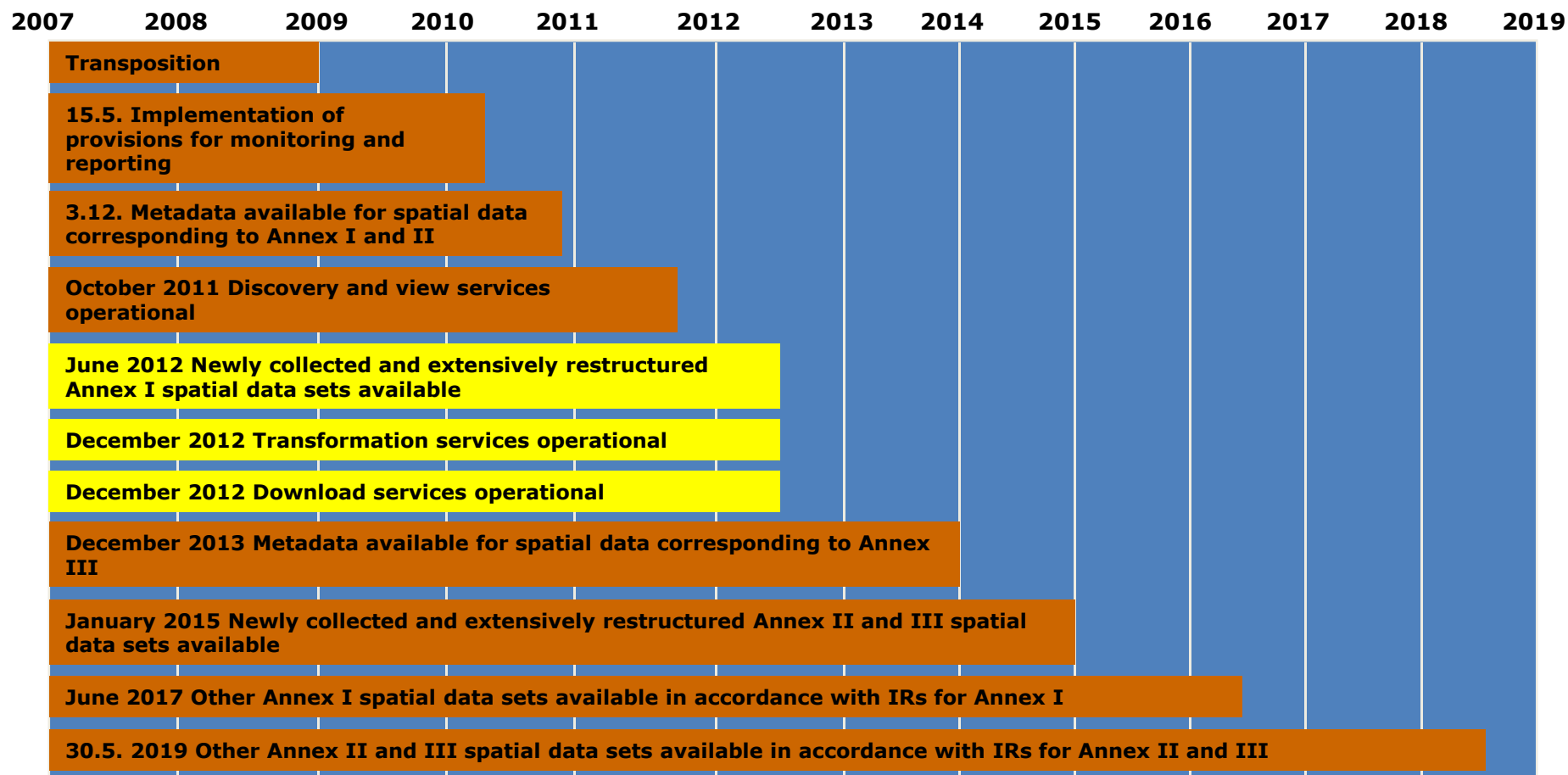
Role: The initial focus of the IOC TF was on the implementation of the INSPIRE Discovery and View Services. The scope of the IOC TF has been extended to include the implementation of the INSPIRE download and transformation services.



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# INSPIRE Roadmap



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## INSPIRE documents framework

- The Implementing Rules are adopted as Commission Decisions or Regulations, and are binding in their entirety

INSPIRE guidelines (Guidance) for the implementation of particular services – not legally binding

- Regarding metadata
- Regarding discovery services
- Regarding view services
- Regarding Download services
- Regarding Transformation services

In addition to the Implementing Rules - INSPIRE guidelines describe detailed implementation aspects and relations with existing standards, technologies, and practices.

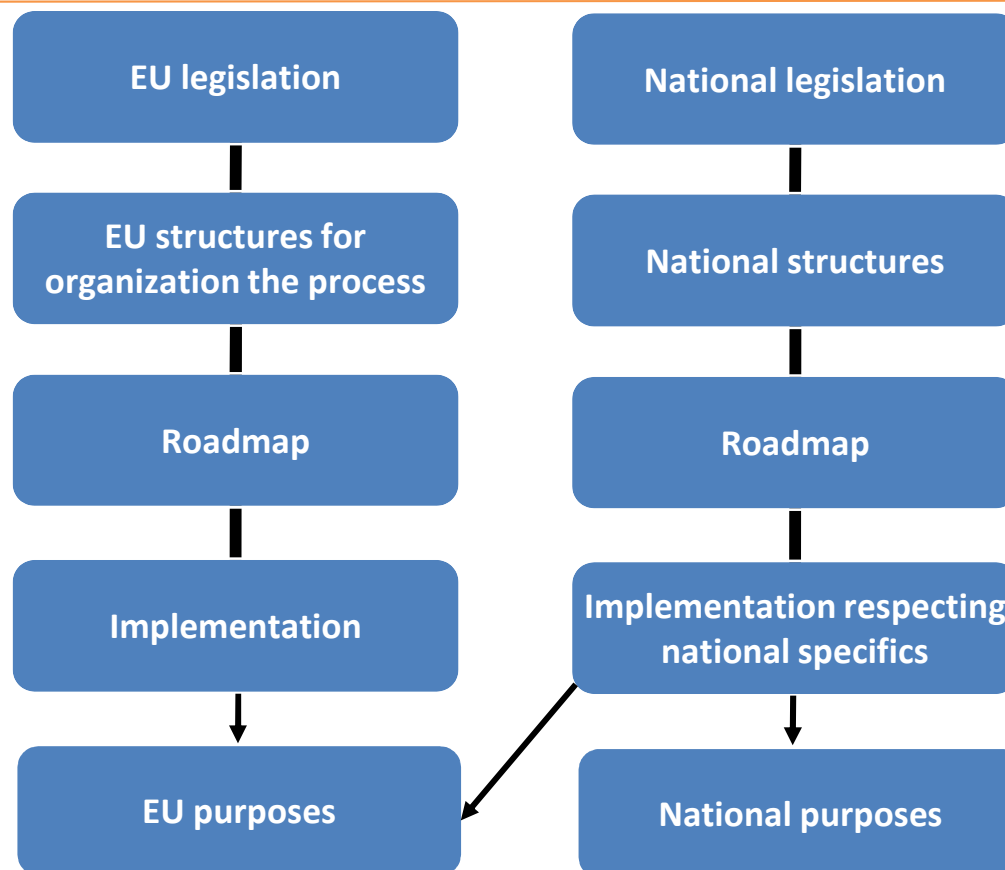


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# INSPIRE and NSDI

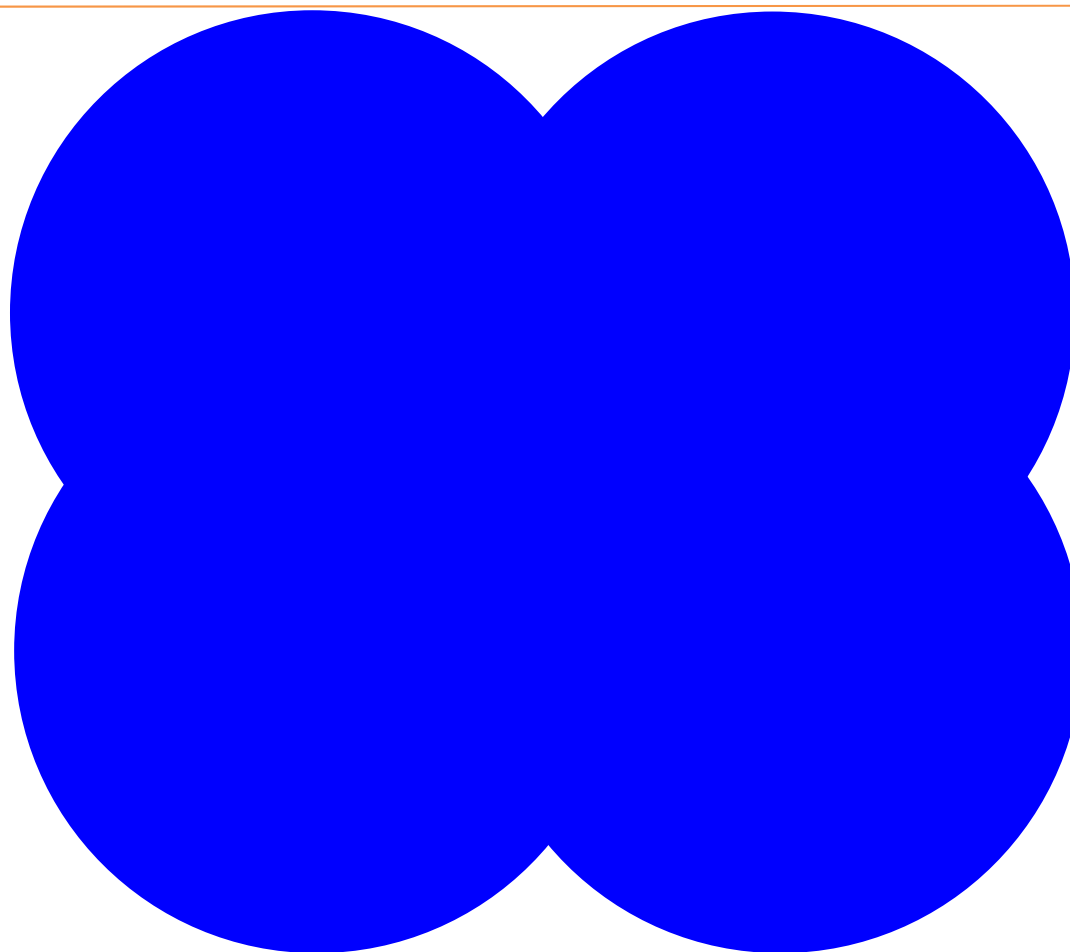


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# Pillars of successful INSPIRE implementation on national level

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## Pillars of successful INSPIRE implementation on national level



**Policy and  
legislation**



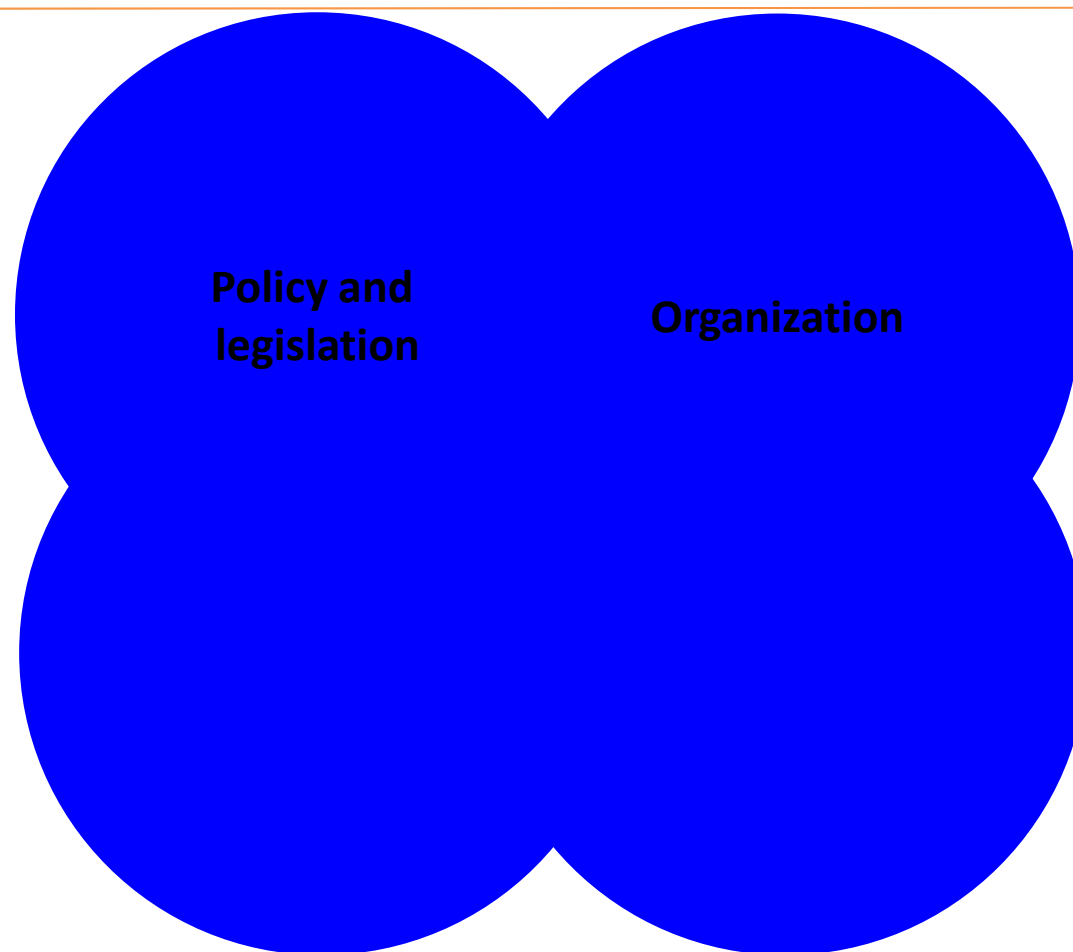
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## Pillars of successful INSPIRE implementation on national level



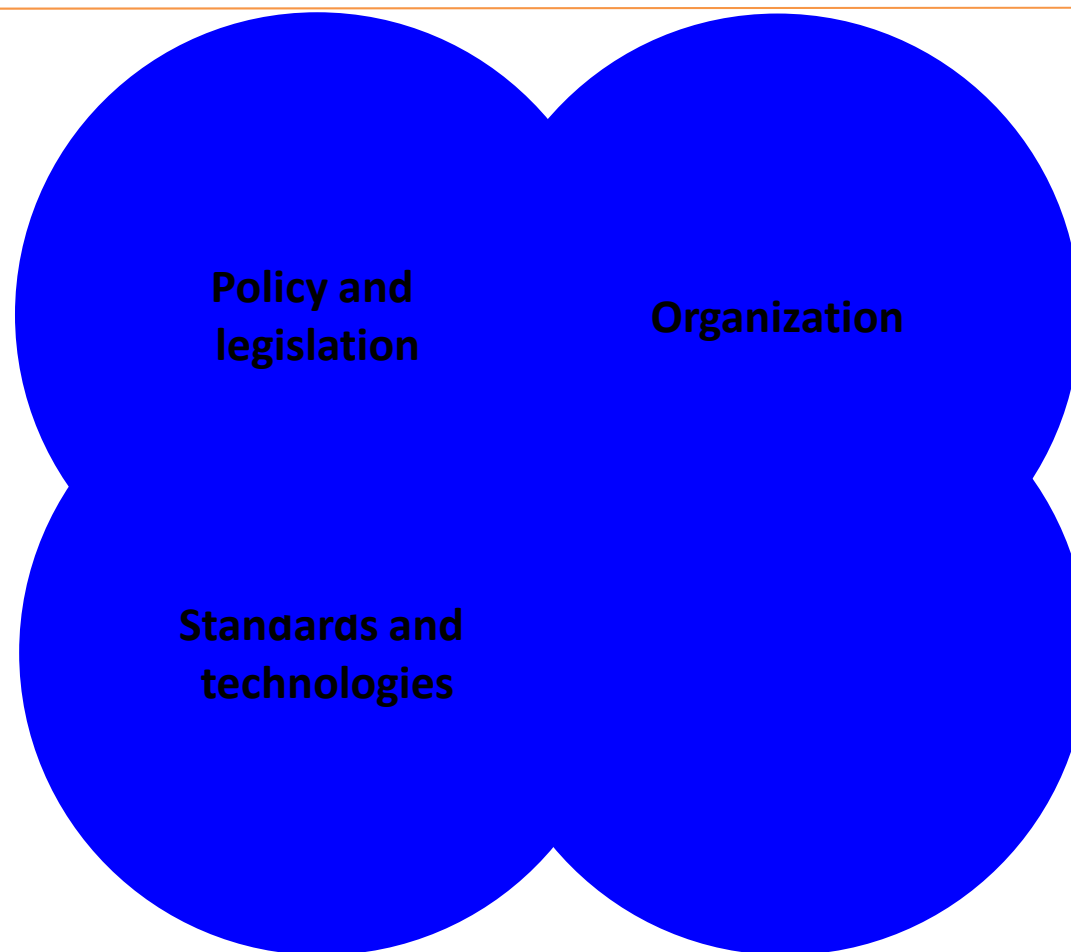
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## Pillars of successful INSPIRE implementation on national level



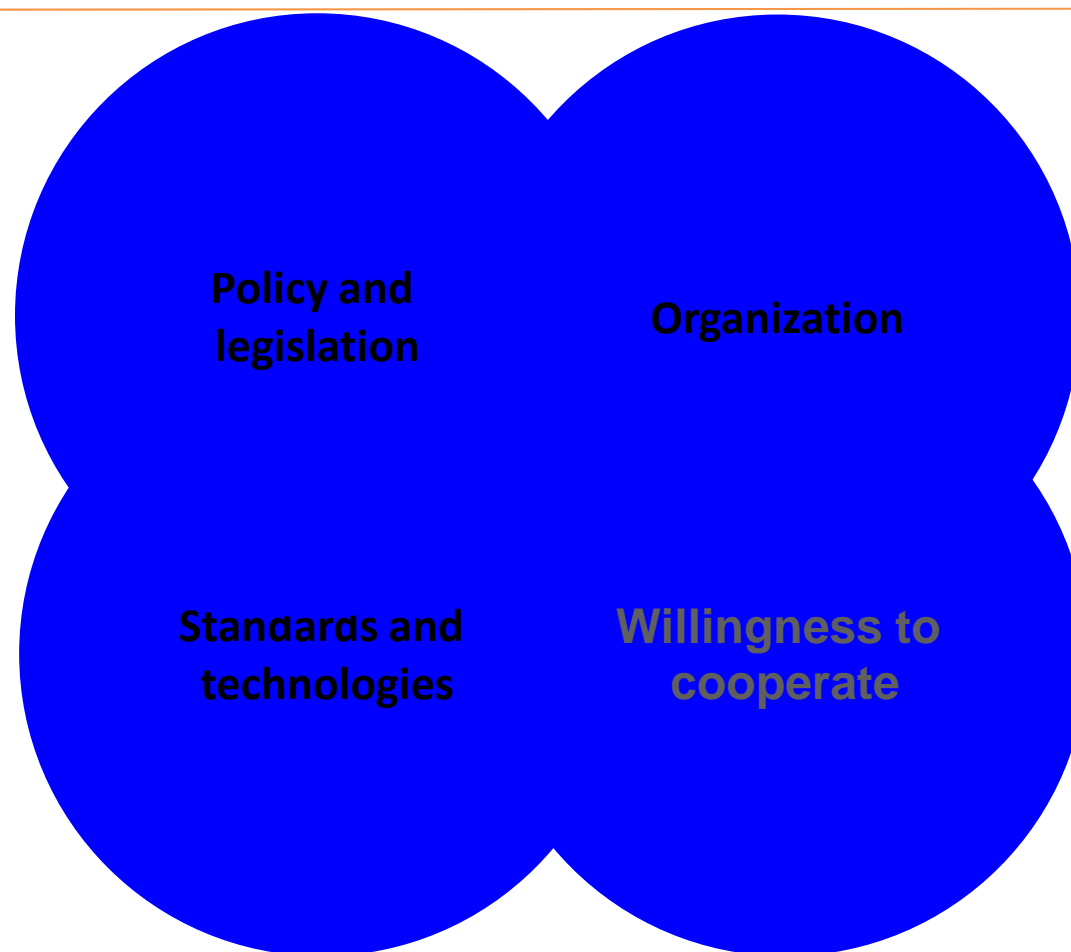
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## Pillars of successful INSPIRE implementation on national level



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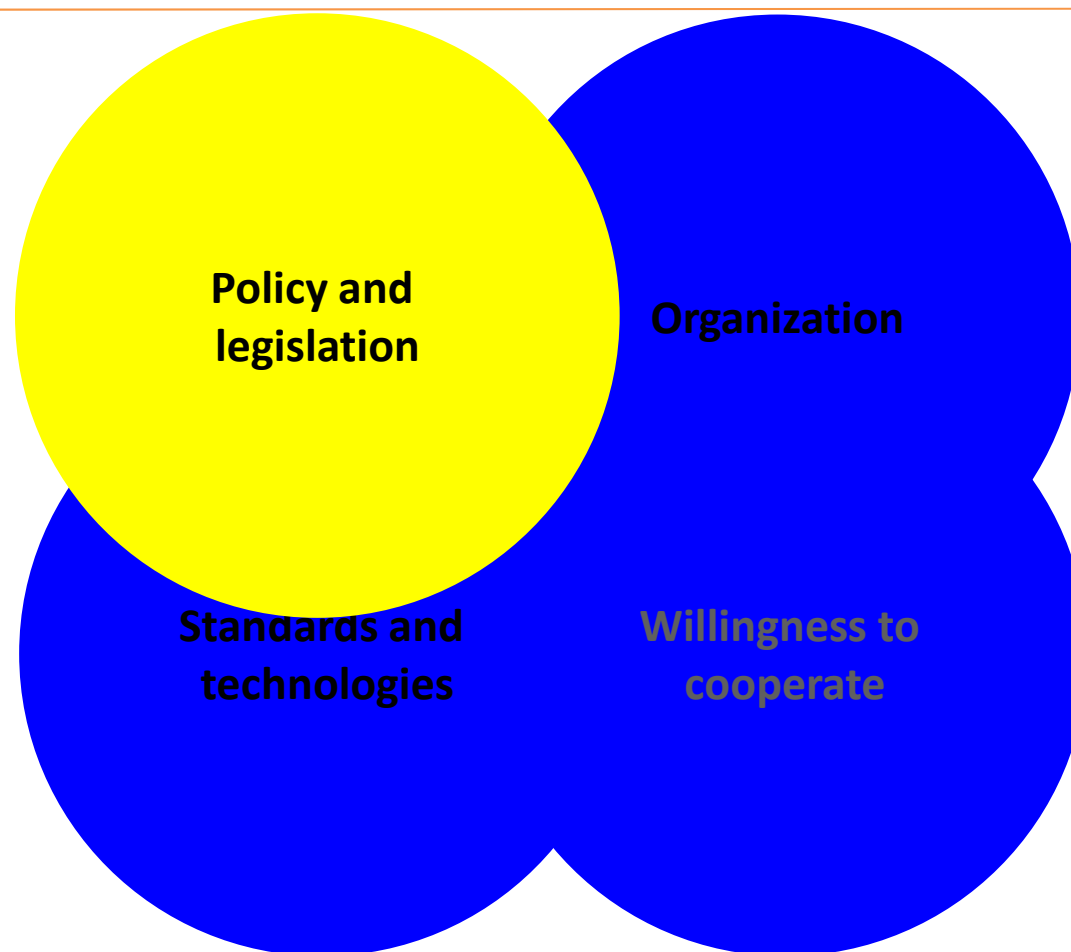


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# Policy and legislation



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# Background for INSPIRE transposition in Slovakia



## EU level

- Slovakia became an independent state on 1 January 1993 after the peaceful dissolution of Czechoslovakia
- After a successful ratification of the Accession Treaty, the Slovak Republic became a member of the European Union on 1st of May 2004
- Legal obligation to fully and timely transpose directives into their national legal systems – also 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)
- Dead line for transposition in member states (MS) – 15. may 2009



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## Related legislation for INSPIRE transposition in Slovakia



### National level

- Act No. 162/1995 Coll. on the real estate cadastre and the entries of ownership and other rights to the real estates (the cadastre act) with it's amendments
- Regulation of Geodesy, Cartography and Cadastre Authority No. 461/2009 Coll. by which the Act No. 162/1995 is executed
- Act No. 215/1995 Coll. on Geodesy and Cartography
- Regulation of Geodesy, Cartography and Cadastre Authority No. 300/2009 Coll. by which the Act No. 215/1995 is executed
  
- Act No. 211/2000 Coll. on free access to information and on amendment and supplementation of certain acts (Freedom of Information Act) – PSI directive
- The Act No. 205/2004 Coll. on collecting and disseminating environmental information and on amendment and supplementation of certain acts
  
- Act No. 275/2006 Coll. on Information Systems of Public Administration
  
- Regulation of Ministry of Finance No. 312/ 2010 Coll. on Standards for Public Administration Information Systems – includes basic standards for spatial services



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## Strategic documents of the information society in Slovakia including spatial data



the Ministry of Finance of the Slovak Republic, as the central government body responsible for the information society

- The Information Society Strategy for 2009 - 2013
- The eGovernment Strategy of the Slovak Republic
- **The National Concept of eGovernment – includes 4 registries - Spatial Information Register**
- The Concept of Software Products Usage for Public Administration
- National Strategy of the Slovak Republic for Digital Integration
- National Reform Programme
- Roadmap for the Introduction of Electronic Public Administration Services
- National Sustainable Development Strategy
- Competitiveness Strategy for the Slovak Republic until 2010
- Strategy and Action Plan for the Development of the Information Society
- Slovak Information Society Policy



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# Possibilities for NSDI Financing by EU structural fund



## ■ The Operational Programme Information Society

The Operational Programme Information Society (OPIS) is a reference document on the basis of which EU structural fund assistance will be provided for information society projects between 2007 and 2013.



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# Transposition in Slovakia

- Responsibility: set to Ministry of the Environment of the SR together with other Central State Offices – by the government decision No. 845 (the 3rd October 2007) - to transpose the Directive 2007/2/EC of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE).
- Transposition: was carried out by an Act No. 3/2010 Coll. on National Infrastructure for Spatial Information (NISPI) – approved 2.12.2009 and entered into force 1.2.2010
- Regulations and commission decisions are automatically transposed to our legislation
- Implementation: follows INSPIRE Roadmap



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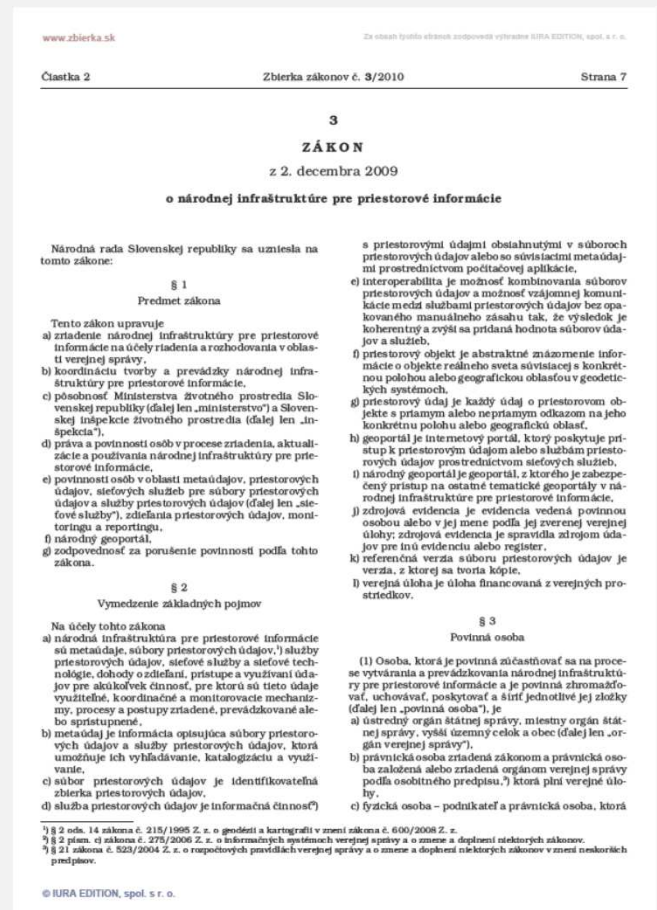


# Transposition in Slovakia



## Act No. 3/2010

- Contains 10 pages
- Contains 17 paragraphs
- Contains 3 annexes – data themes



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# Act No. 3/2010



- Follows INSPIRE directive
- Establishing „national spatial data infrastructure” (NSDI = NISPI)
- Establishing status of „obliged organizations” which must contribute to NISPI and their responsibilities to NISPI in the field of metadata, data and services
- Contains obligation to establish „Slovak national geoportal” as central point to national infrastructure by MoE
- Specifying metadata, network services regarding geospatial data
- Specifying limitations to data access
- Specifying free access to metadata and (fees) for network services (data):

The obliged organization that provides network services is authorized to collect fees, if such fees will be used to compensate the cost of storing spatial data and related services, especially in cases the spatial data, which include large amount of frequently updated data.

- Specifying penalties for non-law
- Doesn't include main coordination body “coordination board”



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# Obligated organizations

- Government departments - ministries
- Public authorities
- Higher territorial units (8)
- Municipalities (2891)
- Legal entity established by law and the legal entity founded or established by public authorities
- Natural or legal person who performs tasks under contract with obligated organization



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# Regulation 352/2011

- Regulation of Ministry of the Environment of the SR 352/2011 Coll. by which certain provisions of Act No. 3/2010 on National Infrastructure for Spatial Information (NISPI) are executed

This regulation establishes

- details of the harmonization and interoperability of spatial data
- details of access for newly collected and extensively restructured spatial data
- details of network services
- details of the sharing of spatial data and spatial data services according to the Act No. 3



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## Examples of INSPIRE transposition in CZ and BG and national coordination authorities



### Transposition:

- **Czech republic:** amendment of existing Act 123/1998 on the access to environmental information
- **Bulgaria:** new Act on access to spatial data
- **Poland:** separate Spatial Information Infrastructure Act together with the amendments of some related acts and regulations concerning the spatial data resources already existing in Polish legislation

### Coordination authorities:

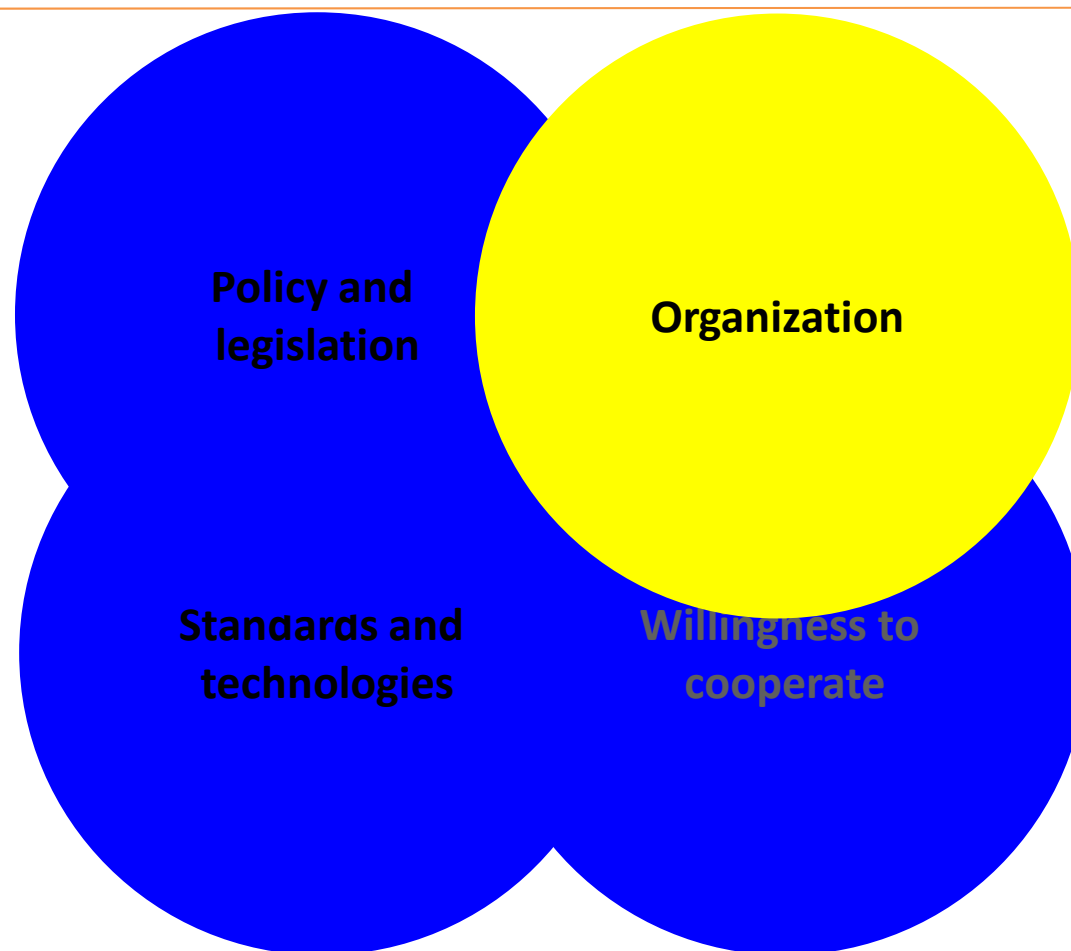
- **Czech republic:** Ministry of environment
- **Bulgaria:** Ministry of Transport, Information Technology and Communications
- **Croatia:** Croatian Geodetic Institute
- **Austria:** Federal Ministry of Agriculture, Forestry, Environment & Water Management



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## Organization of INSPIRE implementation



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## Main coordination body of INSPIRE implementation in Slovakia



- Coordination board - consultative body for the minister of MoE
- Coordination board is not mentioned in the law
- Formed on the basis of status of minister
- Members – representatives from all the ministries
- Meets obligatory 2 times per year
- Decisions of Coordination board have only consultative character

### Main tasks:

- Ensure an efficient mechanism of transfer requirements of the EC to obliged organizations – especially to ministries
- Identify responsibilities for each theme to particular obliged organization
- Ensure the inclusion of tasks related to INSPIRE / NSDI to the annual plans of ministries - planning financial and human resources
- The possibility of methodological guidance and information sharing
- The possibility of control, monitoring and reporting tasks



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## Structure of Coordination board

Nomination
<b>Chairman</b> , Ministry of Environment of SR (MŽP SR)
<b>Deputy chairman</b> , Ministry of Environment of SR (MŽP SR)
<b>Secretary</b> , Ministry of Environment of SR (MŽP SR)
Ministry of Environment of SR (MŽP SR)
Ministry of Interior of SR (MV SR)
Ministry of Transport & Posts & Telecommunications of SR (MDPT SR)
Ministry of Agriculture and Rural Development of SR (MP SR)
Ministry of Defense of SR (MO SR)
Ministry of Economy of SR (MH SR)
Ministry of Health of SR (MZ SR)
Ministry of Culture of SR (MK SR)
Ministry of Finance of SR (MF SR)
Statistical Office of SR (ŠÚ SR)
Geodesy, Cartography and Cadastre Authority (ÚGKK SR)
Association of Cities and Municipalities of Slovakia (ZMOS)



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# Data theme's distribution

Annex	Name of theme	Responsible (Provisionally)
I – 1	Coordinate reference systems	Geodesy, Cartography and Cadastre Authority
I – 2	Geographical grid systems	Geodesy, Cartography and Cadastre Authority
I – 3	Geographical names	Geodesy, Cartography and Cadastre Authority
I – 4	Administrative units	Ministry of Interior of SR
I – 5	Addresses	Ministry of Interior of SR
I – 6	Cadastral parcels	Geodesy, Cartography and Cadastre Authority
I – 7	Transport networks	Ministry of Transport, Construction and Regional Development of SR
I – 8	Hydrography	Ministry of Environment of SR
I – 9	Protected sites	Ministry of Environment of SR
II – 1	Elevation	Ministry of Environment of SR; Ministry of Defense of SR; GCCA
II – 2	Land cover	Ministry of Environment; Ministry of Agriculture and Rural Development of SR
II – 3	Orthoimagery	Third party
II – 4	Geology	Ministry of Environment of SR



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# Data theme's distribution

Annex	Name of theme	Responsible (Provisionally)
III – 1	Statistical units	Statistical Office of SR
III – 2	Buildings	Cadaster of SR; Ministry of Economy of SR; Ministry of Interior of SR
III – 3	Soil	Ministry of Agriculture and Rural Development of SR
III – 4	Land use	Ministry of Agriculture and Rural Development of SR
III – 5	Human health and safety	Ministry of Health of SR; Ministry of Environment of SR
III – 6	Utility and governmental service	Ministry of Environment of SR; Ministry of Health SR ; MV SR
III – 7	Environmental monitoring facilities	Ministry of Environment of SR
III – 8	Production and industrial facilities	Ministry of Economy of SR; Ministry of Environment of SR
III – 9	Agriculture and aquaculture facilities	Ministry of Agriculture and Rural Development of SR
III – 10	Population distribution - demography	Ministry of Transport, Construction and Regional Development; Statistical Office of SR
III – 11	Area management/restriction/regulation zones and reporting units	Ministry of Environment of SR
III – 12	Natural risk zones	Ministry of Environment of SR; Ministry of Interior SR
III – 13	Atmospheric conditions	Ministry of Environment of SR
III – 14	Meteorological geographical features	Ministry of Environment of SR
III – 15	Oceanographic geographical features	-----
III – 16	Sea regions	-----
III – 17	Bio-geographical regions	Ministry of Environment of SR
III – 18	Habitats and biotopes	Ministry of Environment of SR
III – 19	Species distribution	Ministry of Environment of SR
III – 20	Energy resources	Ministry of Economy of SR; Ministry of Environment of SR
III – 21	Mineral resources	Ministry of Economy of SR; Ministry of Environment of SR



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## Expert group – board of representatives – GIS and IT experts



- Consultative executive body for coordination board
- Members: experts from governmental organizations, municipalities, private companies
- Meets obligatory 2 times per year (usually more)

### Main tasks:

- Preparing materials for Coordination board meetings
- Solving technical issues of INSPIRE roadmap
- Explaining guidelines for implementation of INSPIRE regulations (metadata, interoperability, network services)
- Sharing of experiences between stake holders
- Organization of trainings
- Establishing subgroups with particular topics (currently hydrography and transport network harmonization)



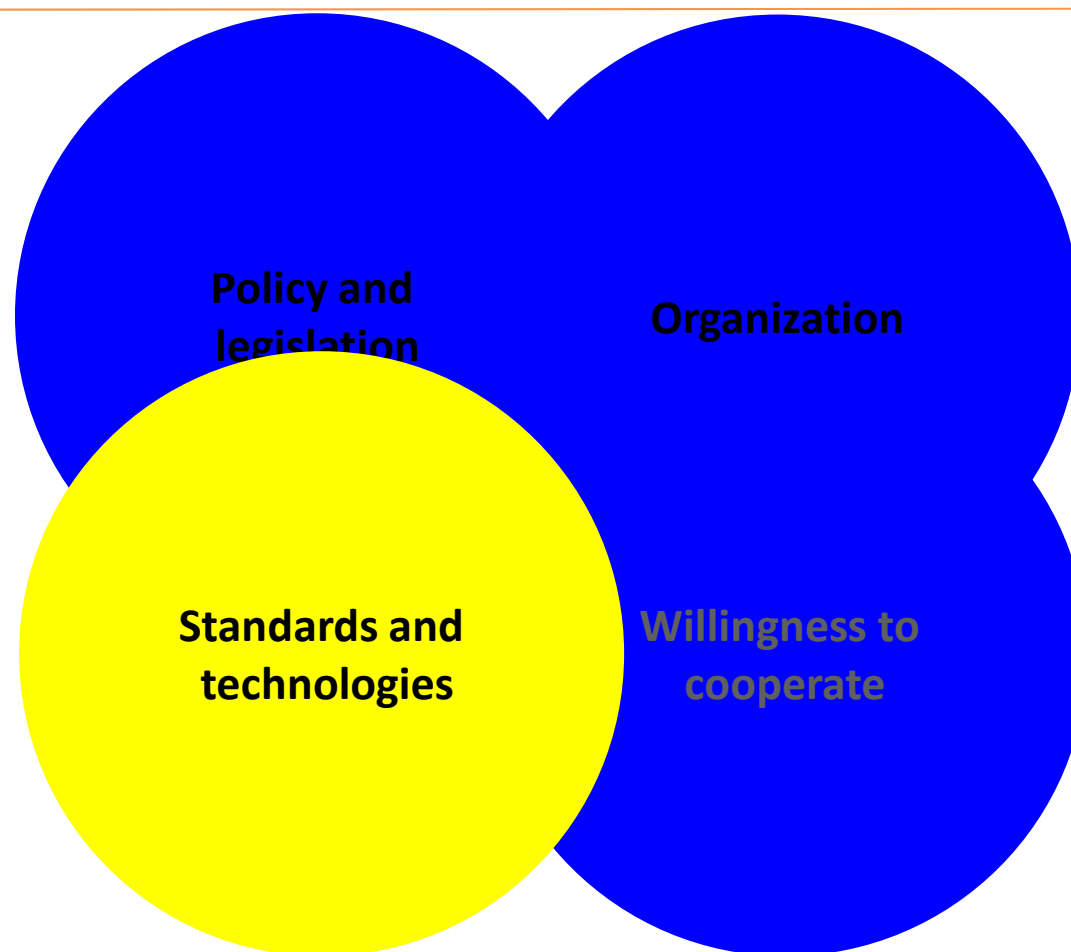
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# Standards and technologies



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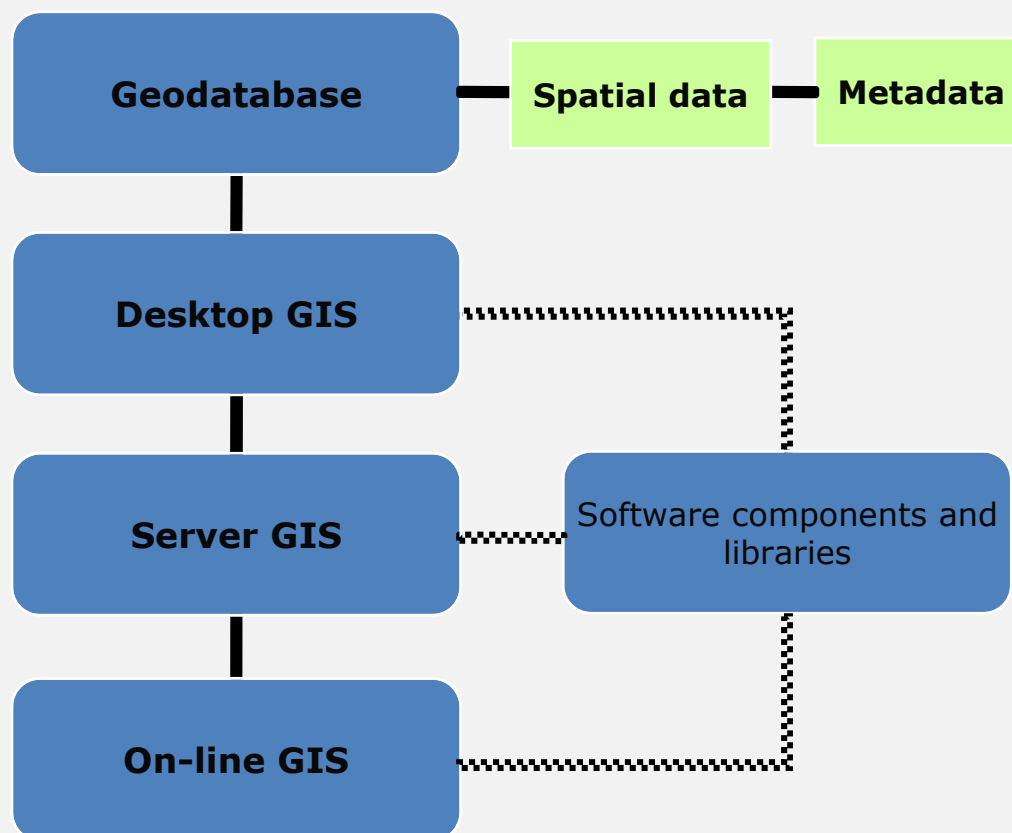


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## Software components of SDI (simplified)



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# Understanding SDI components in scope of INSPIRE



- Defining elements of SDI – metadata, data, services
- Data producers – obliged organizations
- Data users – EU level, national level, institutional level, third parties, public sector
- Procedures of data creation, storage, update – data specifications
- Standards – metadata, data, services – ISO, OGC, INSPIRE
- Conditions for reusing data – provided by data producers
- Agreements for data sharing – data sharing policy
  
- Hardware
- Software – tools how to provide implementation
- Internet connection



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## Role of INSPIRE on national level:

- Establishing useful legislation
- Defining requirements – standards for NSDI - very good template for national SDI – coordination and technical implementation
- Roadmap of implementation - time scheduler
- Effective way of sharing (exchange) data using standardized services
- Establishing community involved in the process
- **Obligation to do something...**



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## Understanding SDI components in scope of INSPIRE



- Defining elements of SDI – metadata, data, services
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## Issues with Slovak NSDI: (general issues)

### Subjective

- The existence of duplicated spatial data
- Limited access to spatial data
- Inconsistencies in terms of spatial data sharing – not unified data sharing policy/usually framework contract between ministries and then license agreements between organizations of the ministries
- The lack of uniformity in the used standards
- Absence of metadata
- Old reference system Krovak a S-JTSK (Bessel ellipsoid, Greenwich meridian, Krovak projection, negative values)

### Objective

- Spatial data are huge
- Interpretation of spatial data is variable
- Updating and processing usually takes a long time
- Creation (update) of spatial data is expensive



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# INSPIRE and NSDI applications and service's implementation



- INSPIRE-NSDI information portal
- Environmental online metadata catalogue
- National online metadata catalogue
- Implementation of view and download services
- National geoportal – testing version
- Mashup application



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# Information portal about INSPIRE



■ <http://inspire.gov.sk/>



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## Providing metadata records and national discovery service



Several scenarios for implementing discovery service and metadata records

- One national metadata catalog for all players
- Several metadata catalogs with one catalog on national level

Slovakia scenario

Metadata catalog of MoE (operational)

Metadata catalog Geodesy, Cartography and Cadastre Authority (developing)

Metadata catalog of Slovak Road Administration (developing)

National metadata catalog (operational)



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## Providing fully compliant METADATA solution of MoE

- sk | en

Národná infraštruktúra pre priestorové informácie  
Metainformačný katalóg

Vyhľadanie

Jednoduché

Rozšírené

Kategorie

Nastavenia

Mapy

Prihlásenie

Užívateľské meno:

Heslo:

Prihlásiť

Výsledky vyhľadávania

Späť na vyhľadanie

Číslo záznamov: 953

Údajová sada I Úroveň ochrany: Verejnost

Maloplošné chránené územia

Maloplošné chránené územia na území Slovenskej republiky, Chránený areál, Chránený krajinný prvok.

Údajová sada I Úroveň ochrany: Verejnost

Veľkoplošné chránené územia

Veľkoplošné chránené územia na území Slovenskej republiky.

Údajová sada I Úroveň ochrany: Verejnost

Chránené vtáčie územia

Chránené vtáčie územia vyhlasované v rámci sústavy CHA.

Údajová sada I Úroveň ochrany: Verejnost

Územia európskeho významu

Územia európskeho významu vyhlasované v rámci sústavy Natura 2000.

Údajová sada I Úroveň ochrany: Verejnost

Osídlenie v dobe ľumelej

Atlas krajiny - kapitola 2.1. Historický vývoj osídlenia kraja.

Search

Simple search

Extended search

GEMET Browser

Settings

Maps

Your Account

Username:

Password:

Login

Metadata details

Back to result page

dataset

Maloplošné chránené územia

Maloplošné chránené územia na území Slovenskej republiky, Národná prírodná rezervácia, Prírodná rezervácia, Národná prírodná pamiatka, Prírodná pamiatka, Chránený areál, Chránený krajinný prvok

Description

Categorisation

Binding

Distribution

Quality

Metadata

Description

Title: Maloplošné chránené územia

Abstract: Maloplošné chránené územia na území Slovenskej republiky, Národná prírodná rezervácia, Prírodná rezervácia, Národná prírodná pamiatka, Prírodná pamiatka, Chránený areál, Chránený krajinný prvok

Date:

creation: 2010-02-01

publication: 2010-02-01

revision: -

Point of contact:

Role: author

Individual name: Peter Pastorek

Organisation name: Štátna ochrana prírody Slovenskej republiky

Position: GIS-specialista

Phone: 0484712032

Facsimile: -

Delivery point: Tajovského 26B

City: 974 01 Banská Bystrica

Administrative area: -

Country: Slovenská Republika

E-Mail address: peter.pastorek@sppsr.sk

Reference system info: ETRS89 / LAEA Europe

Geographic bounding box (Extent type West bound longitude: 16.35242

Subscribe GeORSS | Help | Res

Zemepisná mapa Slovenskej republiky

Prírodná pamiatka, Prírodná rezervácia, Národná prírodná pamiatka, Prírodná pamiatka, Chránený areál, Chránený krajinný prvok



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# Providing metadata records and national discovery service



Providing fully compliant METADATA solution on national level

- <http://geoportal.sazp.sk/>

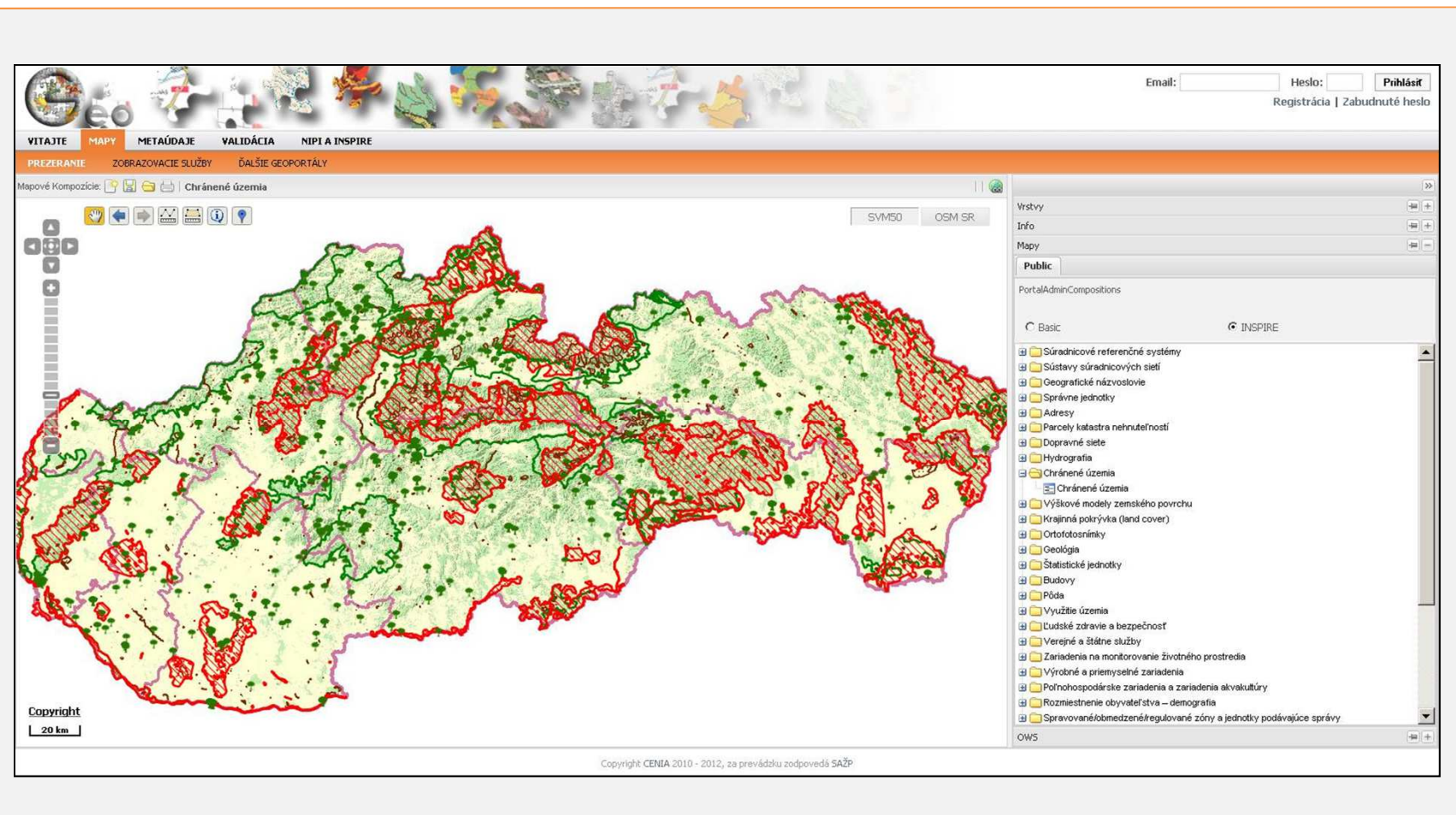
The screenshot displays the Geoportal SR (213) interface. On the left, a list of metadata records is shown, including topographic maps, cadastral maps, and various environmental data. On the right, a map of Slovakia is displayed with a search bar and a list of results. The map shows the country's borders and major cities. The search bar contains the text 'Ochraničujúci obdĺžnik'. The list of results shows several records related to the 'Ochraničujúci obdĺžnik' (Protective rectangle) area.



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## Simple map viewer



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## Providing INSPIRE view services for reference datasets



Several scenarios for implementing view services

- Every obliged organization will have infrastructure for providing this obligation
- Some authority will provide necessary infrastructure for another data provides

Slovakia scenario

MoE – SAZP provides architecture for all institutions within MoE except Geological institute

Central Office of Geodesy&Cartography&Cadaster of SR provides it's own infrastructure

Slovak Road Administration provides it's own infrastructure

.....

National geoportal provides access to all accessible view services



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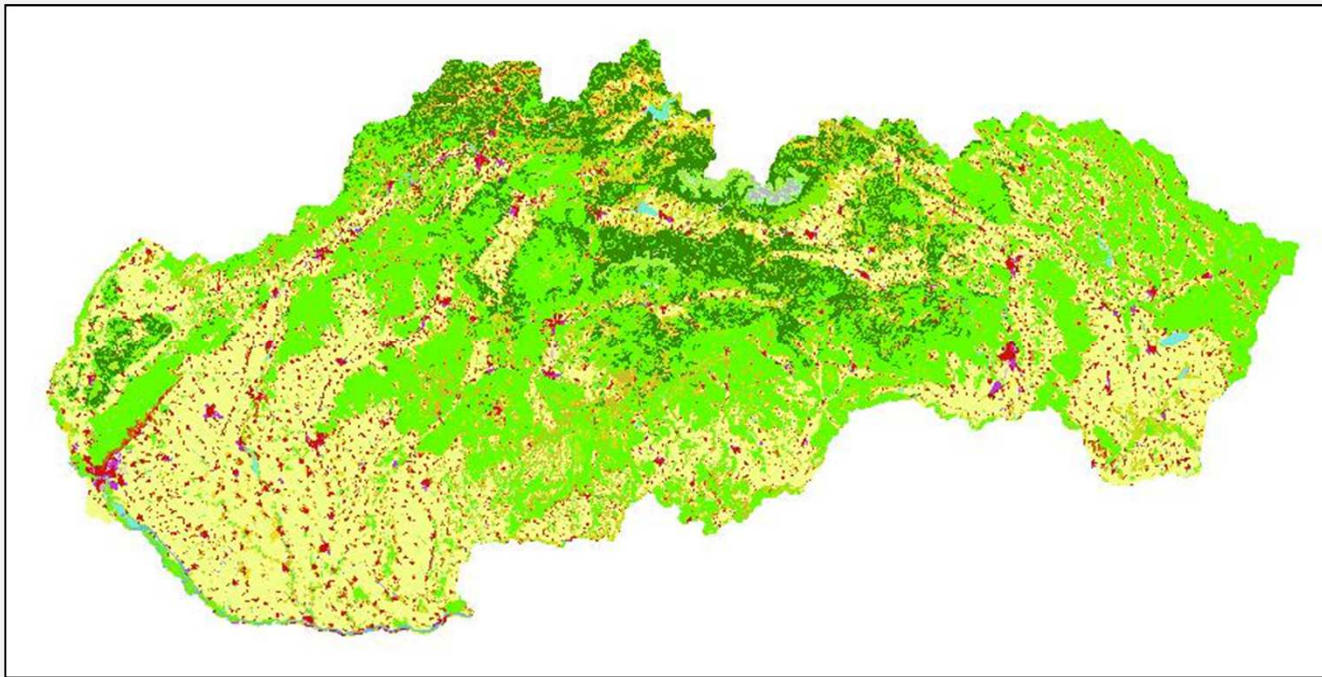


## Providing INSPIRE view services for reference datasets



Example – land cover provided by SEA

- <http://tiles.geop.sazp.sk/themes/service?REQUEST=GetCapabilities>



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# Providing INSPIRE download and transformation services



## Example – protected sites provided by SEA

- [http://nipi.sazp.sk/arcgis/services/nipi/protected\\_sites/MapServer/WFSServer?request=GetCapabilities&service=WFS](http://nipi.sazp.sk/arcgis/services/nipi/protected_sites/MapServer/WFSServer?request=GetCapabilities&service=WFS)

```
<?xml version='1.0' encoding='UTF-8'>
<xsd:schema targetNamespace="http://nipi.sazp.sk/arcgis/services/nipi/protected_sites/MapServer/WFSServer" elementFormDefault="qualified" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:gml="http://www.opengis.net/gml" schemaLocation="http://schemas.opengis.net/gml/3.1.1/base/gml.xsd">
  <xsd:import namespace="http://www.opengis.net/gml" schemaLocation="http://schemas.opengis.net/gml/3.1.1/base/gml.xsd"/>
  <xsd:element name="MCHUF" type="gml:MCHUFType" substitutionGroup="gml:Feature"/>
  <xsd:complexType name="MCHUFType">
    <xsd:complexContent base="gml:AbstractFeatureType">
      <xsd:sequence>
        <xsd:element name="OBJECTID" type="xs:int"/>
        <xsd:element name="ID" type="xs:int"/>
        <xsd:element name="CSZ" type="xs:int"/>
        <xsd:element name="Predmet_ochrany">
          <xsd:simpleType>
            <xsd:restriction base="xs:string">
              <xsd:maxLength value="250"/>
            </xsd:restriction>
          </xsd:simpleType>
        </xsd:element>
        <xsd:element name="Meno">
          <xsd:simpleType>
            <xsd:restriction base="xs:string">
              <xsd:maxLength value="100"/>
            </xsd:restriction>
          </xsd:simpleType>
        </xsd:element>
        <xsd:element name="Datum_vyhlasenia" type="xs:dateTime"/>
        <xsd:element name="Legislativny_predpis">
          <xsd:simpleType>
            <xsd:restriction base="xs:string">
              <xsd:maxLength value="200"/>
            </xsd:restriction>
          </xsd:simpleType>
        </xsd:element>
        <xsd:element name="Posobnost_spravy_SOPSR">
          <xsd:simpleType>
            <xsd:restriction base="xs:string">
              <xsd:maxLength value="40"/>
            </xsd:restriction>
          </xsd:simpleType>
        </xsd:element>
        <xsd:element name="Plocha_m2" type="xs:double"/>
        <xsd:element name="Kategoria_chranneho_uzemia" type="xs:short"/>
        <xsd:element name="Zonacia_stupen_ochrany" type="xs:short"/>
        <xsd:element name="Plocha_HA_OIS" type="xs:double"/>
        <xsd:element name="Oficialna_Plocha_HA" type="xs:double"/>
        <xsd:element name="Aktualne_I" type="xs:dateTime"/>
        <xsd:element name="Parcelny_stav" type="xs:short"/>
        <xsd:element name="Presnost" type="xs:short"/>
        <xsd:element name="Sukromne_chranene_uzemia" type="xs:short"/>
        <xsd:element name="CDDA_site_code" type="xs:double"/>
        <xsd:element name="Shape" type="gml:MultiSurfacePropertyType"/>
        <xsd:element name="SHAPE_AREA" type="xs:double"/>
        <xsd:element name="SHAPE_LEN" type="xs:double"/>
      </xsd:sequence>
    </xsd:complexContent>
  </xsd:element>
</xsd:schema>
```



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## Involvements at European level in order to support INSPIRE development and implementation



### EC supports INSPIRE implementation by EU programs and projects:

- EnviroGeoPortal
- NATURESDI+
- Plan4all
- OneGeology
- HLANDATA
- Twinning project with BG, CR
- EnvPlus

### Benefits:

- Sharing knowledge within EU
- Cross border cooperation
- Building interoperable applications



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## Example of successful mashup application



Mash up application AT, BG and SK, call by JRC

- [http://geo.enviroportal.sk/geoserver/www/ps\\_mashup/index.html](http://geo.enviroportal.sk/geoserver/www/ps_mashup/index.html)

A screenshot of a web application titled "INSPIRE Mash-up Biodiversity web application". The interface includes a "Species list" on the left with links to various bird species like Accipiter gentilis, Accipiter nisus, Alcedo atthis, Aquila chrysaetos, Aquila pomarina, Ardea cinerea, Bonasa bonasia, Bubo bubo, Buteo buteo, Ciconia ciconia, and Ciconia nigra. The main content area displays the profile for "Ciconia nigra (Linnaeus, 1758)", also known as the Black Stork. It features a large image of the bird, a grid of smaller images, and a classification tree on the right. The classification path is: Animalia &gt; Chordata &gt; Aves &gt; Ciconiiformes &gt; Ciconiidae &gt; Ciconia &gt; Ciconia nigra (Linnaeus, 1758). The application also shows the IUCN Red List status as "LEAST CONCERN (LC)" and includes a search bar and navigation tabs for Images, Maps, and Comments.



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# Conclusion

## Implementation issues

- Continue with implementation following INSPIRE Road map
- Invite new members of NSDI to existing process
- **Improve national conditions for data sharing – “general agreement”** (in development)
- Enhance of using standardized web services (OGC, ISO) by obliged organizations

## Data

- Improve quality of data
- Improve actualization of reference data
- Creation of Slovak national data specifications based on INSPIRE data specifications

## Services

- Standardization of Slovak grid scales for tiled map services



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# Conclusion

## Interlink between NSDI and eGovernment

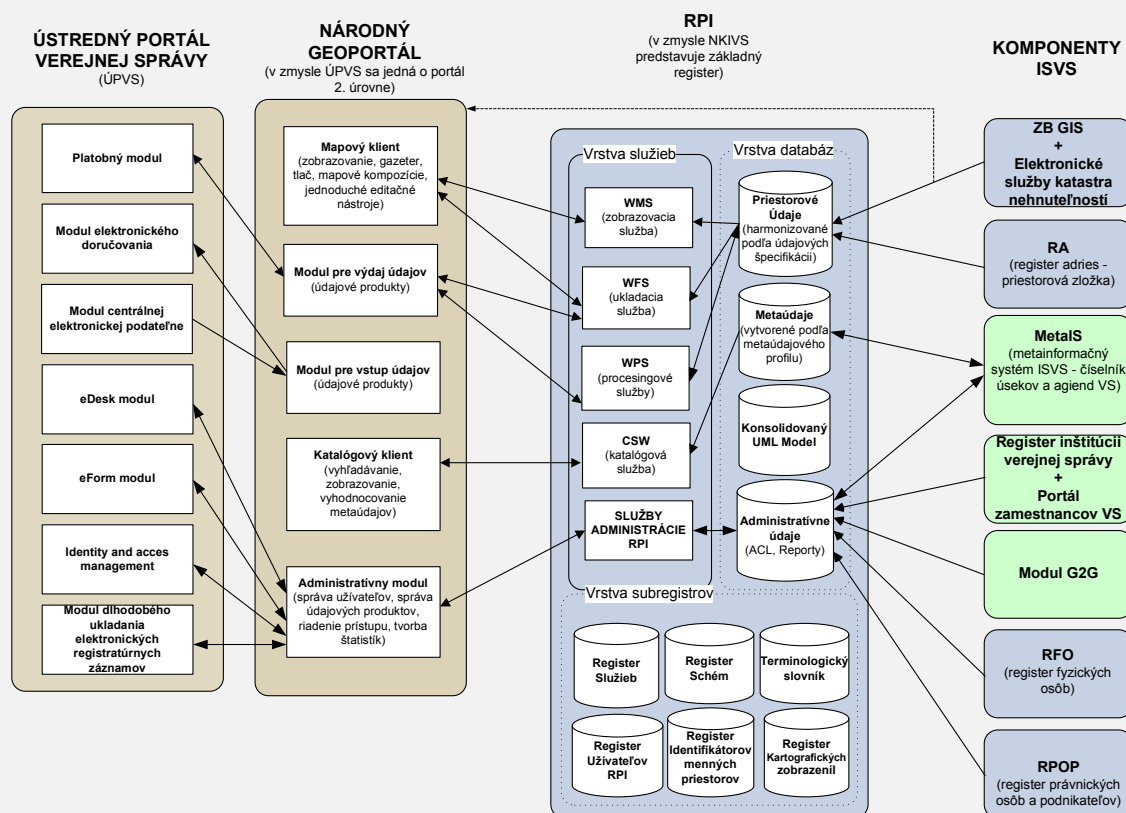
- NSDI should be included into process of eGovernment strategy and development
- Interlink between basic elements of eGovernment:
  - Basic identifiers
  - Basic enumerators
  - Basic registers
  - Central public administration portal as entrance point to national geoportal
  
  - Identity and access management
  - Payment module
  - eForm module
  - Module of central electronic registry
  - eDesk modul
  - Module electronic delivery
  - Module of long-term storage of electronic registry records



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# Location of NSDI (spatial register and national geoportal in eGovernment)



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# INSPIRE (SDI) Principles

- Data should be **collected once** and maintained at the level where this can be done **most effectively**
- It should be possible to **combine** seamlessly spatial data from **different sources and share** it between many users and applications
- Spatial data should be collected at one level of government and **shared** between all levels
- Spatial data needed for good governance **should be available** on conditions that **are not restricting** its extensive use
- It should be easy to **discover which spatial data is available**, to evaluate its fitness for purpose and to know which conditions apply for its use.



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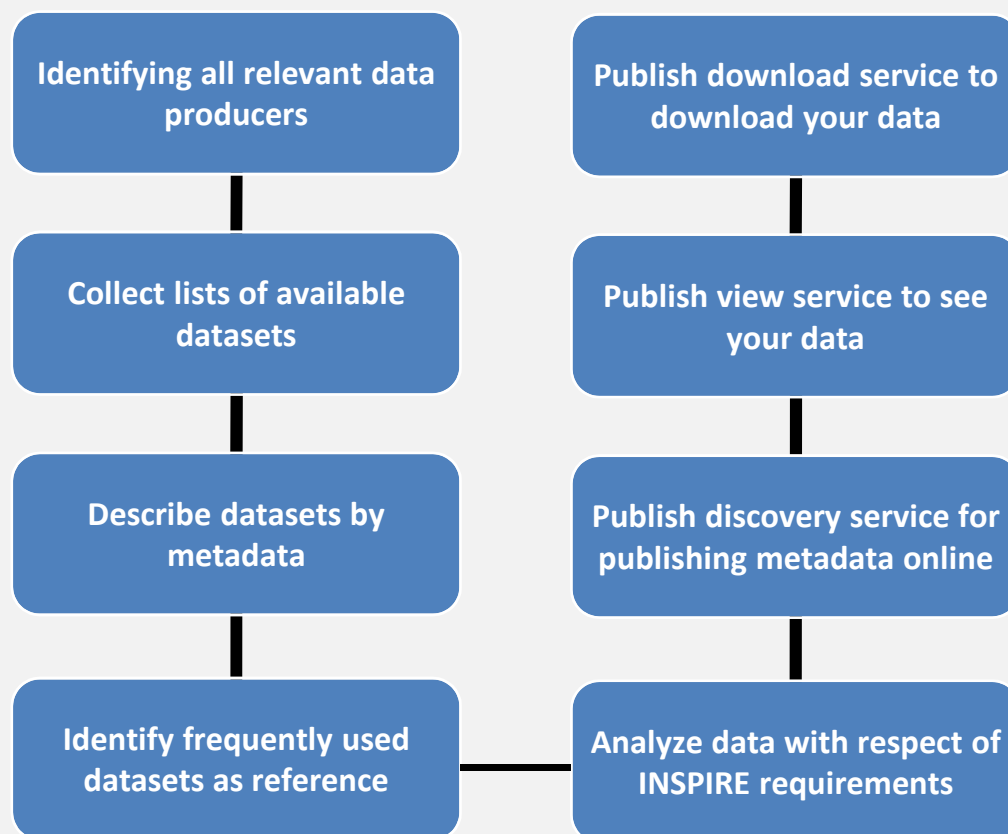


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## INSPIRE implementation next steps



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Thank you.

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<http://geoportal.sazp.sk>

<http://geo.enviroportal.sk>

<http://inspire.gov.sk>

<http://www.enviroportal.sk>

<http://www.sazp.sk>



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