



INSPIRATION – Spatial Data Infrastructure in the Western Balkans



# INSPIRE

## General Introduction & Service Architecture

2nd National INSPIRATION Workshop Croatia  
February 20, 2013

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INSPIRATION – Spatial Data Infrastructure in the Western Balkans



## Why INSPIRE?

- EU Sustainable Development Strategy
  - new approach to policy-making
  - more coherence in the Community policies
- Information base - detailed relevant harmonised **spatial information** to significantly contribute to this objective
  - for different policy areas
  - commonly accessible

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## Why INSPIRE?

### Environmental data:

- 90% of environmental data is linked to geography
- Out of 58 data components needed for environmental policy :
  - 32 are multi-sectoral
  - 16 are environmental only
  - 10 are related to other sectors
- These 32 components allow to:
  - link different ENV themes together → policy coherence
  - link with other sectors → integration

Source: EEA



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## Why INSPIRE ?

### **Situation in Europe**

- Heterogeneous data policy
- Lack of coordination
  - across borders and between levels of government
- Lack of standards
  - incompatible information and information systems
- Existing data not re-usable
  - fragmentation of information, redundancy, inability to integrate



Source: EC



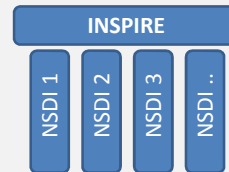
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## What is INSPIRE?

### A system of systems!



- $ESDI = \sum NSD$
- Infrrastructure for Spatial Information in the European Community
- Directive 2007/2/EC of the European Parliament



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## INSPIRE (SDI) Principles

1. Data should be collected once and maintained at the level where this can be done most effectively
2. It should be possible to combine seamlessly spatial data from different sources and share it between many users and applications
3. Spatial data should be collected at one level of government and shared between all levels
4. Spatial data needed for good governance should be available on conditions that are not restricting its extensive use
5. 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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## INSPIRE Directive

- INSPIRE lays down **general rules** to establish an infrastructure for spatial information in Europe
- to be based on the infrastructures for spatial information established and operated by the Member States (NSDIs)
- INSPIRE does not require collection of new spatial data
- Legally binding for all public institution which are holding or owning data listed in the 34 annex themes



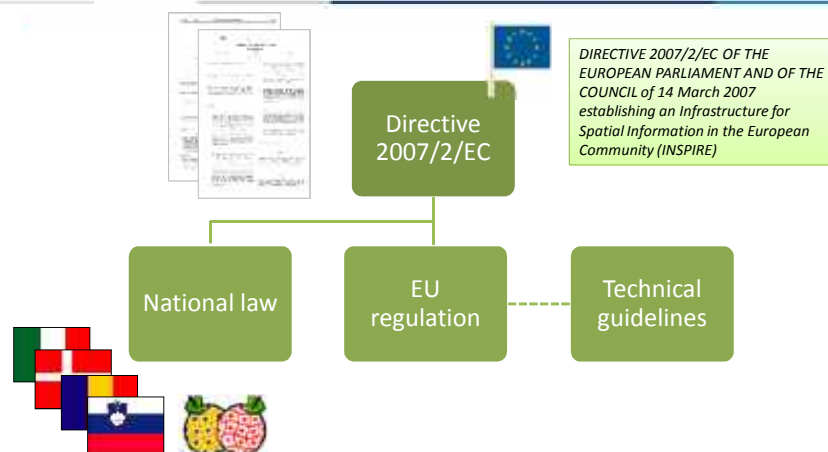
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## Legal Hierachy



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## Legal transposition

- **European directive has to be transposed into national law**



Example Austria

- **Geodateninfrastrukturgesetz**
  - March 2, 2010 - BGBl. I Nr. 14/2010



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## Implementing Rules

- Implementing rules are EU regulation
  - Directly legally binding for EU member states
- “Implementing Rules” for:
  - Metadata
  - Interoperability of spatial data sets and services
  - Network services (discovery, view, download, transform, invoke) - European geo-portal
  - Data and Service sharing EU / MS
  - Coordination and measures for monitoring & reporting



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## Technical Guidelines

### ■ INSPIRE Technical Guidelines

- Specification on much more detailed level than given by Implementing Rules
- e.g. INSPIRE Metadata Implementing Rules: Technical Guidelines



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## INSPIRE components

- INSPIRE as environmental/spatial information system



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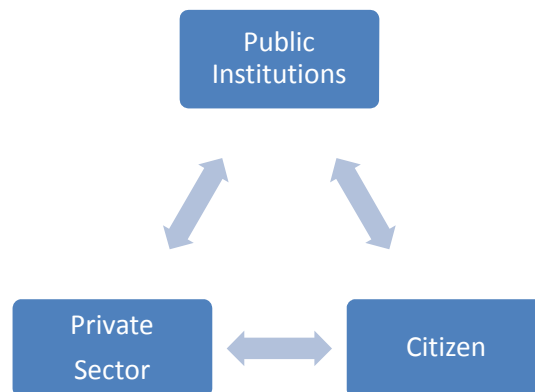


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## INSPIRE Community



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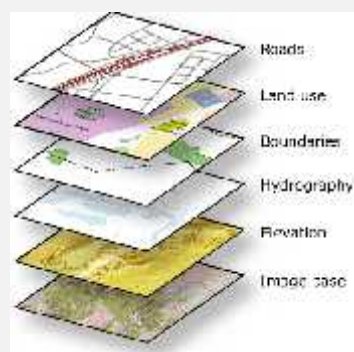


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## INSPIRE Annex I

1. Coordinate reference systems
2. Geographical grid systems
3. Geographical names
4. Administrative units
5. Addresses
6. Cadastral parcels
7. Transport networks
8. Hydrography
9. Protected sites



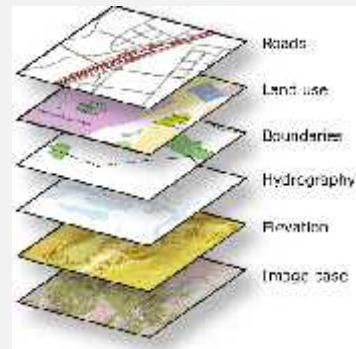
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## INSPIRE Annex II

1. Elevation
2. Land cover
3. Orthoimagery
4. Geology



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## INSPIRE Annex III

- |  |  |
|--|--|
| 1. Statistical units                       | 11. Area management / restriction / regulation zones and reporting units |
| 2. Buildings                               | 12. Natural risk zones   |
| 3. Soil                                    | 13. Atmospheric conditions   |
| 4. Land use                                | 14. Meteorological geographical features                                 |
| 5. Human health and safety                 | 15. Oceanographic geographical features                                  |
| 6. Utility and governmental services       | 16. Sea regions  |
| 7. Environmental monitoring facilities     | 17. Bio-geographical regions   |
| 8. Production and industrial facilities    | 18. Habitats and biotopes  |
| 9. Agricultural and aquaculture facilities | 19. Species distribution   |
| 10. Population distribution — demography   | 20. Energy resources   |
|  | 21. Mineral resources  |



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## INSPIRE Architecture

Basic SDI functions:

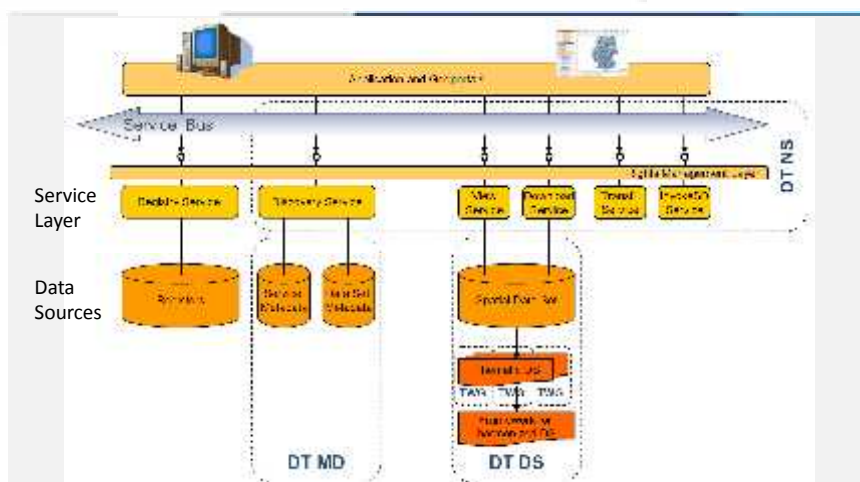
- Discover data available
- Deliver data available
  - Broker & Manage
  - Aggregate & Fusion
- D3.5 INSPIRE Network Service Architecture
  - [http://inspire.jrc.ec.europa.eu/reports/Implementing\\_Rules/network/D3\\_5\\_INSPIRE\\_NS\\_Architecture\\_v3-0.pdf](http://inspire.jrc.ec.europa.eu/reports/Implementing_Rules/network/D3_5_INSPIRE_NS_Architecture_v3-0.pdf)



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## INSPIRE Architecture



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## INSPIRE Roadmap



10 years! – that's geological timeframe for IT



15-May-2010	Implementation of provisions for monitoring and reporting	
03-Dec-2010	Metadata available for spatial data sets and services corresponding to Annex I and II	
09-May-2011	Member States shall provide the <b>Discovery and View Services with initial operating capability</b>	
30-Jun-2011	The EC establishes and runs a <b>geo-portal at Community level</b>	
19-Oct-2011	Implementation of Regulation as regards the access to spatial data sets and services under harmonised conditions for new arrangements	
09-Nov-2011	<b>Discovery and view services operational</b>	
28-Jun-2012	<b>Download Services with initial operating capability</b>	
28-Jun-2012	<b>Transformation Services with initial operating capability</b>	
23-Nov-2012	Implementation of Commission Regulation (EU) No 1089/2010 of 23 November 2010 as regards interoperability of spatial data sets and services for <b>Newly collected and extensively restructured Annex I spatial data sets available</b>	
28-Dec-2012	<b>Download services operational</b>	
28-Dec-2012	<b>Transformation services operational</b>	
04-Feb-2013	Implementation of Commission Regulation (EU) No 102/2011 of 4 February 2011 as regards interoperability of spatial data sets and services for <b>newly collected and extensively restructured Annex I spatial data sets</b>	Today
19-Apr-2013	Implementation of Regulation as regards the access to spatial data sets and services of the Member States by Community institutions and bodies under harmonised conditions for existing arrangements	
03-Dec-2013	Metadata available for spatial data sets and services corresponding to Annex III	
October 2015	<b>Newly collected and extensively restructured Annex II and III spatial data sets available</b>	
23-Nov-2017	Implementation of Commission Regulation (EU) No 1089/2010 of 23 November 2010 as regards interoperability of <b>spatial data sets and services for other Annex I spatial data sets still in use at the date of adoption</b>	
04-Feb-2018	Implementation of Commission Regulation (EU) No 102/2011 of 4 February 2011 as regards interoperability of spatial data sets and services for other Annex I spatial data sets still in use at the date of adoption	
October 2020	<b>Other Annex II and III spatial data sets available in accordance with IRs for Annex II and III</b>	



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## Beyond INSPIRE?



- Is there an „after“ INSPIRE?
  - Public and private services
  - Environmental policy
  - Remote sensing communities
  - Continues adaptations



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## Contact & Information

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