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INFRASTRUCTURE FOR SPATIAL INFORMATION IN EUROPE

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INSPIRE is an initiative taken by the environmental sector in the european community.

INSPIRE aims at making available relevant, harmonised and quality geographic information for the purpose of formulation, implementation, monitoring and evaluation of community policy-making

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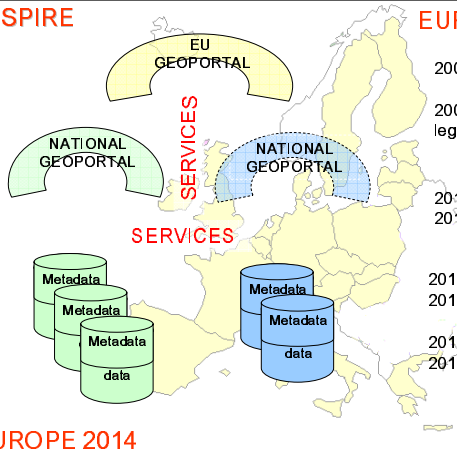

2006: EU directive

2009: National legislation in place

2010: Services (a)
2011: Services (b)

2010: Metadata (I-II)
2013: Metadata (III)

2011: Data (I)
2014: Data (II-III)?

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OVERALL PROVISION

The infrastructure for spatial information in the Community shall build upon infrastructures for spatial information established and operated by the Member States

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DEFINITION

"infrastructure for spatial information" means

- metadata, spatial data sets and spatial data services;
- network services and technologies;
- agreements on sharing, access and use;
- coordination and monitoring mechanisms, processes and procedures.

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INSPIRE DATASETS

- are in electronic format
- are held by a public authority or .....
- relate to the themes listed in the Annexes I, II or III.

INSPIRE do not imply collection of new data

"Sleeping" data is not comprised?

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TWO CATEGORIES OF DATA

The first category (annex I and II data):
data for geo-referencing data in the second category.

They have the status of "multi-purpose" spatial or basic data.

High demands on harmonisation

The second category (annex III data): the environmental data

They are needed in order to monitor and improve the state of the environment, including air, water, soil and .....

Limited demands on harmonisation

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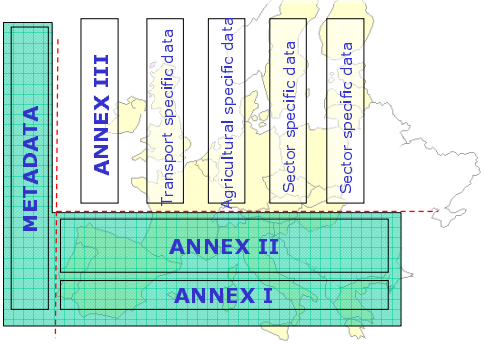
INSPIRE – DATA and METADATA



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Annex I - (2011)
- Coordinatereference systems
- Geographical grid systems
- Geographical names
- Administrative units
- Transport networks
- Hydrography
- Protected sites

Annex II - (2014 ?)
- Elevation
- Addresses of properties
- Cadastral parcels
- Land cover
- Orthoimagery

Annex III - (2014 ?)
- Statistical units census
- Buildings
- Soil
- Geology
- Landuse
- Human health and safety
- Governmental services and environmental monitoring facilities
- Classified sites (industry and agricultur)
- Population distribution – demography
- Area management and .... zones
- Natural risk zones
- Atmospheric conditions
- Meteorological geographical features
- Oceanographic geographical features
- Sea regions
- Bio-geographical regions

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INTEROPERABILLITY OF DATASETS AND SERVICES

General demands to all INSPIRE datasets
Definition and classification of spatial objects relevant to the spatial data and the way in which those spatial data are geo-referenced.

Specific demands to Annex I and II data
- a common system of unique identifiers for spatial objects
- the relationship between spatial objects
- the key attributes .....
- the way the temporal dimension is to be exchanged
- the way in which updates of the data are to be exchanged

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METADATA

Metadata shall include information on:

1. conditions for access to and use of spatial data sets and services .....
2. the quality and validity of spatial data
3. the public authorities responsible for ... the spatial data sets and services
4. Member States shall ... ensure that metadata are complete and of a quality sufficient to fulfil the purpose.

ANNEX I and II: 2010 ANNEX III: 2013

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NETWORK SERVICES

Discovery services
View services
Download services
Transformation services
incl. semantic data transformation
Additional services
(E-commerce service)

Community portal
National portals (not mandatory)

based on a service oriented architecture

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DATA-SHARING AND RE-USE

Discovery services	free of charge
View services	free of charge?
Download services	charging is possible
Transformation services	free of charge
E-commerce services	to be available
Additional services	charging is possible
Community portal	The Commission
National portals	The countries

Common licensing conditions?????

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FROM IDEA TO LEGISLATION

2001: The EU Commission established an expertgroup.
2002: Six position reports were published.
2003: Extended impact analysis
July 2004 : The EU-Commission published a draft directive.
2005/2006: The political process in the Council and the EU-parliament?
2005/2006: Entry in force of the directive?
2006-2008: Transposition of the directive into national legislation

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THE TECHNICAL PROCESS

If the directive enters into force 2006 the implementation will take place between 2007 and 2014.

2007: adoption of implementation rules for metadata for data
- 2010: metadata and services for annex I and annex II dataset
- 2013: metadata and services for annex III dataset

2009: adoption of implementation rules for annex I data
- 2011: implementation rules for annex I data in use

2012: adoption of implementation rules for annex II and III data
- 2014: implementation rules for annex II and III data in use

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LESSONS LEARNED

Why did the initiative from the environmental sector survive?

Perhaps because the countries have digitized datasets

Perhaps because the technology is mature

Perhaps because the initiative was taken by a specific sector with specific formulated needs

Perhaps because of the Extended Impact Assessment (1:7 or 1:10)

Perhaps because the amount of data were reduced

Perhaps because it builds national infrastructures

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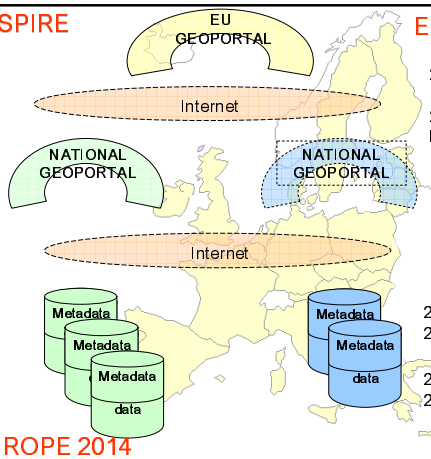

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SCOPE

"…. general rules aimed at the establishment of an infrastructure for spatial information… for the purposes of the Community environmental policies and policies or activities which may have an impact on the environment "

OVERALL PROVISION

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DATA
INTEROPERABILITY
METADATA

NETWORK SERVICES
DATA-SHARING
AND RE-USE

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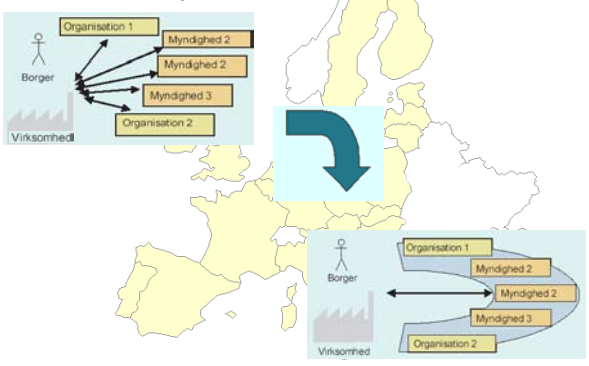

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EU GEOPORTAL

Internet

NATIONAL GEOPORTAL

NATIONAL GEOPORTAL

Internet

Metadata
Metadata
Metadata
data

Metadata
Metadata
data

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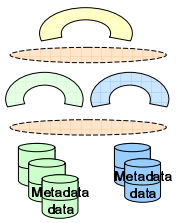

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THE INSPIRE PRINCIPLES
DATA
Data should be collected once and maintained at the level where this can be done most effectively

THE INSPIRE PRINCIPLES
inperoperability
It should be possible to combine seamless spatial information from different sources across Europe and share it between many users and application

It should be possible for information collected at one level to be shared between all the different levels, detailed for detailed investigations, general for strategic purposes

THE INSPIRE PRINCIPLES
Conditions
Geographic information needed for good governance at all levels should be abundant under conditions that do not refrain its extensive use

THE INSPIRE PRINCIPLES
Networkservices
It should be easy to discover which geographic information is available, fits the needs for a particular use and under which conditions it can be acquired and used

THE INSPIRE PRINCIPLES
Geographic data should become easy to understand and interpret because it can be visualised within the appropriate context selected in a user-friendly way.

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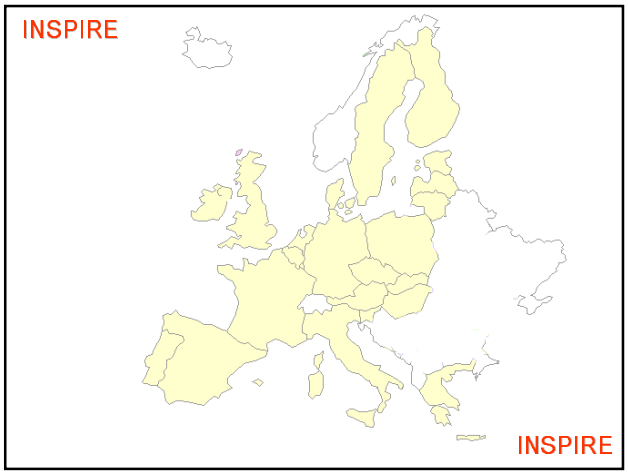
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