

# Assessing the impact of Public Sector Geographic Information

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## PSI and Geographic Information

Geographic information a large component of PSI in both volume and economic value

PSI Directive sets the framework for the exploitation of public information made available by government

INSPIRE Directive addresses geographic and environmental information

The Directive was approved in March 2007 and came into force in May 2007

It sets more stringent rules to ensure discovery, access, and interoperability of geographic information and related services

# INSPIRE Directive General Provisions

INSPIRE lays down **general rules** to establish an infrastructure for spatial information in Europe for the purposes of Community environmental policies and policies or activities which may have an impact on the environment.

INSPIRE to be based on the infrastructures for spatial information established and operated by the Member States.

INSPIRE does not require collection of new spatial data

INSPIRE does not affect existing Intellectual Property Rights

# INSPIRE Components

Metadata

Interoperability of spatial data sets and services

Network services (discovery, view, download, invoke)

Data and Service sharing (policy )

Coordination and measures for Monitoring & Reporting

*INSPIRE is a Framework Directive*

*Detailed technical provisions for the issues above will be laid down in Implementing Rules (IR)*

JRC is responsible for overall technical coordination of INSPIRE

# INSPIRE Spatial Data Scope

## Annex I

- Coordinate reference systems
- Geographical grid systems
- Geographical names
- Administrative units
- Addresses
- Cadastral parcels
- Transport networks
- Hydrography
- Protected sites

## Annex II

- Elevation
- Land cover
- Ortho-imagery
- Geology

*Harmonised spatial data specifications more stringent for Annex I and II than for Annex III*

### Annex III

Statistical units

Buildings

Soil

Land use

Human health and safety

Utility and governmental services

Environmental monitoring facilities

Production and industrial facilities

Agricultural and aquaculture  
facilities

Population distribution –  
demography

Area management/restriction  
/regulation zones & reporting units

Natural risk zones

Atmospheric conditions

Meteorological geographical features

Oceanographic geographical features

Sea regions

Bio-geographical regions

Habitats and biotopes

Species distribution

Energy Resources

Mineral resources

## Assessing the impact of INSPIRE

Extended Impact Assessment carried out in 2003. It demonstrated potential benefit but required large number of assumptions in the absence of available evidence in this field.

Review of best international practice in assessing spatial data infrastructures carried out in 2006-07.

Some promising methodologies but most studies ex-ante with no follow up.

Identification of user groups and benefits most problematic. Regional & local levels appeared promising

E-government Economic Programme study (e-GEP) provides useful set of indicators

Launch of study in Catalunya in 2007 to evaluate impacts ex-post.

## Catalunya Study: Key findings

Costs: €1.5 million over 4 years (2002-06)

- Human resources account for 76% of total cost during launch period (2002-03) and 91% during operational period (2004-05)

Benefits: assessed for 2006 with a focus on local government level

- Efficiency savings account for 500 hours per month = €2.6 m
- Effectiveness savings account for another 480 hours per month
- Wider social benefits are not quantifiable but clear narrowing of digital divide between small local authorities and larger ones
- Benefits to private sector visible but not outstanding yet

Four years of investment recovered in 6 months

Full report to be published soon on [www.ec-gis.org/inspire](http://www.ec-gis.org/inspire).



## Indicators: Efficiency

<u>Impact</u>	<u>Indicator</u>
Monetary gains	Savings in time (hours/month)
	Expected or predicted savings in consumables (Euros/month)
Better prepared personnel	More motivated employees with new training (number)
Improvements in the organisation	Time saved in the redesigned processes (hours/month)
	New processes (e.g. cadastre maintenance, license teams) (list-qualitative)
	Interoperable services (e.g. public service, permits) (list-qualitative)
	Interdepartmental data sharing (list-qualitative)
	Better planning of actions and decisions (list-qualitative)
	GIS services accessible from municipal websites (list-qualitative)

## Effectiveness and wider social benefits

### EFFECTIVENESS

<u>Impact</u>	<u>Indicator</u>
Benefits for residents	Time saved by residents (hours/moth)
	Time saved by companies (hours/moth)
User satisfaction	Repeat users of services (numbers, %)
	Volume of data queries and downloads (number)
	User satisfaction (qualitative)
Extension of services	Use of new services by businesses (number)
	Use of new services by residents (increase per month)
	Uses enabled exclusively by SDI (qualitative)

### DEMOCRACY

<u>Impact</u>	<u>Indicator</u>
Openness and transparency	Interactive services and web access (number)
	Available metadata records (number)
Participation	Complaints, queries, suggestions, errors, etc. transmitted electronically (number/month)

## Lessons learned

Possible to measure impacts, with outcomes validated by user groups

Methodology appropriate for spatial data infrastructures or e-gov initiatives once operational

Other methodologies (e.g. MCA) better to evaluate ex-ante alternative strategies or investments from multiple stakeholders

Indicators useful BUT much preliminary work AND in depth interviewing necessary to gather quality information

Planning to repeat across multiple regions in comparative study

More research on alternative approaches needed (e.g. measuring value added)

**Thank you for your attention !**



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**For more information on INSPIRE: [www.ec-gis.org/inspire](http://www.ec-gis.org/inspire)**