



Inspire-verkosto

# Costs and benefits of implementing the INSPIRE, experiences from Finland

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Cost and Benefits of  
implementing the INSPIRE  
Directive Workshop, JRC, Ispra

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# The estimated costs and benefits of implementing INSPIRE in 2008

- Two studies before the national legislation (SDI law 17.6.2009)
  - A working group that was managed by the Ministry of Agriculture and Forestry evaluated the cost of the national implementation of the INSPIRE
  - A study about the potential benefits of the implementation of INSPIRE in Finland was made in the Helsinki University of Technology

# The estimated costs of implementing INSPIRE (2008)

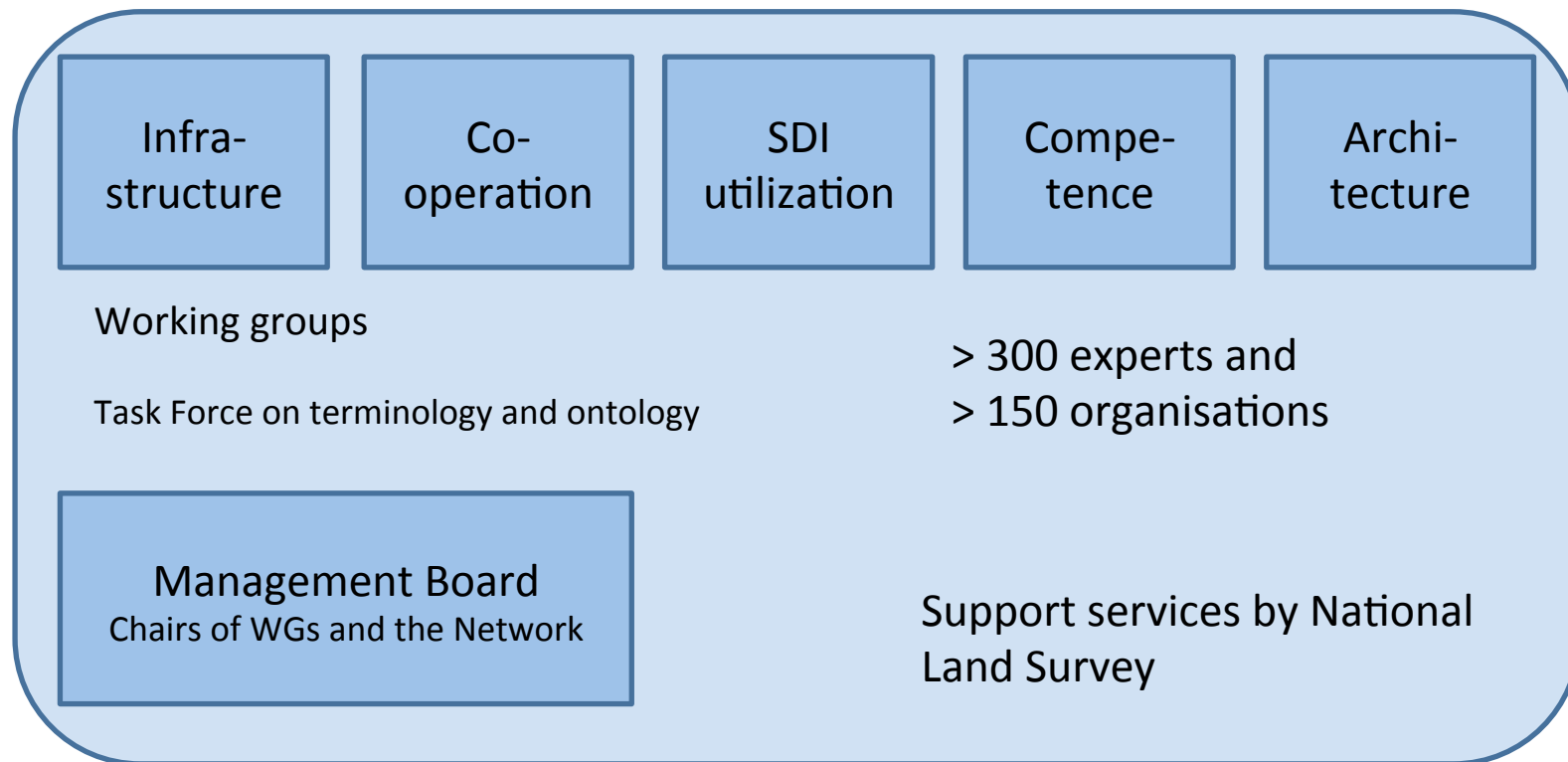
	2010 – 2012 EUR	2013 – 2019 EUR
Extra finance for the launch of the NSDI  (estimated total costs are double)	4.5 million - state and regional administration 3.6 million (0.8 million for the national geoportal) - municipalities 0.9 million - 10 000 – 20 000 / organization	
Extra finance for the maintenance of the NSDI (estimated total costs are double or triple)	1.2 – 1.3 million / year (mainly state and regional administration)	1.2 – 1.3 million / year (mainly state and regional administration)
Extra finance for implementing Annex III		1.7 million - state and regional administration 1.1 million - municipalities 0.6 million
Estimated total costs for the maintenance of required network services (are mainly implemented together with other information services)	4 million / year - 10 000 / organisation	4 million / year - 10 000 / organisation

# The estimated benefits of implementing INSPIRE (2008)

- Based on interviews and questionnaires
- All respondents were not able to envision and estimate the future benefits of the utilisation of spatial data in their own organisations if a comprehensive, well-implemented national SDI were available
- Internal benefits in user organizations (state, regional, local) EUR 9 million / year (min 3 million, max 15 million)
- External benefits to citizens and other organisations EUR 2.5 million / year

# Benefits of INSPIRE – the Finnish Inspire Network

- Established 1.6.2009

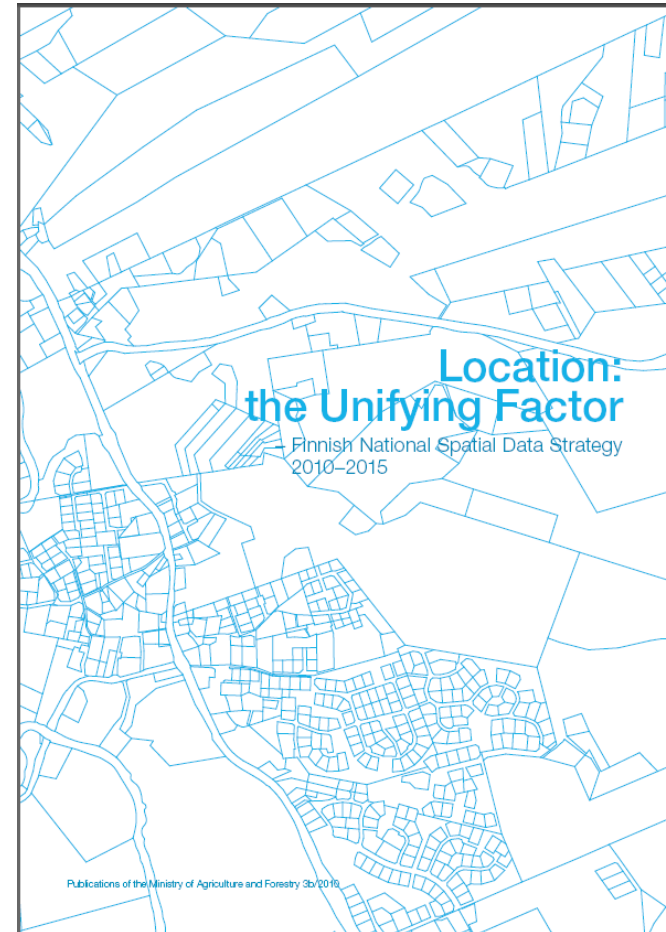


# Benefits of INSPIRE – the Finnish Inspire Network

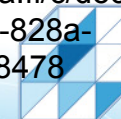
- National cooperation is based on open and strong networking of experts
- Supports and engages different stakeholder groups (state authorities, municipalities, private companies, universities and other organisations) in the SDI implementation.
- Workshops, training and group meetings open to all interested people improve sharing of knowledge and “learning together” process.

# Benefits of INSPIRE – the Finnish National Spatial Data Strategy 2010–2015

- The objective of the strategy is to implement a national spatial data infrastructure
- In the development a bottom-up approach instead of top-down was used



[http://www.paikkatietoikkuna.fi/c/document\\_library/get\\_file?uuid=b951e457-3a93-4467-828a-fb353a4b5f4e&groupId=108478](http://www.paikkatietoikkuna.fi/c/document_library/get_file?uuid=b951e457-3a93-4467-828a-fb353a4b5f4e&groupId=108478)



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# The Finnish National Spatial Data Strategy 2010–2015

## Vision for 2015

The spatial data infrastructure has improved the quality of services and decision-making and made public administration, industry and research more efficient, and, supported by research and education, it has generated new business and new services for the public.



# The Finnish National Spatial Data Strategy 2010–2015

Objectives and aims for 2015:

I High-quality and easily accessible spatial data form the basis for service improvements and new services

1. The public sector will endeavour to meet the growing needs of society at large by producing spatial data that are of a high quality, up-to-date, comprehensive and interoperable.
2. Spatial data will be available at the service interfaces of the processes maintaining the data.
3. The terms and conditions governing the use of spatial data will be clear and harmonised, and the use of spatial data concerning individuals will be well-managed and governed by guidelines.
4. The pricing of spatial data will not be an obstacle to its use.

II A smoothly functioning division of labour between the private and public sectors and within the public sector will help to put the use of spatial data on a more efficient basis

5. The production of spatial data will be put on a more efficient basis by eliminating overlapping work.
6. Spatial data produced by the public sector will be widely available for use by the markets as well as for research and public administration.
7. Companies will create a large number of innovative solutions based on spatial data for the needs of public administration and other sectors of society.

III The spatial data infrastructure will improve the quality of life and the quality of processes carried out in society at large

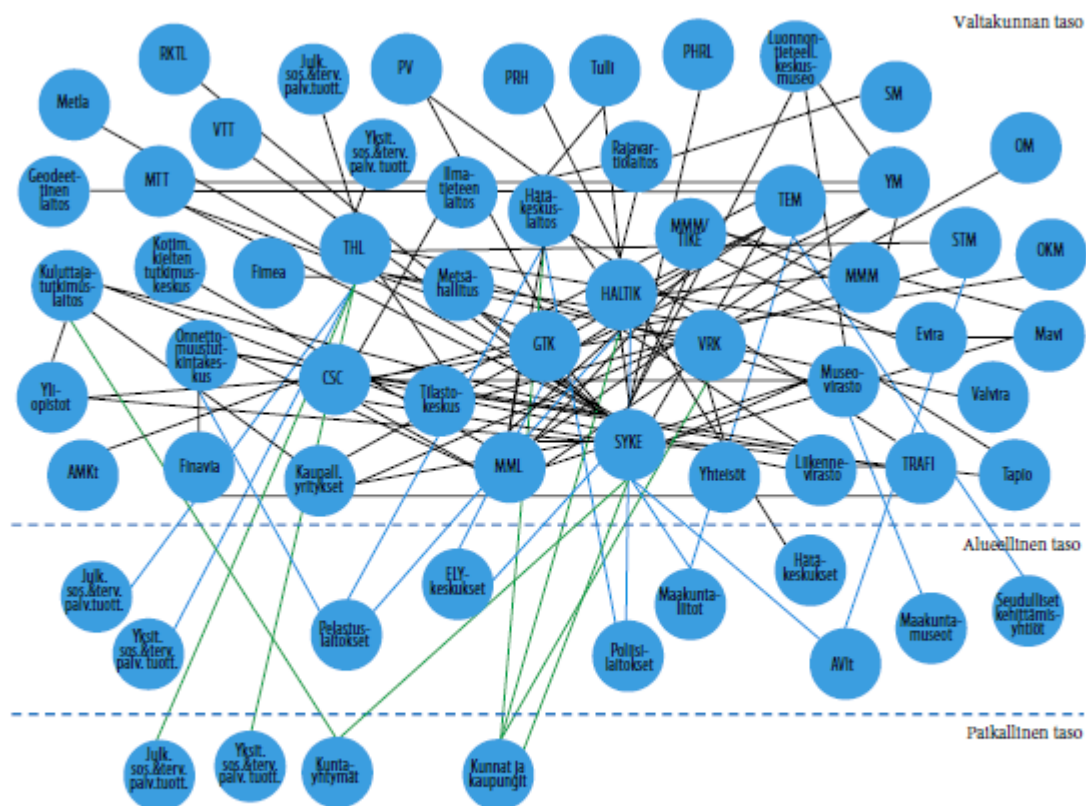
8. Spatial data services will support people in their everyday activities and during their leisure time.
9. Spatial data will be widely used in decision making and it will support the participation of citizens.
10. Spatial data will be used for managing a large number of functions essential for society at large.
11. The use of spatial data and spatial data technology will provide a solution for the monitoring and assessment of the state of the environment.

IV Research and training in the spatial data sector will support the use of spatial data and the development of the spatial data infrastructure

12. Increasing training will help put spatial data expertise on a more in-depth basis in many sectors.
13. Research using spatial data will grow and expand into new branches of science.
14. Research and development of spatial data services will be at the cutting edge internationally.

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# Co-operation in spatial data issues – from the perspective of the state administration level

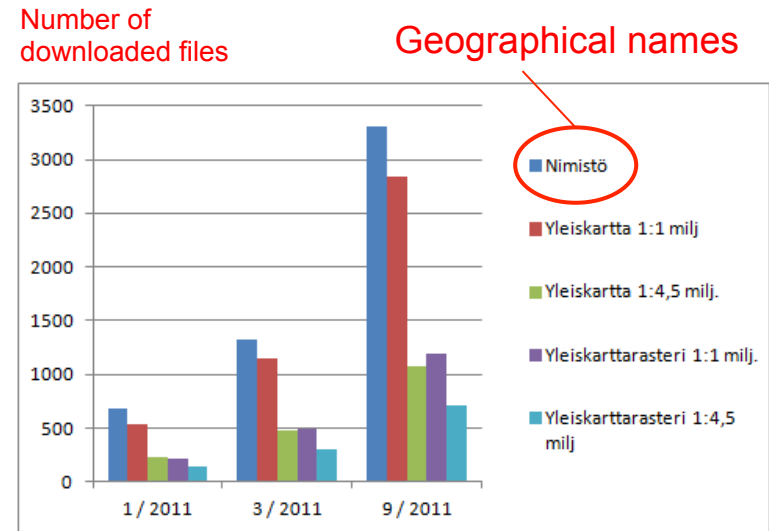


From the study: The utilization of spatial data in public sector in Finland 2010

[http://www.paikkatietoikkuna.fi/c/document\\_library/get\\_file?uuid=18e702ba-aad8-476d-9867-cc0c3f2306d6&groupId=108478](http://www.paikkatietoikkuna.fi/c/document_library/get_file?uuid=18e702ba-aad8-476d-9867-cc0c3f2306d6&groupId=108478)

# Benefits of INSPIRE – has encouraged producers to open data and service interfaces

- National Land Survey
  - Opened small scale datasets 2011
  - Opened topographic datasets 1 May 2012 for free use (Topographic Database, aerial and orthophotos)



# Finnish Environment Institute – the number of downloads of national environmental and geographical information packages

Fees were charged

TIETOKESKUS

## Valtakunnallisten aineistopakettien latausmäärät

	2007 maksullinen	05/2008	2009	2010
*Pohjavesialueet	22	642	1486	1232
*Luonnonsuojelualueet	28	444	919	807
Natura2000	36	393	691	602
Valuma-aluejako	4	283	687	685
Arvokkaat kallioalueet	4	345	776	431
Suojeluohjelmat	17	236	382	362
Suokasvillisuusvyöhykkeet	2	154	207	129
Metsäkasvillisuusvyöhykkeet	2	152	287	210
*Rajoitusalueet	3	132	246	156
*Maakuntakaavat			276	309
Vesienhoitoalueet			44	359
Asuinalueet			355	364
Luonnon virkistyskäyttö			216	220
Yhdyskuntarakenne			355	272
Asemakaavoitettu alue			208	553
RakL mukaiset yleiskaavarajat			31	169
CORINE2000 (4 aineistoa)	41	82	92	72
CORINE2006				279
Meluselvitykset				25
Liikennealueiden riskiluokitus			173	220
Maisemamaakunnat			113	
<b>yhteensä</b>	<b>159</b>	<b>2863</b>	<b>7431</b>	<b>7569</b>

16.9.2004

\* Päivityvät kaksi kertaa vuodessa

SYKE

15.10.2012

Source: [http://www.maanmittauslaitos.fi/sites/default/files/Teiniranta\\_SYKE\\_20111102.pdf](http://www.maanmittauslaitos.fi/sites/default/files/Teiniranta_SYKE_20111102.pdf)

# Benefits of INSPIRE — has encouraged producers to open data and service interfaces

- **Statistics Finland** ([http://tilastokeskus.fi/ajk/tiedotteet/2012/tiedote\\_002\\_2012-01-25\\_en.html](http://tilastokeskus.fi/ajk/tiedotteet/2012/tiedote_002_2012-01-25_en.html))
- **Geological Survey of Finland**
- **Finnish Museum of Natural History** (<http://www.luomus.fi/english/about/opendata/index.htm>)
- **National Board of Antiquities**
- **Finnish Forest Research Institute (Metla)**
  - national forest inventory data later in 2012
- **Finnish Meteorological Institute**
  - weather and radar observations in the spring 2013
- **Cities in the Helsinki region**

# Benefits of INSPIRE – tools to assess GIS maturities of user organisations

- The GIS maturities of the organisations that use spatial data are not only an internal matter of these organisations but also highlight the organisations' capabilities to benefit from a national spatial data infrastructure (NSDI) and direct needs to the development of the NSDI
- Maturity assessments could be used as a measure in the evaluation of the success of the implementation of an NSDI

# Benefits of INSPIRE – tools to assess GIS maturities of user organisations

- A comprehensive GIS maturity model was developed by the Finnish Inspire Network (the content and the development process of the model are described in “Spatially Enabling Government, Industry and Citizens: Research and Development” Perspectives <http://www.gsdi.org/openaccessbooks>)
- GIS maturity model is a concrete tool to assess the current state of competence and to set a roadmap for organisational improvement
- The Inspire Network has a plan to develop an open web application for the assessment of GIS maturity



# Cost of INSPIRE – the level of costs of the supporting services in NLS

	2009 EUR	2010 EUR	2011 EUR	2012 EUR (estimated)
Labour costs (includes indirect personal costs) and cost of outsourcing service for the development of national geoportal	0.9 million	1.15 million	1.3 million	1.3 million

- Support and guidance for INSPIRE implementation and for the utilisation of INSPIRE data and network services in organisations
- Development of the national geoportal
- Organization of training, workshops etc.