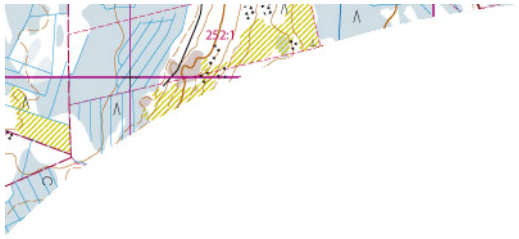

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Emerging Trends in Institutional Arrangements Europe - Finland

Arvo Kokkonen
Deputy Director General
National Land Survey of Finland

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Contents

- Facts about Finland
- National Land Survey of Finland
- European cooperation in Geospatial Information
- Institutional Arrangements
- Conlusions

Facts about Finland

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Land area 304,530 km2
Water area 33,615 km2
Total area 338,195 km2

Population 5.4 million
17 inhabitants per km2
67% in towns
19 counties
336 municipalities
- Municipal reform in progress

Joined the European Union in 1995 along with Sweden and Austria

Wood processing industry, electronics industry, metal and engineering industry

GDP per capita 29 500 euros

National Land Survey of Finland

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- established in 1812
- subordinate to the Ministry of Agriculture and Forestry
- responsible for
  - cadastre and legal surveys
  - land registration
  - topographic data system
  - land information system
  - implementing national INSPIRE legislation
- Central Administration in Helsinki, 12 District Survey Offices, 35 localities throughout Finland
- budget about 125 million euros, 80 million from revenues, 45 million from the state budget

FINNISH QUALITY AWARD 2009

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INSPIRE and cooperation in Europe

INSPIRE
- INfrastructure for SPatial InfoRmation in Europe

- European Union (EU) **framework directive**
  - came into force in May 2007
- founded on **common** European environmental **policy**
- goal is to establish European Spatial Data Infrastructure (ESDI) based on **harmonized national SDI's** in Member States (MS).
- The directive is adopted to MS's **national laws**
- INSPIRE will be implemented according detailed technical **implementing rules** prepared by expert drafting teams

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INSPIRE Principles

- Spatial data should be **collected once** and maintained at the level where this can be done most effectively
- It must be possible to **combine seamlessly** spatial data from different sources across the EU and share it between many users and applications
- It must be possible for spatial data collected at one level of administration **to be shared** between all the different levels of administration
- 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 conditions for its use

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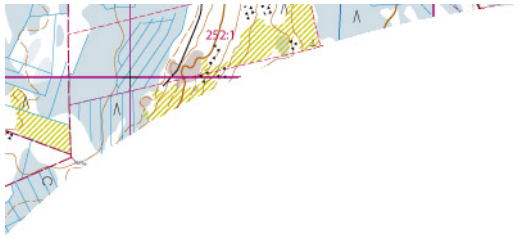
SDI Challenges

- Political consent
  - Information society, electrical services, eGovernment
- Data policy restrictions
  - Pricing, copyright (IPR), accesing rights, licensing policy
- Technical incompatibility in existing SDI's
  - Incompatible data products, incompatible information systems, lack of interoperabilty, redundancy
- Technical standards are still immature
  - Entrepreunal spirit in implementation, different versions of standards, global solutions (like Google, Bing, Nokia…) tend to pass by
- Lack of coordination in governance
  - Between levels in administration, between countries (across borders)
- Lack of data (or poor quality of the data)



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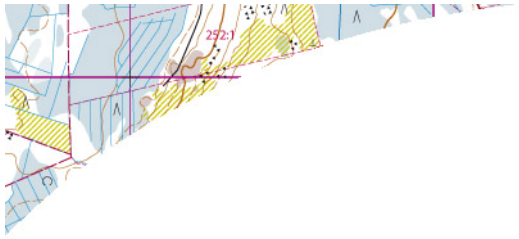
Inspire catalyses European development

- Shift from data capture to data services
- Wider attention to spatial data at political level
- National SDI - eGovernance

- ”GIS goes to Web”, analyzing tools for everyone



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European eGovernment Action Plan 2011-2015
- harnessing ITC to promote smart, sustainable and innovative Government

- to deliver innovative online public services to citizens and businesses
- increase the take-up of these services across Europe

- sets out concrete actions and priorities
  - to exploit the benefits of information and communication technologies (ICT) across Europe
  - to make access to public services more efficient and cost effective

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The Seven pillars of the Digital Agenda for Europe

1. **Digital single market**
2. **Interoperability, openness and standards**
3. **Online trust and security**
4. **Internet for all**
5. **ICT Research and innovation**
6. **Digital inclusion**
7. **ICT for societal benefits**

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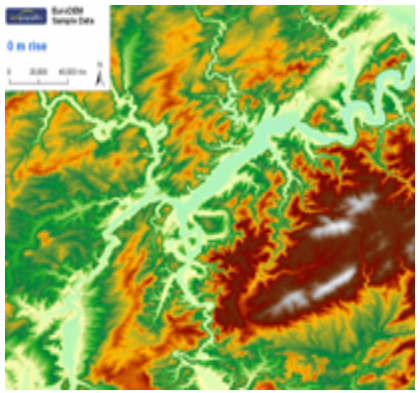
EuroGeographics

- a membership association comprising public authorities responsible for national cadastre, land registry and mapping
- **Developing the European Location Framework**
- **Making full use of Public Sector Information**

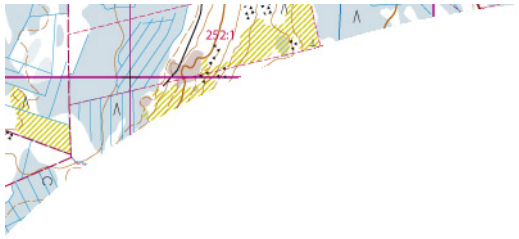
EuroBoundaryMap

EuroGlobalMap

EuroRegionalMap



EuroDEM



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SDI implementation in Finland

SDI implementation in Finland
Legislation

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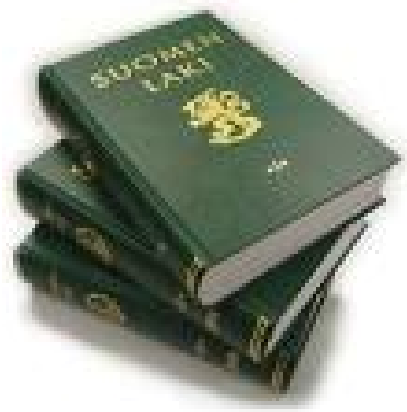

- **SDI law, 17.6.2009**
  - Minimal requirements of Inspire
- **SDI act, 12.10.2009**
  - Coordinator: Ministry of Agriculture and Forestry
    - List of authorities involved (26+municipalities)
  - Duties: metadata, view&download services, reporting
    - **Support services by National Land Survey:** geoportal, discovery&transformation services, guidance, monitoring&reporting support
  - National Council for Geographic Information (7 ministries + 8 other members)

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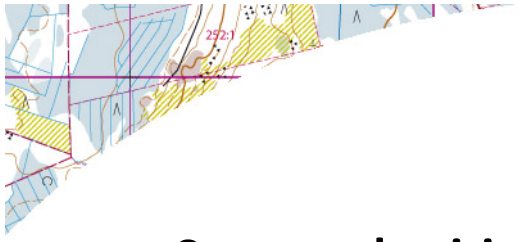
SDI implementation in Finland
Duties for authorities

The tasks for public authorities as data providers:

- Metadata describing datasets and services
- View service (WMS) for existing datasets
- Download service (file and/or WFS) for existing datasets
- Network services for INSPIRE data products
- Monitoring data usage on service interfaces



INSPIRE / SDI Authorities in Finland nominated in the act of the SDI (1.1.2010-)

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State authorities:

Environment Institute
National Land Survey
Meteorological Institute
Transport Agency
Geological Survey
Statistics Finland
Population Registry Centre
Agency for Rural Affairs
Natural History Museum
Game and Fisheries Research
Forest Research Institute
National Forest Agency
Food Safety Authority
Agrifood Research
Agriculture and Forestry Information Centre
Board of Antiquities
Defence Forcies
Transport Safety Agency
Institute for Health and Welfare
Energy Market Authority
Ministry of Employment and the Economy

Regional authorities:

economy, transport and environment centres (15)
regional councils (19)
forestry centres (13)
search and resque units (22)

Local authorities:

municipalities (336)

Coordination structure

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Ministry of Agriculture and Forestry (MAF)

National Council for Geographic Information

Inspire-secretariat (NLS Finland)

INSPIRE- network (1.6.2009 -)

- Steering group
- Work groups
- Geoportal and network services (mainly service providers)
- Products and harmonising (mainly data providers)
- Data and service sharing (data and service providers)
- Employment and use of spatial data (mainly users)
- Business models and roles of stakeholders

- New grouping 2011-2012: Infrastructure, Co-operation, Exploitation, Capability building

- Task Force on terminology and ontologies

> 300 experts and > 140 organisations

Government 28
Municipalities 16
Universities 9
Business 26
Other

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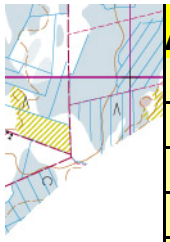
National Council for Geographic Information

Principal tasks:

- Follow-up the development of the NSDI
- Follow-up the implementation of the INSPIRE
- Handling of the Implementation Rules and Guidelines
- Handling of the national guidelines for the SDI implementation
- Handling of the terms of use for the national geoportal services
- Writing initiatives and statements
- Maintaining the national list of Inspire data sets



National Spatial Data Sets

Annex	Theme	Data Sets	Organisations
I	*3. Geographical names*	*1*	1
I	*4. Administrative units*	*3*	2
I	*5. Addresses*	*2*	2+
I	*6. Cadastral parcels*	*1*	2+
I	*7. Transport networks*	*5*	2
I	*8. Hydrography*	*6*	3
I	*9. Protected sites*	*6*	3+
II	*1. Elevation*	4	*3*
II	*2. Land cover*	5	4
II	*3. Orthoimagery*	4	3
II	*4. Geology*	15	3
III	*1. Statistical units*	*1*	*1*
III	*2. Buildings*	*3*	3+
III	*3. Soil*	*1*	1
III	*4. Land use*	*3*	1+
III	*5. Human health and safety*	*4*	3+
III	*6. Utility and governmental services*	*3*	3
III	*7. Environmental monitoring facilities*	*6*	3+
III	*8. Production and industrial facilities*	*3*	3+
III	*9. Agricultural and aquaculture facilities*	*1*	1
III	*10. Population distribution – demography*	*1*	1
III	*11. Area manageme*	*12*	6+
III	*12. Natural risk zone*	*1*	1
III	*13. Atmospheric con*	*1*	1
III	*14. Meteorological geog. features*	*1*	1
III	*15. Oceanographic geogr. features*	*1*	1
III	*17. Bio-geographical regions*	*3*	2
III	*18. Habitats and biotopes*	*1*	1
III	*19. Species distribution*	*4*	2
III	*20. Energy resources*	*4*	4
III	*21. Mineral resources*	*3*	1

~100 data sets in total

+ refers municipalities

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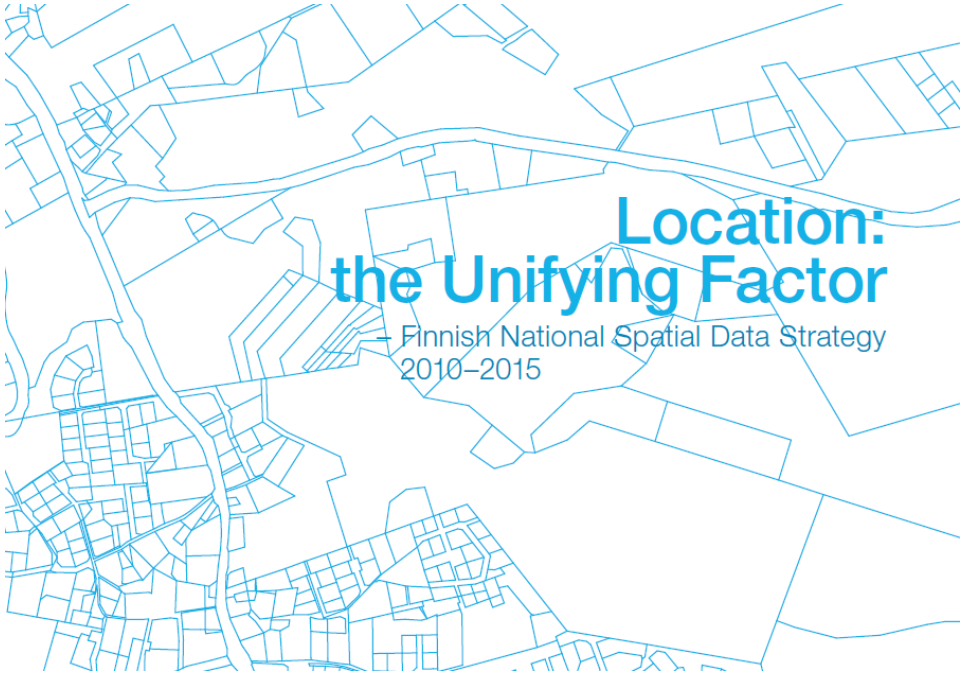
National SDI strategy



Vision 2015:

- **Utilisation of SDI**
- **Goals**

• Easy access on high quality spatial data
• Clear roles of stakeholders in the public and the private sector
• Quality of life and processes in the society
• R&D supporting the utilisation and the development of SDI

http://www.paikkatietoikkuna.fi/web/en/sdi-in-finland

Finnish Geoportal

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- **Motivation**
  - INSPIRE directive: establish an infrastructure for spatial information in Europe
  - European Union and national legislation:

    >400 public authorities obliged in Finland

    ~100 spatial data sets from 34 data themes involved in Finland
- **Main goals**
  - Provide guidance for INSPIRE implementation
  - Provide INSPIRE Discovery Service
  - Demonstrate the potential of Spatial Data Infrastructure

Tervetuloa Panu Muhli!

Suomeksi | på Svenska | in English

Panu Muhli | Sign Out A+ A-

Paikkatietoikkuna

Search... SEARCH

FRONTPAGE | MAP WINDOW | EMBEDDED MAPS | SDI IN FINLAND

Paikkatietoikkuna Finnish Geoportal

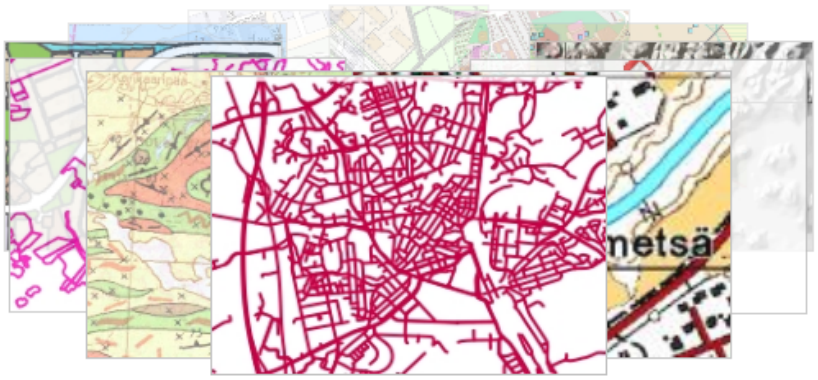
Paikkatietoikkuna is a national portal that, with words and map pictures, presents the spatial data produced and exploited in the Finnish society.

Map window offers a possibility to browse dozens of map levels, produced by different organizations, on different themes, such as terrain, soil and land use as well as traffic network.

Paikkatietoikkuna is based on open source software.You may dowload the source code here.

Karuselli – Look and Feel – Configuration – Close

Get to know spatial data sets | spatial data organisations | spatial data services



Digiroad

Open in map window

Previous | Next

Digiroad

Digiroad, administrated by The Finnish Transport Agency, is a national road and street database that contains information on the geometry of roads and streets as well as their physical features.

Paikkatietoikkuna is the best quality innovation

QUALITY INNOVATION OF THE YEAR 2010

The Finnish Geoportal, Paikkatietoikkuna has won the Quality Innovation of the Year award in the category for public sector and non-profit corporations in a competition organized by Excellence Finland.

Read more

Cartography & Geoinformatics in Finland

Positio ICC 2011 Special Issue reports some of the progress made in Finland in the geoinformation field and gives an insight into development of spatial data infrastructure in Finland.

Positio ICC 2011 Special Issue (pdf)

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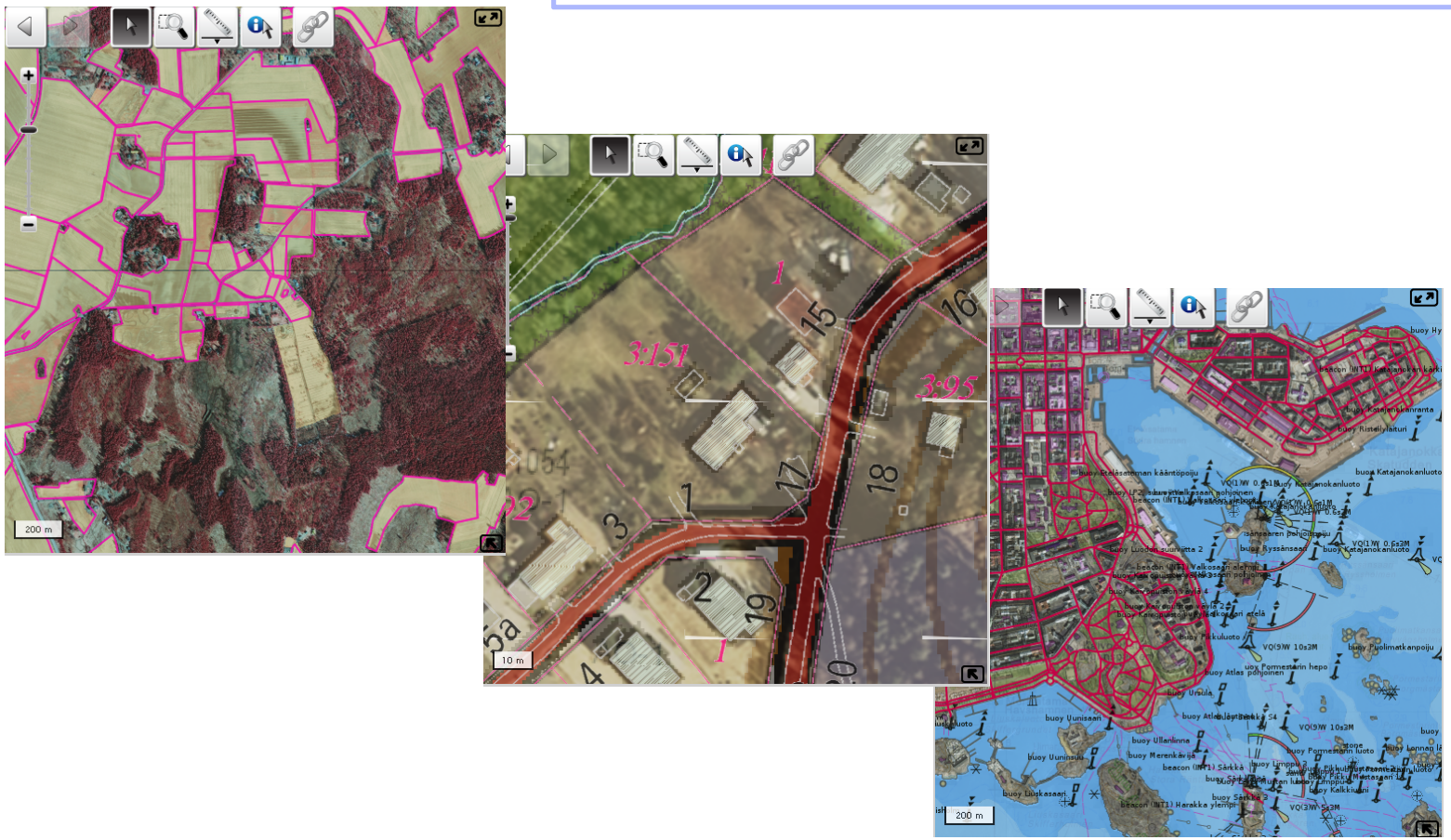
http://www.geoportal.fi



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Open Data (Public Sector)

- **Government principles 3.3.2011**
  - **Public data should be available for re-use**
    - **Free of charge**
    - **Harmonised licensing**
- **NLS Finland Open Data Initiative**
  - **All topographic data freely available from May 1, 2012**
  - **Topographic database, elevation model, laser scanning data, aerial photos, place and road names, background maps, …**

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NLS Finland:
Opening of the topographic data (May 2012)

- The demand for free governmental data has grown a lot.
- Geographic information often referred as the most valuable dataset for users to be opened.

- Even public sector authorities started to use free datasets available on the internet instead of using the accurate high-quality data from a governmental body.

During the year 2011:

- conclusion by NLS Finland that in the long run it is economically better as a whole for the Finnish Society to let all users to use the same reference data rather than limit the usage by charging for it.

Base Registers in Finland

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- The basic units of society:
  - natural persons
  - real estates
  - buildings
  - enterprises, corporations and foundations
- Topographic Database

Base Registers

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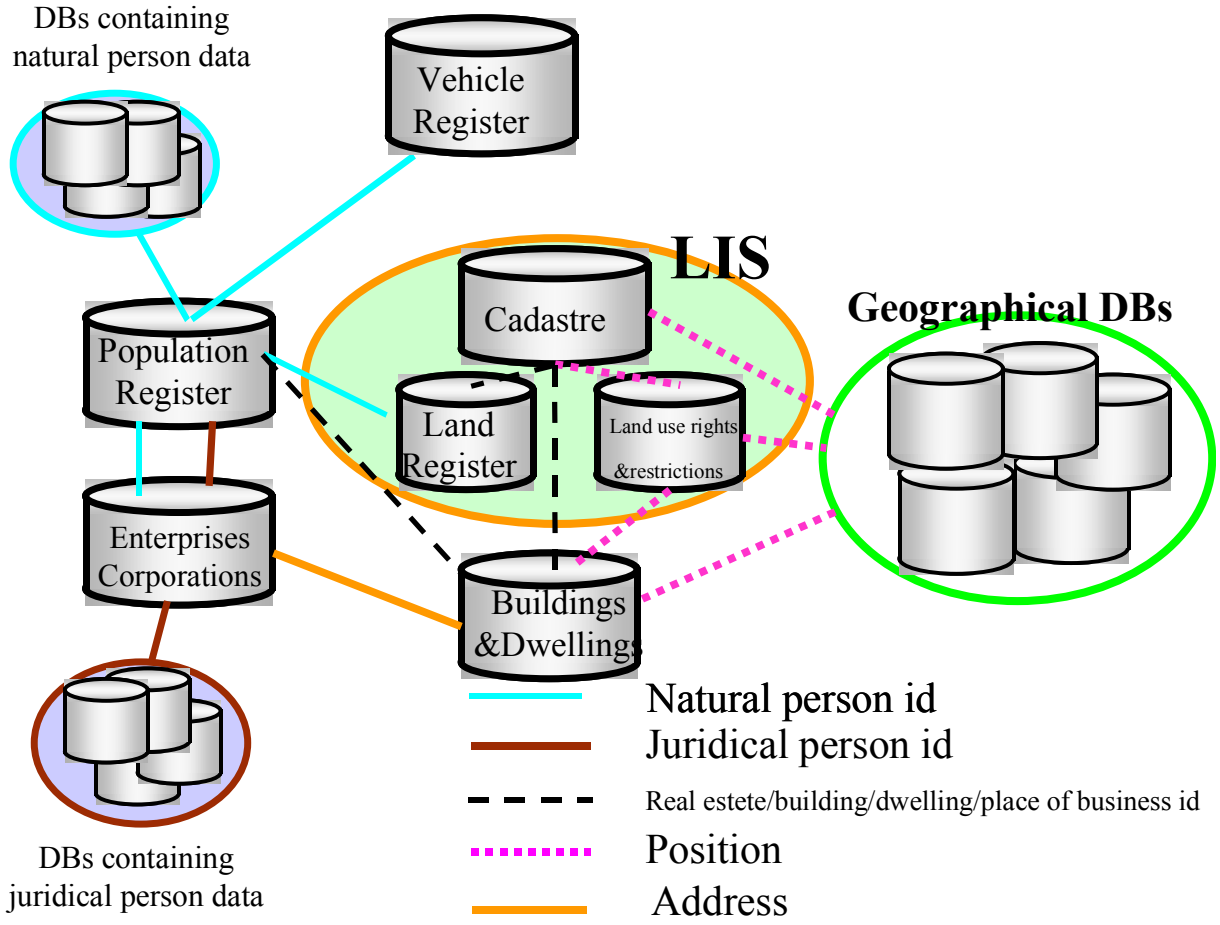

Integration of register data using IDs and position as links

Topographic Database

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- National databank
  - maintained by the NLS
  - up-to-date information on terrain and built-up surroundings
- Maps of Finland base on the Topographic Database.
  - power lines, water areas, place names, address data, road data, barriers, number of storeys in buildings
- The content and technical characteristics of the material uniform and of the same quality

LIS in Finland

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- Part of base register structure
- Cadastre
- Land Register
- Legislation Jan 1, 2003
  - setting-up
  - administration
  - financing
- Operational June 1, 2005

LIS Players

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- Ministry of Agriculture and Forestry
  - legislation
- National Land Survey
  - administration, data
- Municipalities
  - data
- Private company
  - IT management

Other Agencies' Data

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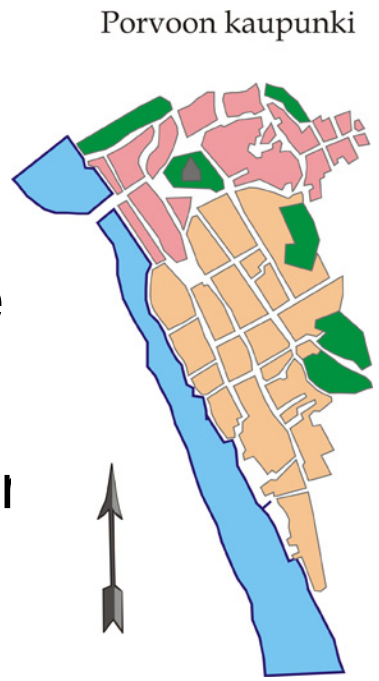
- Land use plan data
  - Municipalities
    - Master plans, detailed plans
- Nature conservation areas on private land
  - Regional Centers for Economic Develop Transport and the Environment
- Environment allowance agreements
  - Forestry Centres
- Decisions according to Water Act
  - Regional State Administration Agencies
    - Reservoirs, protection areas, etc.



LIS Data Policy

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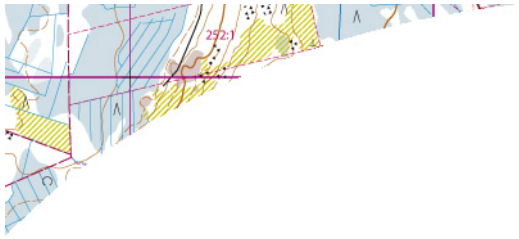
- Data open for everybody
- Queries and taking notes free of charge
- Extracts of register units against fee
- Digital data containing person info (ownership, conveyance, mortgage), with licence for stipulated uses only, against fee



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Thank you for your interest!

EFQM
Recognised for excellence
5 star

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