YOU NEED TECHNOLOGY, PLATFORMS AND DATA – BUT ALSO A FRAMEWORK AND POLITICAL SUPPORT

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CONTENTS

• Base registers and spatial data policy
• Technology
• Platforms
• Data
BASE REGISTERS

• The Finnish base register system
  • Population
  • Buildings and dwellings
  • Enterprises and Corporations
  • Real Properties
BASE REGISTER SYSTEM

Integration of register data using IDs and position as links
300 million handovers per year

- DBs containing natural person data
- Population register
- Enterprises & corporations
- DBs containing legal person data
- Buildings & dwellings
- Cadastre
- Land register & restrictions
- Landis
- Geographical DBs

Finnish Patent and Registration Office

NLS NATIONAL LAND SURVEY OF FINLAND
SPATIAL DATA POLICY

- The NSDI has been there, built to enable spatial data collection, storage, distribution, and use
- Higher level description, goals, plans to reach them and guidelines were considered a necessary step forward
- Report on Spatial Data Policy initiated
REPORT ON SPATIAL DATA POLICY

• Discusses
  • What types of spatial data are needed
  • How their production, management, and distribution are developed
  • How their use is promoted
• Its vision
  • Finland has the most innovative and secure spatial data ecosystem in the world
REPORT ON SPATIAL DATA POLICY

• Prepared and drafted in Ministry of Agriculture and Forestry (MAF)
• The document is progressing through a parliamentary process and is supposed to be endorsed by the Parliament WHEN.
• The end result is increased understanding at the political decision makers’ level of the importance of spatial data and consequently also support to continued work towards a solid spatially enabled society with clearly stated vision and responsibilities.
• The report itself is followed by an implementation plan with 7 concrete goals. The implementation of the measures described in the plan require that the ministry level will give its full support to the practical work including development of the necessary institutional, legislative and other measures to be taken.
The outlined development measures

- Ensure high-quality address information
- Give access to exact positioning for all
- Create a common spatial data platform for security authorities
- Develop a common spatial data ecosystem
- More efficient cooperation via a new cooperation body
- Enhance knowledge and expertise on spatial data
- Ensure progress through legislative reforms
Technology

- Technology is a tool – with which you can change how you do things – but technology alone is not enough - you need also processes and institutions
- And you need an idea
- NLS has implemented several services and systems that not only revolutionized the way we work but also taught us how important it is to involve your partners and stakeholders
  - Use of same APIs (Application programming interface) for both own production and customer services
  - Mobile cadastral application for time- and location-independent work
  - Property Transaction Service, which is unique
    - Allows anybody to carry out a real estate sales process digitally
    - Rolling out a perfect application was not enough
    - It was crucial to discuss with the other stakeholders, particularly the banks and real estate brokers, how to make the systems and processes work together
Mobile JAKO Cadastral Application

About 250 surveyors use Mobile JAKO Cadastral Application today

Benefits:
1. Better performance in production process
2. Smaller compensations of the surveyor’s car use
3. Less risk of accidents
4. Less car emissions
5. Better work welfare of the surveyors

At the customer

Network or telephone (3G-4G) connections
Terminal Server (Citrix)
VPN: Virtual Private Network

At home

In the field
Browser Information Services

Map Site
Finnish Geoportal
Open Data Service
Old Map Service
Suomi.fi-maps
LIS Map Site
Customer Transaction Service
Property Transaction Service

Map Site
Finnish Geoportal
Open Data Service
Old Map Service
Suomi.fi-maps
LIS Map Site
Customer Transaction Service
Property Transaction Service

Web Map Service
Web Map Tile Service
Web Feature Service
Document Service (SSL/https)
Web Service (REST)

Orthophoto Data (Bentely)
Topographic Database (SW)
Visualization (PostGIS)
Cadastre (SW)
Purchase Price Register (SW)
Land Register (Oracle)

Every day
Every day
Property Transaction Service

Since 2013

Land Register (Oracle)

Automatic Title pending

Digital signature

Data Interface

Automatic mortgages decision

Strong detection with bank keys or mobile id

Banks
Real Estate Agents

Anywhere Anytime
Spatial Data Platform

- Create a common spatial data platform for the public administration to offer:
  - Common specifications and services for data providers within the public sector
  - Common and unified data for all data users
  - Common user services

- Unify government, regional, and municipal spatial data and provide enterprises and the society with them

- Its purpose
  - Unify and improve public sector digital services
  - Improve and make information based decision making more transparent
  - Save costs within public administration
  - Provide accessibility to spatial data for private sector to build its own service ecosystem upon
In this way spatial data will step up the function of ecosystems in society.

Companies will create applications and services that utilise the Geospatial Platform.

**ECOSYSTEMS**

- The built environment and transport.
- Energy and the bioeconomy.
- The financial sector.
- Public sector services.
- Research and development.
- Education, training and learning.
- Health and well-being.
- Safety/security.

**The Geospatial Platform**

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<th>Location / feature references</th>
<th>Baseline data for 2D and 3D design</th>
<th>Integrated spatial data, metadata and life-cycle management</th>
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<td>Satellite images</td>
<td>Land use</td>
<td>National topographic data</td>
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**PRODUCERS OF NATIONAL HARMONISED SPATIAL DATA**

- Regions
- Municipalities
- Government Companies
- Citizens

**Satellite images**

**Land use**

**National topographic data**

**Addresses**

**INSPIRE**
DATA

- Nation-wide data-bases
  - Cadastre, Land register, topographic database
- Open data
  - Topographic data free since 2012
- Data quality cornerstone
- Added value only when used widely
- Cooperation between NLS, municipalities, other government agencies and even private sector
MAP OF THE PRODUCTION APPLICATIONS

169 classified IT-services in use

About 1000 thousand servers or virtual servers

1800 TB data
SHOWING THE WAY