THE FINNISH CADASTRE: FULLY DIGITAL WITH FULL COVERAGE, AND AN INTEROPERABLE PART OF THE BASE REGISTER SYSTEM - BUT IS THAT ENOUGH?

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• Some facts
• Short history
• Current discussion
• Steps towards future
QUICK FACTS ABOUT FINLAND

5.5 million inhabitants

15.8 inhabitants per km²

2.7 million real estate units

2.6 million buildings and dwellings

0.6 million enterprises and corporations

3.7 million vehicles
SHORT HISTORY

• Roots in the Swedish system
• Own Finnish authority 1812
• Independence 1917
• NLS (11) and municipalities (75) updated their manual Cadastres → 86 primary + national LIS as copy
• Land Register in local courts
• 2005 official nation-wide single Cadastre within LIS
  • NLS maintain
  • NLS and municipalities update
  • Fully digital with full coverage
• Land Register to NLS 2010
DAWN OF CADAstral DIGITALIZATION

• Computerized data processing used first time in a cadastral survey in 1958 (land consolidation).
• Computer-based register was introduced in 1970
CADASTRE OF TODAY

- Real Estate Formation Act in 1995 came into force 1997
- Same law for urban and rural areas
  - Earlier partly different rules
- Better opportunities to use computerized data processing
- New production system JakoKII rolled out 1998
- New Land Information System in 2005 →
- One nationwide Cadastre and cadastral index map
CONTENT OF THE CADASTRE

- Property division
- Incl. shares in common areas
- Connected rights
- Easements, usufructs
- Cadastral index map
- Register units, their identifiers and boundaries

- The State is obliged to pay compensation for errors that are a consequence of decisions taken in cadastral surveys since 1 July 1985.
REAL PROPERTY REGISTERS

• Cadastre
  ▪ NLS and 75 municipalities update
  ▪ NLS, maintain

• Land Register
  ▪ NLS, update and maintain
  ▪ Register on titles and mortgages and special rights

• Purchase Price Register
  ▪ NLS, updating and maintenance
CURRENT ISSUES (1)

Our legacy

• Complexity, time layers \(\rightarrow\) varying specifications and data content \(\rightarrow\) data quality improvement projects since decades

• What data are relevant for today’s users?

• What type of Cadastre do we need in the first place?
CURRENT ISSUES (2)

Our reality

• Ongoing change towards digital society overall
• Customer needs and demand force towards service orientation
• Use of (register) data increases and diversifies
• Modern positioning, open data → accuracy of boundary data an issue
  • E.g. land owners, forest harvesters, infrastructure construction projects…
• Is coordinate cadastre a solution? If so, to what problem? What if you just improved the positional accuracy?
CURRENT ISSUES (3)

Technology

• Improving internal efficiency
  • Introduction of automated production processes
  • Introduction of automated decision making – Land Registry
    • Not yet AI, legislative and ethical issues
• What quality is good enough for the variety of purposes?
• Do new technologies like Blockchain play a role?
• Crowdsourcing, positioning, sensor data
CURRENT ISSUES (4)

Institutions and organization

- Platforms, ecosystems and networks to meet customer needs
  - Interlinked and interoperable registers and databases
  - One-stop-shopping
  - Data quality an essential enabler
  - Appropriate steering and funding mechanisms
STEPS TOWARDS OUR FUTURE

• Katasteri2035 project
  • Research study at Aalto University, funded by NLS and MAF
  • Aim to provide research-based views and scenarios
  • Ideas and insight for decision making

• Internal NLS discussion and studies on the subject
  • Customer and service based orientation
  • Activities, organization, and management system revisited
  • Enterprise architecture approach

• 3D real properties since Aug 1, 2018 → fundamental change
• ASREK project: housing companies and shareholders
THE CHALLENGE

• Legacy
• Change
• Demands and aspirations
SHOWING THE WAY