Open Source – a strategic choice for National Land Survey of Finland

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Open in Many Ways

1 Open Data (since 2012)

2 Open Standards

3 Open Source

4 Open Collaboration

Short history of (geospatial) Open Source activity

- Until 2008, Scattered use of open source libraries and software

- 2008 First spatial data APIs based on open source servers

- 2009 Decision to build [Finnish Geoportal](#) on an open source solution

- 2010 Postgresql introduced as a storage solution

- **2011 [Oskari](#) web mapping platform shared as Open Source**

- 2014 Decision that NLS FI builds all web maps based on Oskari

- 2019 Majority of APIs run on open source servers, Postgresql/PostGIS usage is growing

- **2020 [Decision](#) to build the new Spatial data production system core on open source.** 1st phase expected to be complete by end of 2024.

- **2022 NLS Open Source Guidelines approved**

Non-comprehensive list of OS @ NLS

Linux, PostgreSQL, Oskari, OpenLayers, Hibernate, Java OpenJDK, IntelliJ Idea, GitLab, GeoServer, GeoTools, Geonetwork, Flyway, Proj, JTS, GEOS, GDAL, Mapserver, Mapcache, Emacs, Firefox, Eclipse IDE, Audacity, Apache HTTPD, Apache Tomcat, 7-Zip, Chromium, Jetty, Jenkins, Maven, PostGIS, PuTTY, QGIS, React JS, Request Tracker, Rocket Chat, Spring Boot, Swagger, …

Approx. **100** Open Source applications or frameworks

NLS ICT Strategic Goals

- NLS is an ICT **forerunner** in the public sector.

- NLS has an **up-to-date** technology base and **customer focused** digital services.

- NLS uses common methodology and **common solutions** in providing services.

- NLS is a motivating and **sought-after** place to work.

NLS Open Source Guidelines

1) Maximise the benefit of our activities to the society

• Results of the work involving public spending must be openly available, whenever possible

2) Use open source

• Open source solutions shall be used when we develop our IT systems or acquire them, whenever applicable and possible

Any exceptions to the guidelines need to be approved by the NLS IT management board.

Why is NLS going Open Source First?

1. Strategic Architecture choice for NLS Core Business

2. Co-creation of Value through Open Collaboration

3. Agile and Open ways of working internally and with partners

4. Innovation and faster leveraging of Research Results

5. Modular standards-based architecture – Resilience for Change

How do we create our new Spatial Data Production system?

- We design the system architecture based on business needs

- We choose mature OS software

- We seek collaboration and joint development – Co-/Crowd funding

- We want to work with the Communities and Core Contributors of the OS projects as directly as possible

  - To solve any issues rapidly

  - To have the NLS enhancements and add-ons developed in line with the OS project and community guidelines – for mutual benefit

  - To make the enhancements part of the core products (or as add-ons) -> no separate version to be maintained

Open Source relevance to IGIF pathways

- Governance
  - Policy & Legal – OS is an important topic on EU policy level, as well as on national and organizational levels (resilience, digital sovereignity, …)
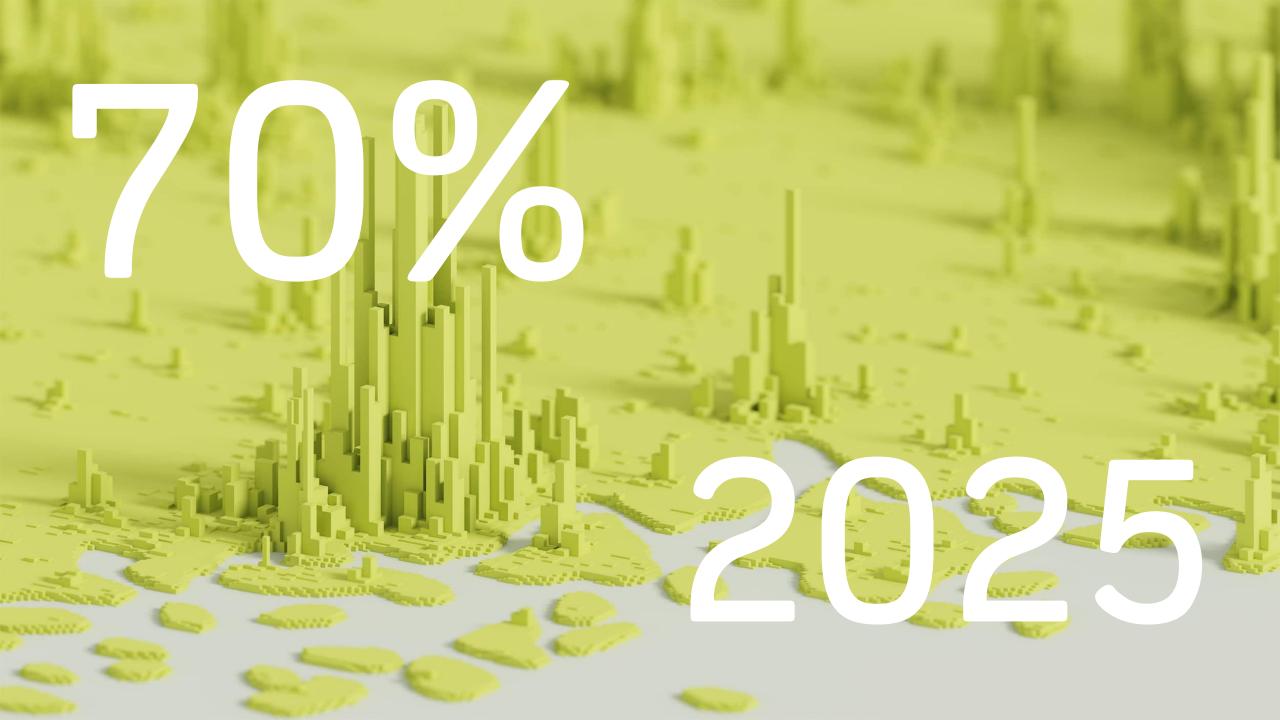
- Technology
  - Innovation – enabler
  - Standards – early adopter of open standards

- People
  - Collaboration, Communication and Engagement – Other agencies, OS communities, SMEs, …
  - Capacity Building and Education – contributing to OS software & communities is (geo)enabling development on a global scale

95%

2021

70%

2025

Takeaways

Open Source should be a part of every organizations' digital agenda.

Openness is a strategic choice for public sector organizations.

Open data, standards and code **support and empower** collaboration, communities and innovation and resilience.

Be Resiliant. Be Open.

Thank you!

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