



# BUSINESS MOTIVATION FOR LINKED GEODATA

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# PROJECT OBJECTIVES

Long term goals: Integrated services based on geodata and improved data management

Feasibility study for 8 months, ending in April 2015

"Is linked data a blind alley or is it a way forward and consistent with our business model"?

We have some practical experiences on linking geodata from different authorities (pilot studies)

# PROJECT PARTNERS

Lantmäteriet (The Swedish mapping, cadastral and land registration authority)

Swedish Geological Survey

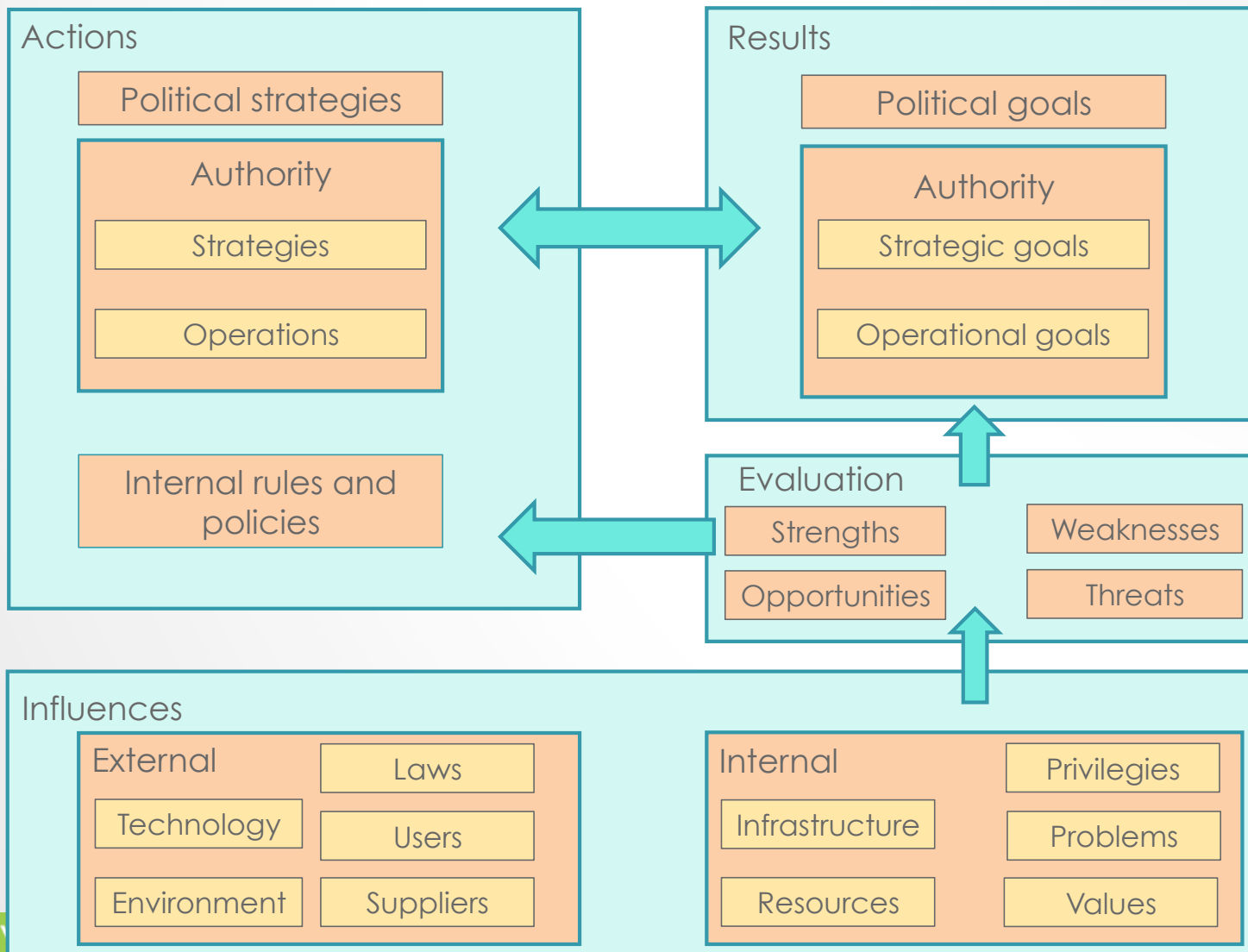
Swedish Environmental Protection Agency

Swedish Civil Contingencies Agency

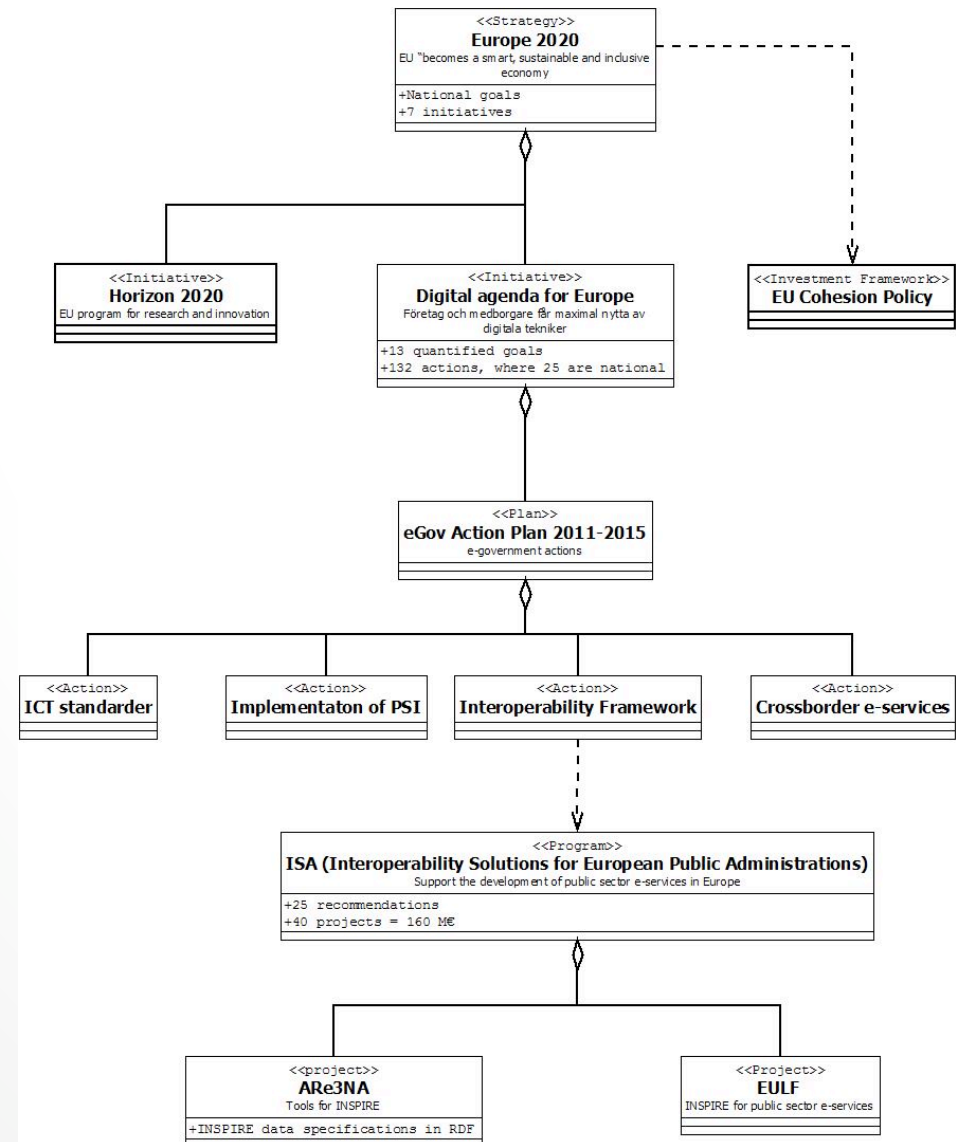
Linköping University

Future Position X

Novogit AB



# EUROPEAN POLICIES AND GOALS

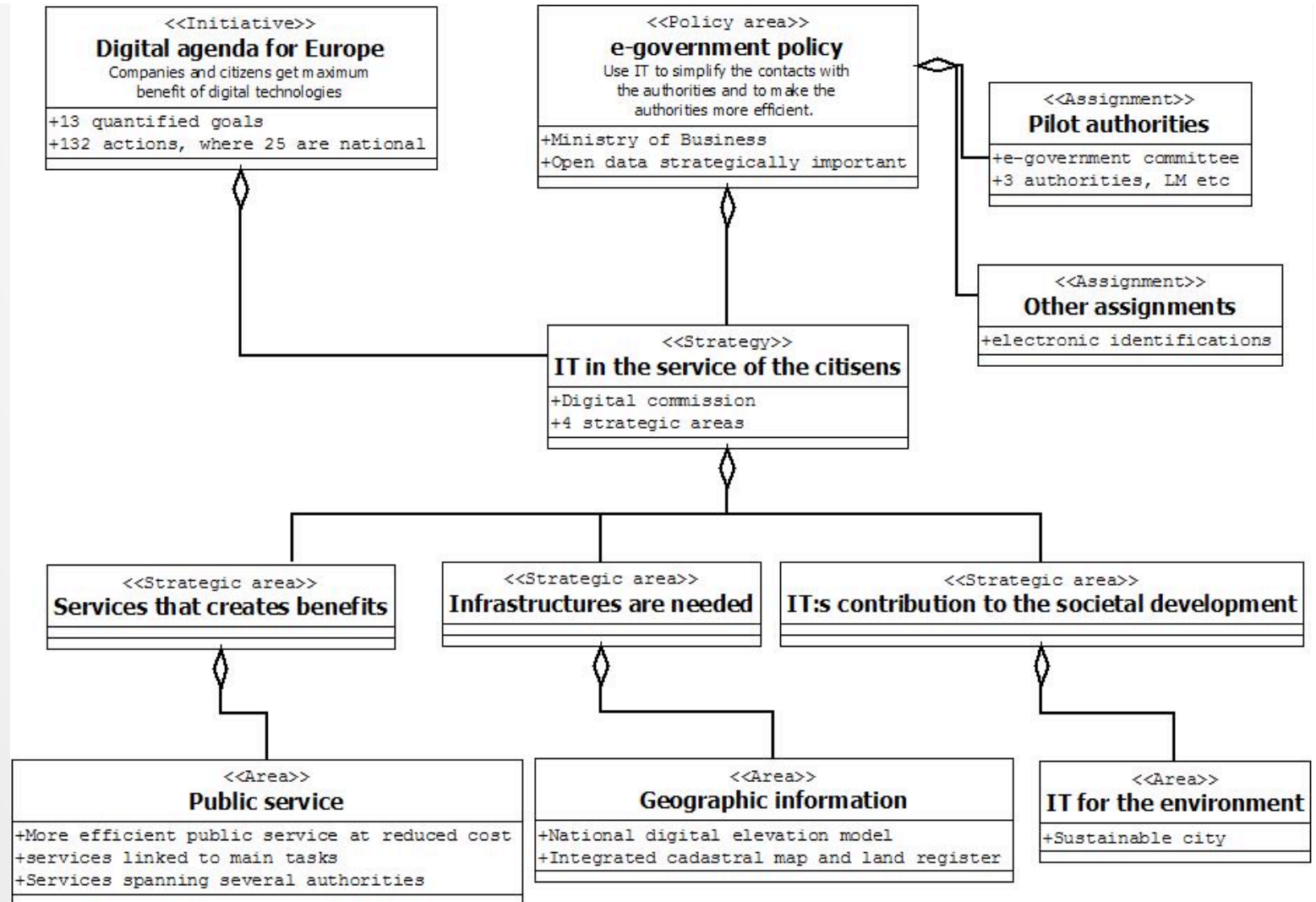


# DIGITAL AGENDA FOR EUROPE

- Digital single market
  - EU single market rules for the digital era
- Interoperability and standards
  - New IT devices, applications data repositories and services interact seamlessly
- Strengthening online trust and security
  - Coordinated response to cyber-attacks and reinforced rules on personal data protection
- Fast and ultra-fast internet for all
- Investing in research and innovation
- Promoting digital literacy, skills and inclusion
- ICT-enabled benefits for EU
  - Climate change
  - E-health
  - Digitisation
  - ITS

13 quantified goals  
132 actions, where 25  
are national

# SWEDISH POLICIES AND GOALS



# E-GOVERNMENT IN THE YEARLY INSTRUCTIONS

Lantmäteriet: Increased usage and benefit of geodata and INSPIRE coordinator

Swedish Geological Survey: -

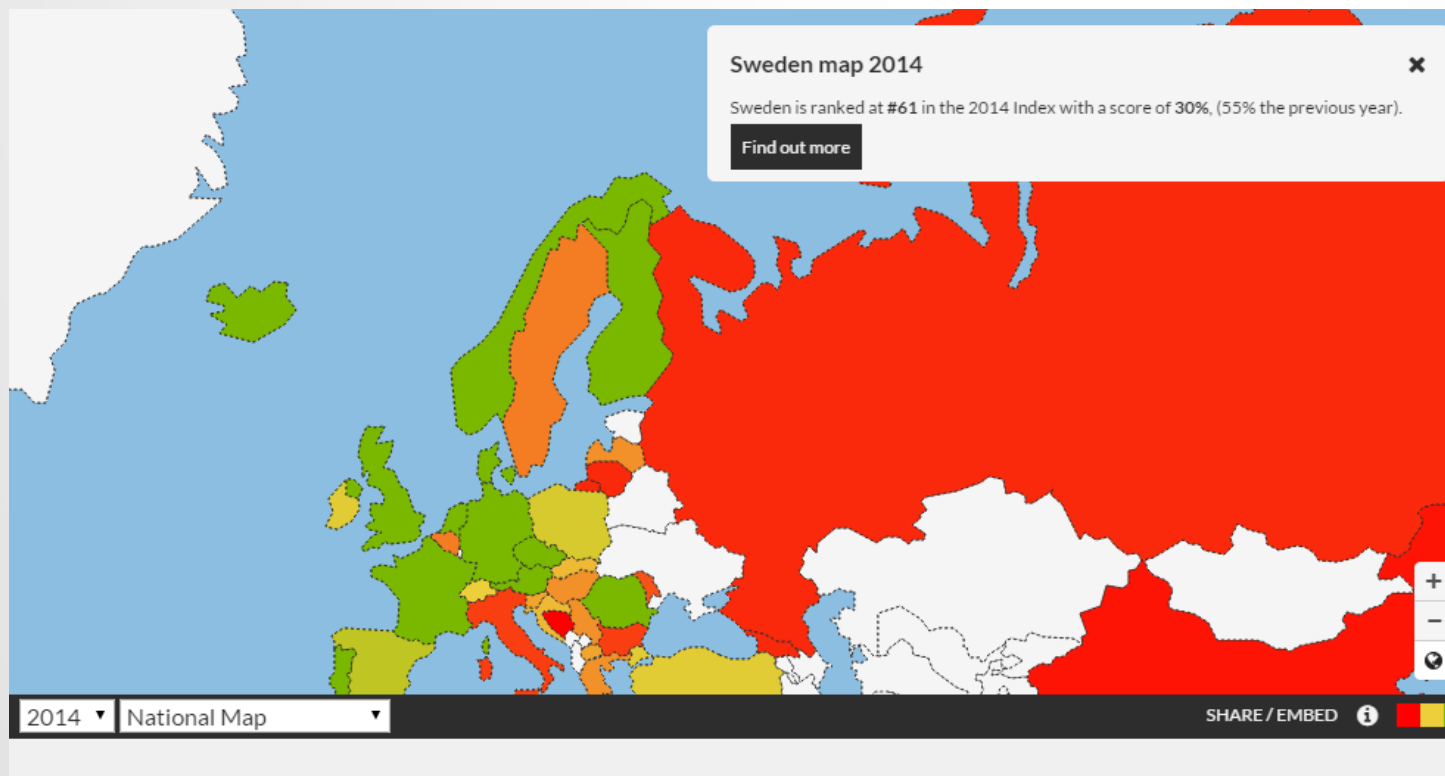
Swedish Environmental Protection Agency: Environmental monitoring (environmental toxins, improved statistics on waste, cooperation on protected area management, forecasts of avalanches etc)

Swedish Civil Contingencies Agency: Information security in public authorities

Direct instructions for e-gov given to National Financial Management Authority, Tax Agency, Kammarkollegiet (legal and economic expertise) and Ministry of Enterprise and Innovation, mainly aimed for grants



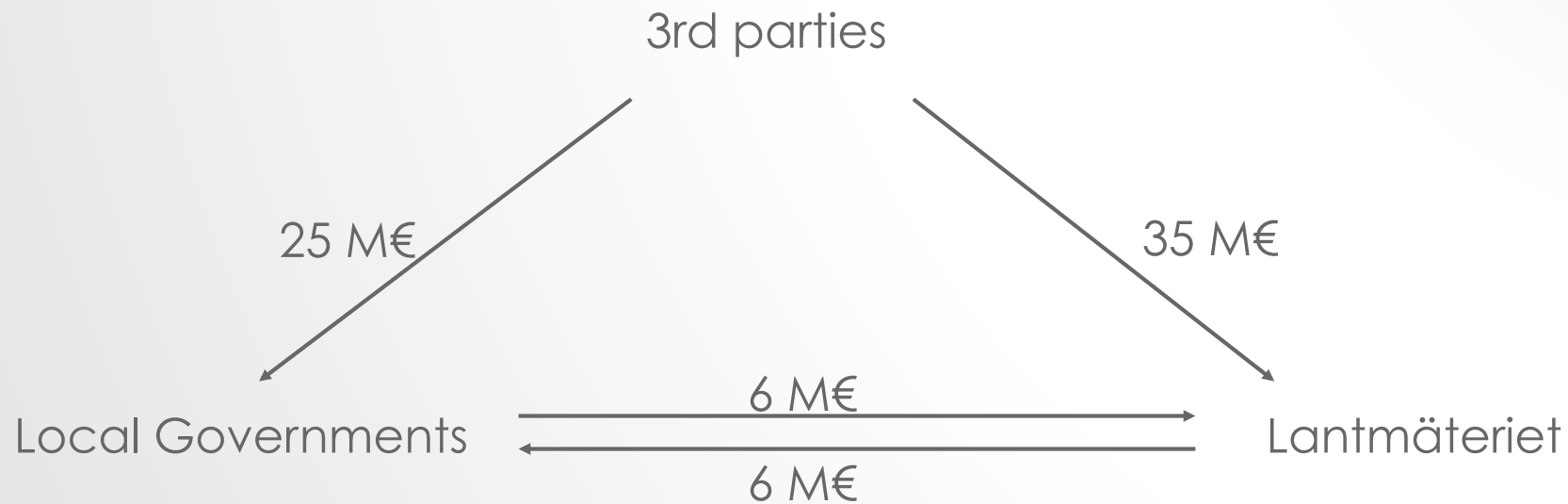
# OPEN GEODATA IN SWEDEN



Global Open  
Data Index  
(currently 97  
countries)

[index.okfn.org](http://index.okfn.org)

# GEODATA REVENUE STREAMS



Lantmäteriet has applied for state budget support

# CRITICAL SUCCESS FACTORS FOR LINKED GEODATA

Alignment with business models – value creation, delivery and revenue streams

Management of persistent ID

Clear SLA's -> ownerships are clearly defined

Data are easy to find, access and use -> licenses

Assurance of quality to external linked data

Standards, vocabularies, ontologies

Restrictions on data (privacy, national security) must be respected

Tools for users and data providers should be easy to use and affordable

# POTENTIAL VALUES

Easier to understand and reuse other data sets

Reduce redundancy of data management and instead focus on the specific characteristics of own data sets

Better visibility and availability on the web and in search engines

Well established procedures for automated data processing may be utilized

Improved efficiency and effectiveness in data management and data processing

# EXPECTED VALUES, EXAMPLES

DEFRA (UK) and OS (UK)

- Improved transparency, support to innovation

EULF (EU Location Framework)

- Better availability of data

EEA

- Improved efficiency and effectiveness in data management and data processing

Italy, Poland, Finland

- Better visibility in search engines

# OBSERVED VALUES, EXAMPLES

## Office for National Statistics, UK

- Better provision of statistical data (data sets in geoportal, instances in triplestore)
- Around 5000 visits (geoportal) and 5000 downloads (triplestore) per month

## ODI (UK)

- Several benefits of open data are reported

## Swedish Cultural Heritage Board

- FornMap is an app using data on old settlements
- Not used that much (unknown, poor data quality, external linkages missing)

## BBC, Nobelstiftelsen etc ...

- More efficient data management (no external links)
- Richer own website

# STRATEGIC GOALS

- Simplify the daily life for citizens and companies by providing integrated services
- More effective and efficient data management
  - and optionally
- Integrated digital cadastral map and land registry
- Improve urban environment

# FUTURE PLANS AND ISSUES 1 (2)

- Strategies for linked geodata
  - Persistent ID's
  - Licenses, SLA
  - Vocabularies, ontologies
- Data resources
  - 2 stars – open geodata from Lantmäteriet (shape etc)
  - 3 stars – XML/GML according to INSPIRE
  - 4 stars – Data from Swedish Geological, Swedish EPA etc in RDF



# FUTURE PLANS AND ISSUES 2(2)

- Tools
  - Tools for creating linkages
    - OpenRefine for RDF, Spatial Join in GIS, ...
  - Tools for using linked geodata
    - Currently limited support in QGIS, ArcGIS etc
- Usability (effectiveness, efficiency and user satisfaction)
  - Usability in using linked geodata
  - Usability in creating linkages (\*\*, \*\*\*, \*\*\*\*)