



ELF EUROPEAN
LOCATION
FRAMEWORK

Quality Management of the European Location Framework



Presentation to: International Workshop on Spatial and Map Quality

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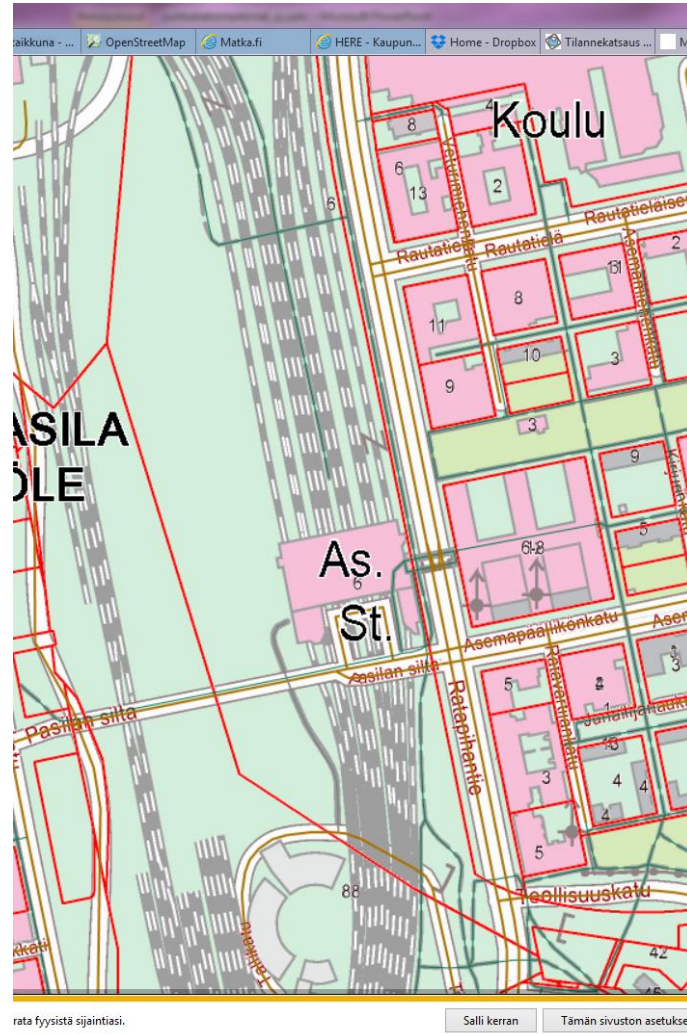
Why ELF?

Authoritysourcing = ELF

OpenStreetMap Finland



Crowdsourcing



Official SDI data combined

The ELF vision –The ELF White Paper

A geospatial reference infrastructure

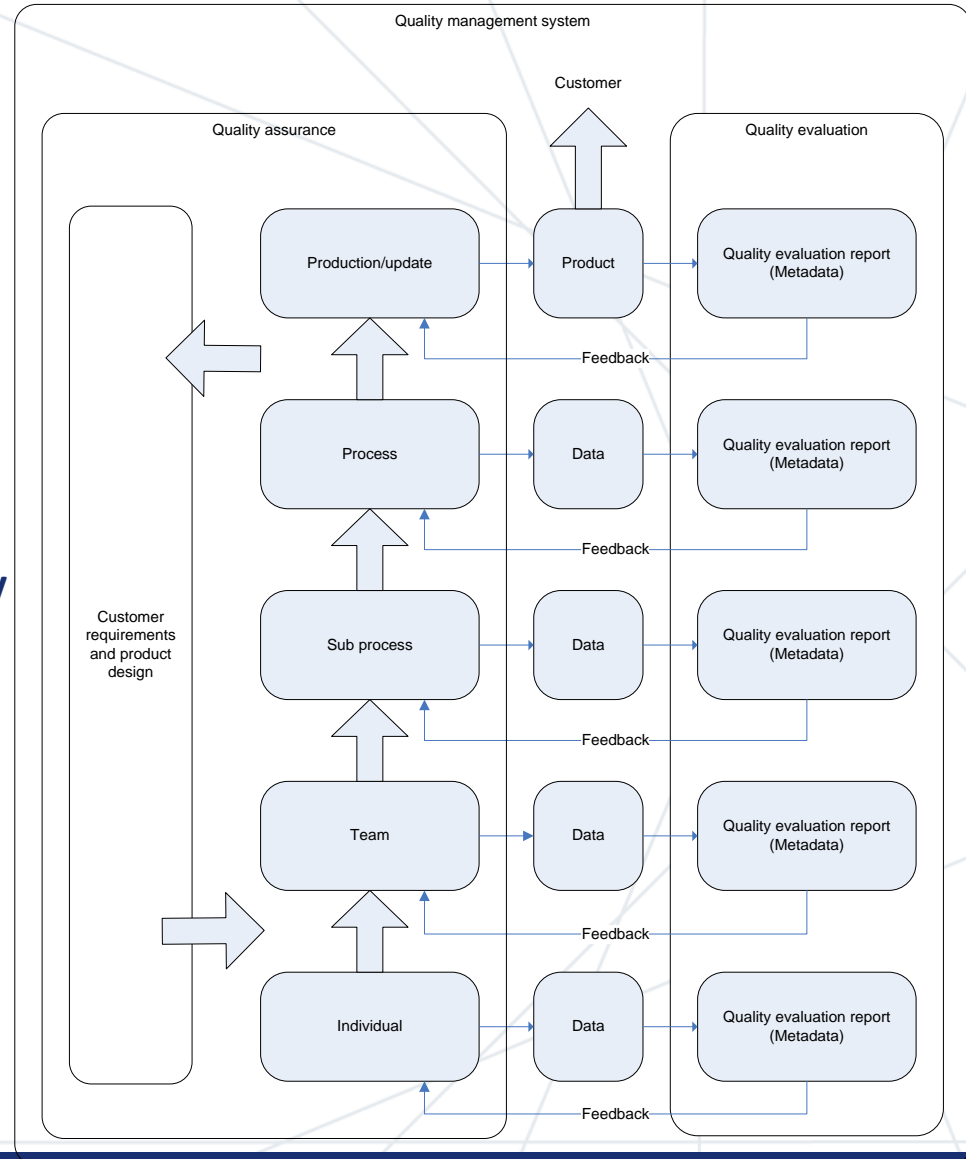
- ★ Interoperable data and services
- ★ Full coverage of Europe
- ★ Support international standards and INSPIRE
- ★ Quality and metadata
- ★ Management of national data through interoperable processes

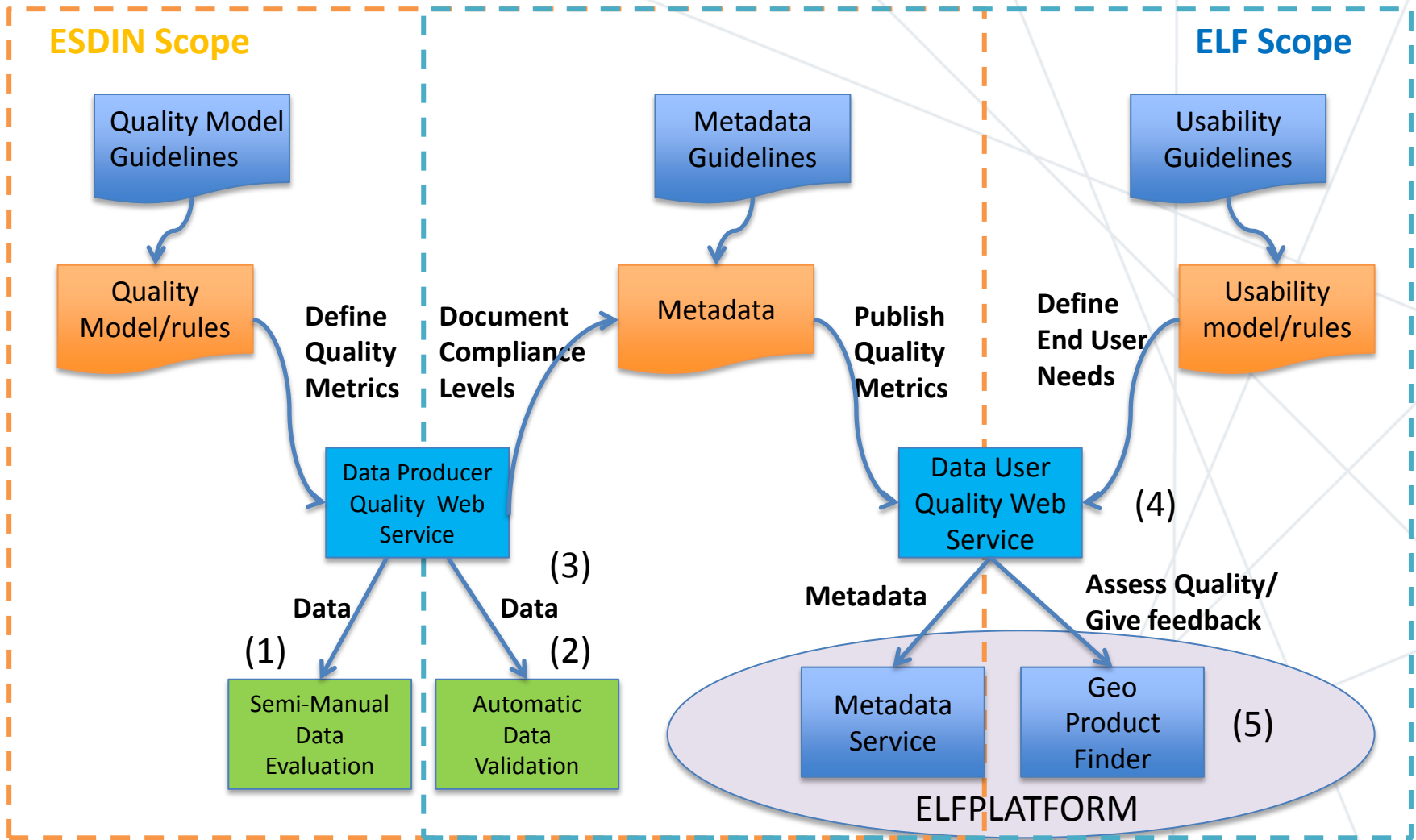


Basis for the Quality Management in ELF

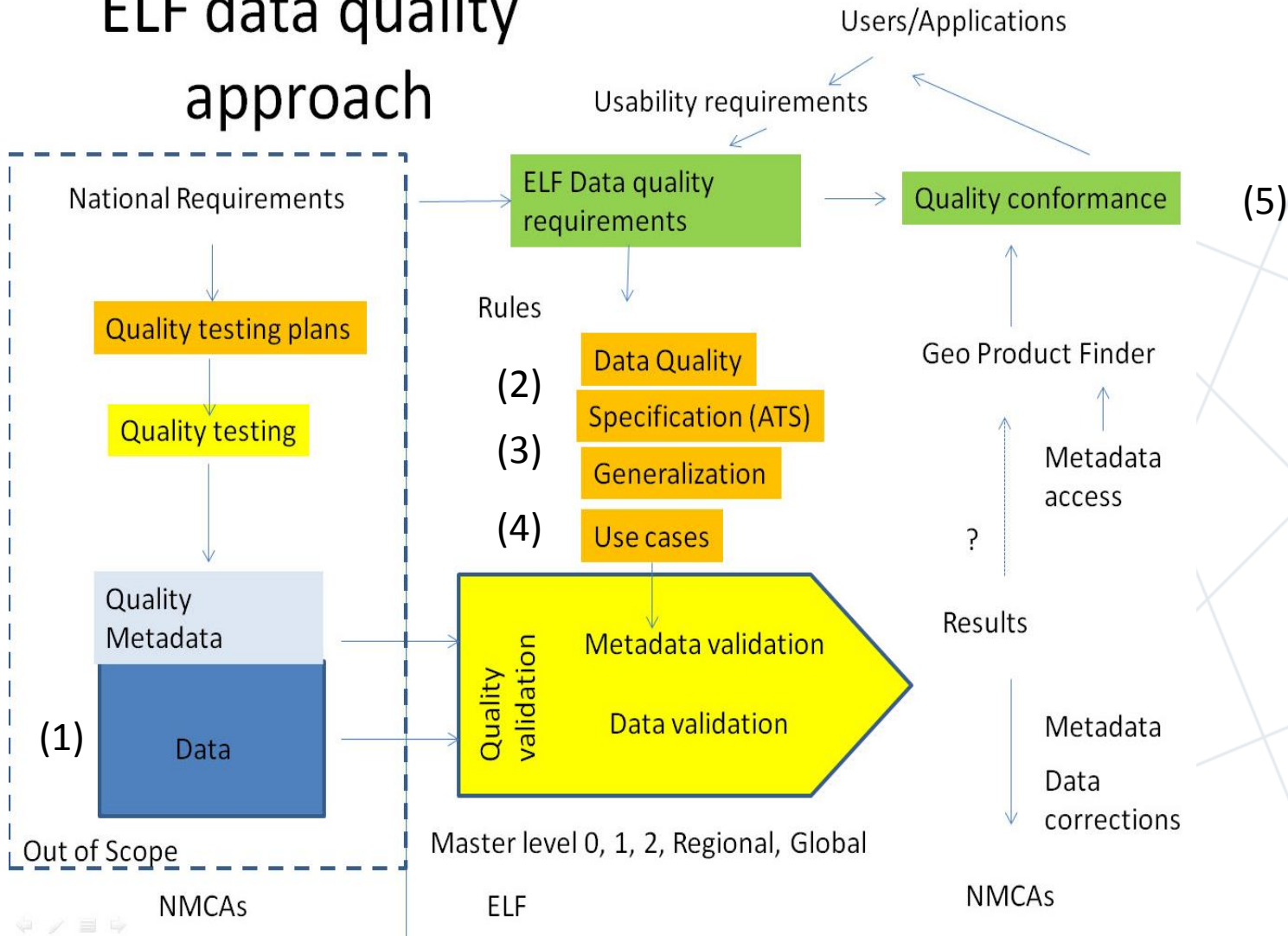
- **ISO 9000 Quality Management Systems**
- **ISO 19157 Geographic Information – Data Quality**
- **ISO 19158 Quality Assurance of Data Supply**
- **ESDIN project (2008-2011)**

- **Data custodian can ensure that data providers are capable of proving required quality**
- **Why?**
 - ★ **Data custodian can not directly influence to the production processes**
 - ★ CASE ELF
 - ★ CASE INSPIRE
 - ★ Commercial relationships
 - ★ **It is costly to correct data after the production**
 - ★ **Delay in provision of data**
 - ★ **Certification is expensive**





ELF data quality approach



Data Provider Quality Assurance

- **Basic Level Assurance:** Assuring that a process appears to be capable of creating or maintaining ELF products at the required quality. This includes identification of production processes and utilization of ELF validation or some other tools
- **Operational Level Assurance:** This will be achieved working together with ELF regional co-ordinators, checking that validation results are what is expected, training programmes have been implemented.
- **The Final Level Assurance:** This is achieved when the data provider for ELF is capable of maintaining the quality achieved at the operational level over a period of time.

Management responsibilities

- **ELF Data Providers -> validating their ELF data and setting the ELF services. In case of Non NMCA data provider it could be that NMCA validates this data (based on national SDI)**
- **ELF Regional Co-ordinators -> Management of expert reviews using ELF Data Quality Tool(s)**
- **ELF Quality Manager -> overall quality management -> Data Provider Agreement**

What is required at national level

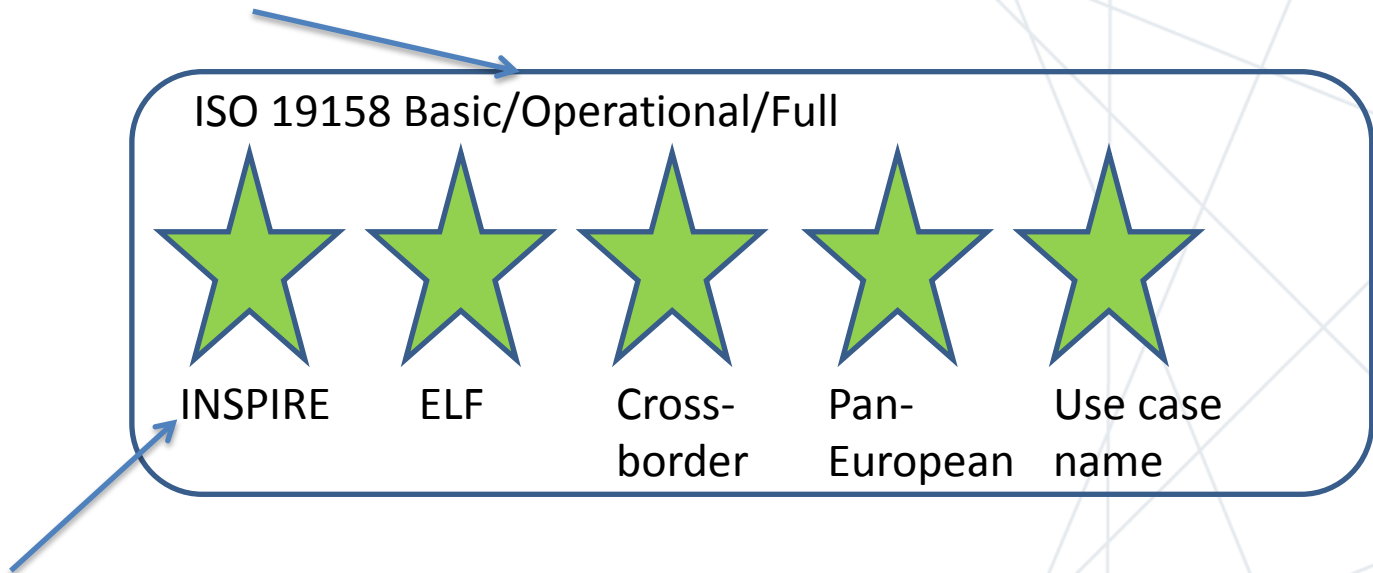
- To perform INSPIRE ATS and schema validation as specified by INSPIRE
- To perform ELF minimum quality evaluation, each update should be evaluated
- To ensure that organization meets ELF ISO 19158 as specified by the ELF Quality Manager
- To answer quality reclamations and feedback received from the Geo Product Finder

Expert Reviews

- Used to determine overall quality of data within ELF
- To check whether certain quality requirements are met
- As a result data may be
 - ★ Rejected : Data does not meet INSPIRE ATS and can not be published in ELF. Testing done nationally and confirmed by expert review
 - ★ INSPIRE schema: Checked that INSPIRE schema is valid -> INSPIRE tools
 - ★ Generic ELF: Data meets ELF minimum requirements, ELF national validation was performed, ELF metadata is available
 - ★ Generalisation: Data meets generalisation requirements
 - ★ Edge-matching :edge matching tool has been run or edge matching done nationally; Data can be used for cross-border use cases

Quality results in GPF – ELF Quality Label

Process/Organisation capability



Validation results/Expert reviews