ELF: Organisational Framework

Presentation to: Technical Producers meeting, Warsaw

By: Nathalie Delattre

Date: 1 April 2015

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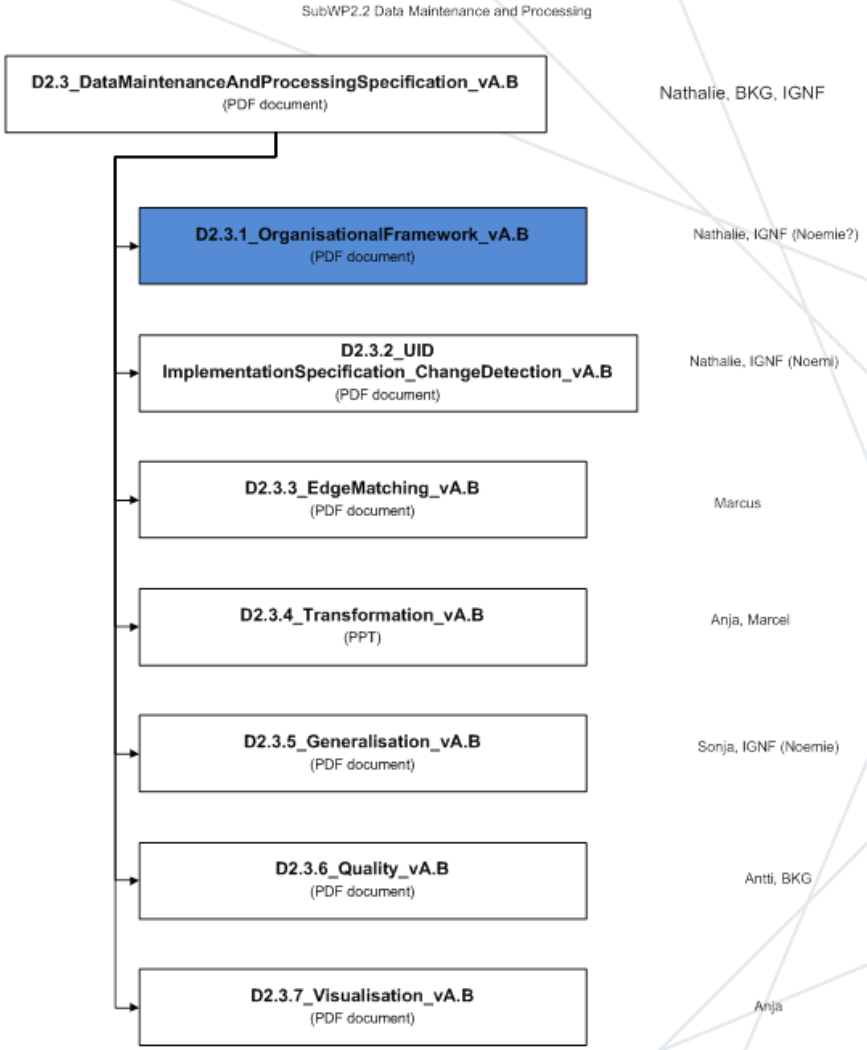
Basic structure



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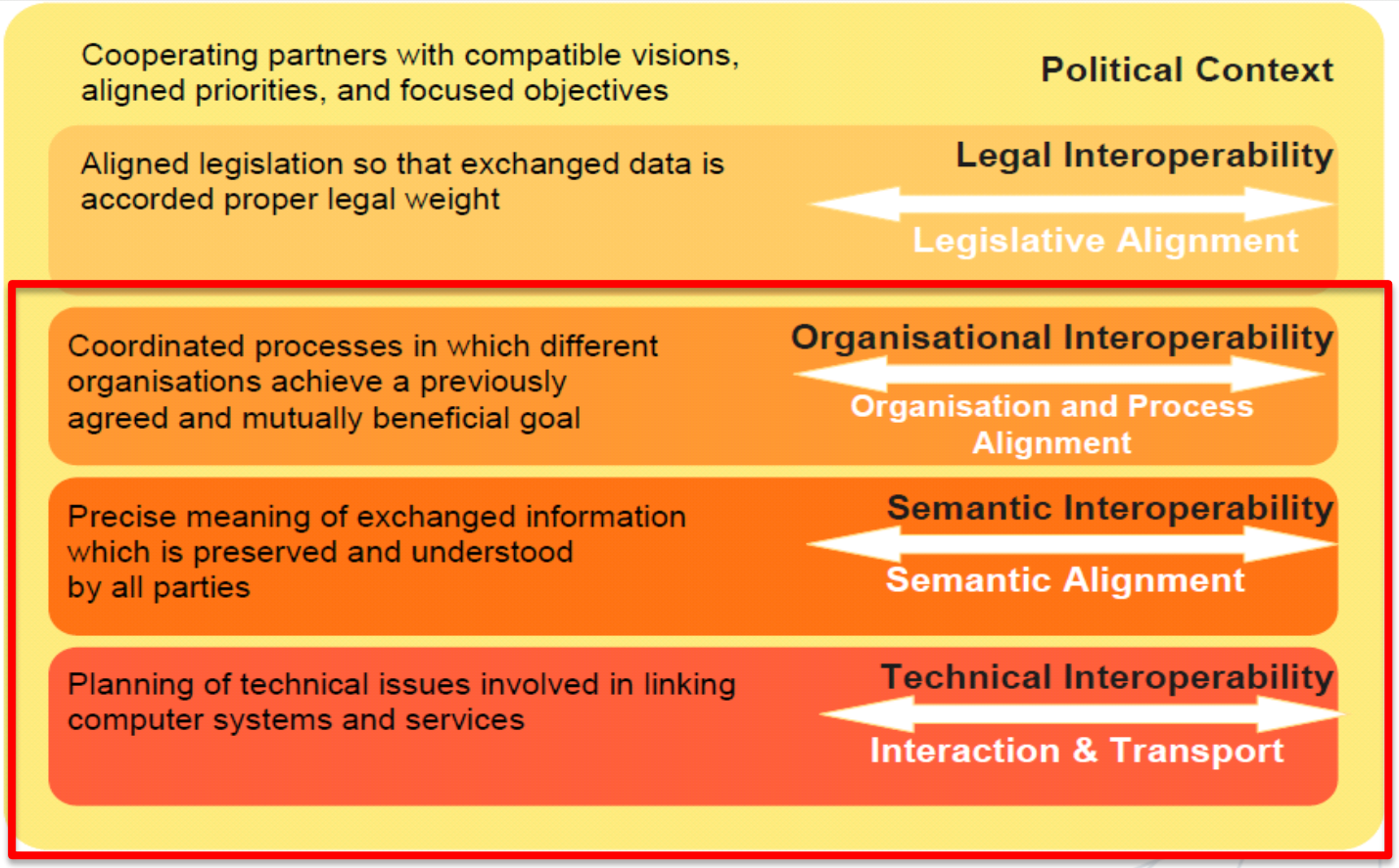
Interoperability levels



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Semantic Interoperability

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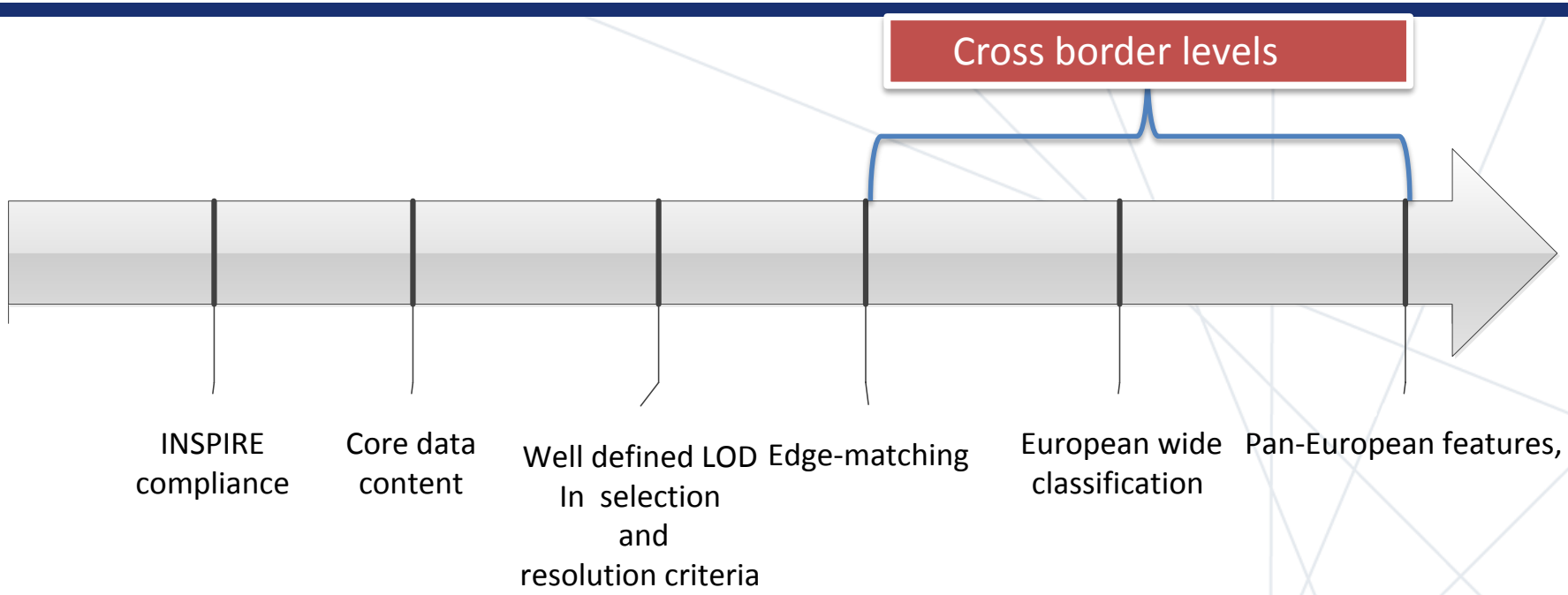
Degrees of interoperability of the ELF datasets



- This graduated scale indicates a step by step approach to achieve the highest degree of interoperability.
- All these steps should finally be finally described in the ELF data specifications

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Well defined LoD in selection and resolution criteria

LoD	Scale range	Thematic scope
Master Level 0	Larger than 5k	Cadastral Parcels, Buildings, Addresses
Master Level 1	5k – < 25k	ELF Topo (Admin Units, Hydro, Transport, Elevation, GeoNames, etc.)
Master Level 2	25k – < 100k	ELF Topo generalised (1:50K)
Regional	100k – 500k	ELF Regional themes
Global	> 500k	ELF Global themes

Master 0/1: prioritize the existing most detailed LoDs of NMCAs without trying any harmonization between national criteria

Master 2: to set up common resolution and selection criteria based on what are the most commonly applied criteria among NMCAs.

Regional/global: mature level

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Pan-European features

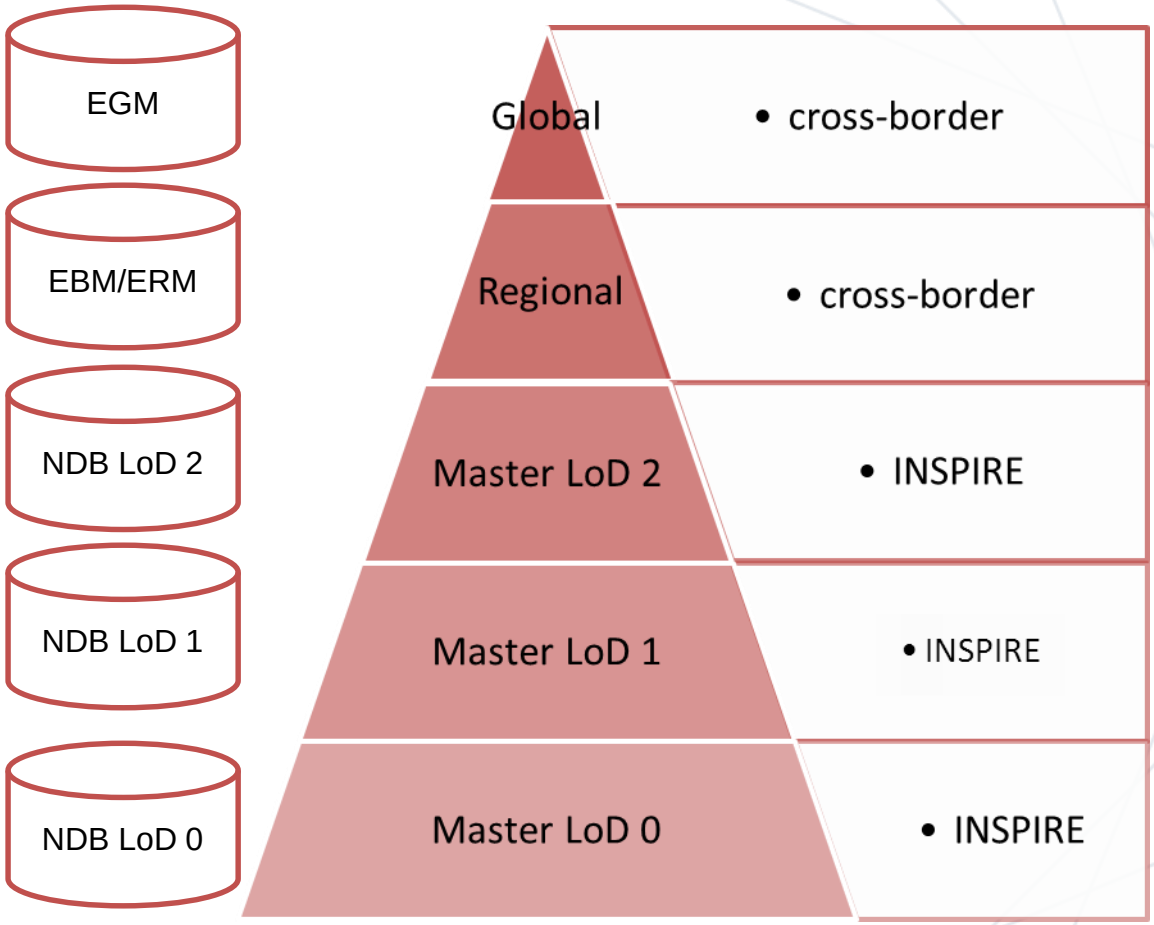
Definition: located on the international boundaries -> duplication

Task: single feature combining national attribute/property values whenever different

Attributes	Values	
F_CODE	BH502	
FCsubtype	Watercourse	
HOC	Natural	
HydroID	E.EG.WATRCRS.000009	unique value (European Uid)
HYP	Perennial/Permanent	
ICC	DE#FR	Combined ICC Values (the feature belongs to two countries)
LDV	inDirection	
LEN	2.598898	
LOC	Fictious axis through water area	
NAMA1	Rhein	Name (in German) put into alphabetic order according to NLN attribute value
NAMA2	Le Rhin	Name (in French) put into alphabetic order according to NLN1 and NLN2 attribute value
NAMN1	Rhein	
NAMN2	Le Rhin	
NHI	20000000000000000000#A----0000	Combined national values (DE#FR)

Degree of interoperability of ELF datasets

Short Term (end the project)



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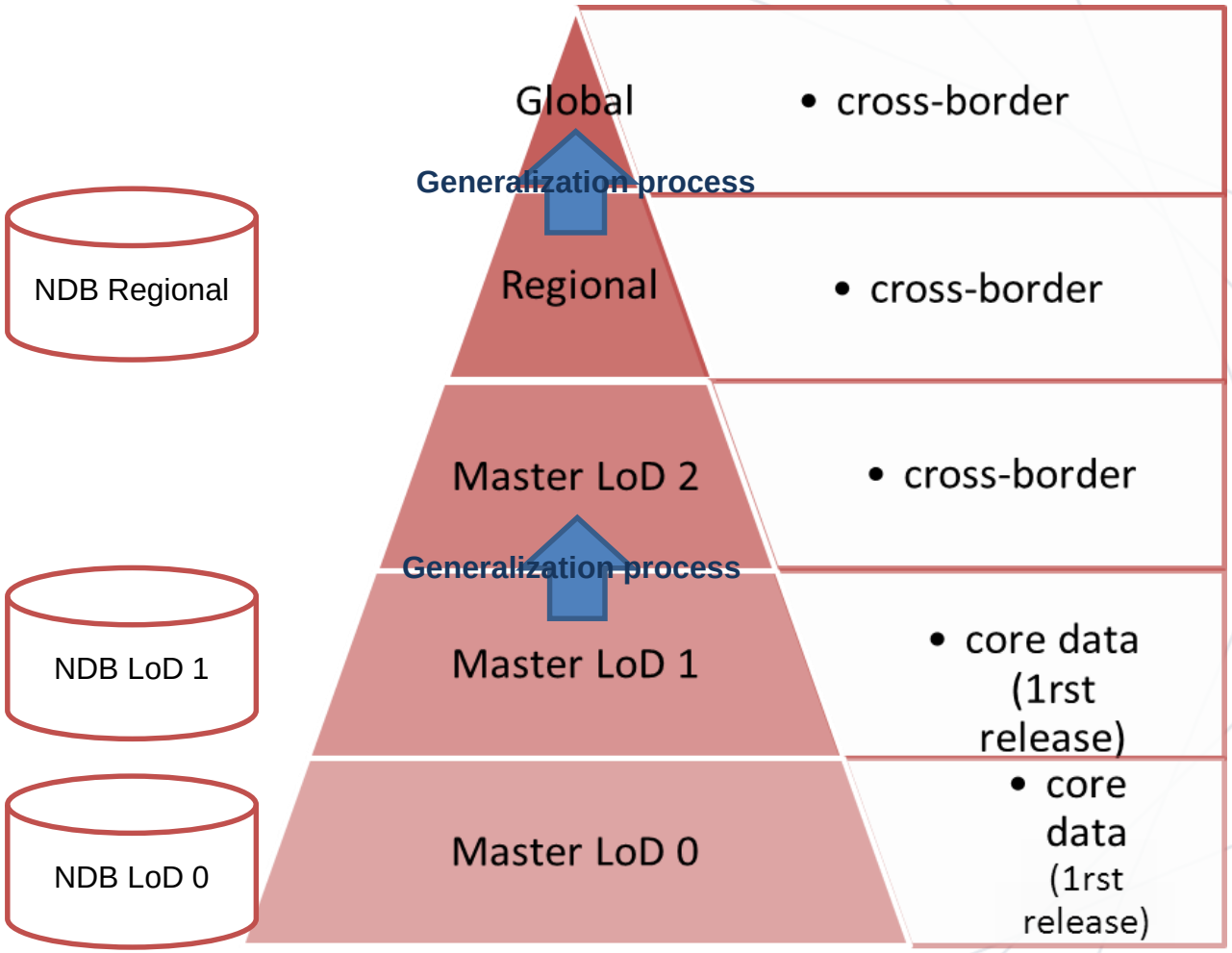
2.3 Degree of interoperability of ELF datasets

Medium Term (next 2 years): working with the ELF geo-processing tools



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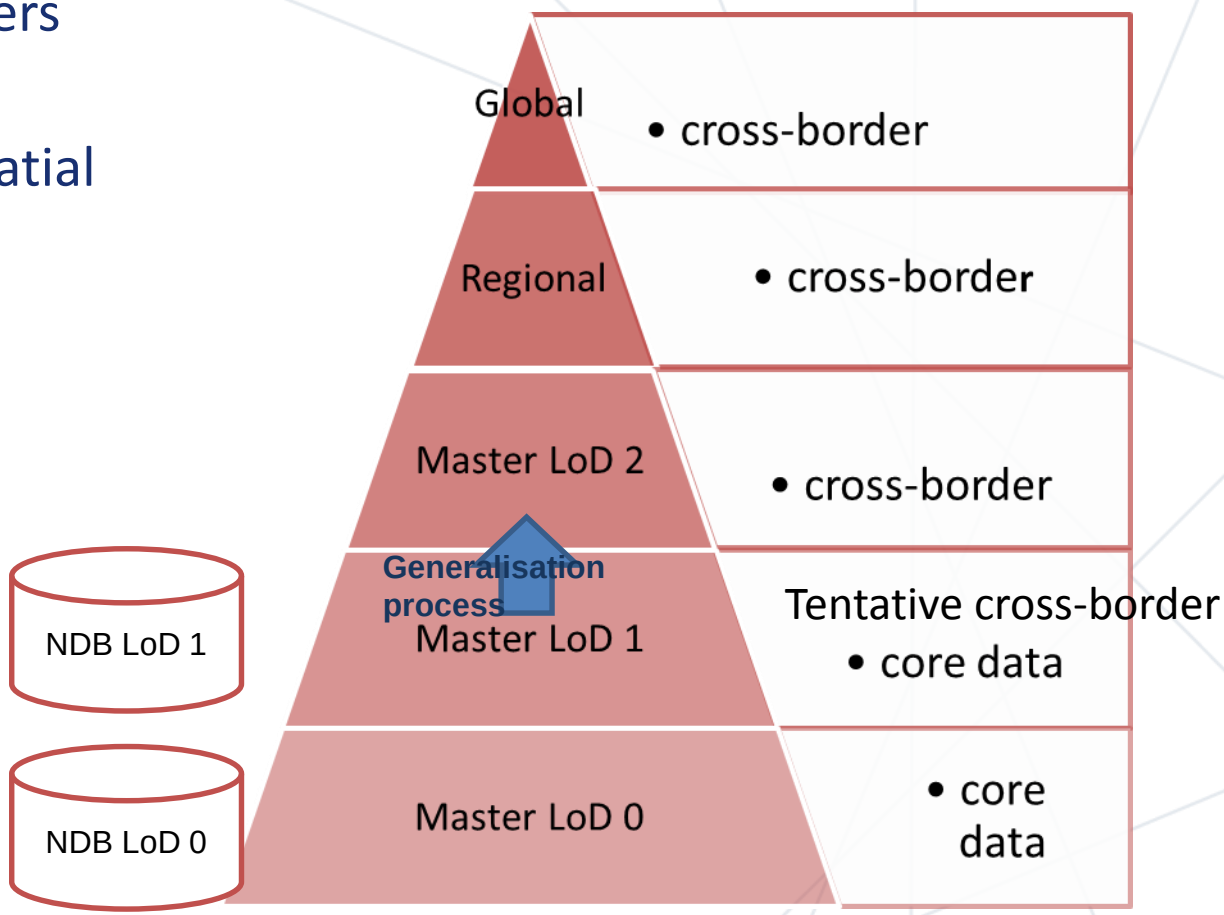
2.3 Degree of interoperability of ELF datasets

Long Term Vision (users expectations)

Master : aimed for spatial analysis purpose

Derived datasets for mapping purpose

Implication : data specific to regional global should be collected and maintained at master level



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Organisational Interoperability

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How to organise the data collection and maintenance of ELf data in future in case of Additional data

Two options :

- ELF data = core Geospatial Reference Data of NMCAs
- ELF data = core Geospatial Reference Data of NMCAs + additional data

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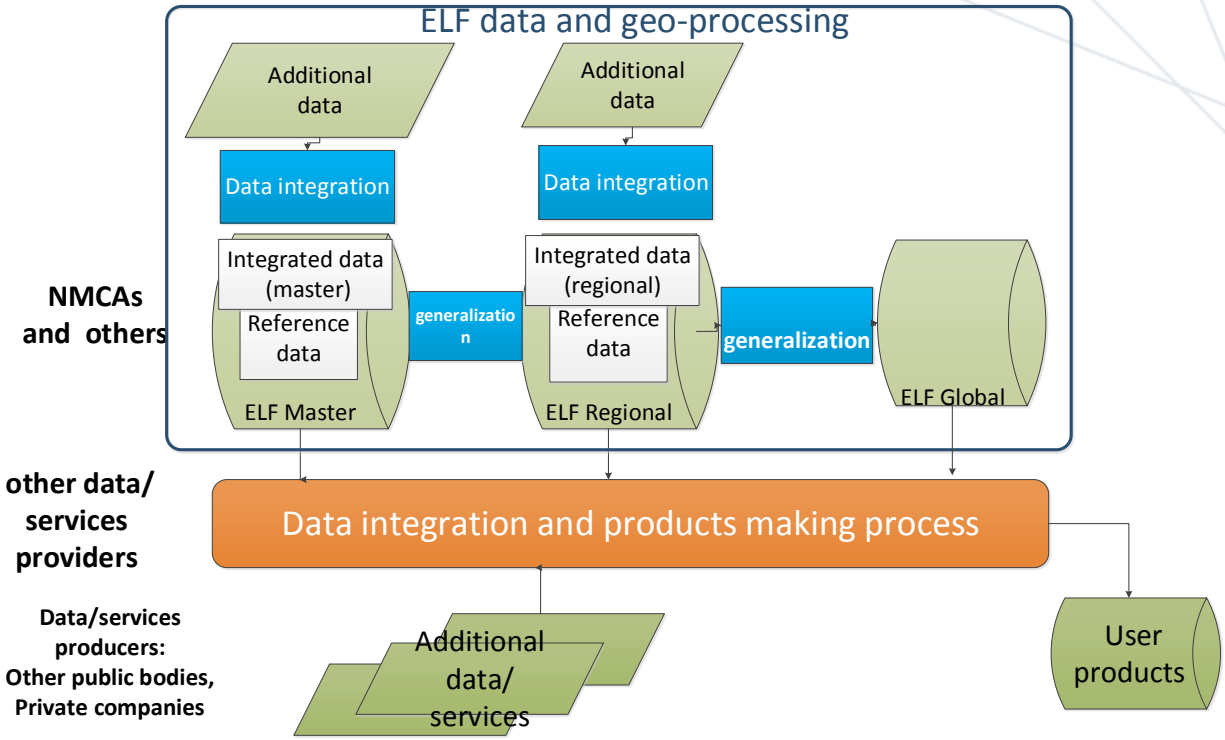
Producing and maintaining ELF data

ELF data = core Geospatial Reference Data of NMCAs + additional data



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Impacts for the future in data maintenance

- NMCAs may take some responsibility **for integrating additional data to their authoritative and reference data** and acting as data and services providers
- Strategical decision

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Technical Interoperability

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Supply of ELF Data on the ELF platform :

adopting fully decentralised workflow

What does that mean?

1. matter of Service network architecture: no centralised data center, the ELF data are **only** delivered on the national web services (ELF national componants)
2. matter of data maintenance : NMCAs are fully in charge of the geoprocessing and maintenance of the data

A coordination body will provide a quality control and assessment of the data

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Geo-processes implemented (tools)

- Data quality and reporting
- Edge-matching
- Generalisation (Master level 1 to Master level 2)
- Change detection

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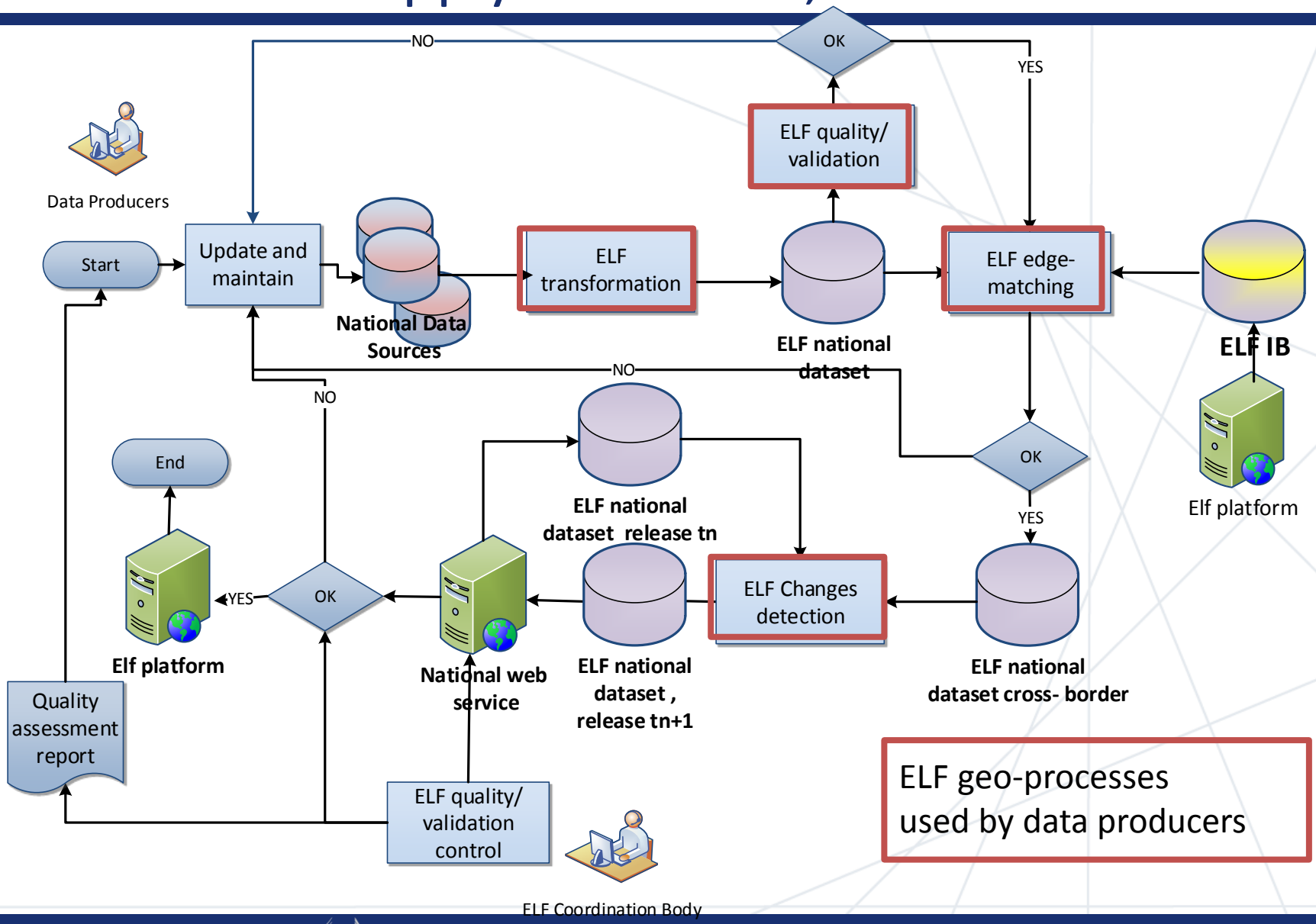
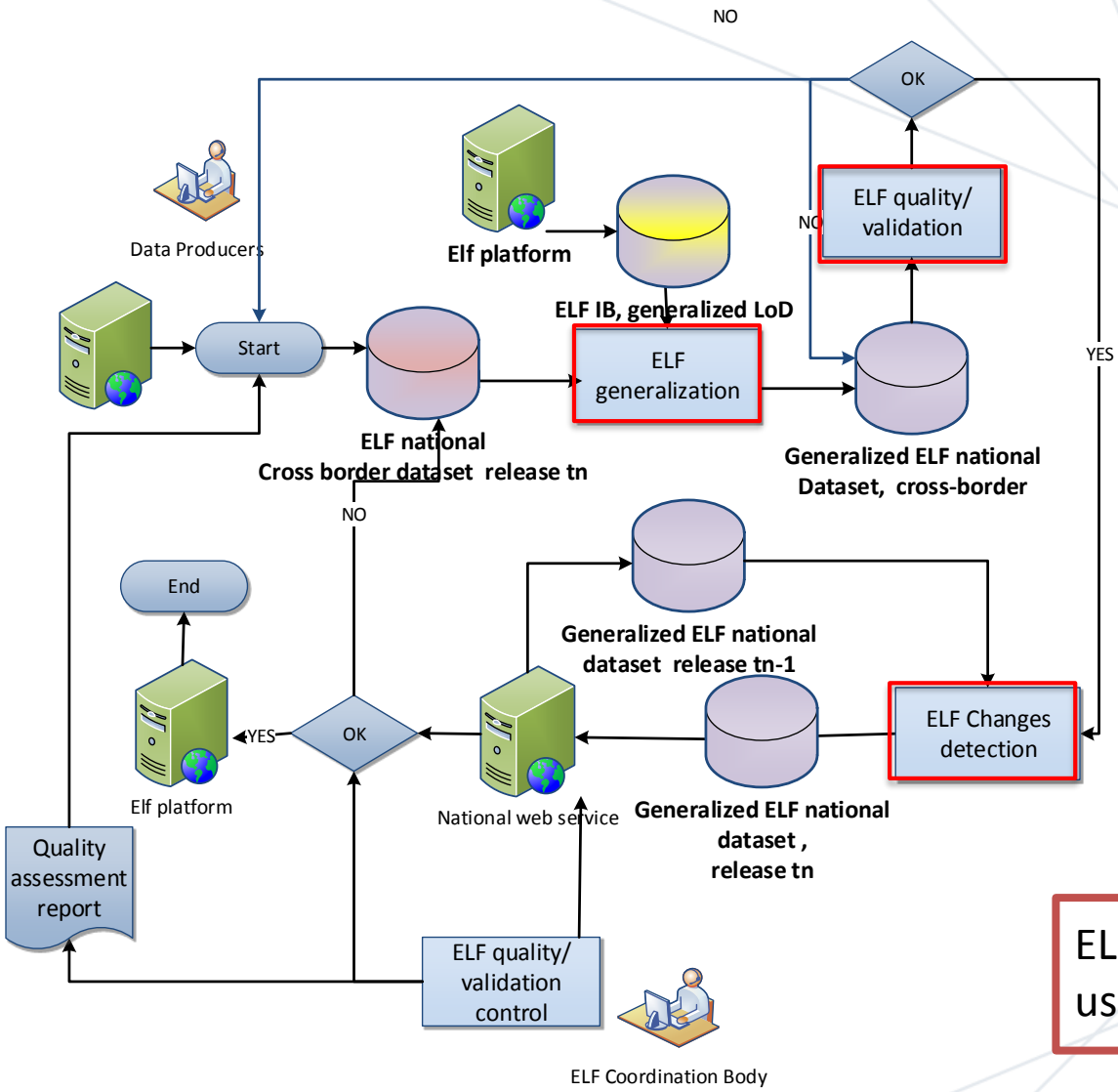
Data Supply data chain, cross-border



Expected results on ELF platform

	Option 1
ELF Regional	National Componants, no unique dataset covering Europe
ELF Global	National componants, generalisation process doin charge of NMCAs
Data quality control	Supervised by the coordination body (providing quality assessment report)
NMCA role	Act as data and service provider of ELF regional
Pan-european features or European Uids maintenance	pan European features created and maintained by NMCAs (or would be missing)
EG role	act as a VAR for producing pan-European products

Generalisation process



ELF geo-processes
used by data producers

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Geo- processing tools

Tools	Tool developers	Used Software
Data quality Validation	ESRI	ArcGIS
	1Spatial	1Spatial Cloud
	Delft University	prepair and pprepair
Change Detection	IGNF	C++ libraries
Edge-Matching	ESRI	ArcGIS
	1Spatial	Local installation of 1integrate with ELF Edge Matching Rules
	Delft University	prepair and pprepair
Generalization (Regional-Global)	IGNF	C++ programming based on IGN-F internal libraries
Generalization (master LoD1-master LoD2) Generic level	1Spatial	Local installation of 1Generalise with specific Flowline
	Delft University	tGAP builder (prototype implemented in Python)
	KadasterNL	ESRI ArcGIS
Transformation	Snowflake	GO Loader and GO Publisher

Applying ELF technical interoperability principles on the geo-processing tools

Requirements

- to run on ELF compliant data sets.
- INSPIRE/ELF GML will be used as the standard for data exchange on the ELF platform,

Replies

- All tools will be able to run on ELF compliant data sets (but are not restricted to).
- Currently no tools are able to work directly on GML data format. Geo-tools must assure transformation process between ELF (GML) and the GIS software in which tools are developped

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Questions?

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