



# FIG Working Week 2024

19-24 May

Accra, Ghana

Your World, Our World:  
Resilient Environment  
and Sustainable  
Resource Management  
for All

*Presented at the FIG Working Week 2024,  
19-24 May 2024 in Accra, Ghana*

## The Growing Role of Europe with High Value Datasets and the Digital Transformation of the Spatial Data and 3D

Dorus Kruse

Cadastre Land Registry and Mapping Agency

The Netherlands

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## Geospatially Enabled Ecosystem for Europe (GeoE3)

- Funded by Connecting Europe Facility (CEF)
- Duration: three years
- Budget: 2.6M€
- 12 partners
- Five national mapping or cadastral agencies
  - Finland, Norway, Estonia, The Netherlands, Spain
- Coordinated by National Land Survey of Finland

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## GeoE3 goals:

- Use case –oriented approach for service development
- Cross-border content integration
  - Across five participating countries
- Cross-domain content integration
  - Geospatial with statistical, meteorological
- Implement modern service interfaces
  - OGC API Features, Coverages, Records
- Presenting 3D geodata in browser
- On-the-fly data enhancements

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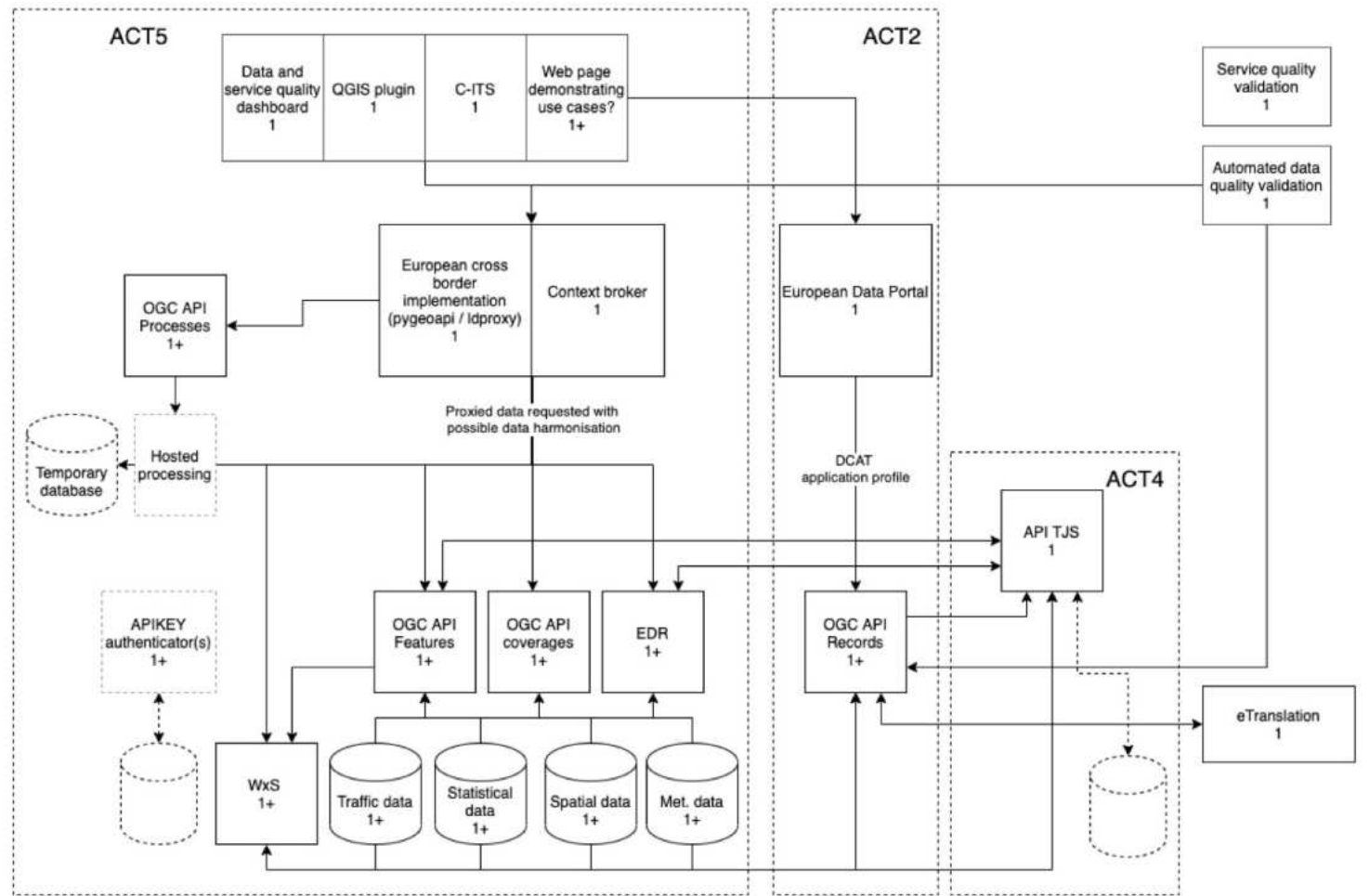
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## GeoE3 Service Architecture





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## 3D Buildings

Downloaded to Integration Platform

Finland, Estonia, The Netherlands

Accessed from national-level service, processed on-the-fly

Spain, Norway

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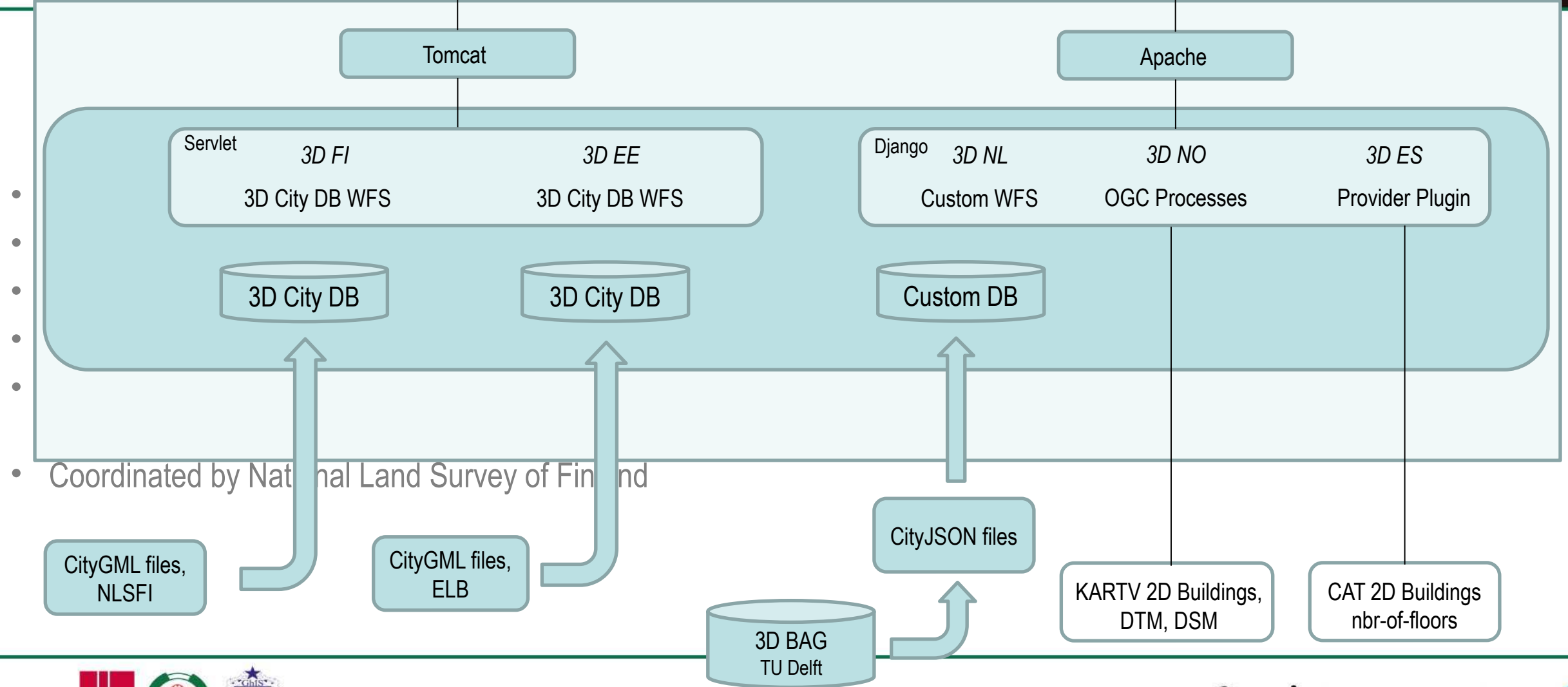


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## Data content status, Buildings

	Finland	Estonia	Norway	The Netherlands	Spain
Buildings	OK	OK	OK (limited coverage)	OK	OK
3D Buildings	OK (limited coverage)	OK	OK (limited coverage, experimental on-the-fly process, only LOD1)	OK	OK (only LOD1)

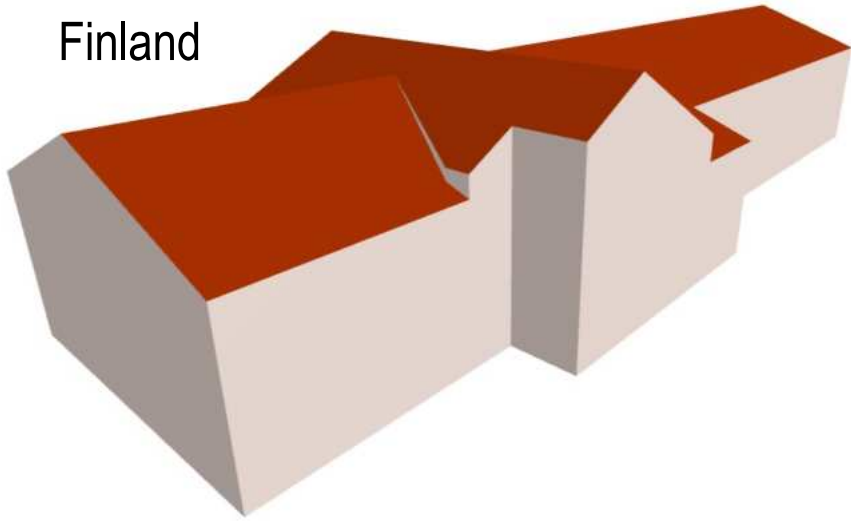
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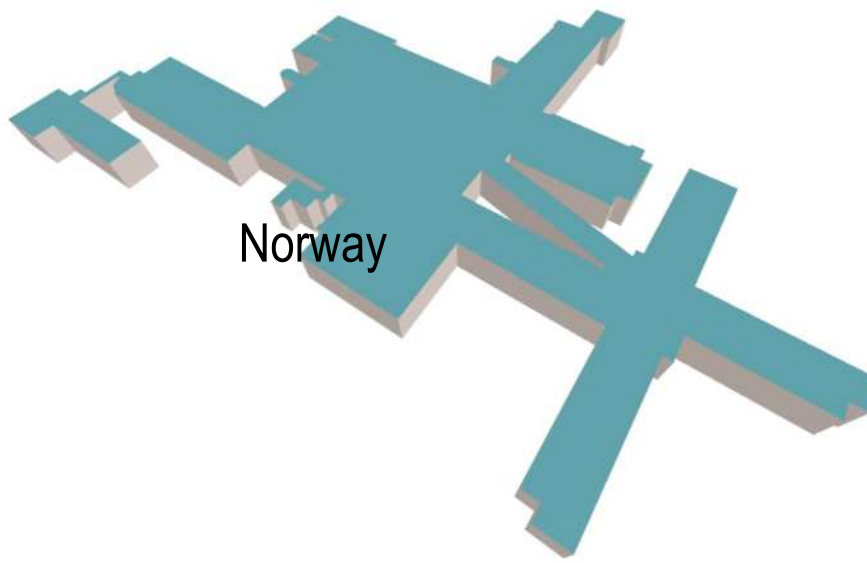
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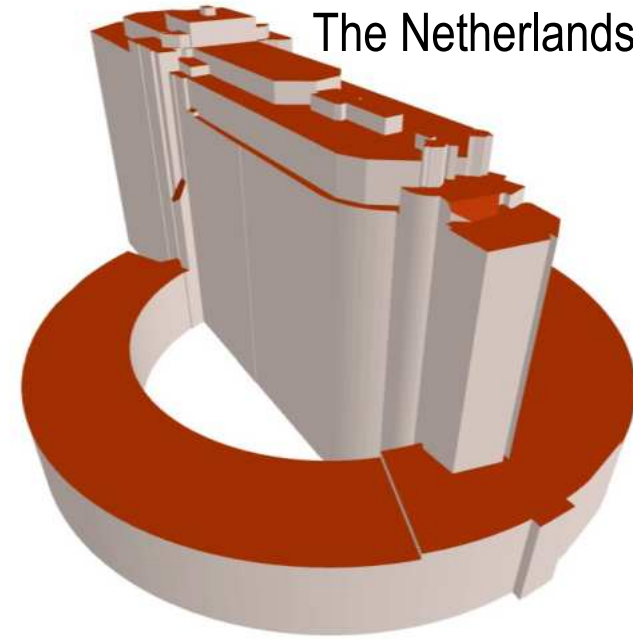
Finland



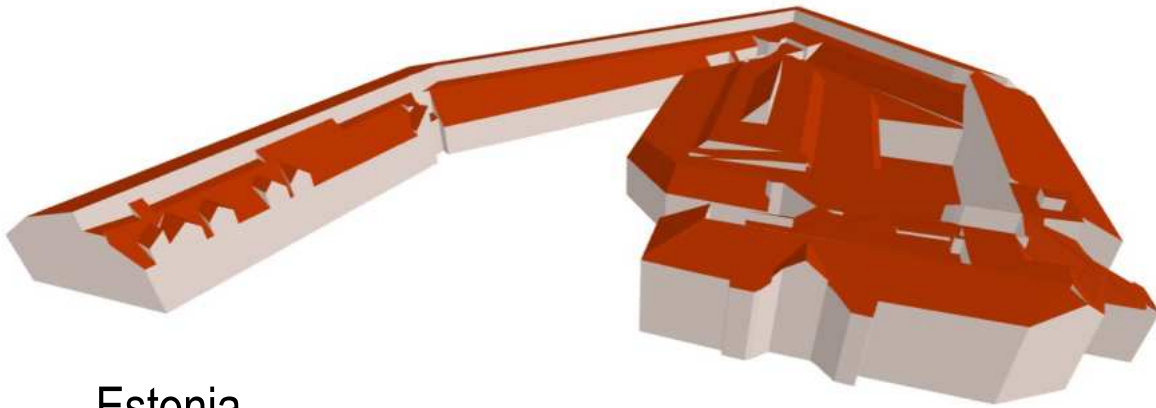
Norway



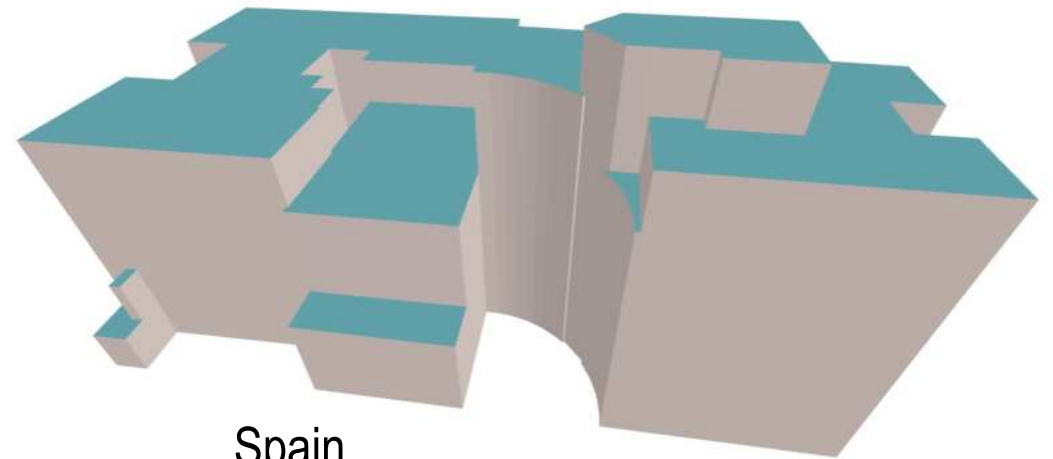
The Netherlands



Estonia



Spain







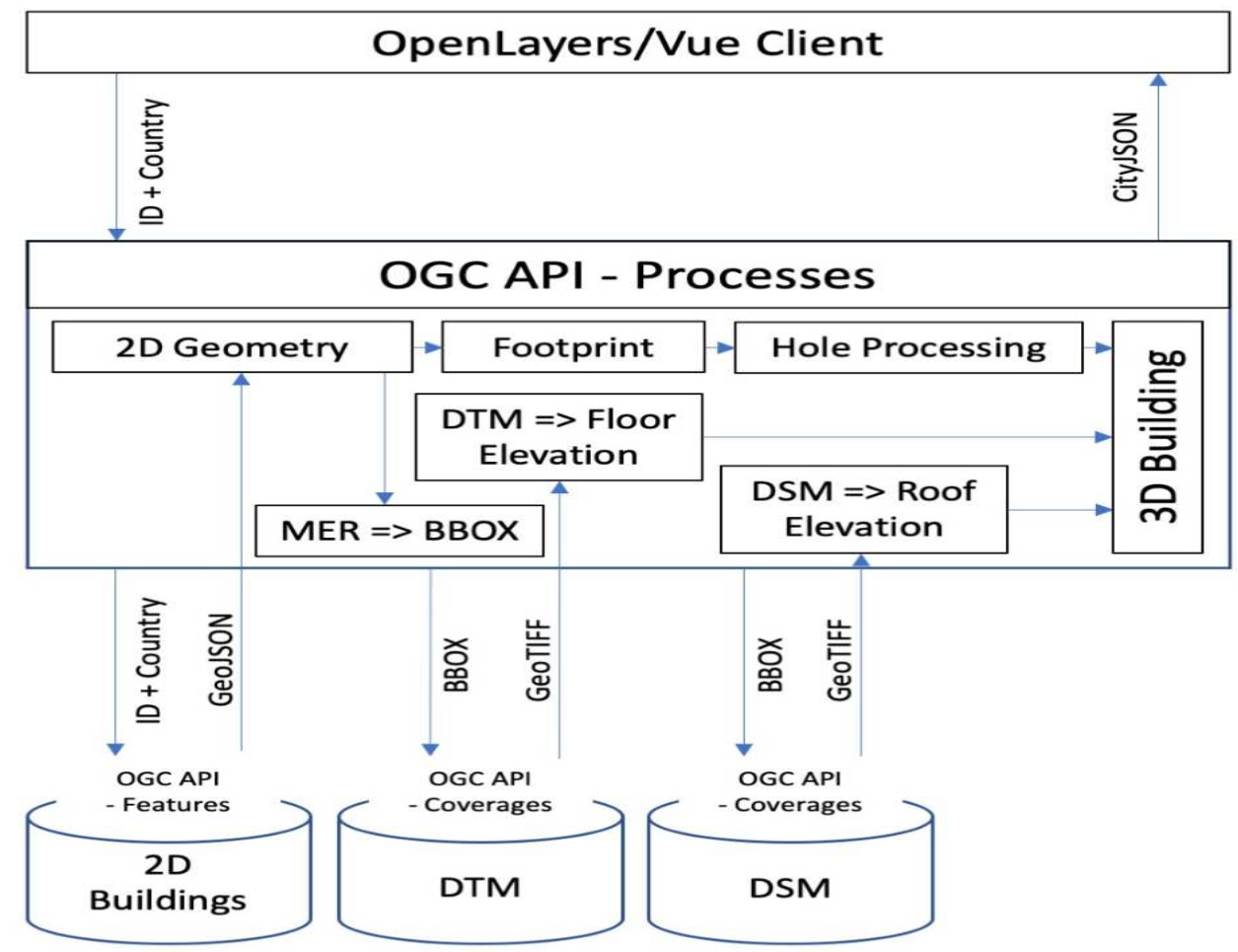
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## On-the-fly Generation of 3D Buildings





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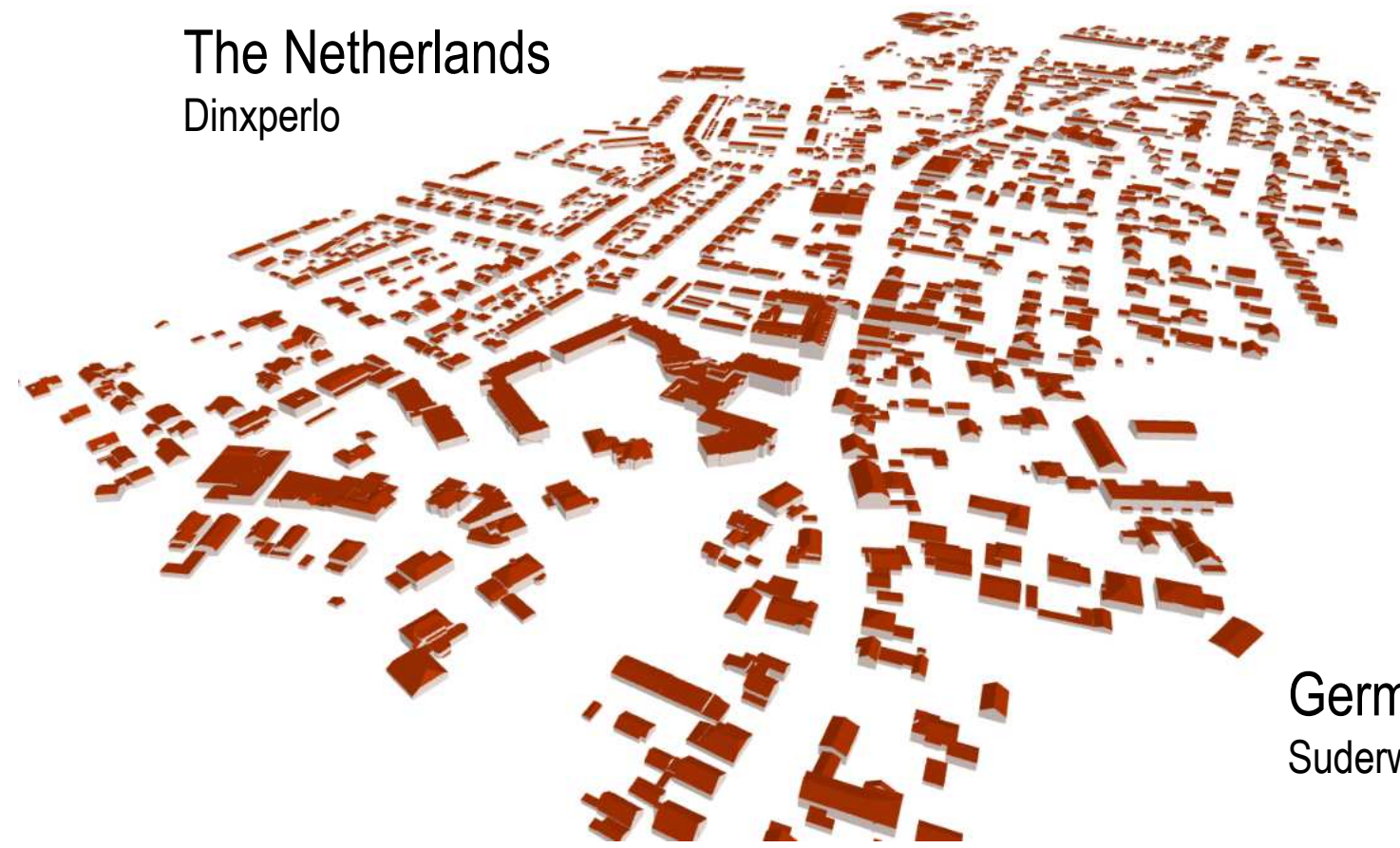
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Cross-border 3D viewing:

Example on the Dutch-  
German border

The Netherlands  
Dinxperlo



Germany  
Suderwick







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## Climate Data Integration

Data accessed from the national Met agencies portals

FMI OAPIF, Frost, KNMI Data Platform, AEMET OpenData, EEA files

Served via OGC API Coverages

Integrated with individual building features

Value accessed using buildings id

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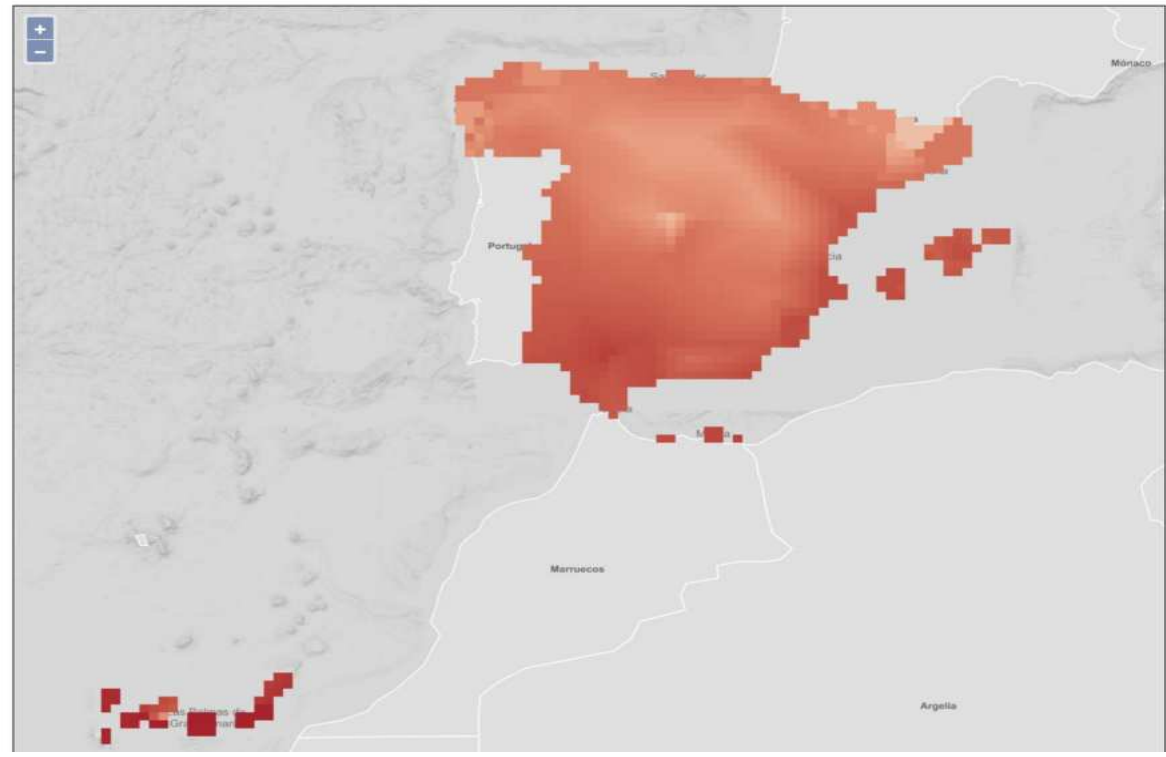


Contact

Temperature / Collections / Spain / Coverage

Zoom in to explore the coverage.

GTiff



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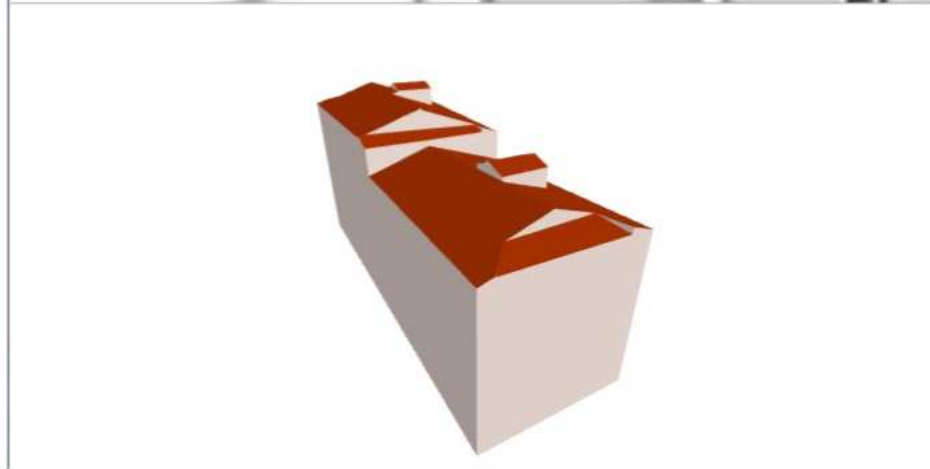
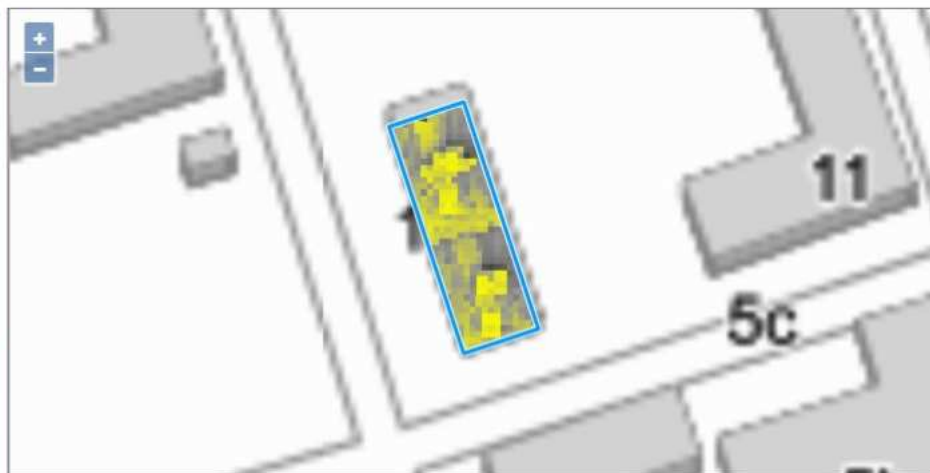
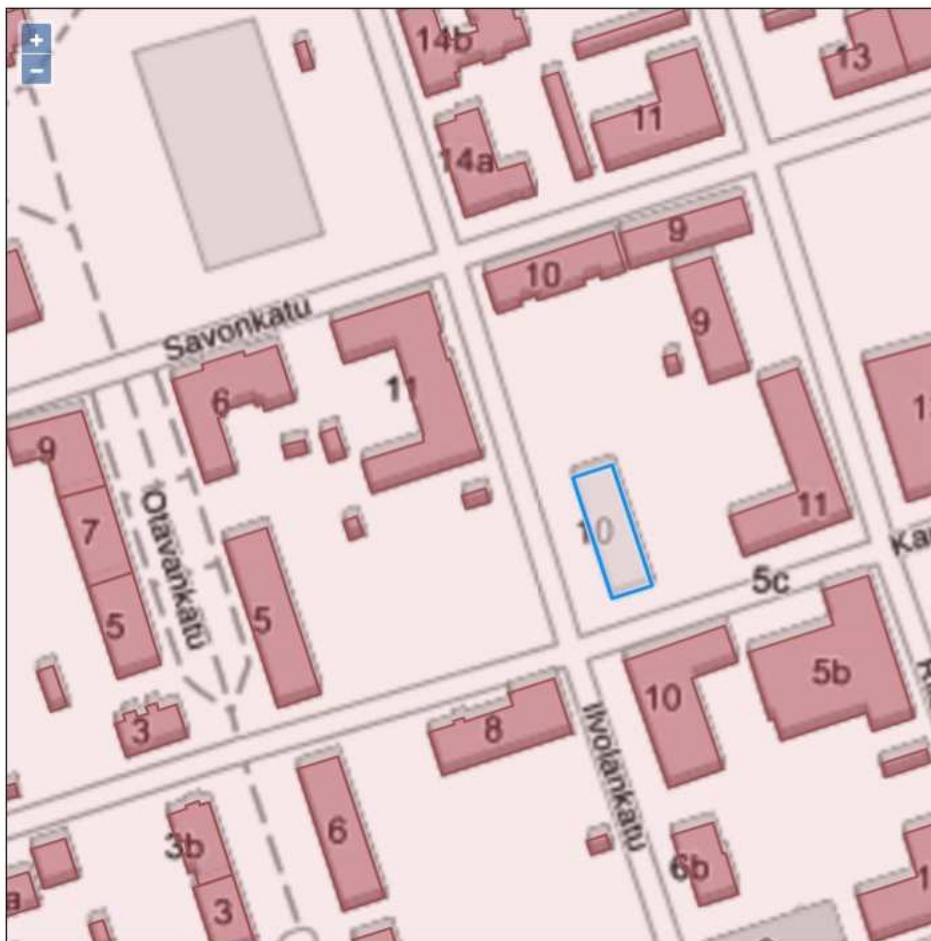
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## Finland

Zoom in to see the items in this collection.







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Buildings / Collections / Finland / Items / 74d72002-d920-4828-8241-b9969a96bb12:4 [3D]



currentUse_currentUse	1
materialOfFacade	2
floorDescription_floorArea	1560
numberOfFloorsAboveGround	3

sunshine_hours	1580
windspeed	3.0
temperature	3.3
energyClass	D

sunshine_hours	1580
windspeed	3.0
temperature	3.3
energyClass	D

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GEOSA  
Geographical Information System  
General Authority for Surveying  
and Geospatial Information







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## Open Maps For Europe 2 (OME2) - A foundation for future pan-European high-value large-scale datasets



Production process  
and prototype for  
harmonised large-scale  
data



Aligned to EU Policy  
objectives and UN  
core geospatial data  
recommendations



Foundation for future  
pan-European high-  
value datasets



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## Objectives

- To set up a workflow to create and maintain:
  - A central pan-European high-value large-scale prototype (HVLSP)
  - 3 themes:  
1-Administrative units; 2-Transport network; 3-Hydrography
  - 10 countries by 2025
  - Common data model based on UN-GGIM: Europe
  - Geometrical and topological consistency across international boundaries
  - Life-cycle management (from the creation of the database)

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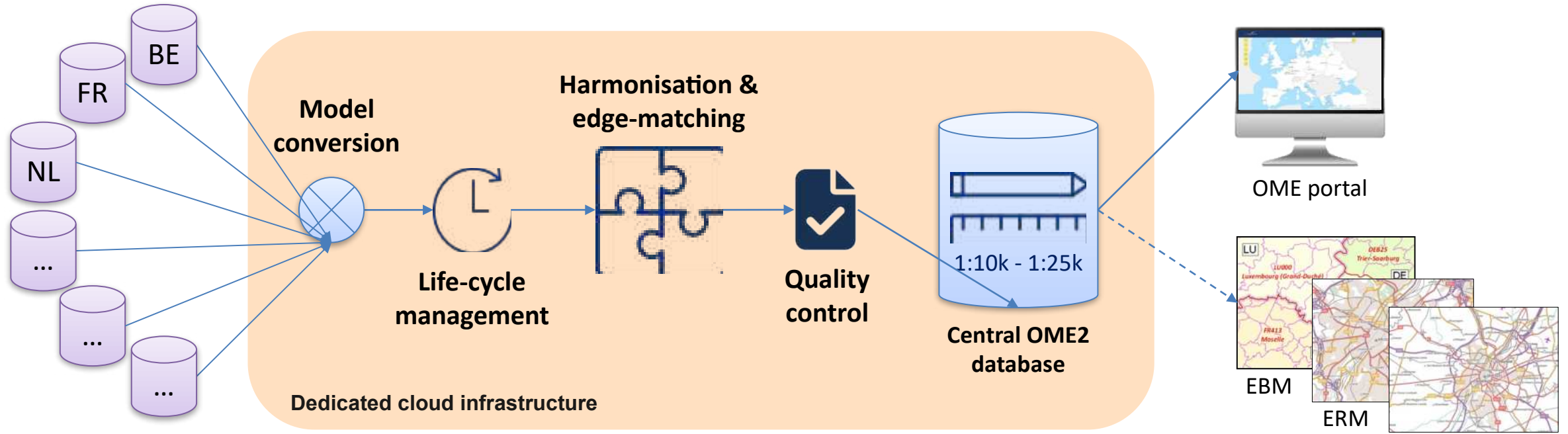


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## Future production process:







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- **Now:** Czech Republic , Denmark, Netherlands, Poland, Slovenia, Spain
- **2024:** Greece, Latvia, Luxemburg and Slovakia
- **2025:** 5 more countries



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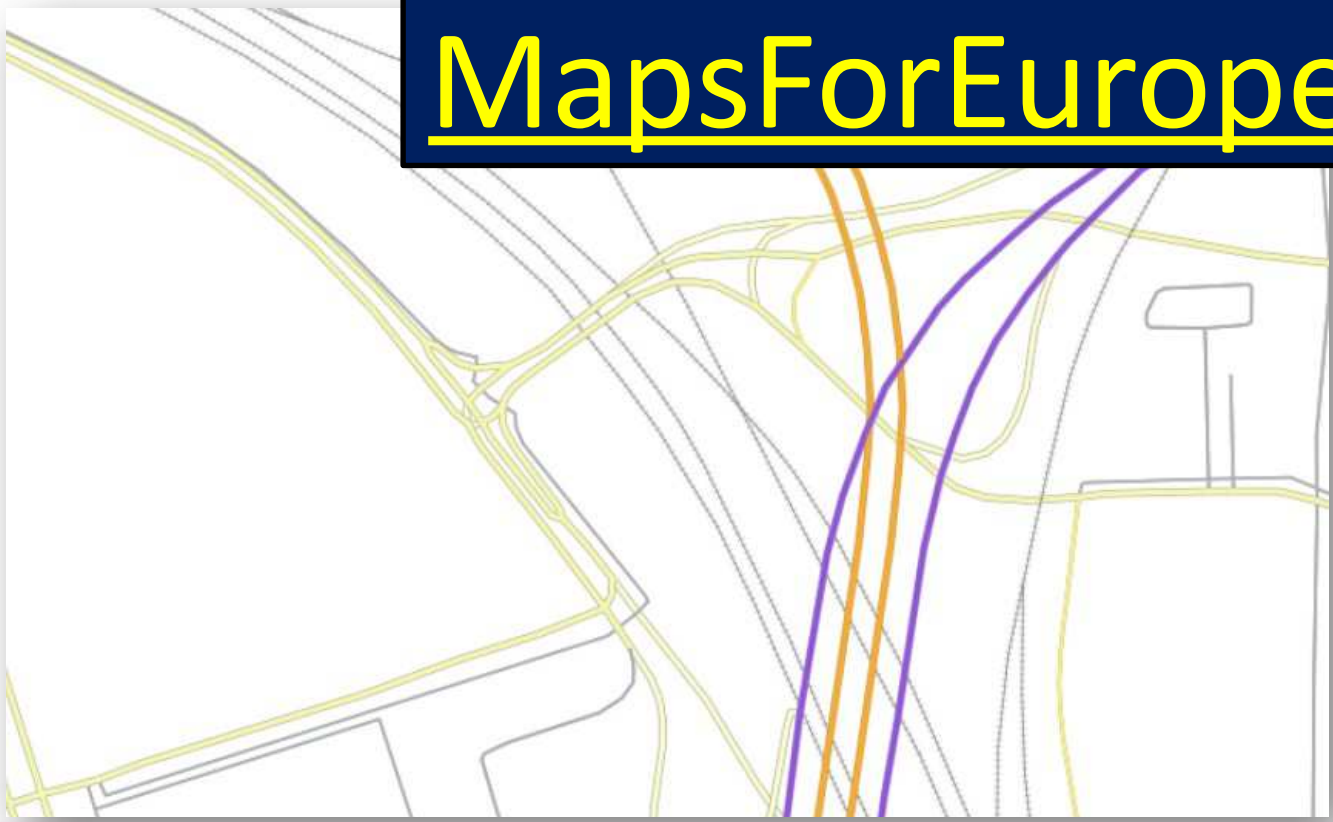
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## High-Value Large-Scale Prototype v1.0

[MapsForEurope.org](https://www.mapsforeurope.org)







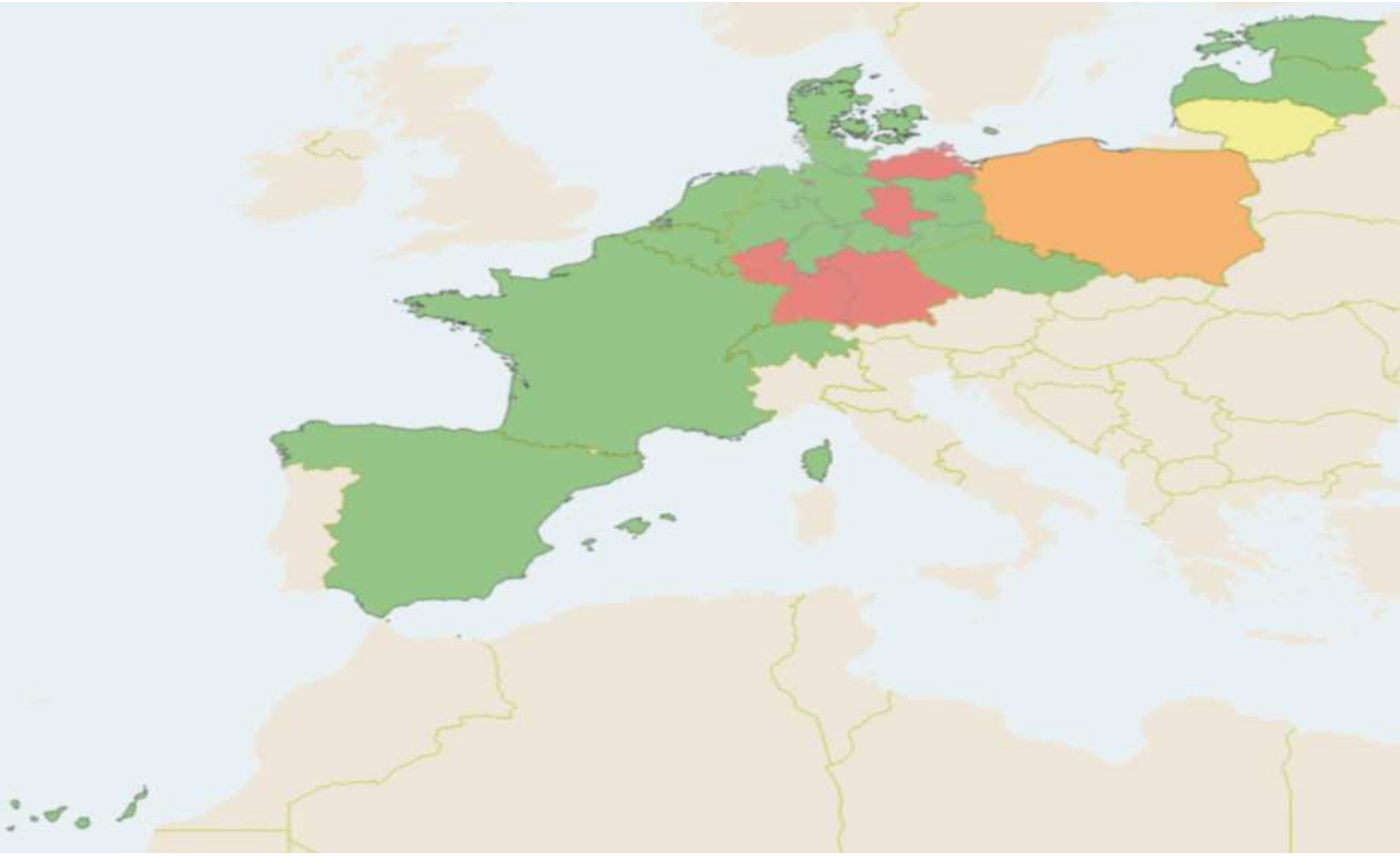
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## High-Value Large-Scale Prototype v3.0



3 data themes – 10 countries:

- Administrative Units
- Transport Networks
- Hydrography





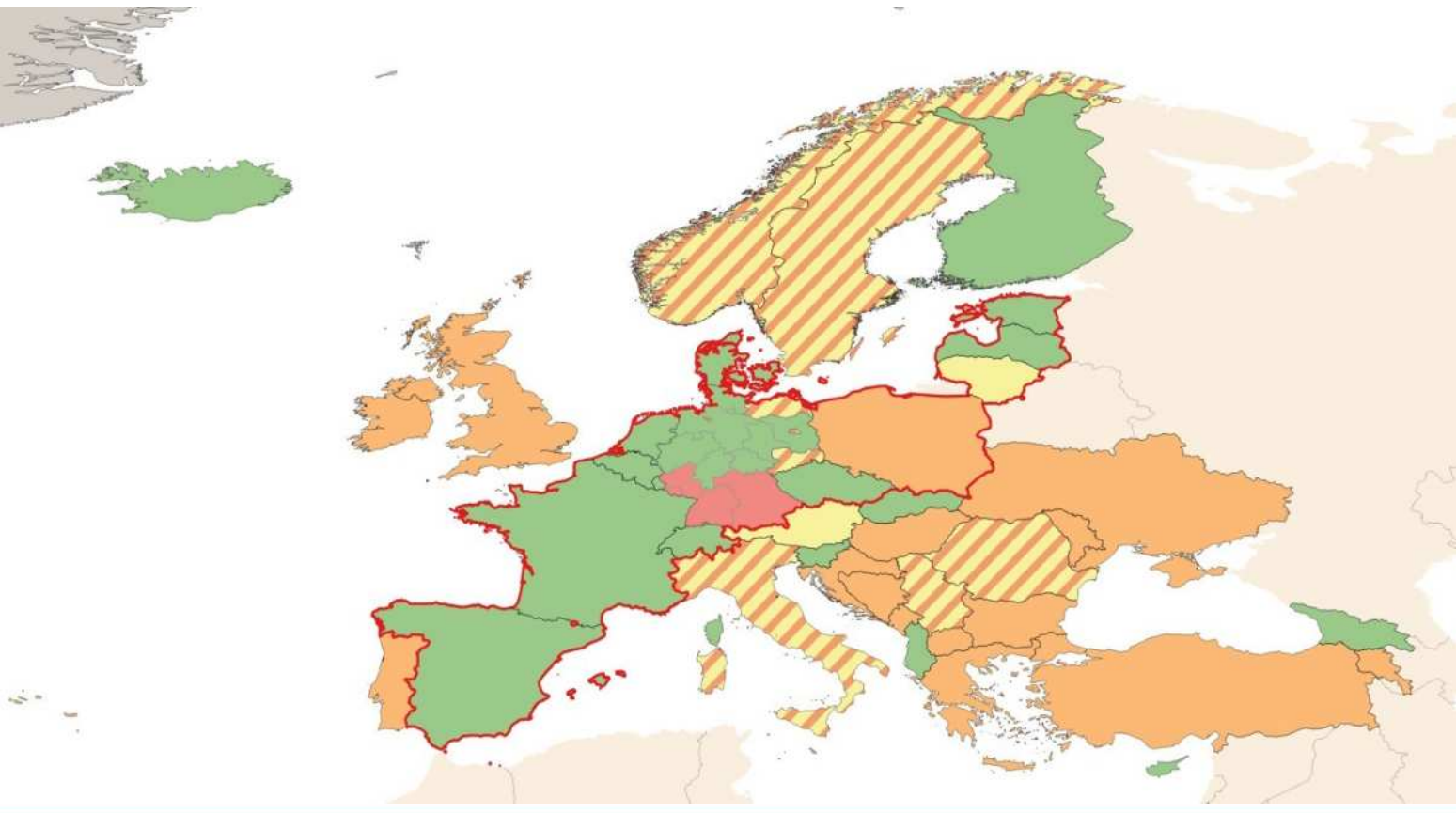
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## High-Value Large-Scale Pan European Dataset





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## SUSTAINABLE DEVELOPMENT GOALS

International Federation of Surveyors supports the Sustainable Development Goals

# Commission 3

## Spatial Information Management

Serving Society for the Benefit of People and Planet



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