

Geospatially Enabled Ecosystem for Europe

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Metadata Matters, 6th September 2023



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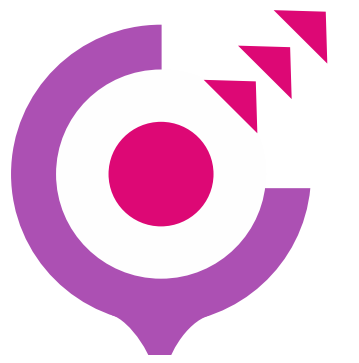


Defining now the future!

Common & Sectoral EU data spaces



Location
Innovation
Hub



Rich pool of data
(varying degree of
accessibility)

Free flow of data
across sectors and
countries

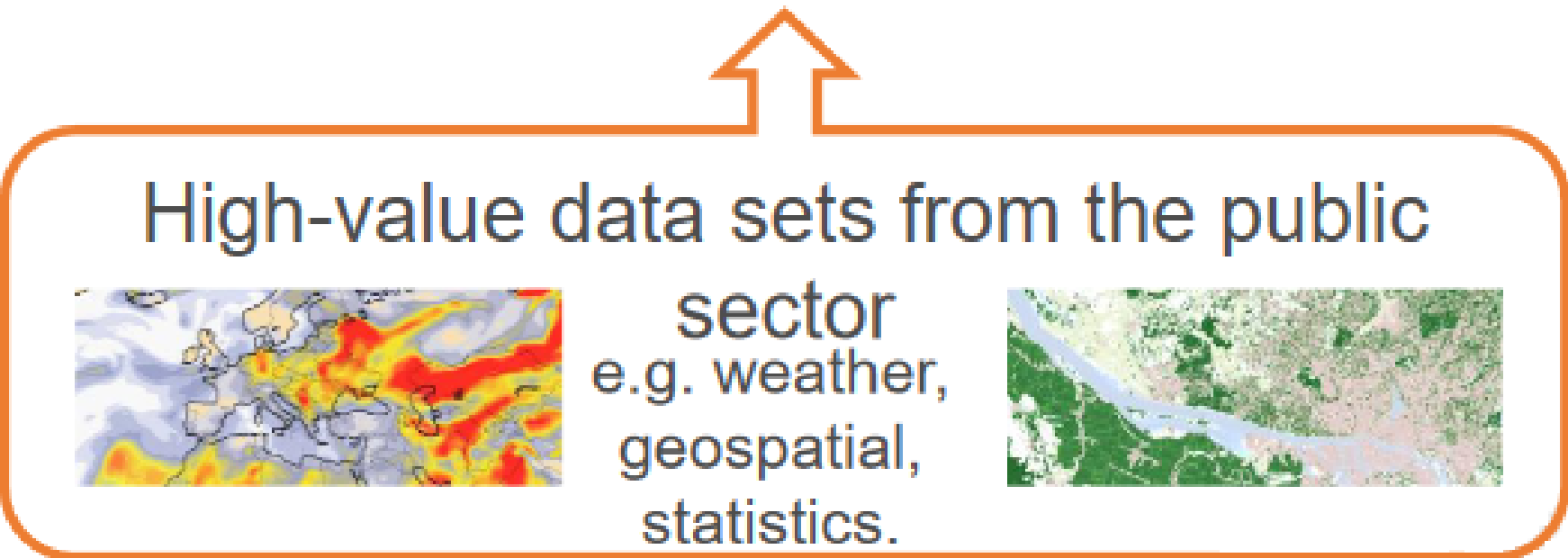
Full respect of GDPR

Horizontal
framework for data
governance and data
access



Location Location Location Location Location Location

- Technical tools for data pooling and sharing
- Standards & interoperability (technical, semantic)
- Sectoral Data Governance (contracts, licenses, access rights, usage rights)
- IT capacity, including cloud storage, processing and services



What is happening in Europe and especially on Digital Twins and mapping agencies

German digital twin 40 points per m2 ready 2025 ja update 3 year interval



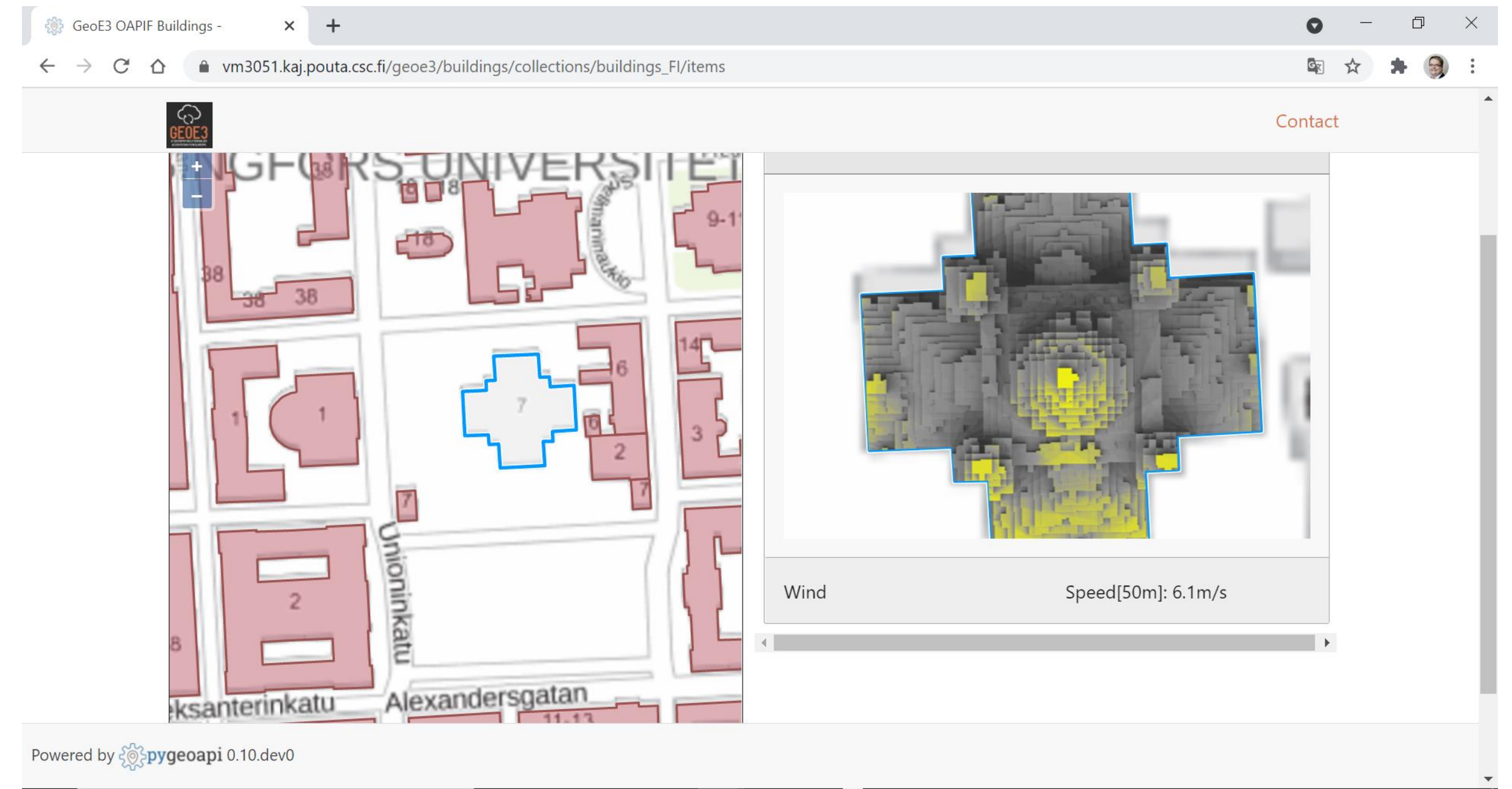
Estonia maa-amet 3D buildings + vegetation

Destination Earth



Why we need Location data in European Data Spaces

- Location connects different data and makes it understandable
- Digital twins means not only 3D data but also various dashboards combining huge data volumes
- Everything happens somewhere so location-based user interfaces are natural



Example Solar Energy Potential In Helsinki combining meteorological data with building data and digital surface model (GeoE3 demonstration platform)

How GeoE3 may help (Objectives)

Better access and interoperability of Geospatial data /other data

- Usability of metadata information – e.g. dashboards
- Integration with other data (e.g. statistics, weather data)
- Accessibility through European Data Portal (DCAT.AP)

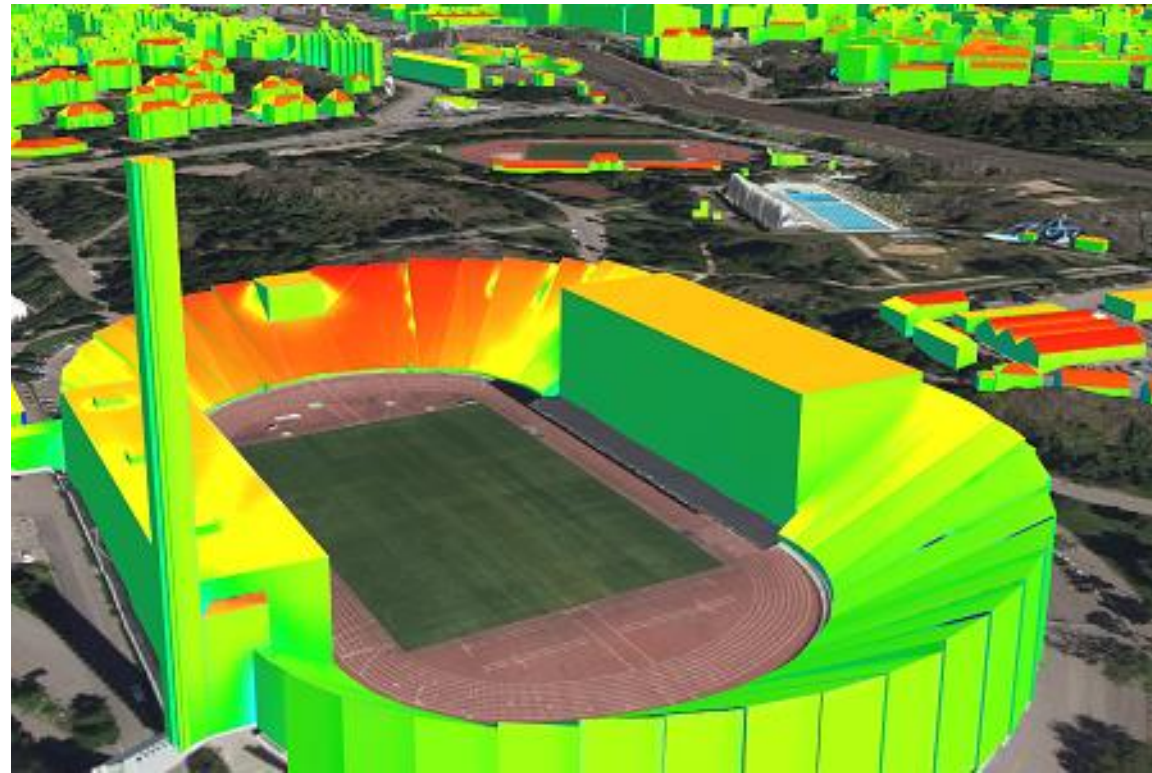
Dynamic harmonisation of geospatial data based on use cases and new APIs

- Example Cloud Platform which will demonstrate use cases and then used for national platform implementatios through different APIs and tools

Build an ecosystem based on national platforms

- eLearning videos
- Innovation events
- Benefits

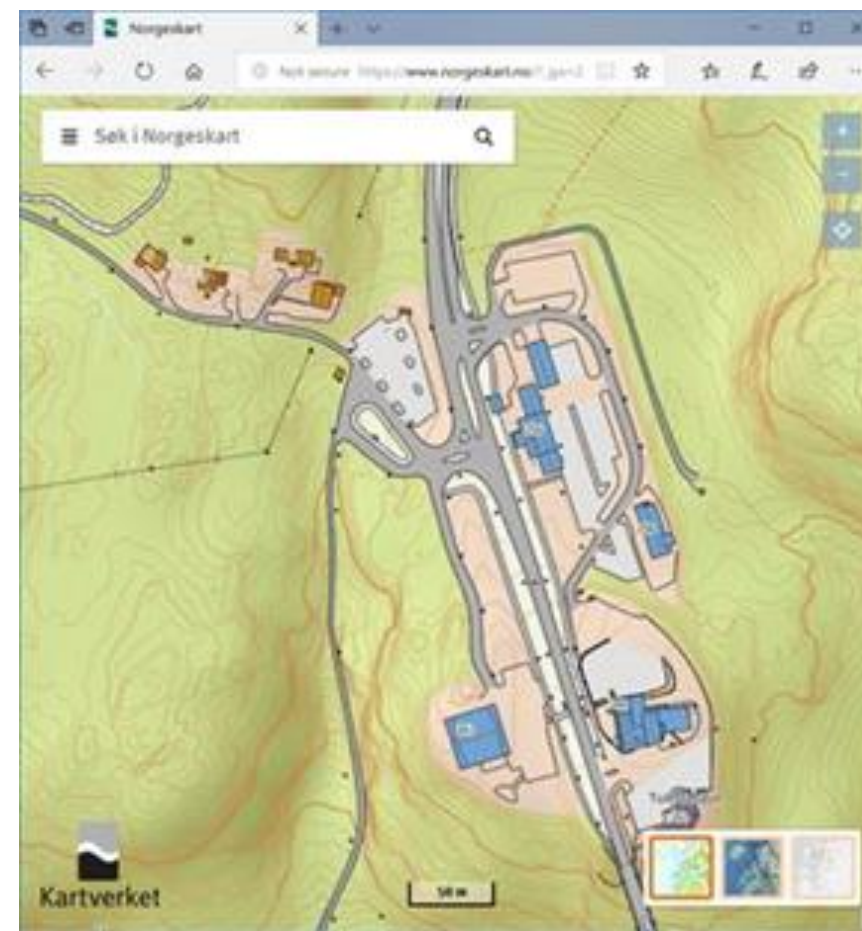
GeoE3 Use cases



Solar energy potential
and energy efficiency
of buildings

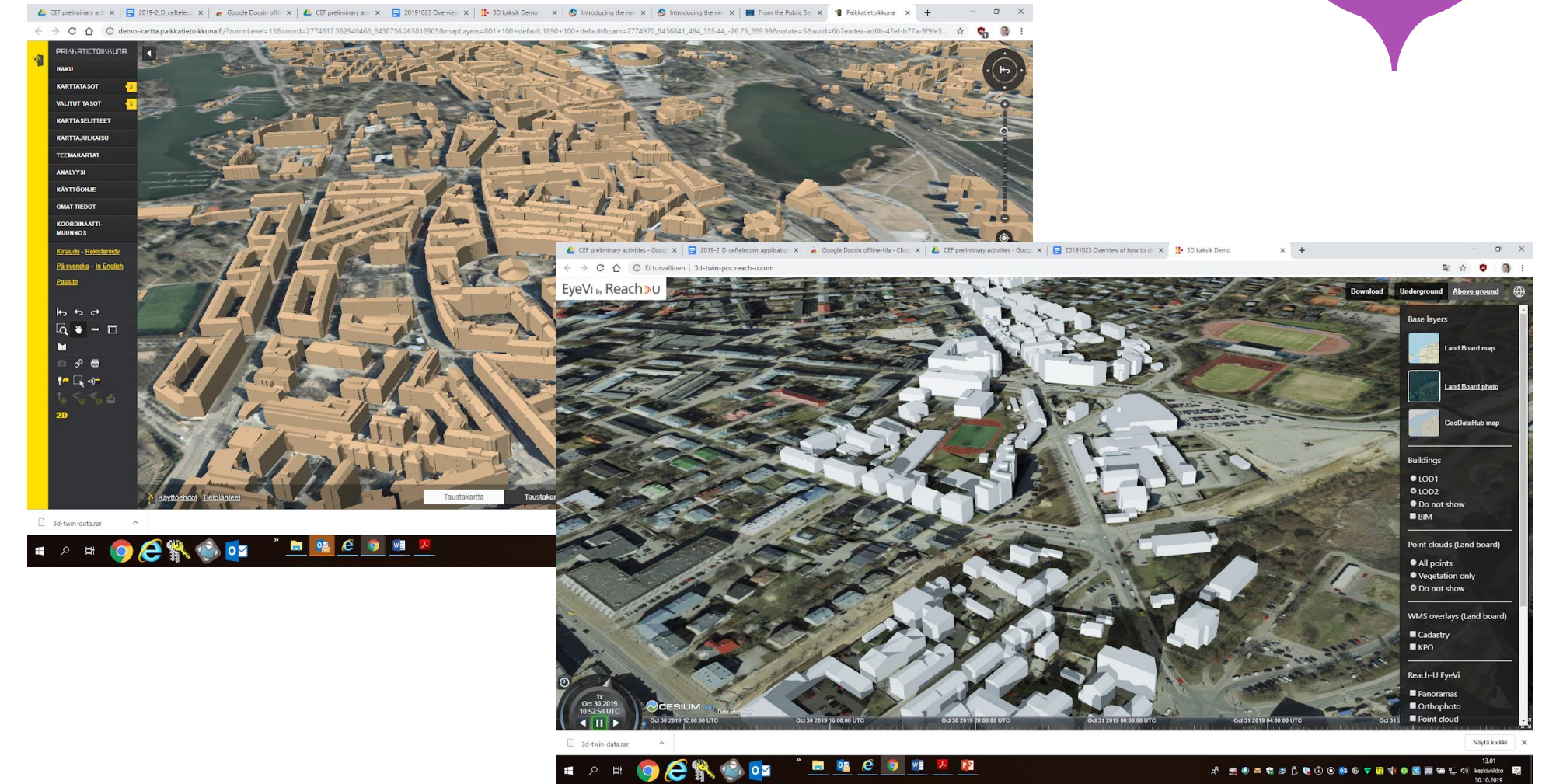
**Optimized use of
solar energy**

**Energy efficiency of
buildings**



Co-operative
Intelligent Transport
Systems and
Advancing map
enhanced driver
assistance systems
leading to automated
driving

**Cleaner and safer
transport**



Cross border & Cross
domain Smart City
Finland Estonia

**City planning for
sustainable energy**

**Sustainable
urbanization**

The Netherlands Dinxperlo



Germany
Suderwick

Interoperability map - maturity model – Buildings 2d/3d



Country/Dataset	Legal aspects/Organizational aspects	Technical aspects/Data access		Semantic aspects		
	National data accessibility and integration arrangements	metadata discoverability	data accessibility	Vocabulary and data specifications	Data content and data quality	Quality assessment (QA)
Finland/Buildings, 2D	Level 1 (Open data, no national platform)	Level 1 (no DCAT AP)	Level 3 (OGC API)	Level 1 (definitions available but not MR)	Level 1 (national schema)	Level 1 (QA available but not published)
Finland/Buildings, 3D (test dataset)	Level 1 (Open data, no national platform)	Level 0 (no metadata)	Level 1 (no API)	Level 1 (definitions available but not MR)	Level 1 (data content limited)	Level 0 (no QA)
Norway/Buildings, 2D	Level 0 (not considered as open data)	Level 3 (DCAT AP)	Level 2 (WFS but not OGC API)	Level 2	Level 2	Level 1? (QA available but not published)
Norway/Buildings 3D (not available)	Level 0	Level 0	Level 0	Level 0	Level 0	Level 0
Netherlands/Buildings, 2D	Level 2 (Open data, national platform)	Level 2 (no DCAT AP)	Level 2 (WFS but not OGC API)	Level 2 (definitions available with RDF)	Level 1 (national schema)	Level 1 (QA available but not published)
Netherlands/Buildings, 3D	Level 2 (Open data, national platform)	Level 2 (no DCAT AP)	Level 1 (downloads, OGC API coming soon)	Level 1 (definitions available but not MR)	Level 1 (national schema)	Level 0 (No QA)
Spain/Buildings, 2D	Level 1 (Open data, no national platform)	Level 2 (DCAT AP)	Level 2 (WFS but not OGC API)	Level 1 (definitions available but not MR)	Level 2 (INSPIRE schema)	Level 1? (QA available but not published)
Spain/Buildings, 3D (not available)	Level 1 (Open data, no national platform)	Level 0 (no metadata)	Level 2 (national API with KLM format)	Level 1 (definitions available but not MR)	Level 1 (national schema)	Level 0 (No QA)
Estonia/Buildings, 2D	Level 2 (Open data, national platform)	Level 2 (no DCAT AP)	Level 3 (OGC API)	Level 2 (INSPIRE schema)	Level 2 (INSPIRE schema)	Level 1 (QA available but not published)
Estonia/Buildings, 3D	Level 2 (Open data, national platform)	Level 2 (no DCAT AP)	Level 3 (OGC API)	Level 1	Level 1 (national schema)	Level 1

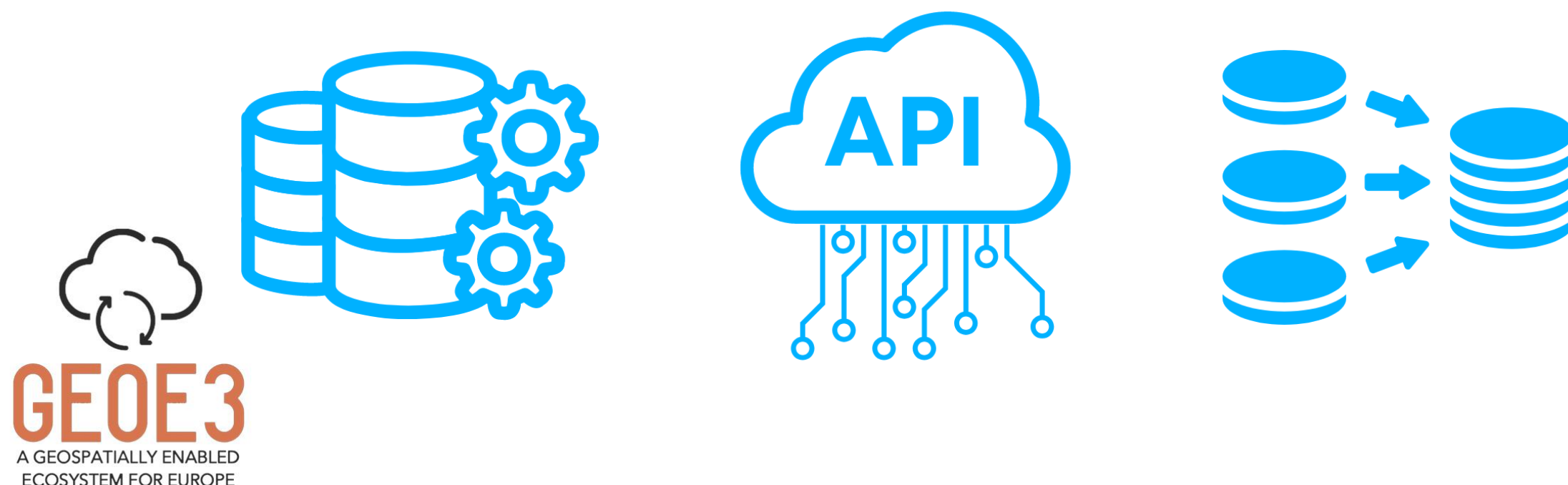
Location Innovation academy

- Part of [GeoE3-project](#), which accelerated the accessibility, interoperability and integration of cross-border geospatial data and services over the past two years.
- After the project, The Academy is hosted by Open Geospatial Consortium and Location Innovation Hub
- Three different courses:
 - Data management
 - Service management
 - Data and service integration



Location Innovation Academy offers a comprehensive set of modules that supports modern and cross-border management, integration, processing, and sharing of geospatial data and services.

academy.ogc.org



This is Location Innovation Hub

- Coordinated by Finnish Geospatial Research Institute and services are provided with a partner network.
- Target audience: businesses and public organizations.
- Tools, testing infrastructure, business and technical consultation, and training.
- Funding opportunities.
- We focus on four different themes: Built Environment, Bioeconomy, Health and Wellbeing, and Transportation and Logistics.
- Three key technology sectors: AI and ML, High Performance Computing, and Cybersecurity.



Partners and Associated partners



European core data provider network



Key outcomes expected

Data spaces

Work on reference data spaces to establish the link between geodata and other data. Seeking funding for these both in Finland and in Europe.

Innovations

Work on creating new innovation and business in location data and services. Create European based solutions, for example Location API business manual. Data integration guidance.

Test environments

Providing test before invest services: GeoE3 platform, next generation navigation space in Otaniemi, urban test environments, novel datasets and test areas.

Location API business manual



Version 1.0 | March 2023

Starter Kit for Data Space Designers

Business models

Lifecycle management

5G

Copyright and licenses

Ethical questions

Security

Sensor APIs

Global and national guidance



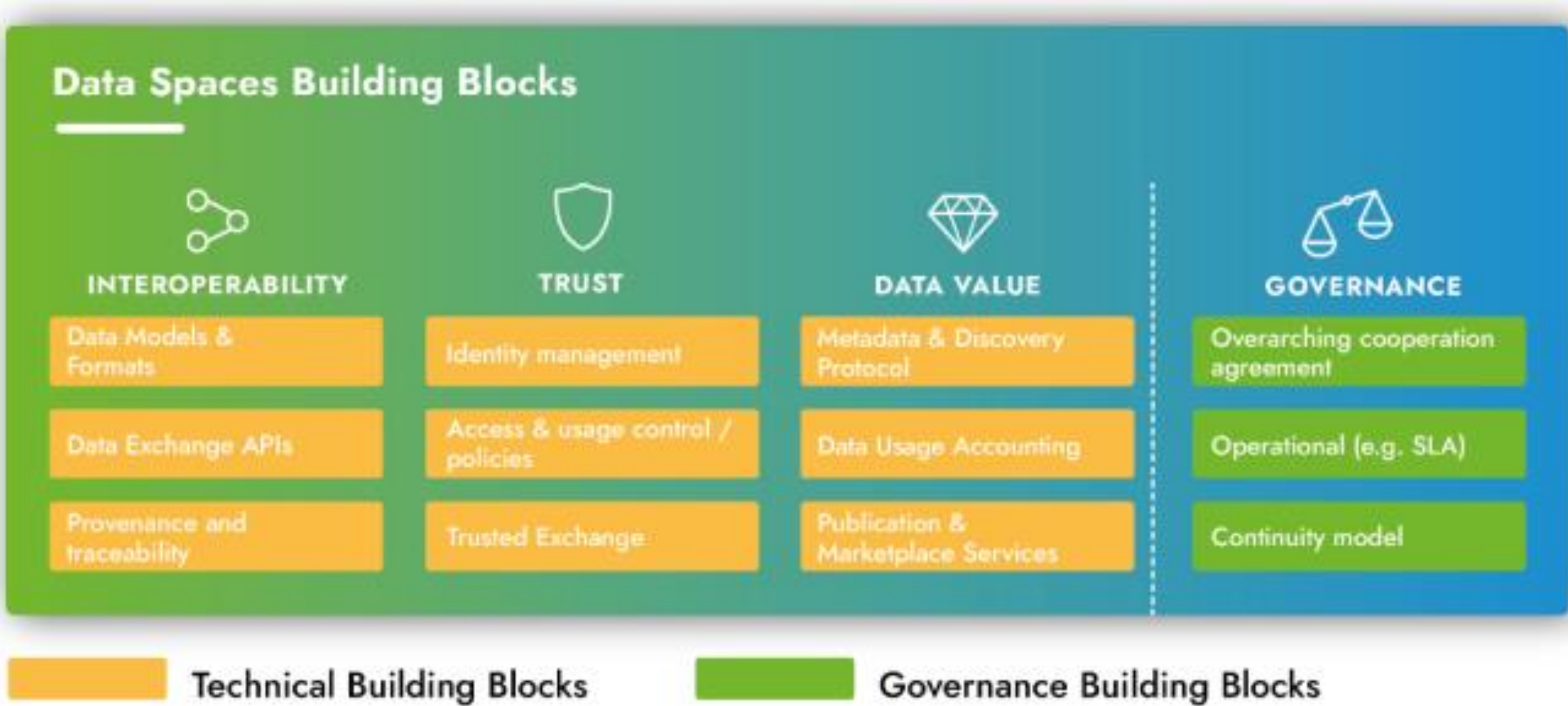
OVERTURE MAPS FOUNDATION



Location Data Space for the European Data Spaces



The aim is to develop frameworks and tools for some of the building blocks as described below by the Data Spaces Support Center, in regards to geospatial data.



Join our European Core Data Provider network



Mission

- Support European Data Spaces on interoperable location data
- Work towards increased use of location data in Europe

Objectives

- Working with the national European Digital Innovation Hubs and helping these to use location data. Each Participant will co-operate with their national hubs and the Location Innovation Hub (Finland).
- Continue to maintain the services and the platform created in the CEF project GeoE3.
- Provide open data sets and services as test beds for the European Digital Innovation Hubs.
- Work to create European Digital Twins on location data in built environment, bioeconomy, traffic and health
- Organise demonstration activities, events and training for creation of interoperability. These may be organized as webinars or using e-learning modules (Location Innovation Academy)
- Seek further funding opportunities through Digital Europe Programme or Horizon Europe for creation of Digital Twins or interoperable services