

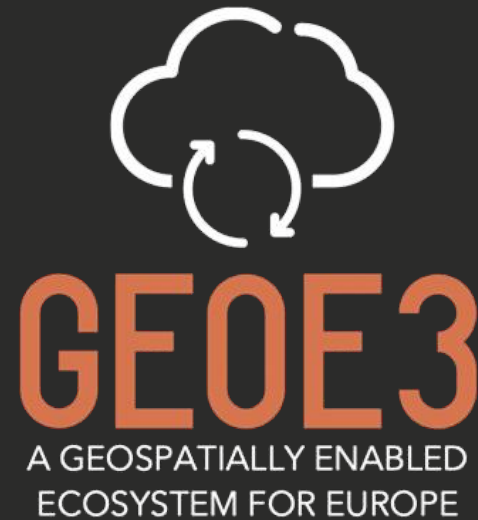


Co-financed by the Connecting Europe  
Facility of the European Union

# GEOE3 WORKING TOWARDS DATA SPACES AND DIGITAL TWINS

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# WHY WE NEED LOCATION DATA IN DATA SPACES?

- Common data spaces include; green deal, mobility, health, financial, energy, agriculture, public admin and skills
- 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



Source: <https://kartta.hel.fi/3d/heating/Apps/Helsinki/view.html>

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)

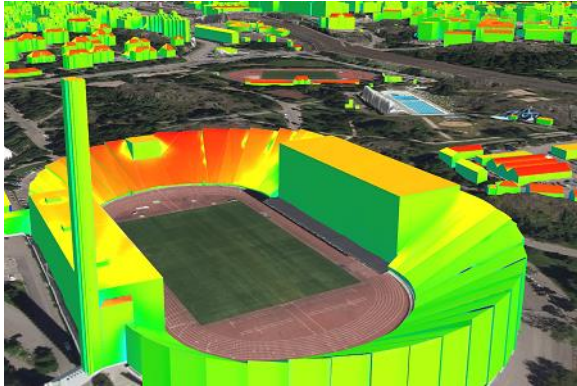
Dynamic harmonisation of geospatial data based on use cases and new APIs

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

Build an ecosystem based on national platforms

- eLearning videos
- Innovation events
- Benefits

- • Part of Connecting Europe Facility –programme
- • Budget 2.6 million euro, funding 1.9 million euroa
- • Partners 12
  - • National Land Survey of Finland
  - • Finnish meteorological Institute
  - • Statistics Finland
  - • Spatineo (Finland)
  - • Norwegian Mapping Authority
  - • Cadastre, Land Registry and Mapping Agency
  - • Open Geospatial Consortium Europe
  - • CENTRO NACIONAL DE INFORMACIÓN GEOGRÁFICA Spain
  - • Estonian Land Board
  - • Information Technology Center of the Ministry of the Environment Estonia
  - • Aveni Intelligent Communication Norway
  - • DIRECCION GENERAL DEL CATASTRO Spain
- • Started October 2020, 3 years



Solar energy potential  
and energy efficiency  
of buildings

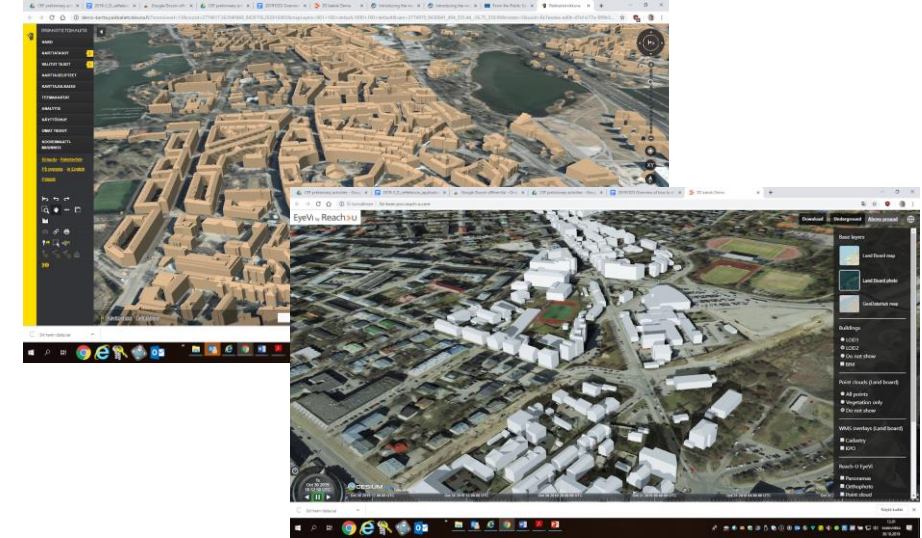
**Optimized use of  
solar energy**

**Reliable, future-proof planning  
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**

## Spatial

- Point clouds, Orthophotos
- 3D building model with LoD 2 detail
- Building footprints and address data
- Cadastral data
- Digital Elevation Model, Digital Surface Model (DSM) of the surrounding area
- 2D and 3D road data
- Building plans, urban planning
- Land use and Land cover

**Connected by  
Location  
Persistent ID  
Address**

## Other

- Relevant building attributes
- Shadow index coverage
- Number of sunshine hours at the nearest observation station
- Average wind conditions
- Normal air temperature at the nearest observation station
- Monthly mean temperature based on climate scenarios
- Traffic data
- Road signs and Speed limits
- Traffic accidents
- Population statistics
- Petrol stations

1 - Administration and  
action management  
(NLS-FI)

2 - Content Discovery  
and Evaluation  
(DISCOVER) (KAD-NL)

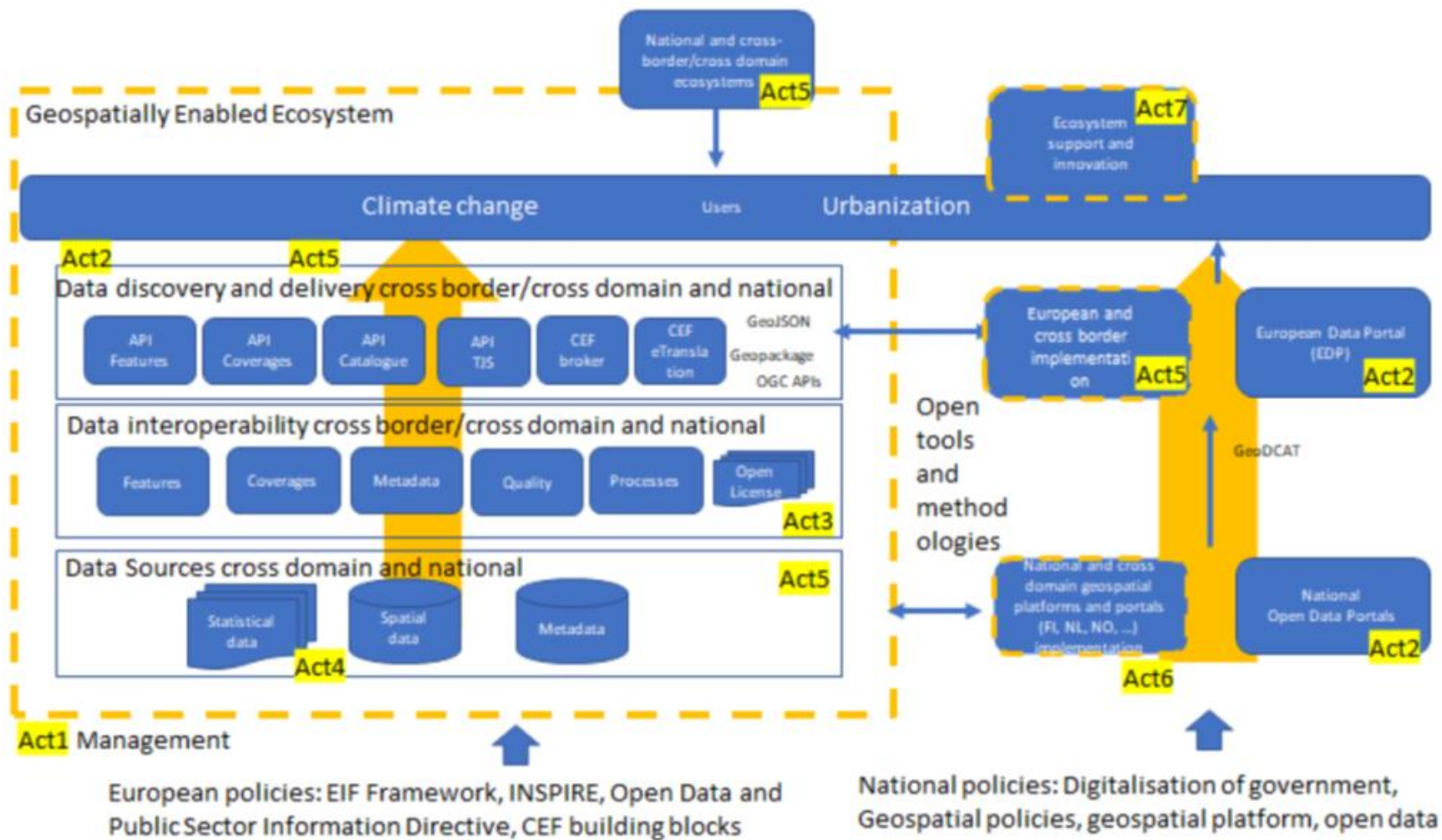
3 - Data interoperability  
of the Geospatially  
Enabled Ecosystem  
(IMPROVE) (KARTV-NO)

4 - Integration of tabular  
data in the Geospatially  
Enabled Ecosystem  
(DISCOVER) (NLS-FI)

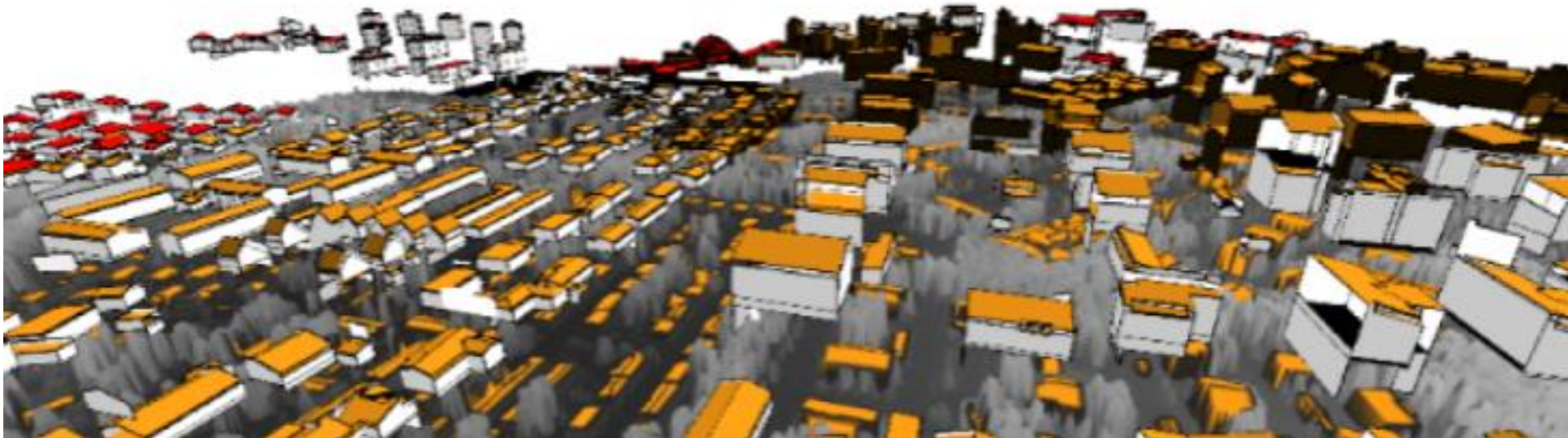
5 - Service and tool  
development for the  
Geospatially Enabled  
Ecosystem (IMPROVE)  
(FMI-FI)

6 - National platform  
and cross domain spatial  
platforms and portal  
implementation (GROW)  
(NLS-FI)

7 - Support and  
innovation for the  
Geospatially Enabled  
Ecosystem (GROW)  
(OGC-BE)

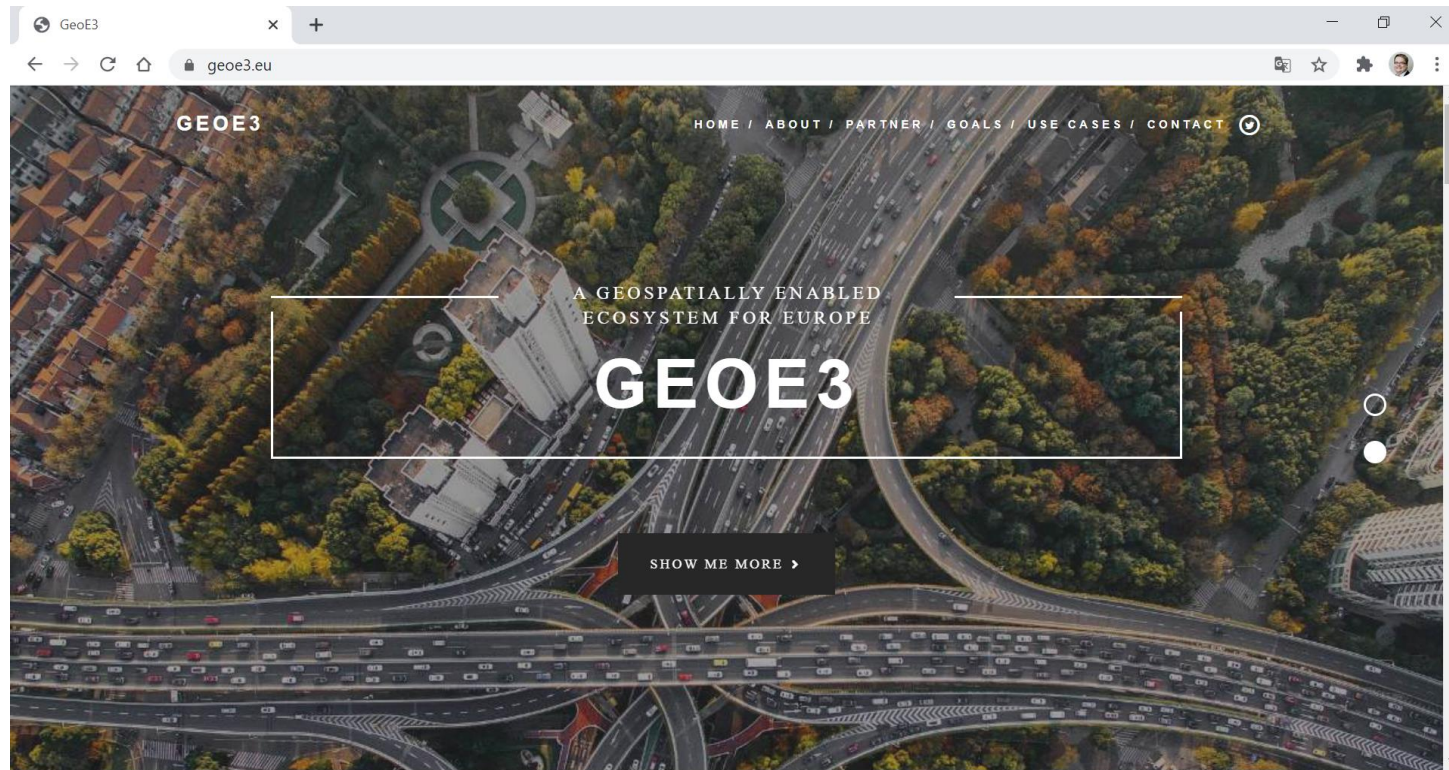


- Use cases nearing completion -> user communities input
- Dataset identification ongoing within countries
- Technical architecture work started
- Cloud environment being set up
- Trials with OGC APIs started



- Communication & Dissemination plan
- Website & Social Media [www.geoe3.eu](http://www.geoe3.eu)
- Support Events for new APIs and tools
- Innovation Events
- 9 eLearning modules
- GeoE3 network: Based on national geo-platforms, developers, users

- A demonstration platform on how to build interoperability need for the use cases
- APIs supporting the platform
- Improved metadata access through the European Data Portal
- Tools for interoperability and quality
- Creating a network based on national and regional data providers willing to work on data interoperability
- E-learning videos
- Investigating now a possibility on creating European Digital Innovation Hubs on location



**GEOE3.EU**