



# User Experience with the HVLSP

OME2 User Requirements Workshop 2  
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*17th October 2024*

# GISCO – GIS at the Commission

GISCO is a permanent service of Eurostat that answers the common needs of Eurostat and the European Commission for geographical information at the level of the European Union (EU), its Member States and regions.

- Provision of GIS (reference) data, services and software,
  - Support cartographic and spatial analysis activities,
  - Stimulate the use of GIS to support commission activities,
  - Support Eurostat activities on the integration of statistical and geospatial information.
- 
- <https://ec.europa.eu/eurostat/web/gisco>

# Requirements

7 main requirements for pan-European datasets



# OME 2 HVLSP topology validation

- Topology validation for transport network
- Check cross-border connectivity (edge-matching)
- New edge-matching validation procedure:
  - Detection of network nodes of degree 1 (dead-ends) located nearby a network section belonging to another country.
  - Detection of around 20 suspect cases only.

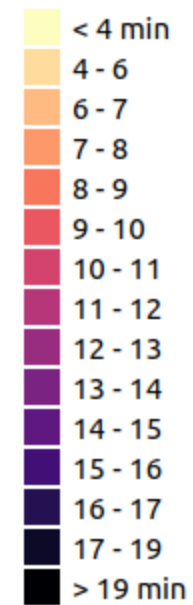
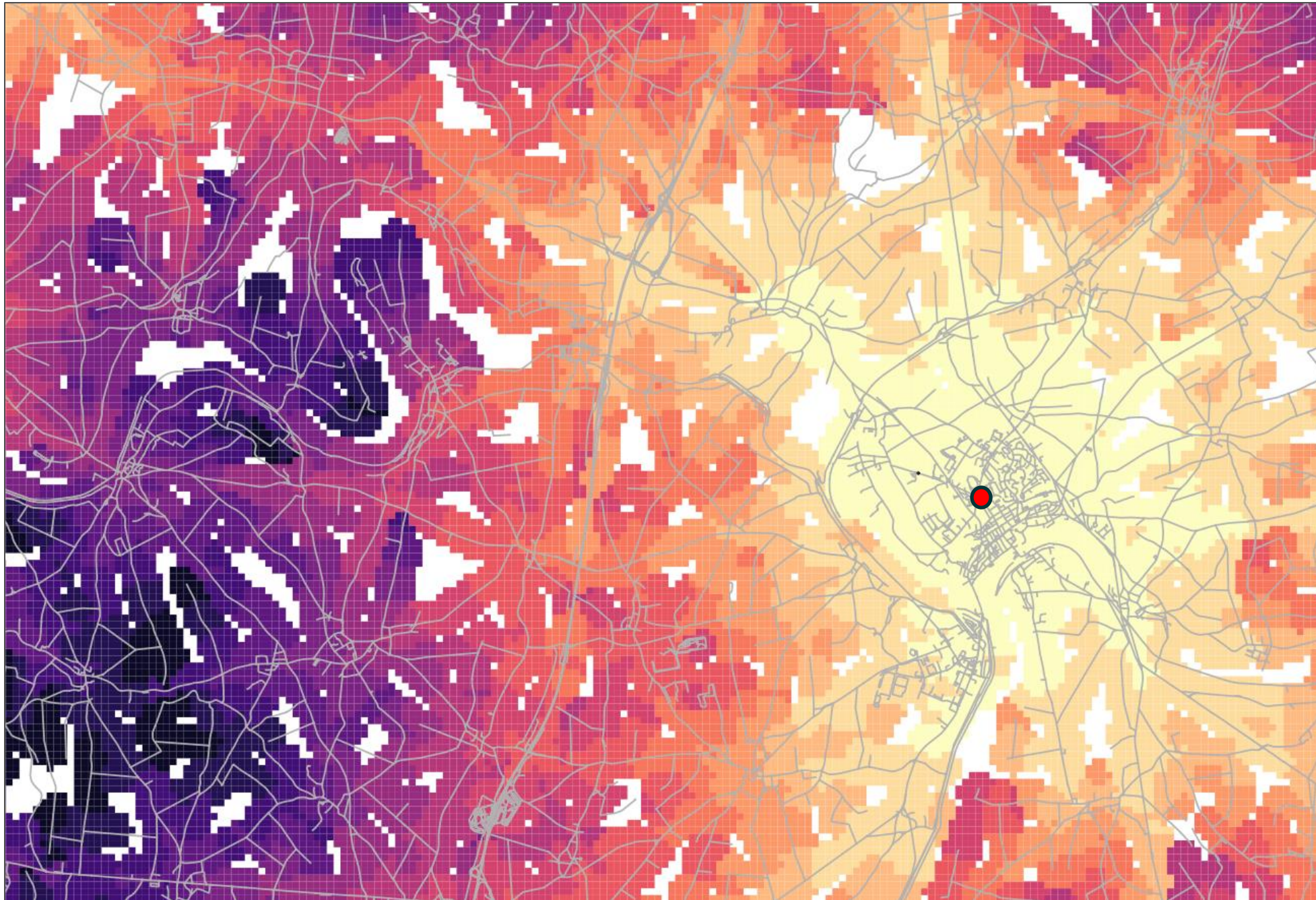
# OME 2 HVLSP topology validation

- Accessibility computation
- “Geographical data quality for spatial analysis and geospatial statistics”, European conference on quality in official statistics, 2024  
<https://leading.eventsair.com/QuickEventWebsitePortal/q2024/agenda-test/Agenda/AgendaItemDetail?id=765e8600-0f28-4dbc-a444-c7d864d5ee0a>
- Introduction on geographical data quality for statisticians
- Controlling geographical data quality on spatial analyses
  - Healthcare services accessibility analysis
  - Building density analysis

# Healthcare services accessibility analysis

- Eurostat dataset on the localisation of main healthcare services in Europe.
- Accessibility at 100m resolution: Driving time to the nearest service by road network.

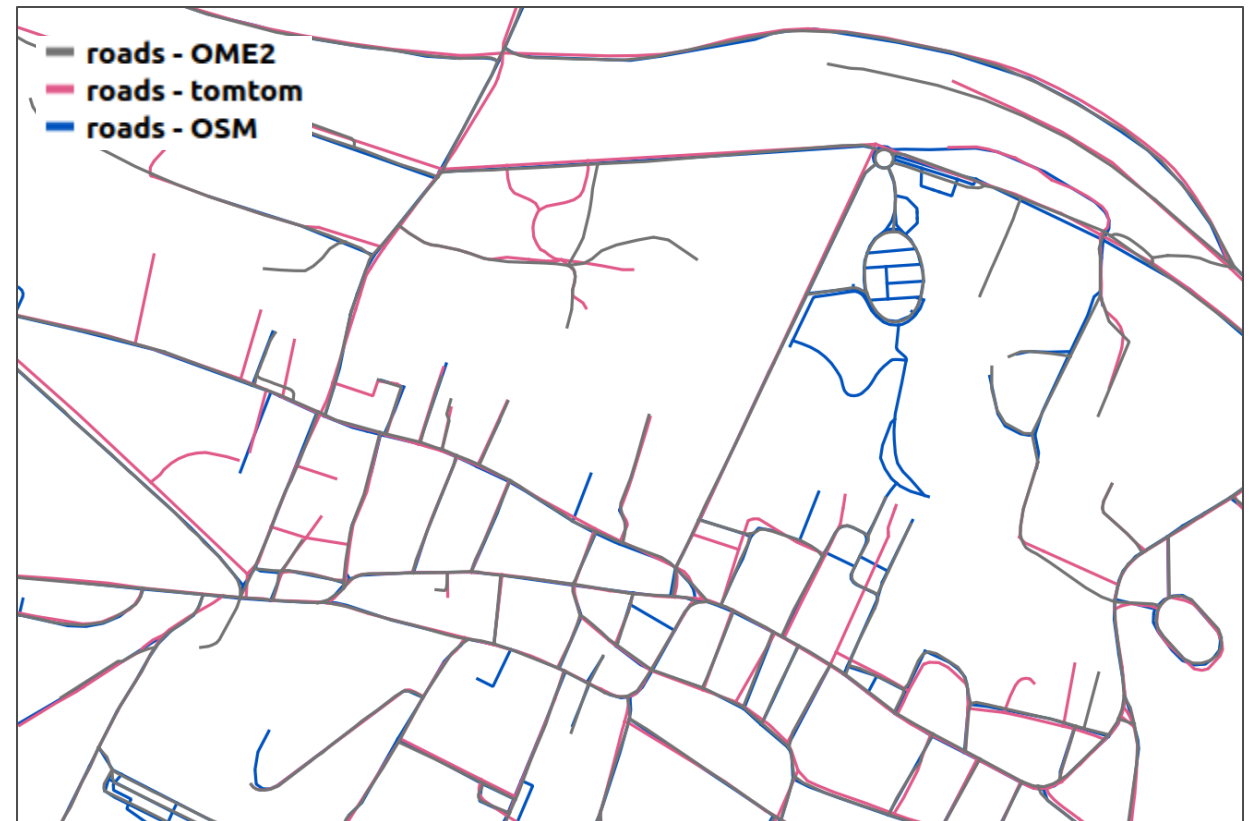






# Healthcare services accessibility analysis

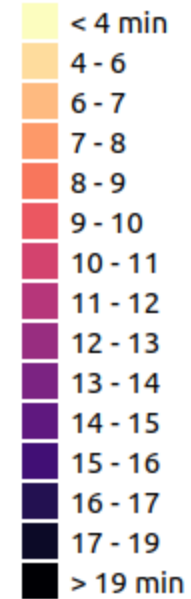
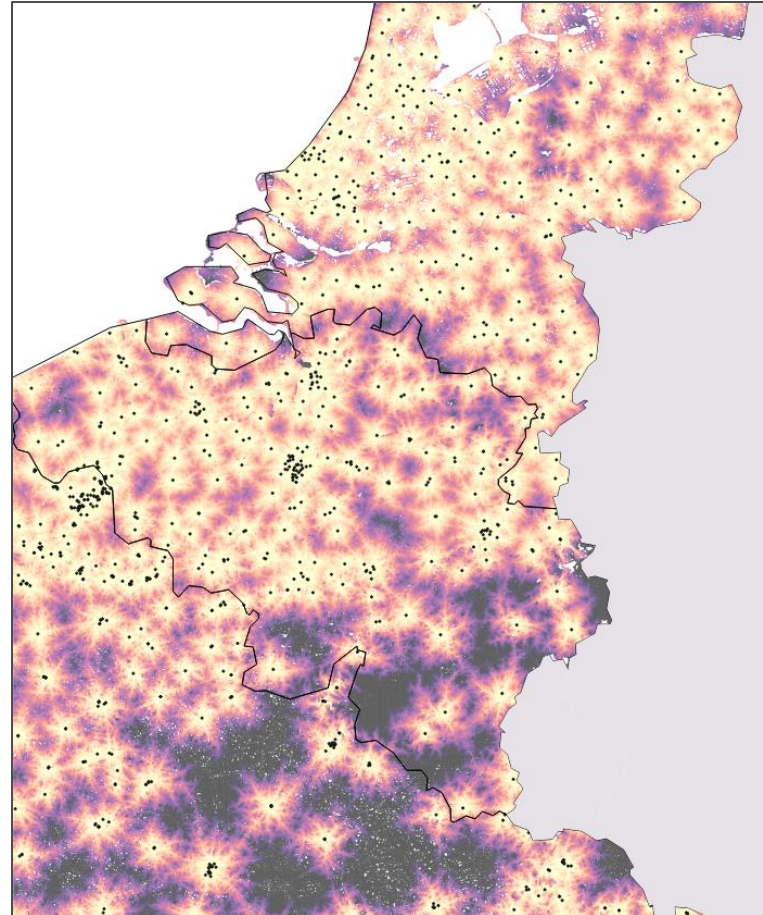
- Input transport network data:
  - OME2 Open Map for Europe 2
  - Multinet Tomtom
  - OpenStreetMap
- Quality differences





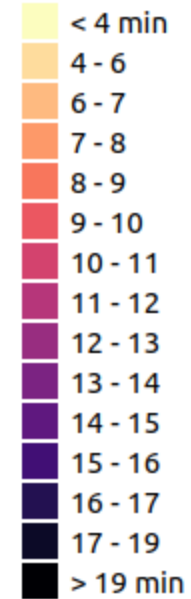
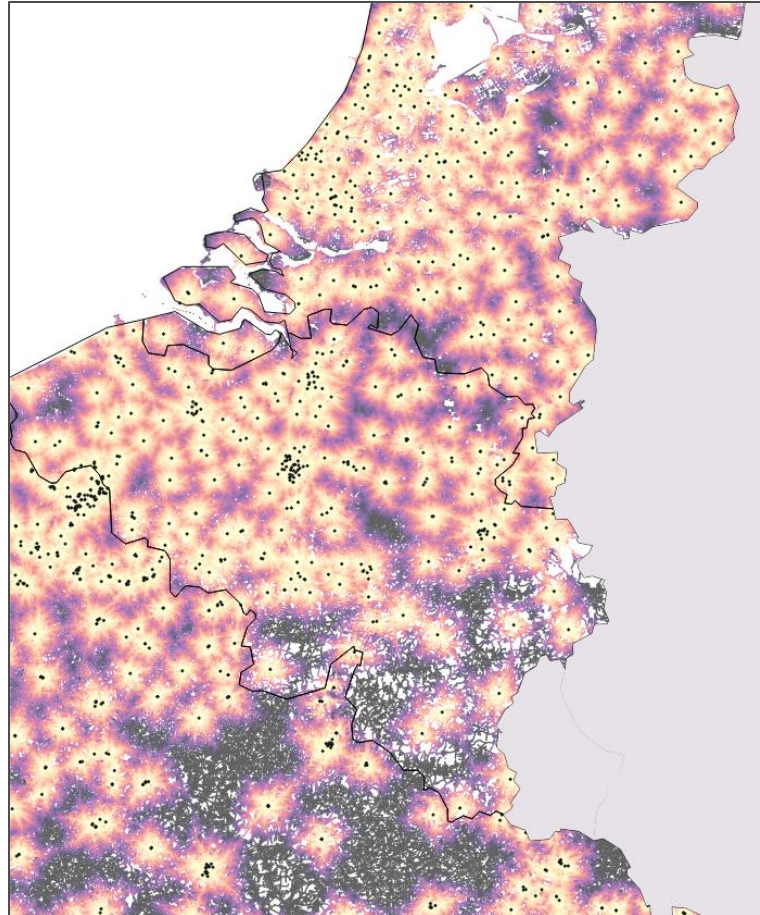
# Healthcare services accessibility analysis

OME2



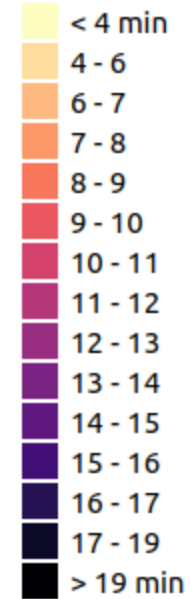
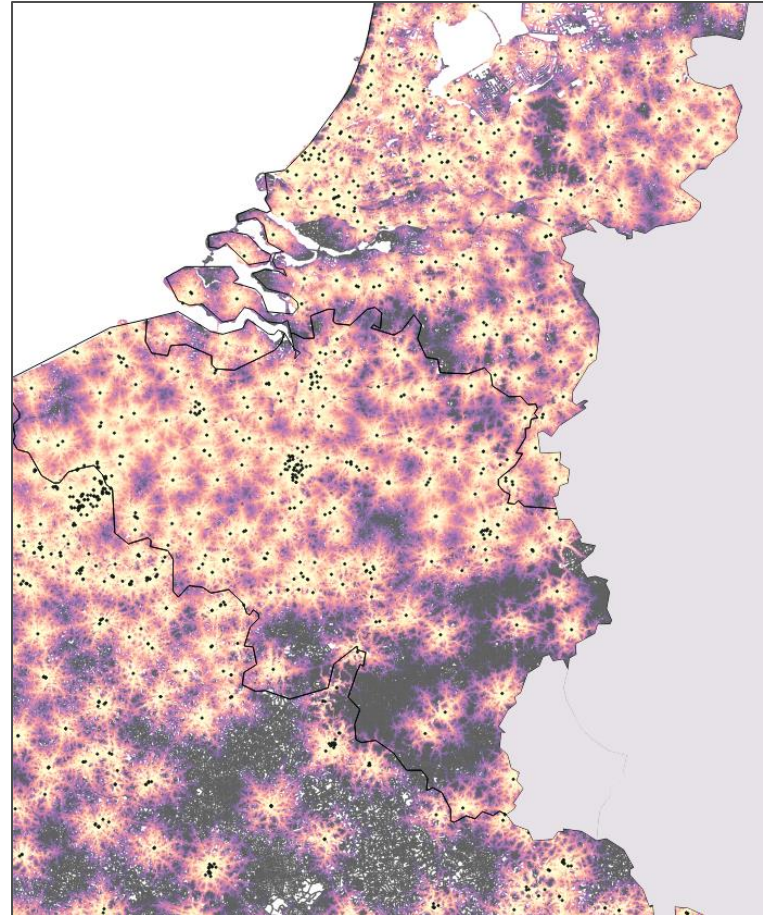
# Healthcare services accessibility analysis

Tomtom



# Healthcare services accessibility analysis

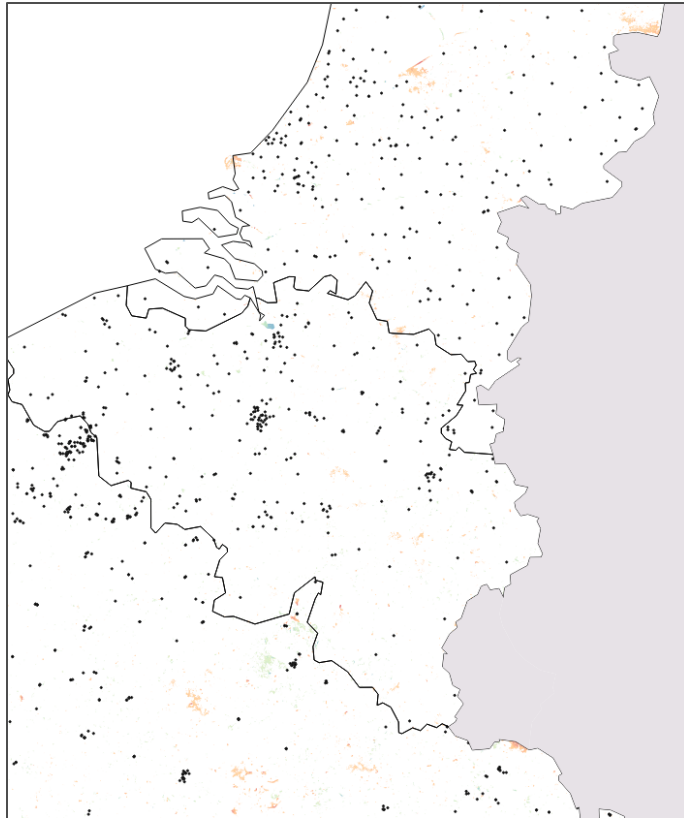
OpenStreetMap



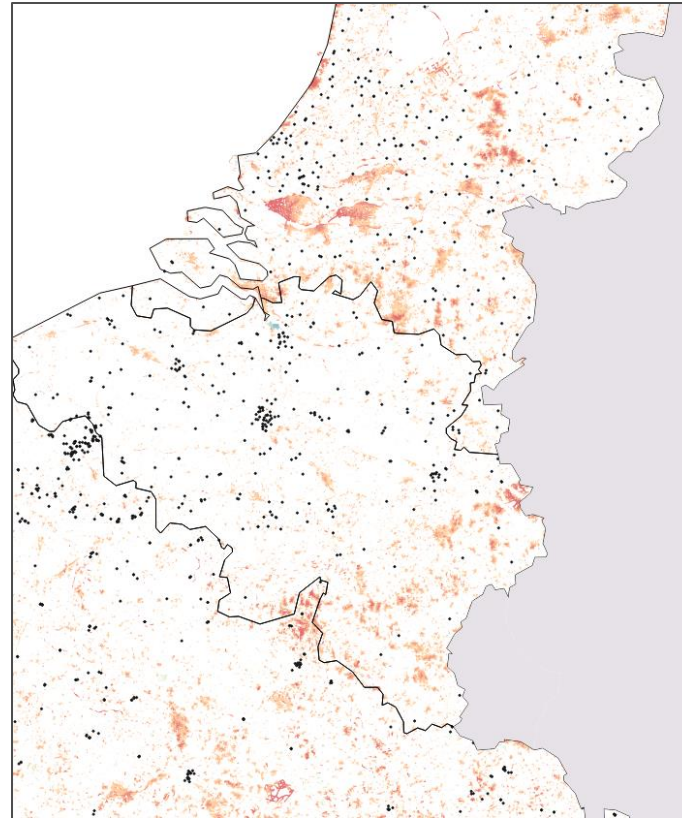


# Healthcare services accessibility analysis

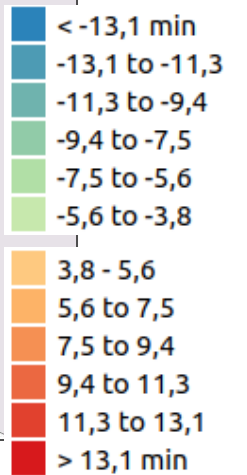
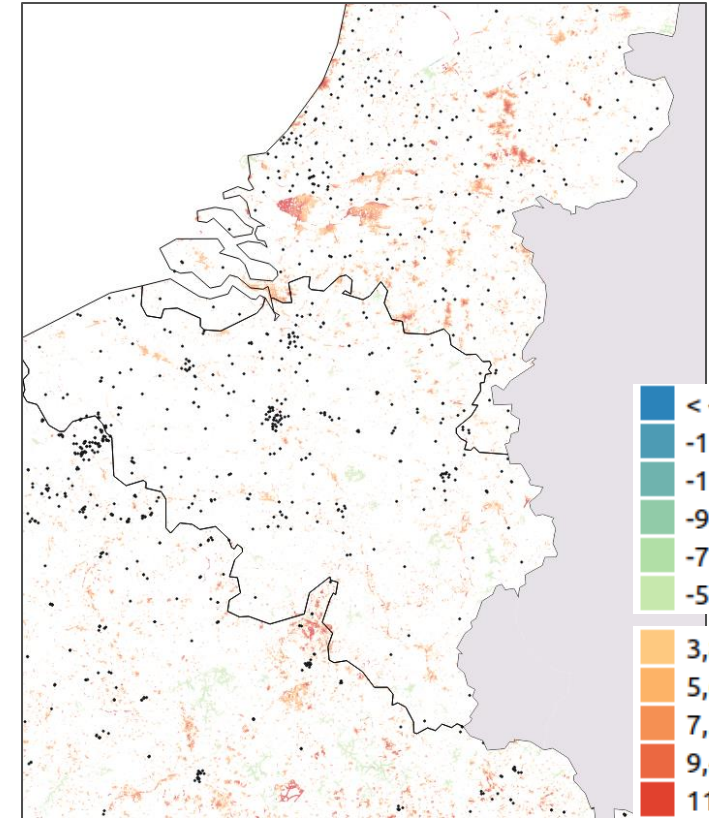
OME2 - Tomtom



OME2 - OpenStreetMap

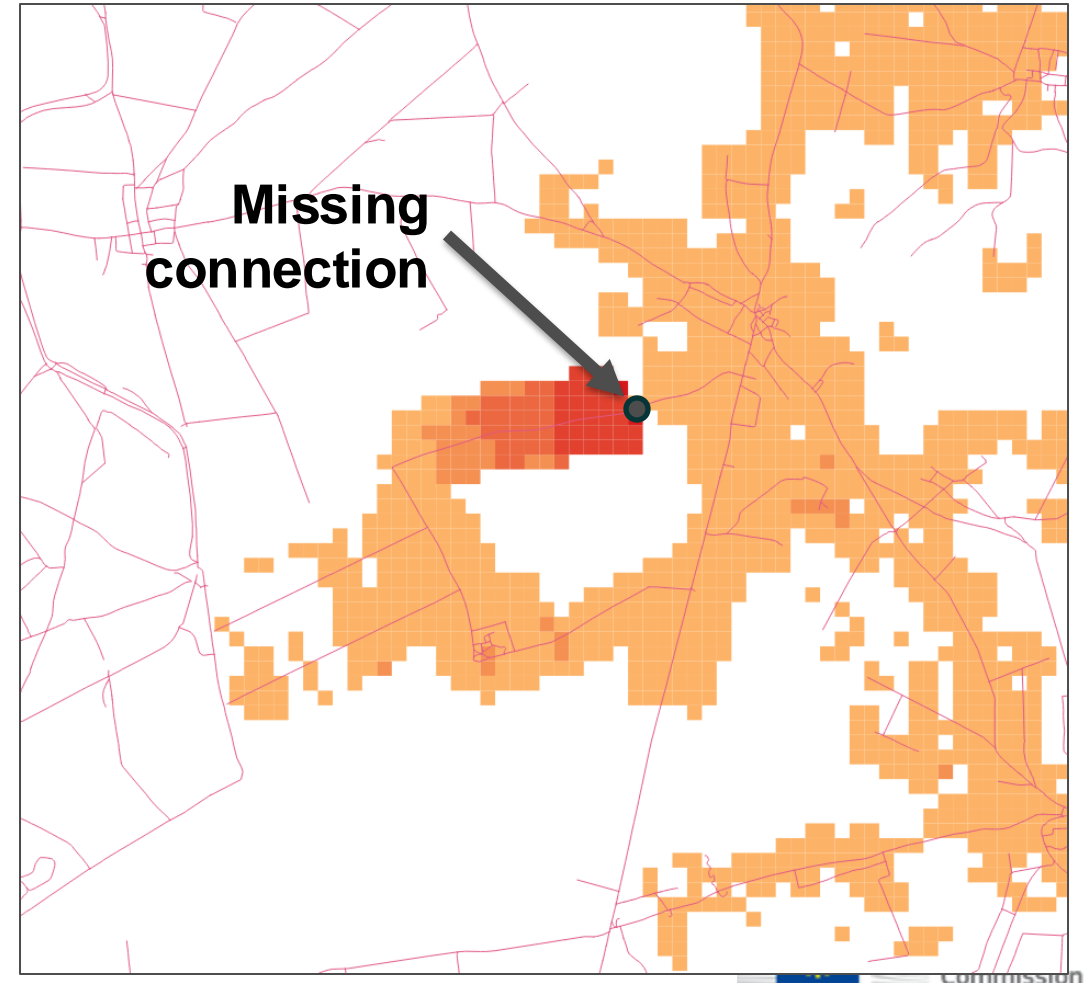


Tomtom - OpenStreetMap



# Healthcare services accessibility analysis

- Identified quality components:
  - Completeness and temporal validity
  - Thematic accuracy
  - Topological consistency





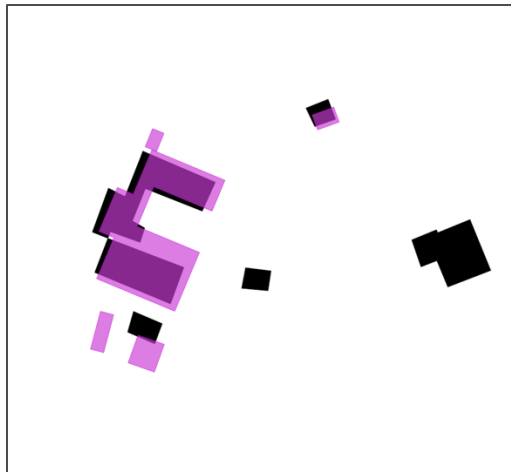
# Building density analysis

- Measure evolution of the buildings stock (density, type, usage, energy performance, etc.).
- Towards a buildings “demography”
- Various indicators at 100m cell level.



# Building density analysis

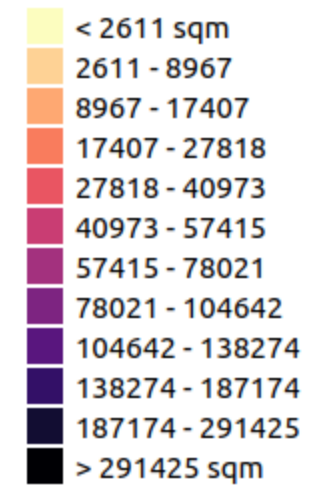
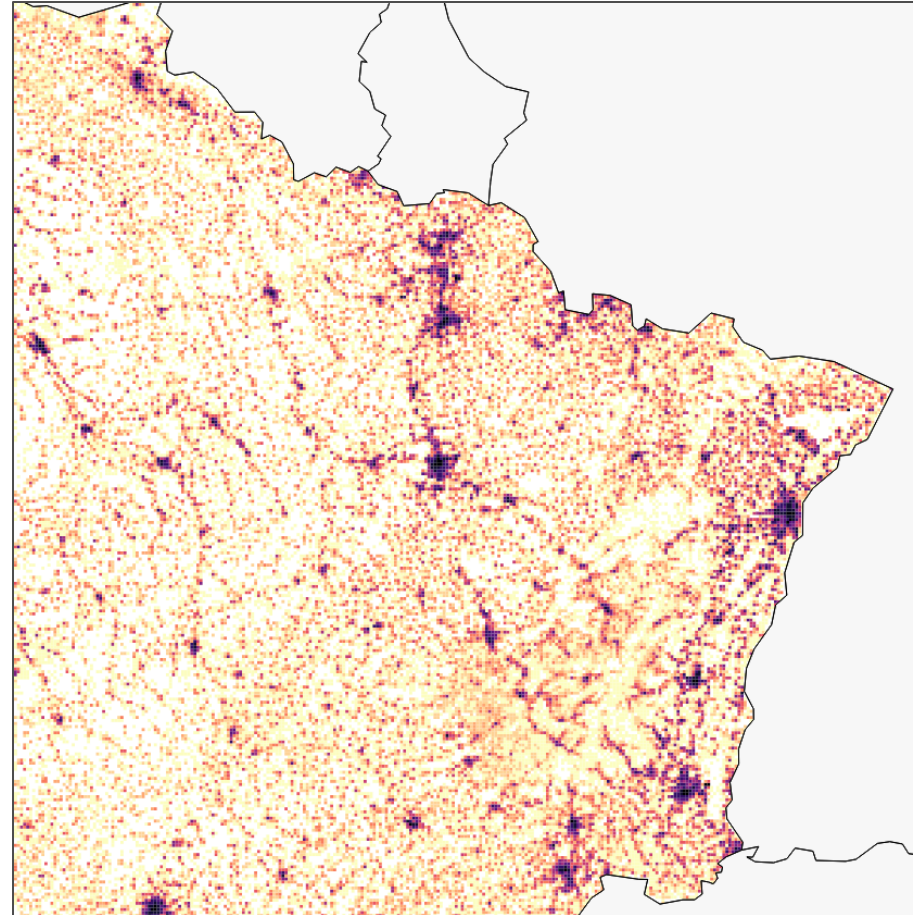
- Input data:
  - French national topographic dataset BD TOPO®
  - OpenStreetMap
- Different qualities



- BD TOPO
- OpenStreetMap

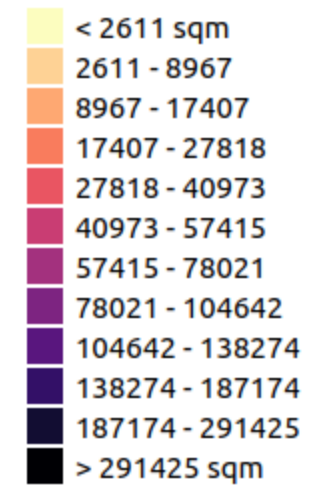
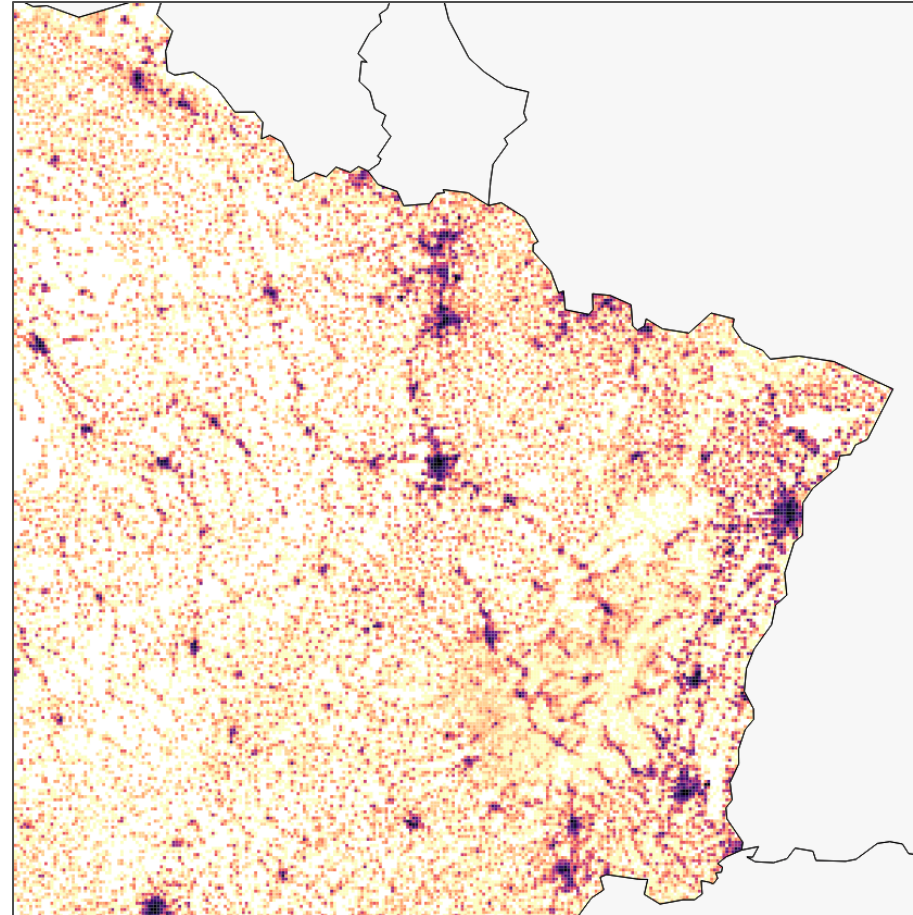
# Building density analysis – total ground area

**BD TOPO**



# Building density analysis – total ground area

OpenStreetMap

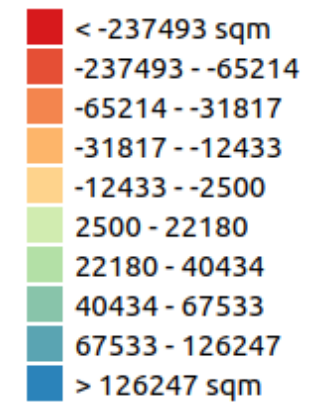
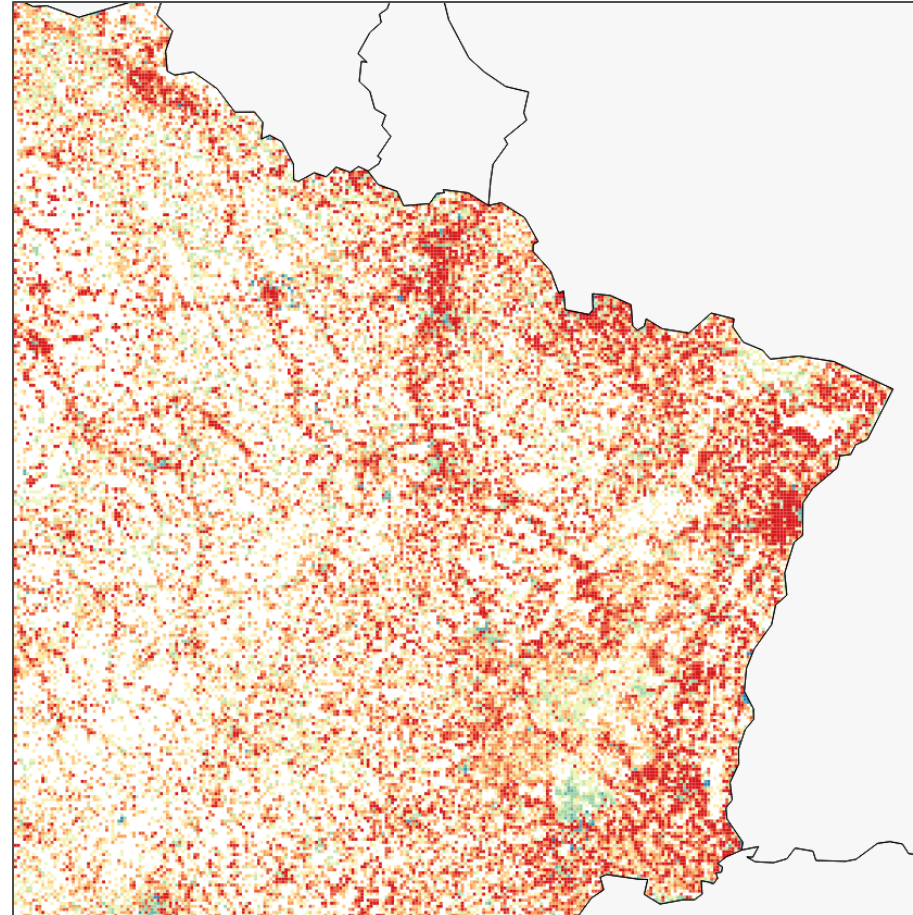




# Building density analysis – total ground area

**Difference  
OpenStreetMap – BD TOPO**

- Identified quality components:
- Completeness
  - Thematic accuracy
  - Temporal validity
  - (Absolute positional accuracy)





# Summary

- Impact of geographical data quality on GIS-based spatial analyses
  - Illustration on two examples from Eurostat activities
- Importance to use quality-controlled reliable data (!)
- Need to develop automated quality control procedures – to measure, document and improve quality.
- Pertinence of involving future users – develop “producers” community.

# Thank you



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