RUSTIK

RUSTIK Viewer: a tool for integrating bottom-up and top-down data sources

Funded by the European Union

MCRIT

Rural proofing: looking at policies through the rural lens.
12 June 2025

RUSTIK Approaches to Data Collection & Analysis

1. Gap Analysis on Data Availability

- **Comparative analysis** on Data Availability across all LLs
- **Identification** of **missing data** & **data interests**
- **Guiding** the priorities for database development

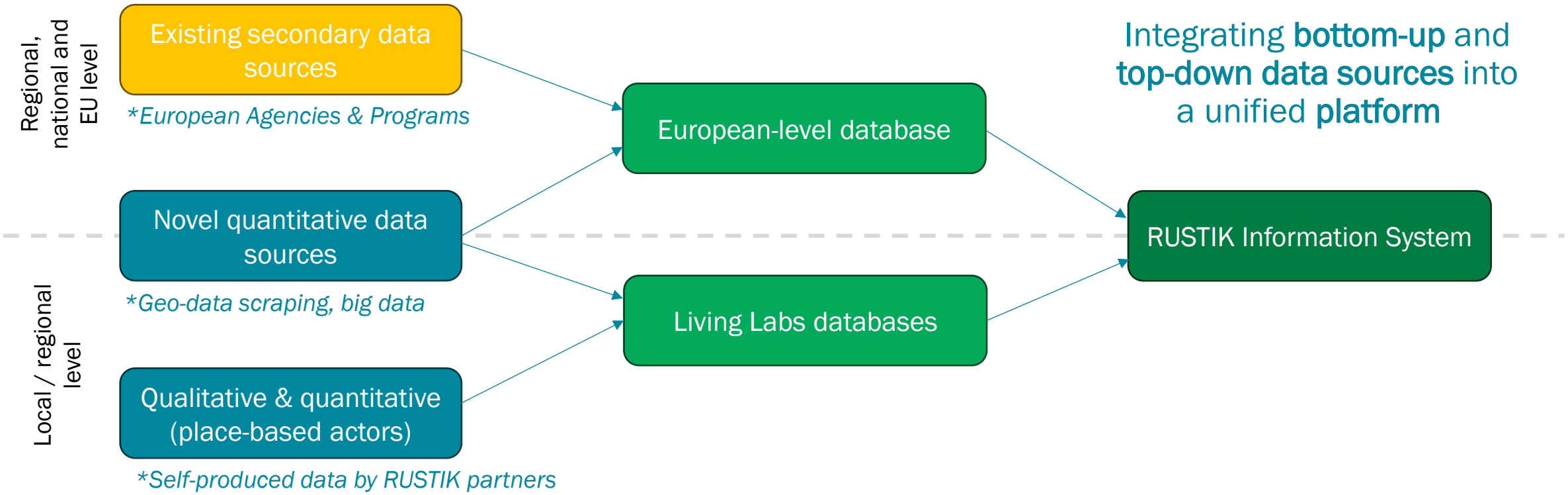
2. Design & Development of RUSTIK Database & Viewer

- Development of **RUSTIK database**
- **Integration** processes with **local databases** (LLs)
- **RUSTIK Viewer** functionalities & design

3. Trainings to Gather & Analyse (Bottom-up/Top-down) Data

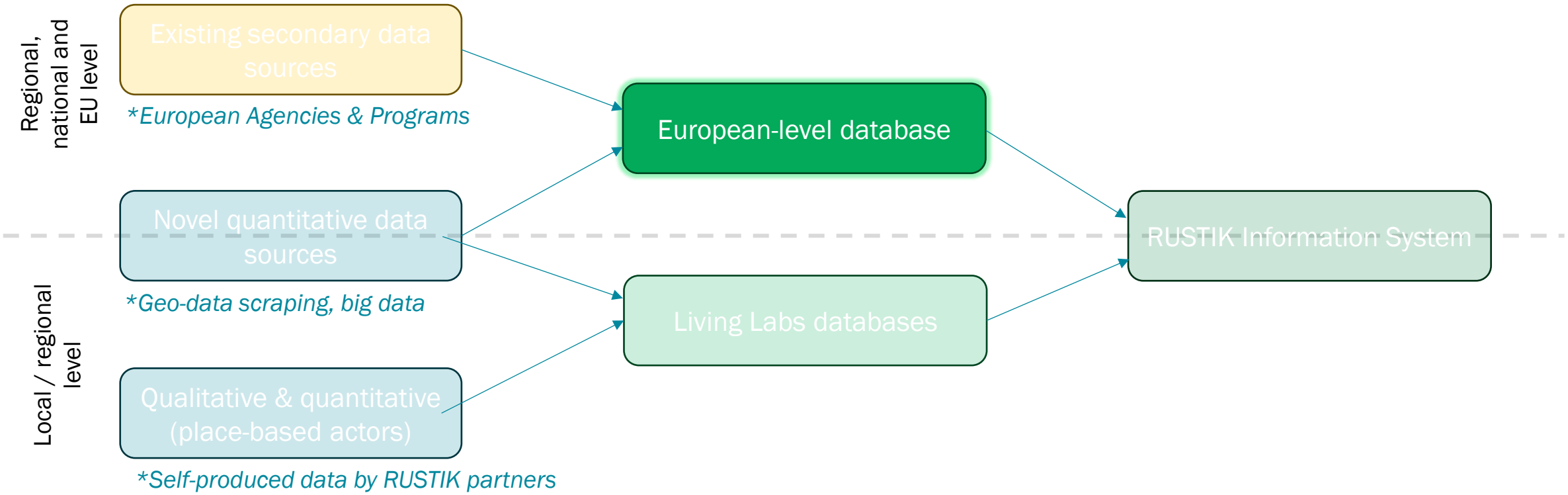
- Mapita's Learning Hub – **Maptionnaire tool**
- Trainings on **Tools for Geospatial Analysis & Data Scraping**
- Trainings on how to use **RUSTIK Viewer**

RUSTIK Viewer: Conceptualization



Integrating **bottom-up** and **top-down data sources** into a unified **platform**

RUSTIK Viewer: European-level database

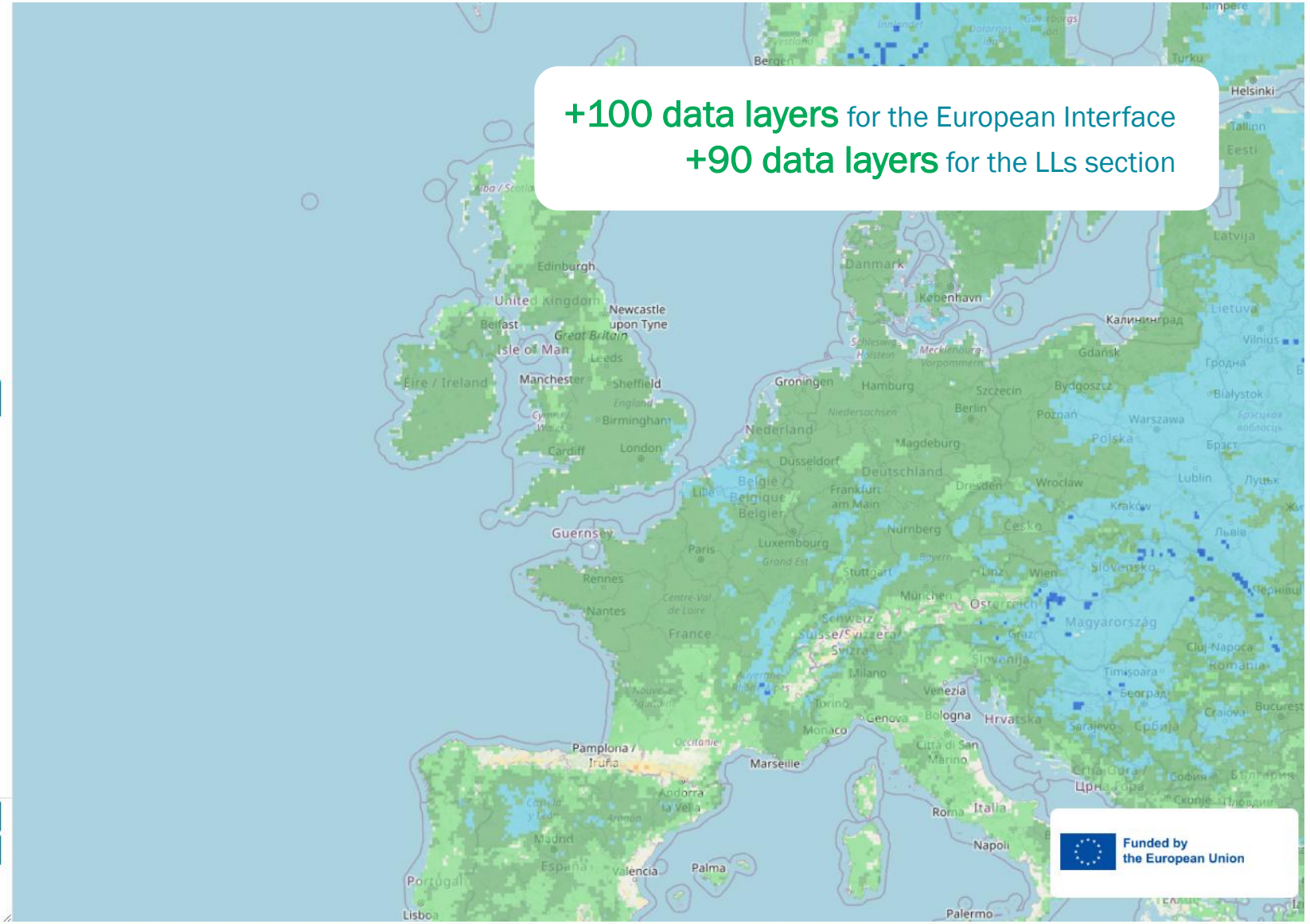


RUSTIK
INFORMATION SYSTEM

The RUSTIK Information System is an analytical interface providing access to meaningful data sets illuminating three key transitions in rural areas: socio-economic, environmental, and digital.

The System connects a central EU platform with regional systems at the Pilot Region level (the Living Labs interface). The Core RUSTIK European interface fosters comparability and transferability of data across regions and territories, while the Living Lab interface emphasizes locally curated datasets that answer to place-based challenges.

- Content
  - General Information
  - European-wide data
    - Socioeconomic Transition
    - Environmental Transition
    - Digital Transition
  - Living labs
- Living lab finder
- Disclaimer



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European interface fosters comparability and transferability of
across regions and territories, while the Living Lab inter
emphasizes locally curated datasets that answer to place-b
challenges.

Content

- Wildfires
  - Projected change in meteorological forest fire danger
  - Average meteorological forest fire danger (1981 - 2010)
  - Areas burnt by wildfires
- Precipitation
- Natural Resources and Heritage Conservation

Projected change in meteorological forest fire danger

Source: **European Environmental Agency**
Organisation: **Joint Research Centre**
Year: **2022**
Source data access: Click here

This indicator measures the projected change in meteorological forest fire danger, expressed as a percentage change in the Standardized Severity Ratio (SSR). It provides insights into the anticipated variations in fire risk due to climatic and environmental factors.

Example for the European interface:
Projected change in meteorological forest fire danger (EEA, 2022)

Funded by the European Union

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UK Research and Innovation

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Content

- Hospitals
  - Points of Interest - Hospitals
  - Grid for Hospitals Availability
  - Share Overlaid Accesibility to Hospitals
  - Distance to Hospitals
- Doctors
  - Points of Interest - Doctors

Distance to Hospitals

Source: **Profecy**
Organisation: **ESPON**
Year: **2021**
Source data access: Click here

The distance from a hospital, expressed in meters, is indicated.

Example for the European interface:
Distance to Hospitals (ESPON Profecy, 2021)

Funded by the European Union

1- Provision of **ecosystem services** (water quality/quantity, energy, biodiversity, landscape, etc.).

Indicators describing each of the 5 concepts of Rural Functions

Indicator	Source
1. Forest Proportion of Land (%)	Joint Research Centre – LUISA (2018)
2. Built Proportion of Land (%)	Joint Research Centre – LUISA (2018)
3. Agricultural Proportion of Land (%)	Joint Research Centre – LUISA (2018)
4. Projected change in meteorological forest fire danger	European Environmental Agency (2022)
5. Average meteorological forest fire danger 1981-2010	European Environmental Agency (2022)
6. Areas burnt by wildfires	European Environmental Agency (2022)
7. Projected changes in heavy precipitation in winter	European Environmental Agency (2020)
8. Projected changes in heavy precipitation in summer	European Environmental Agency (2020)
9. Drought Frequency Change 2041-2071 RCP 4.5	European Environmental Agency (2023)
10. Drought Frequency Change 2041-2071 RCP 8.5	European Environmental Agency (2023)
11. Forest Type (raster 20 m and 100 m), 3-yearly	Copernicus Global Land Service (2018)
12. Tree Cover Density (raster 10 m and 100 m), 3-yearly	Copernicus Global Land Service (2018)
13. Small Woody Features (vector raster 5 m and 100 m), 3-yearly	Copernicus Global Land Service (2018)
14. Dominant Leaf Type (raster 10 m)	Copernicus Global Land Service (2018)
15. Natura 2000 Protected Areas	Copernicus Global Land Service (2018)
16. Emerald Protected Areas	Copernicus Global Land Service (2018)

Indicator	Source
17. Mountain Areas	Copernicus Global Land Service (2018)
18. Grassland (raster 10 m and 100 m), 3-yearly	Copernicus Global Land Service (2018)
19. Grassland Change 2015-2018 (raster 20 m)	Copernicus Global Land Service (2018)
20. EU-Hydro River Network Database 2006-2012 (vector)	Copernicus Global Land Service (2018)
21. Water and Wetness status 2018 (raster 10 m and 100 m), 3-yearly	Copernicus Global Land Service (2018)
22. Riparian Zones Land Cover/Land Use (vector), 6-yearly	Copernicus Global Land Service (2018)
23. Riparian Zones Land Cover/Land Use Change 2012-2018 (vector), 6-yearly	Copernicus Global Land Service (2018)
24. Normalised Difference Vegetation Index 2016-present	European Environmental Agency (2018)
25. Plant Phenology Index 2016-present (raster 10 m), daily	European Environmental Agency (2018)
26. Vegetation Indices Quality Flag 2016-present	European Environmental Agency (2018)
27. Leaf Area Index 2016-present (raster 10 m), daily	European Environmental Agency (2023)
28. Air quality of Ozone [µg*d/m3]	European Environmental Agency (2023)
29. Air quality of PM10 [µg*d/m3]	European Environmental Agency (2023)
30. Air quality of PM2.5 [µg*d/m3]	European Environmental Agency (2023)
31. Solar Production	Joint Research Centre (2023)
32. Onshore Production	Joint Research Centre (2023)
33. Hydropower Production	Joint Research Centre (2023)

2- Innovative **infrastructures & services** (schools, transports, healthcare services, broadband networks, etc.).

Indicators describing each of the 5 concepts of Rural Functions

Indicator	Source
1. Primary Schools. Points of Interest, Grid, and Accessibility (three separate layers)	ESPON Profecy (2022)
2. Secondary Schools. Points of Interest, Grid, and Accessibility (three separate layers)	ESPON Profecy (2022)
3. Hospitals. Points of Interest, Grid, and Accessibility (three separate layers)	ESPON Profecy (2022)
4. Doctors. Points of Interest, Grid, and Accessibility (three separate layers)	ESPON Profecy (2022)
5. Pharmacies. Points of Interest, Grid, and Accessibility (three separate layers)	ESPON Profecy (2022)
6. Tran Stations. Points of Interest, Grid, and Accessibility (three separate layers)	ESPON Profecy (2022)
7. Banks. Points of Interest, Grid, and Accessibility (three separate layers)	ESPON Profecy (2022)
8. Retail Shops. Points of Interest, Grid, and Accessibility (three separate layers)	ESPON Profecy (2022)
9. Cinema. Points of Interest, Grid, and Accessibility (three separate layers)	ESPON Profecy (2022)

Indicator	Source
10. Commercial Activities. Points of Interest	Open Street Maps (2024)
11. Culture. Points of Interest	Open Street Maps (2024)
12. Health. Points of Interest	Open Street Maps (2024)
13. Industry. Points of Interest	Open Street Maps (2024)
14. Nature and Forestry. Points of Interest	Open Street Maps (2024)
15. Restauration. Points of Interest	Open Street Maps (2024)
16. General Services. Points of Interest	Open Street Maps (2024)
17. Sports and Leisure. Points of Interest	Open Street Maps (2024)
18. Touristic Assets. Points of Interest	Open Street Maps (2024)
19. Touristic Information. Points of Interest	Open Street Maps (2024)
20. Access to high-speed mobile network	Joint Research Centre (2023)
21. Access to high-speed fixed network	Joint Research Centre (2023)

3- Provision of high quality & accessible **land-based products** (agriculture, forestry, energy, etc.).

Indicators describing each of the 5 concepts of Rural Functions

Indicator	Source
1.Forest Proportion of Land (%)	Joint Research Centre – LUISA (2018)
2. Built Proportion of Land (%)	Joint Research Centre – LUISA (2018)
3. Agricultural Proportion of Land (%)	Joint Research Centre – LUISA (2018)
4. Agricultural Area	Copernicus Global Land Service (2018)
5. Forest Type (raster 20 m and 100 m), 3-yearly	Copernicus Global Land Service (2018)
6. Tree Cover Density (raster 10 m and 100 m), 3-yearly	Copernicus Global Land Service (2018)
7. Small Woody Features (vector raster 5 m and 100 m), 3-yearly	Copernicus Global Land Service (2018)
8. Dominant Leaf Type (raster 10 m)	Copernicus Global Land Service (2018)

Indicator	Source
9. Urban Atlas Land Cover/Land Use (vector), Europe, 6-yearly	Copernicus Global Land Service (2018)
10. Urban Atlas Land Cover/Land Use Change (vector), Europe, 6-yearly	Copernicus Global Land Service (2018)
11. CLC+Backbone 2018 (raster 10 m), Europe, 3-yearly	Copernicus Global Land Service (2018)
12. Coastal Zones Land Cover/Land Use (vector), Europe, 6-yearly	Copernicus Global Land Service (2018)
13. Coastal Zones Land Cover/Land Use Change 2012-2018 (vector), Europe, 6-yearly	Copernicus Global Land Service (2018)
14. Solar Production	Joint Research Centre (2023)
15. Onshore Production	Joint Research Centre (2023)
16. Hydropower Production	Joint Research Centre (2023)

4- Distributed and diversified **production systems** (new economic activities)

Indicators describing each of the 5 concepts of Rural Functions

Indicator	Source
1. Banks. Points of Interest, Grid, and Accessibility (three separate layers)	ESPON Profecy (2022)
2. Retail Shops. Points of Interest, Grid, and Accessibility (three separate layers)	ESPON Profecy (2022)
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5. Culture. Points of Interest	Open Street Maps (2024)
6. Industry. Points of Interest	Open Street Maps (2024)
7. Restauration. Points of Interest	Open Street Maps (2024)

Indicator	Source
8. Touristic Assets. Points of Interest	Open Street Maps (2024)
9. Touristic Information. Points of Interest	Open Street Maps (2024)
10. Unemployment Proportion	JRC / DG Regio (2022)
11. Agriculture Sector Workers Proportion	JRC / DG Regio (2022)
12. Construction Sector Workers Proportion	JRC / DG Regio (2022)
13. General Service Workers Proportion	JRC / DG Regio (2022)
14. Tourism capacity in rooms per LAU2	JRC / DG Regio (2022)
15. PIB per capita	JRC / DG Regio (2022)

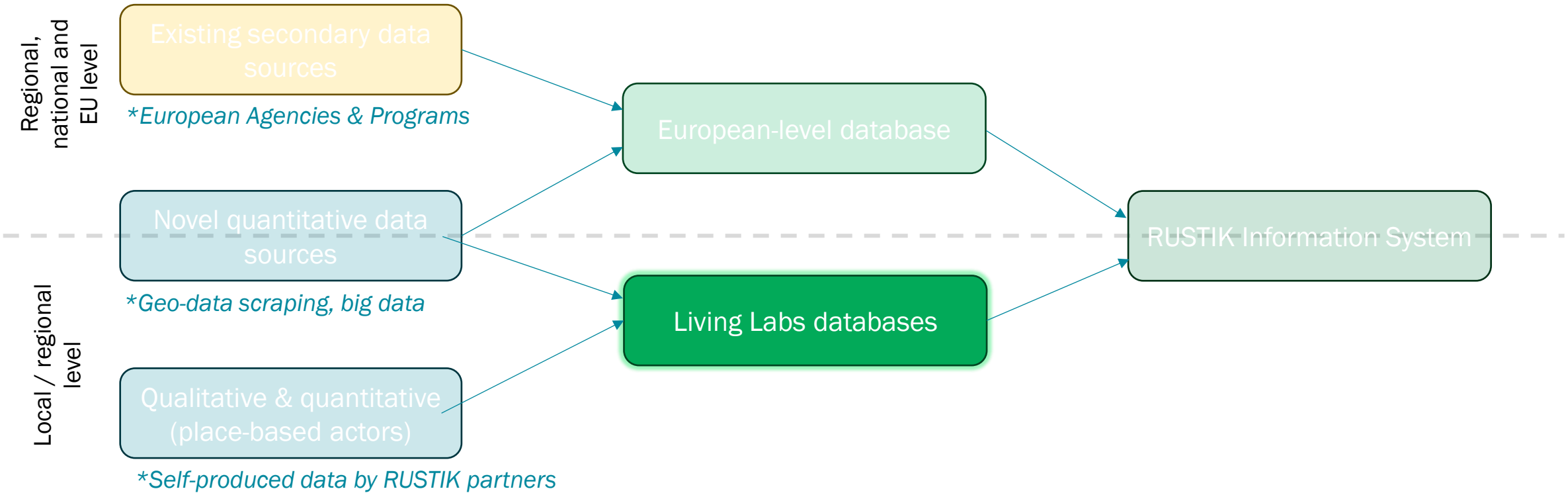
5- Social capital / cultural assets & cooperative institutions

Indicators describing each of the 5 concepts of Rural Functions

Indicator	Source
1.Population (1981, 1991, 2001, 2011, 2021)	Eurostat (1981-2021)
2. Population growth 1981-2021	Eurostat (1981-2021)
3. Density	Eurostat (2021)
4. Density Growth 2011-2021	Eurostat (2011-2021)
5. Women employment proportion	Eurostat (2022)
6. Women and men unemployment difference	Eurostat (2022)
7. Female Disadvantage Index (FemDI)	DG Regio (2021)
8. Female Achievement Index (FemAI)	DG Regio (2021)

Indicator	Source
9. Crude rate of net migration	Eurostat (2021)
10. Migration population proportion	Eurostat (2021)
11. Cinema. Points of Interest, Grid, and Accessibility (three separate layers)	ESPON Profecy (2022)
12. Culture. Points of Interest	Open Street Maps (2024)
13. Tertiary education level (25-64)(%)	Eurostat (2022)
14. Secondary education level (25-64)(%)	Eurostat (2022)
15. Early school leaving (18-24)(%)	Eurostat (2022)
16. Quality of Government Index	University of Gothenburg (2021)

RUSTIK Viewer: Living Labs database



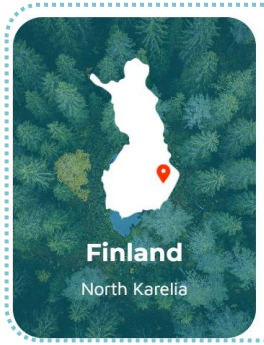
Local Data from RUSTIK Living Labs

~ 10 indicators

- Employment
- Businesses
- Public facilities

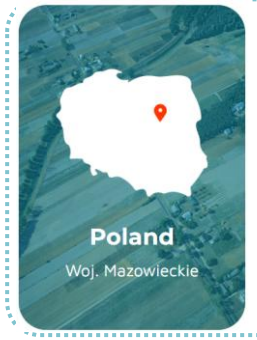
~ 20 indicators

- Agricultural support and CAP payments
- Agricultural activity
- Tourism and local economy



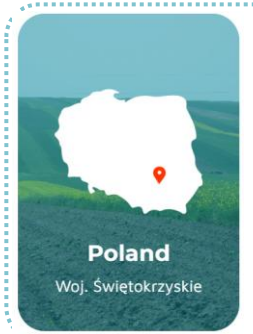
~ 3 indicators

- Population over 65 years
- Population with foreign mother tongue



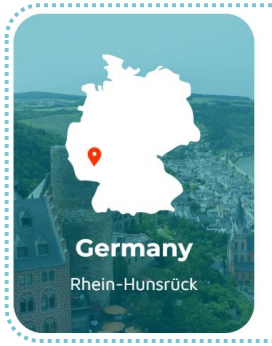
~ 30 indicators

- Demographics
- Enterprises by type



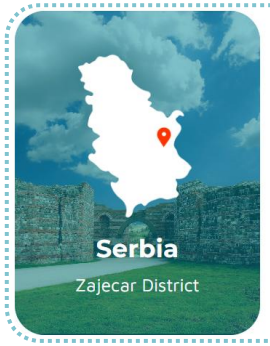
~ 5 indicators

- Demographics
- Working population



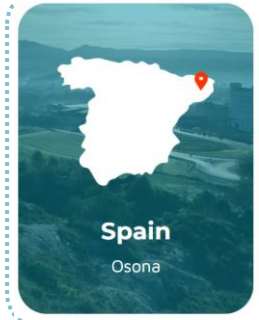
~ 1 indicators

- Educational migration



~ 80 indicators

- Demographics
- Agricultural structure and productivity
- Farm market orientation and diversification



~ 30 indicators

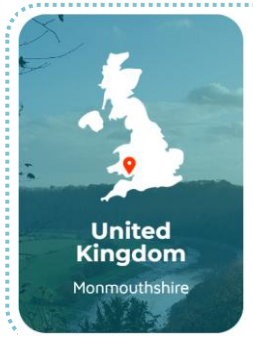
- Quality of life (environmental, social, and economic indicators)

~ 10 indicators

- Land ownership and structure
- Spatial Planning (model settlement)

~ 1 indicator

- Rural broadband connection and performance



~ 15 indicators

- Population dynamics
- Destination of movers
- Community perception and social cohesion

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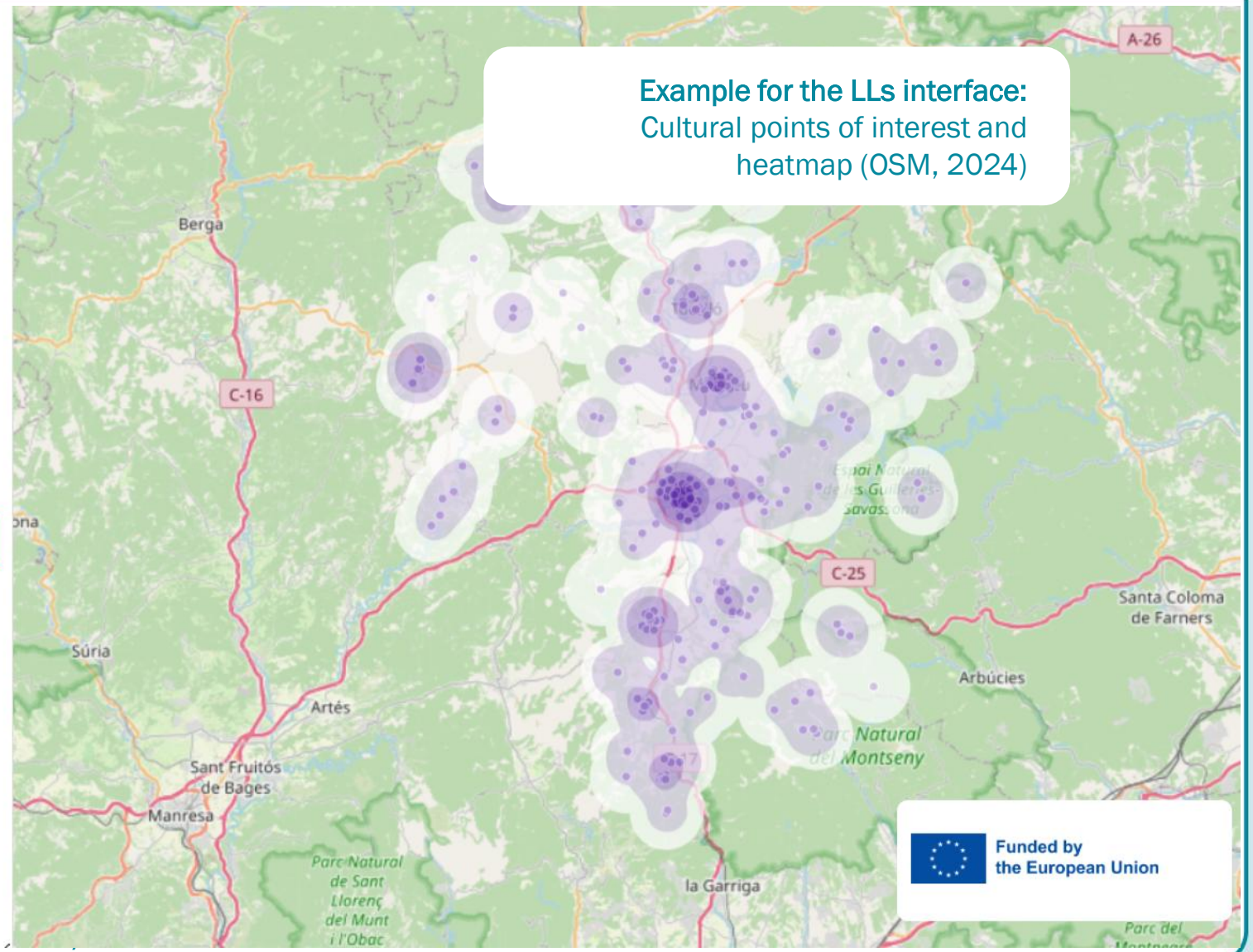
Content

- [ ] Osona Municipalities
- [x] Service Accesibility
  - [x] Cultural Point of Interest
  - [x] Cultural Heatmap
  - [ ] Administrative Point of Interest
  - [ ] Administrative Heatmap
  - [ ] Tourism Point of Interest



Example for the LLs interface:
Cultural points of interest and heatmap (OSM, 2024)

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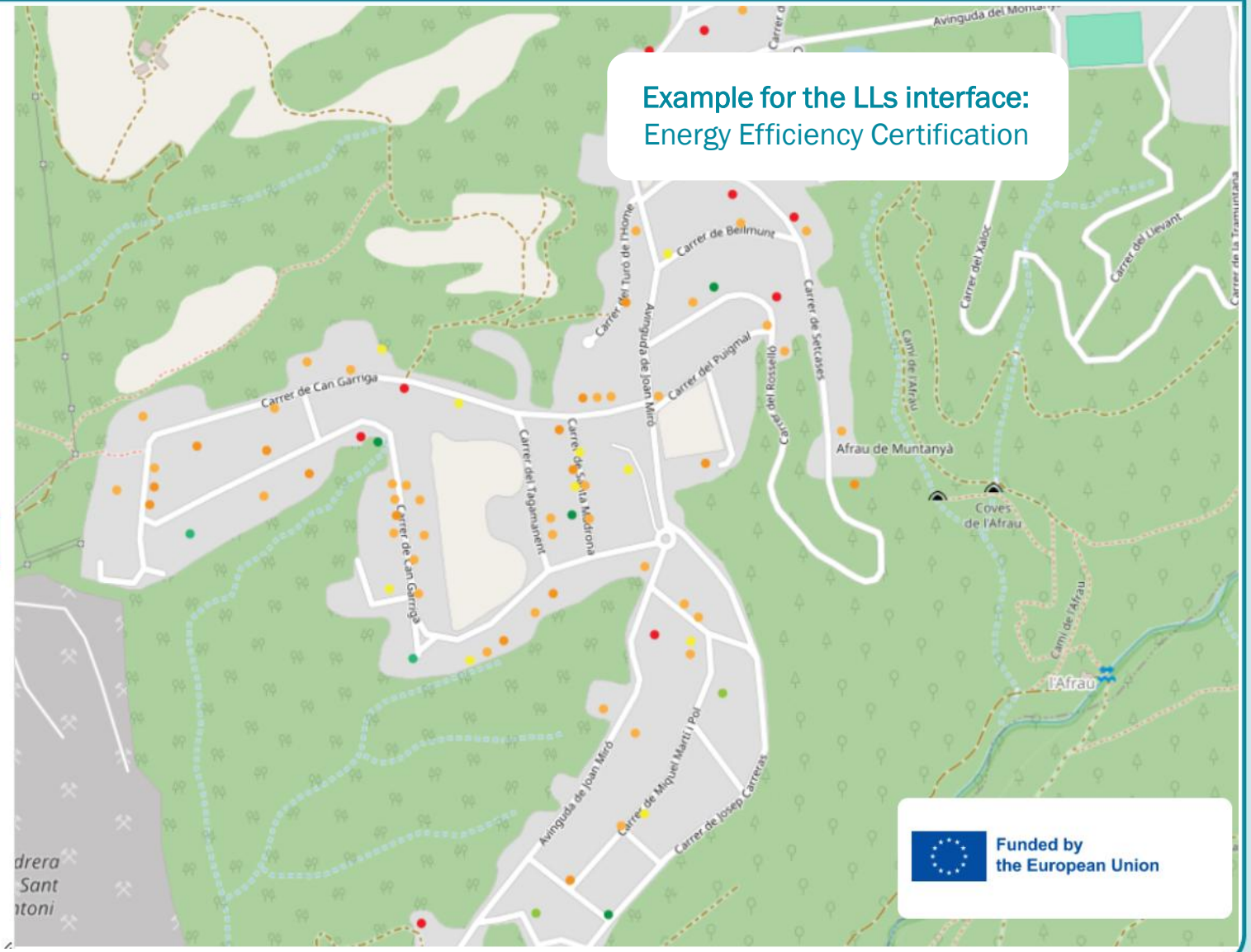
Content

- [ ] Quality of life Grid Calculation
- [x] Energy Efficience Certification
- [ ] Commercial Vitality
- [ ] Green public space proximity
- [ ] Acoustic pollution
- [ ] Osrednjeslovenska (SI)
- [ ] Parma and Piacenza (IT)



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thanks

Marta Carbonés, MCRIT

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