



Towards better integration of statistical and geospatial information in the EU

Tenth Plenary Meeting UN-GGIM: Europe

23 November 2023, Brussels

Location, location, location



Geographical Information System of the Commission (GISCO)

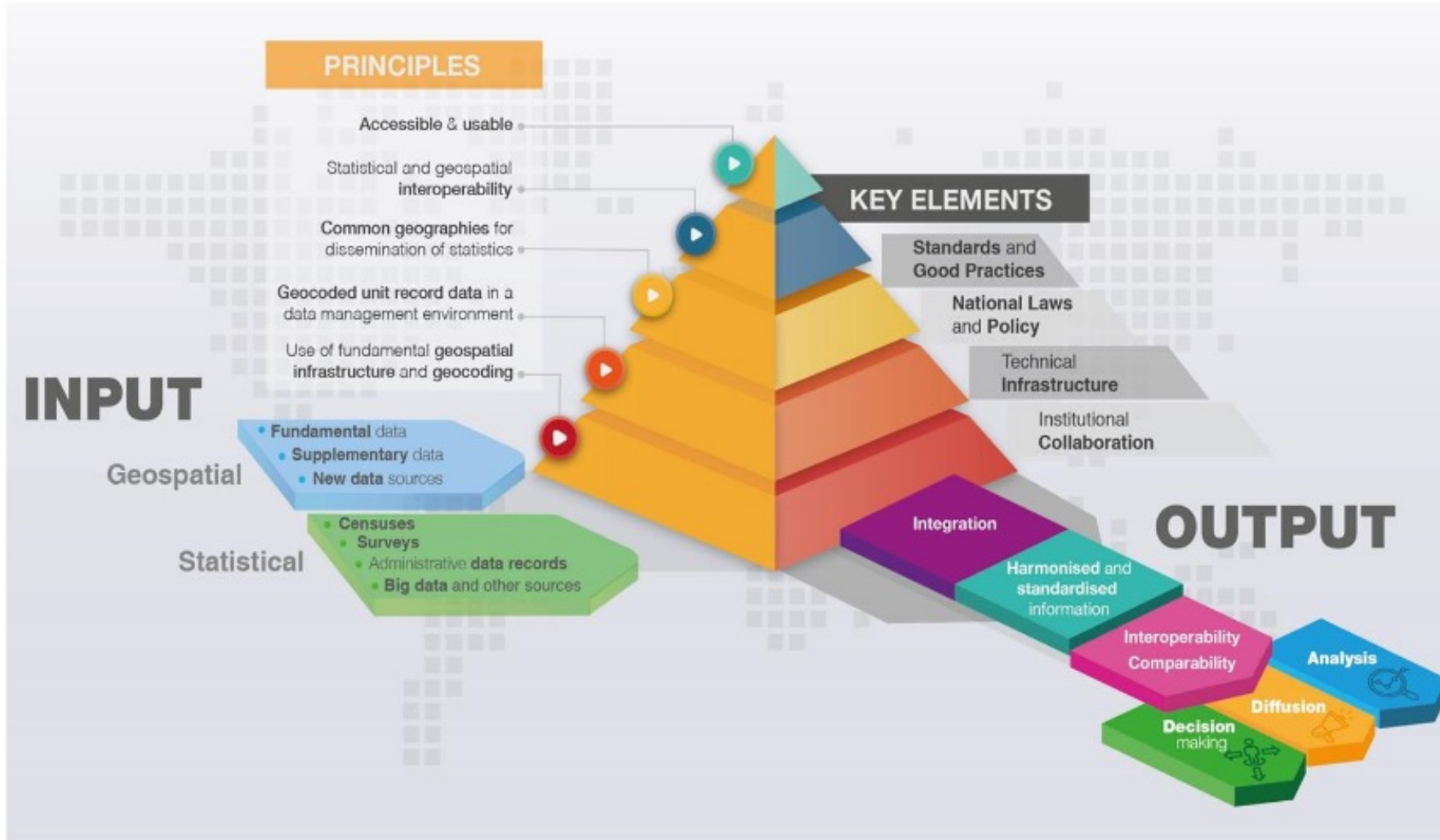
- Permanent service of the European Commission (Eurostat)
- Role: to answer needs of European Commission, Eurostat and the European Statistical System for geographical information at EU/national/regional levels
 - Provision of GIS (reference) data, services and software
 - Contributes to cartographic and spatial analysis activities
 - Supports Commission-wide GI activities
 - Encourages and facilitates activities on the integration of statistical and geospatial information
 - To develop a strategy for the use of earth observation data for statistics

Overview

- Collaboration within Eurostat & the European Commission
- Collaboration within the European Statistical System (ESS) / EU Member States
- Cooperation with international organisations / associations

Collaboration within Eurostat / European Commission

Global Statistical Geospatial Framework (GSGF)



Showcasing GSGF in practice – Population and housing census 2021

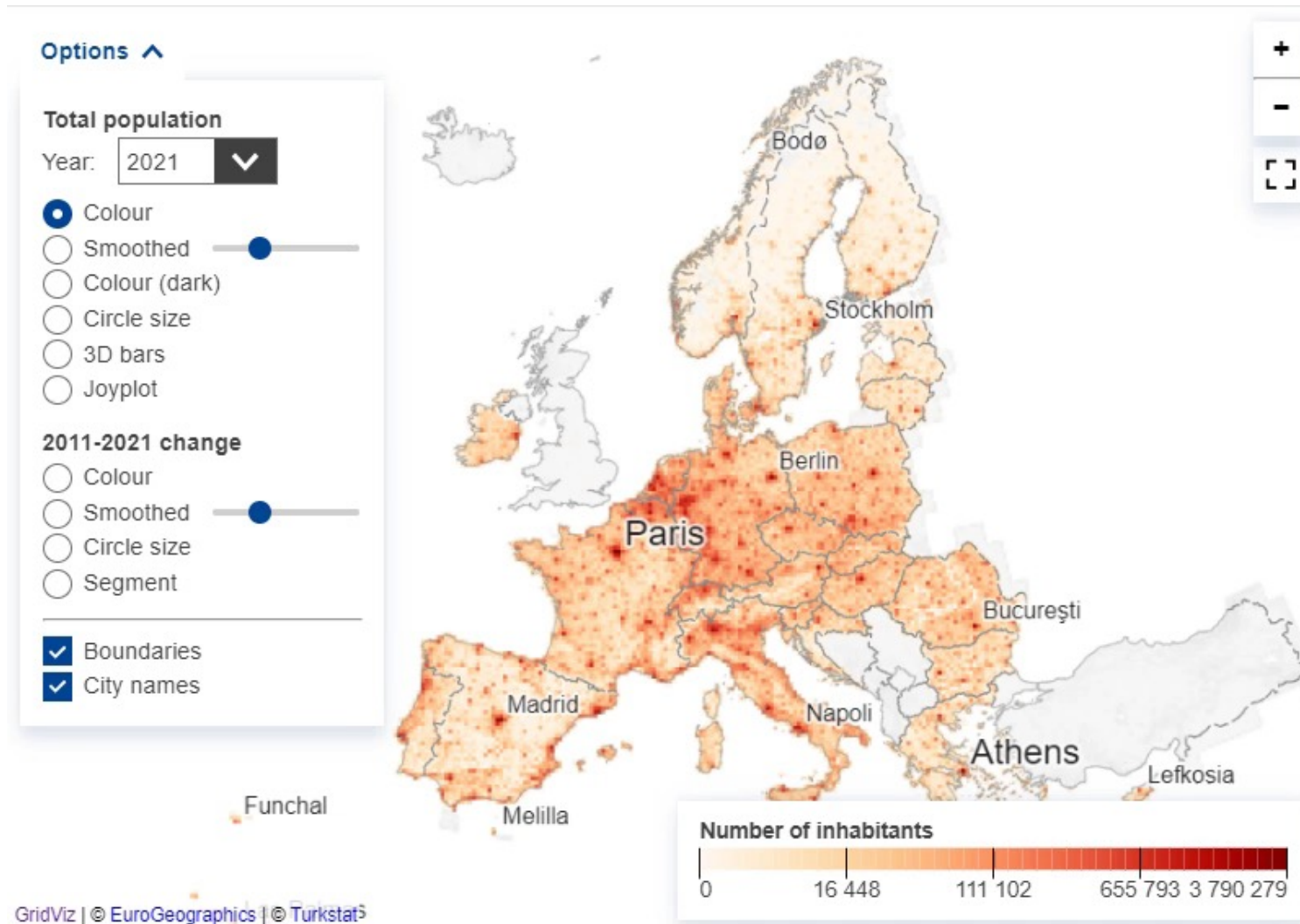
The data to be provided on **1km² grid** from the 2021 population and housing census is laid down in Regulation (EU) 1799/2018 and is as follows:

- total population
- population by sex and by age
- employed persons
- population by place of birth
- population by usual residence 12 months before the census date

GISCO supports:

- data validation
- data visualization
- dissemination of results

Population grid data from the 2021 EU population and housing census



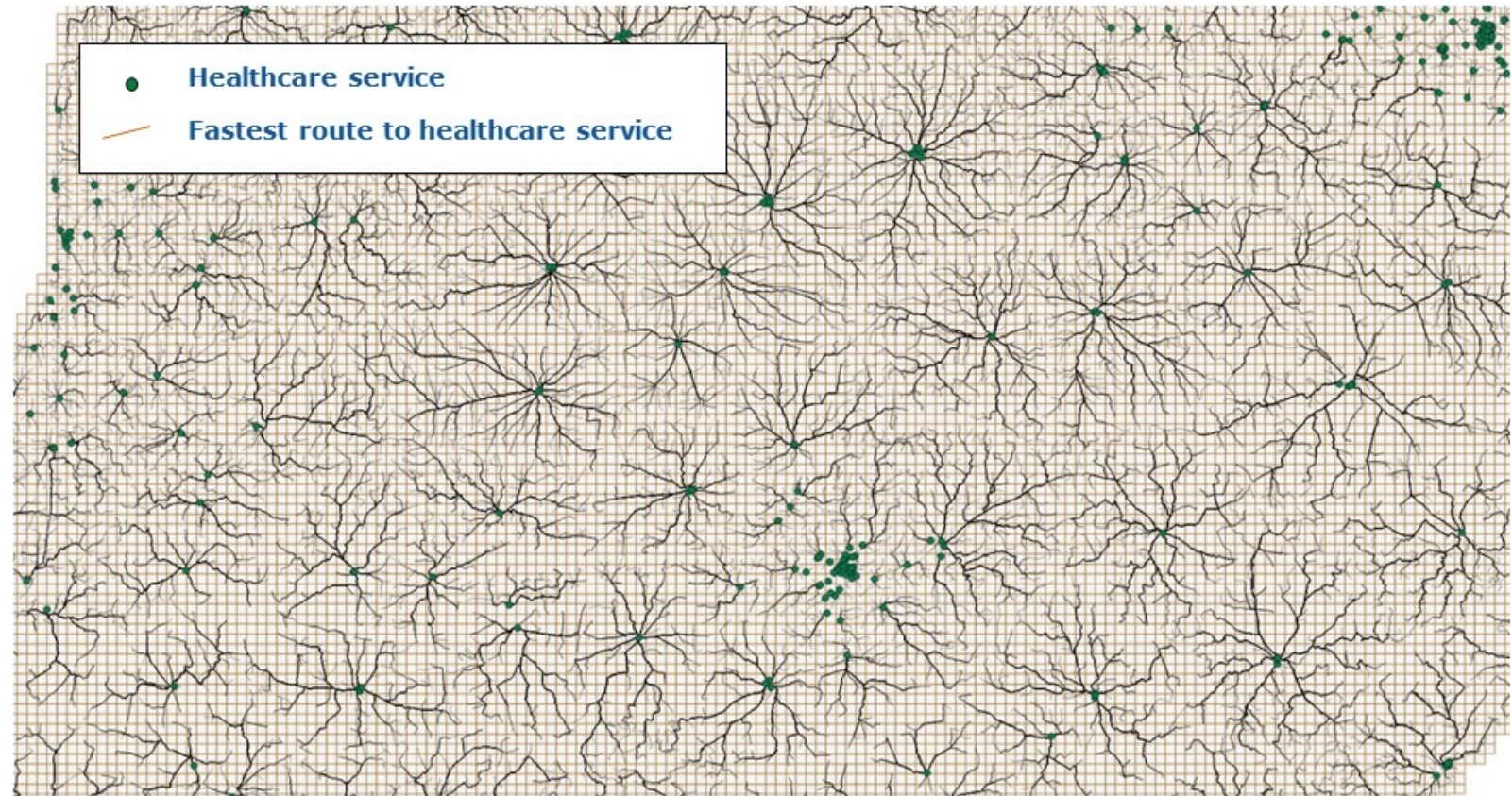
Spatial analysis - one-off

- Identify policy needs of the EC and thematic units in Eurostat
 - Catchment areas of airports
 - How long does it take on average to drive to the closest hospital?
 - How accessible are education facilities?
- Define process for 'experimental' data collection (education and health have been published)
- Data processing
- Thematic mapping

Spatial analysis on the accessibility of hospitals

Step 1

Identifying hospitals and calculating fastest route



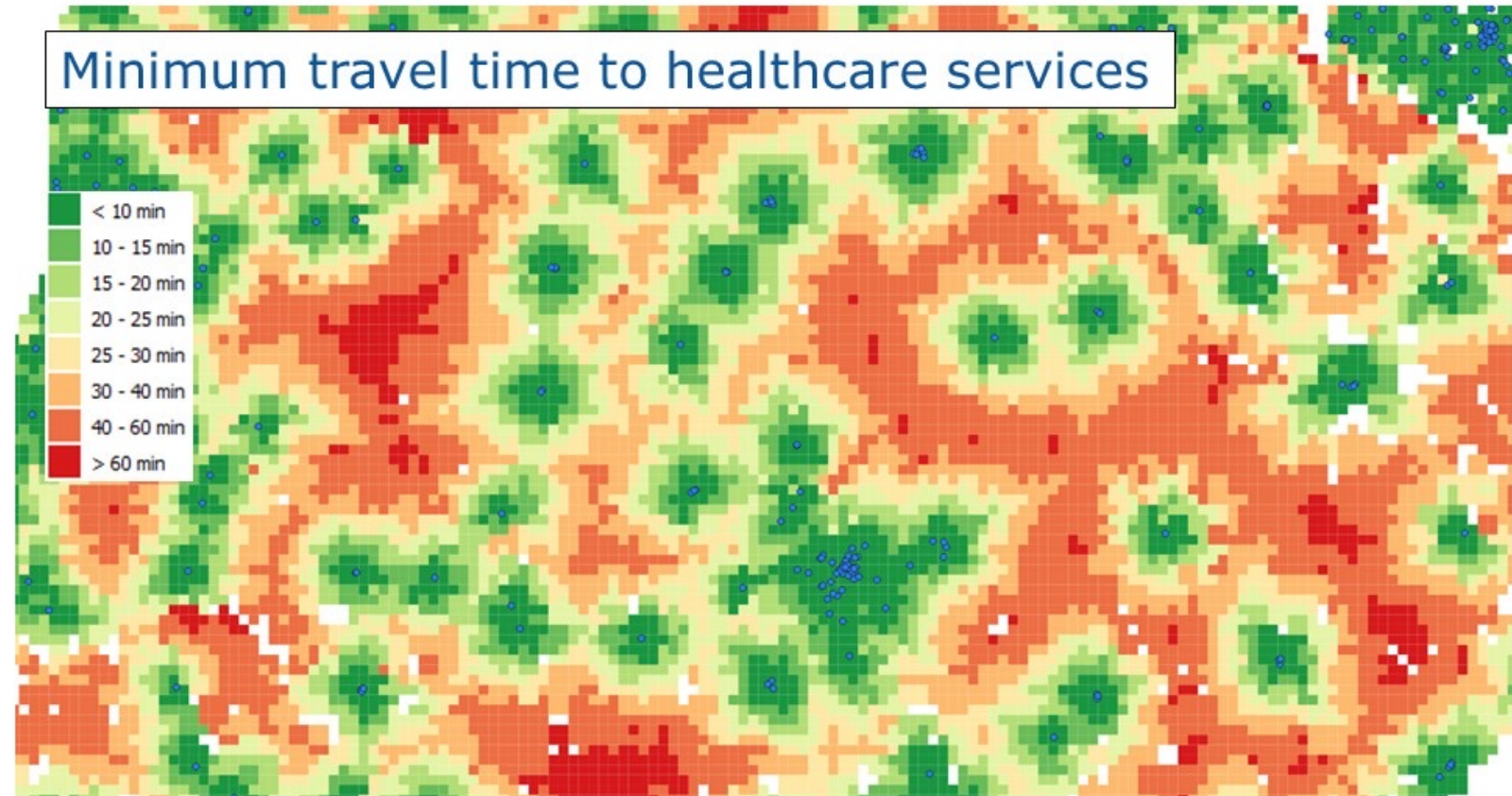
Spatial analysis on the accessibility of hospitals

Step 1

Identifying hospitals and calculating fastest route

Step 2

Calculating minimum travel time

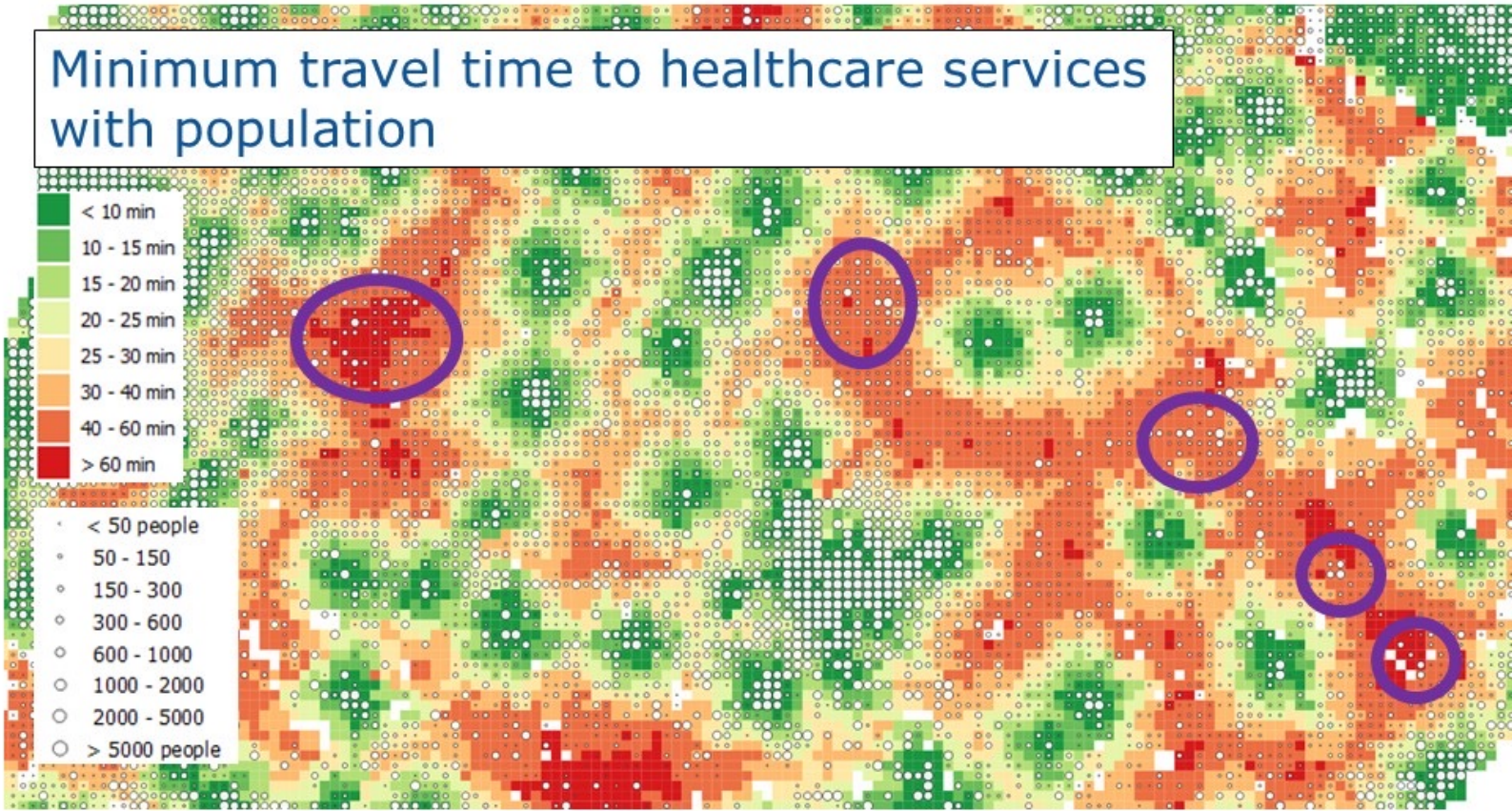


Spatial analysis on the accessibility of hospitals

Step 1
Calculating fastest route

Step 2
Calculating minimum travel time

Step 3
Overlaying gridded population



Spatial analysis – follow-up

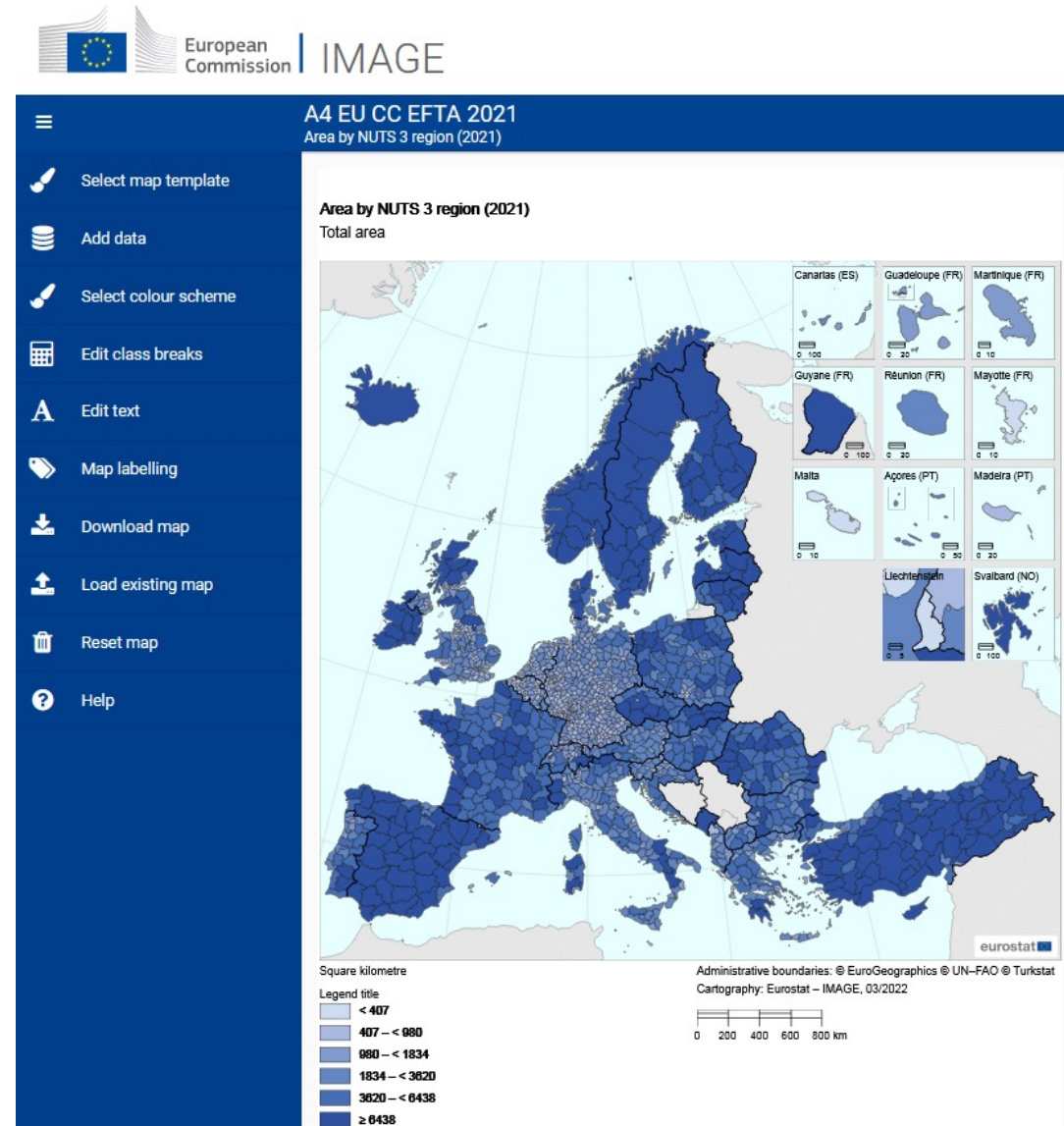
- Identify policy needs of the EC and thematic units in Eurostat
 - How long does it take on average to drive to the closest hospital?
 - How accessible are education facilities?
 - What is the population density in specific areas?
- Define process for ‘experimental’ data collection (education and health have been published)
- Data processing
- Thematic mapping
- Improve process when relevant for core datasets management (e.g. admin. / statistical units, addresses, postal codes, POI...)
- Establish standard production process

Technical support

- Various dissemination-related activities (e.g. production of maps for the Eurostat Regional Yearbook and other publications)
- Update of mapping tools (IMAGE, Statistical Atlas), freely available for users
- Update of transport matrixes
- Follow-up of relevant legislation implementation

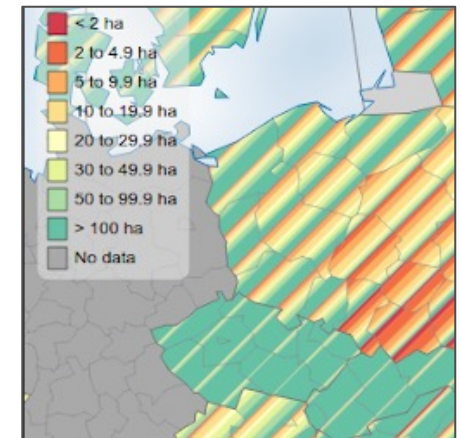
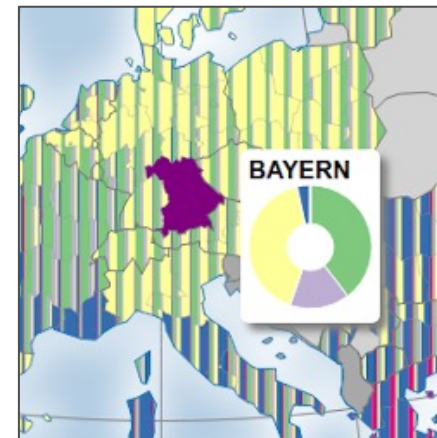
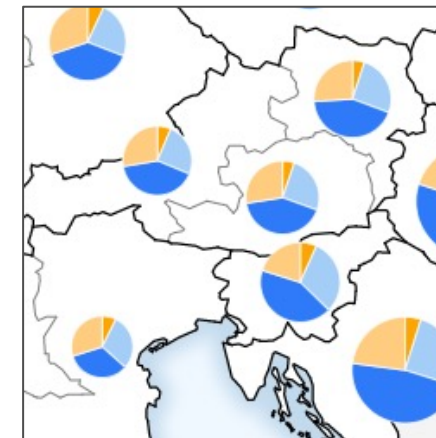
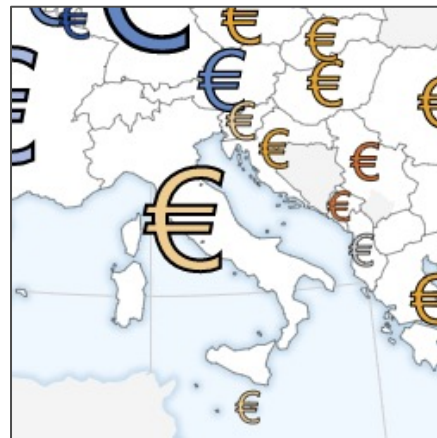
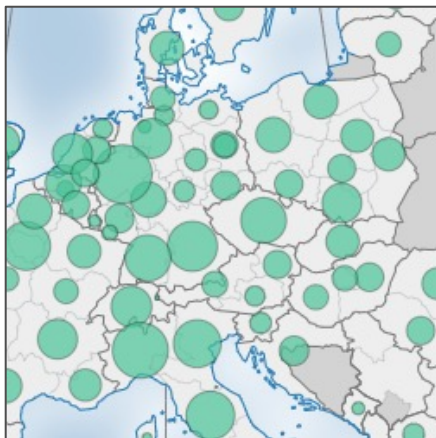
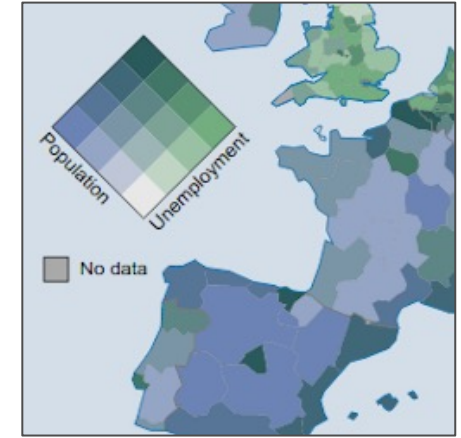
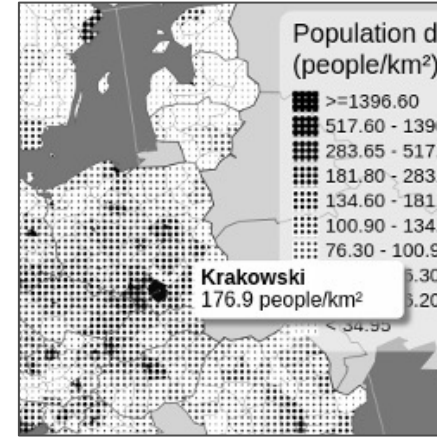
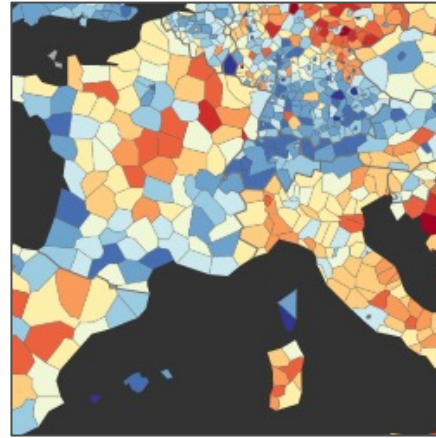
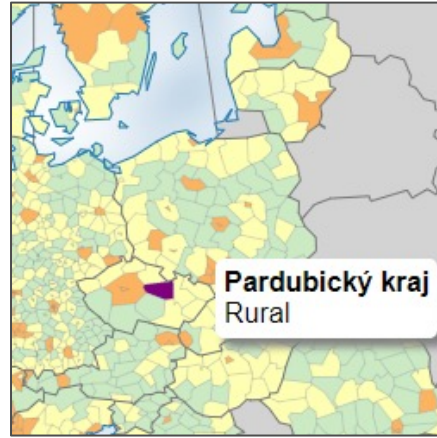
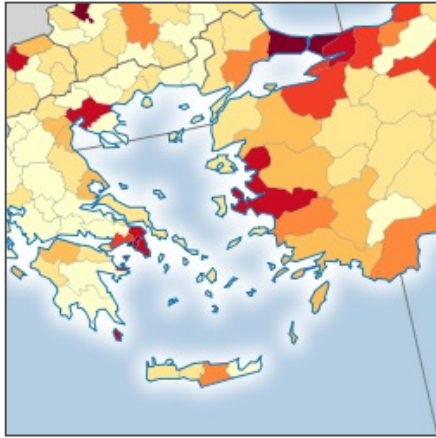
IMAGE

- web-tool used for the production of Thematic Maps for a pre-defined map extent
- enable users to quickly make professional, statistical maps for publication that adhere to Eurostat's Style guide.
- Estimated 50-100 maps/day



<https://gisco-services.ec.europa.eu/image>

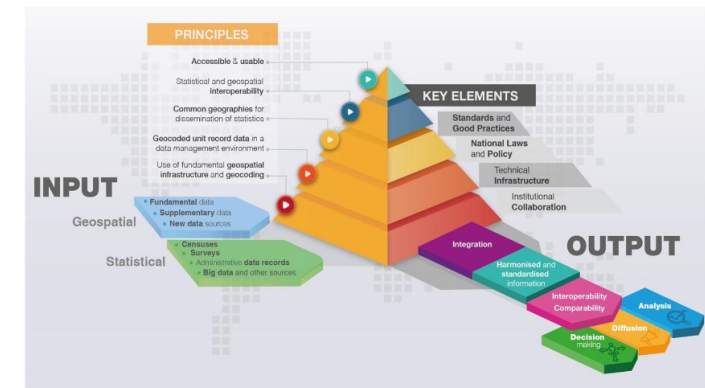
Visualize: Eurostat-map.js



Collaboration within the European Statistical System (ESS) / EU Member States

Financial support: Grants to support EU member states

- Support the integration of geospatial and statistical information during the statistical production process
 - GEOSTAT projects, GSGF, IGIF
- Enhance the cooperation of National Statistical Institutes and National Mapping, Space and Cadastral Agencies
- Establish internal and external processes required for a continuous (semi) automated regular update of geospatial data
- Provide evidence-based data for policy support



GEOS Grants

- More than 40 actions supported by grants in the past years

Examples of supported actions

- Building up a geocoding infrastructure
- Georeferencing statistical databases
- Provision of grid based statistics
- Implementing the Global Statistical Geospatial Framework
- Earth Observation – to determine off-season soil cover on arable land

Earth Observation (EO) data

- EO in the European Union helps
 - monitoring the Earth
 - preparing for crises situations
 - offering free and open data
 - economic development and is a driver for the digital economy



- EO is a “new data source” for statistical production processes

Integration of EO data into statistical processes

Mandate:

- Adaption of the [Warsaw Memorandum](#) at the DGINS Conference on EO for official statistics, held October 2021 in Poland
- Implementation of the recommendations of the 48th Meeting of the European Statistical System Committee (February 2022)

Goal:

Defining an ESS strategy including a governance framework

Action plan:



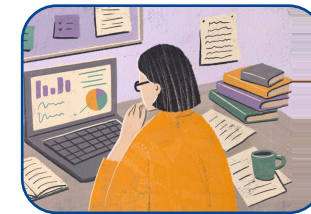
Applications



Skills



Methodology



IT
Infrastructure



Data strategy
and governance

Collaboration with international organisations / associations

UN-GGIM



UN-GGIM
UNITED NATIONS
COMMITTEE OF EXPERTS ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT



- EG-ISGI (Expert Group on the Integration of Statistical and Geospatial Information)
 - Developed the Global Statistical Geospatial Framework (GSGF) to facilitate the integration of statistical and geospatial information
 - Overarching framework IGIF (Integrated Geospatial Information Framework)
- IAEG-SDGs WGGI (Working Group on Geospatial Information of the Inter-Agency and Expert Group on the Sustainable Development Goal Indicators)

UNGGIM: Europe



UN-GGIM: Europe

United Nations Committee of Experts on
Global Geospatial Information Management

- Member of the Executive Committee
- Following and contributing to the work of its working groups (e.g. EG-ISGI, Line of work on Data Integration and on SDGs): webinar series
 - “Data integration in Europe – challenges, findings, added value and cost savings” – chaired by Eurostat (15 March 2023)
 - “United Nations Geospatial Network Data Hub: “One UN Geospatial Situation Room”” – chaired by Eurostat (15 November 2023)
- Support to the organization / financing of the UNGGIM: Europe Plenary meetings
- Regular exchanges at technical and management level

Further international collaboration

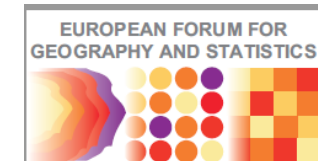
- UNECE

- Member of the Task Team on geospatial information



- EFGS – European Forum for Geography and Statistics

- Observer in its Steering Committee
- Supporting the work of the EFGS including the EFGS conferences
- Foster the integration of statistics and geospatial information in a European context



Thank you

<https://ec.europa.eu/eurostat/web/gisco-estat-gisco@ec.europa.eu>



© European Union 2023

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.

