



**United Nations Economic Commission for Europe
Statistical Division**

UNECE Activities on Integrating Statistical and Geospatial Information

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A decorative graphic consisting of a horizontal blue line and a vertical blue line intersecting at the bottom right corner of the slide.

Exploring Opportunities



Photo by Javier Allegue Barros on [Unsplash](#)



Main Events: 2021

- ❖ Eurostat / UN-GGIM: Europe / UNECE Meeting on the Integration of Statistical and Geospatial Information, **On-line**, 24 March
- ❖ “Coffee Talks”
 - Defining urban areas and modelling urban area data
 - Developments in applying global grids
 - Geospatial and statistical standards



UNECE



GFGS®
GLOBAL FORUM FOR
GEOGRAPHY AND STATISTICS



Geospatial view of GSBPM

- Description of how geospatial information can be used across all stages of the statistical production process



Overarching Processes							
Specify needs	Design	Build	Collect	Process	Analyse	Disseminate	Evaluate
1.1 Identify needs	2.1 Design output	3.1 Reuse or build collection instruments	4.1 Create frame and select sample	5.1 Integrate data	6.1 Prepare draft output	7.1 Update output systems	8.1 Gather evaluation inputs
1.2 Consult and confirm needs	2.2 Design variable descriptions	3.2 Reuse or build processing and analysis components	4.2 Set up collection	5.2 Classify and code	6.2 Validate outputs	7.2 Produce dissemination products	8.2 Conduct evaluation
1.3 Establish output objectives	2.3 Design collection	3.3 Reuse or build dissemination components	4.3 Run collection	5.3 Review and validate	6.3 Interpret and explain outputs	7.3 Manage release of dissemination products	8.3 Agree an action plan
1.4 Identify concepts	2.4 Design frame and sample	3.4 Configure workflows	4.4 Finalise collection	5.4 Edit and impute	6.4 Apply disclosure control	7.4 Promote dissemination products	
1.5 Check data availability	2.5 Design processing and analysis	3.5 Test production systems		5.5 Derive new variables and units	6.5 Finalise outputs	7.5 Manage user support	
1.6 Prepare and submit business case	2.6 Design production systems and workflow	3.6 Test statistical business process		5.6 Calculate weights			
		3.7 Finalise production systems		5.7 Calculate aggregates			
				5.8 Finalise data files			

GSBPM and GSGF

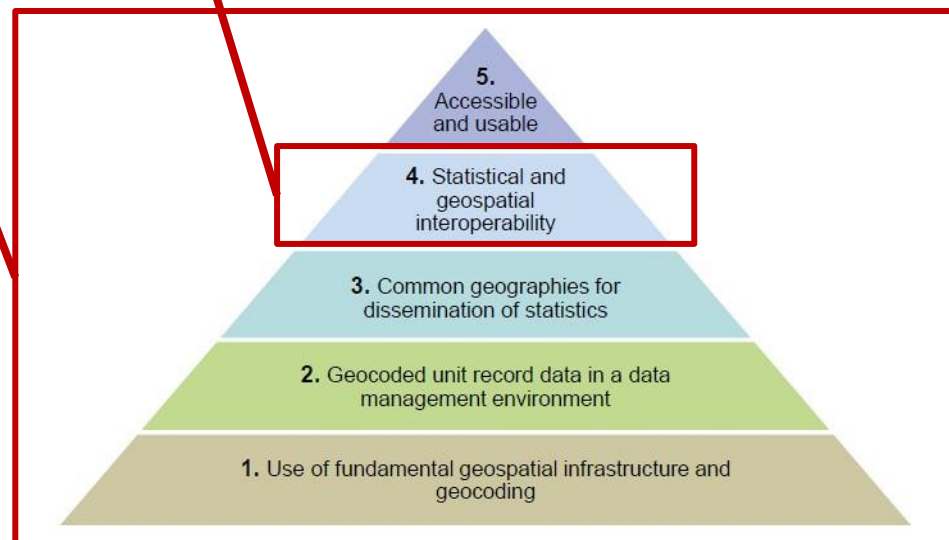
GSBPM as tool to ensure GSGF principles to be followed

GSBPM

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Immediate connection

GSGF



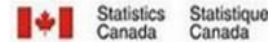
SOURCE: Australian Bureau of Statistics (ABS) / UN-GGIM, illustration by Statistics Sweden

Figure 2: The Global Statistical Geospatial Framework (GSGF)

Geospatial view of GSBPM (GeoGSBPM)



Developed by Geospatial
task team of HLG-MOS
Supporting Standards
Group





Geospatial view of GSBPM

Example of GSBPM sub-process 2.2 Design variable description

2.2 Design variable description

28. This sub-process defines the variables to be collected via the collection instrument, as well as any other variables that will be derived from them in sub-process 5.5 (Derive new variables and units), and any statistical or geospatial-classifications that will be used. It is expected that existing national and international standards will be followed wherever possible.

29. Geospatial variables (geographies) that are used while collecting data at a statistical unit level are not usually the same as those that are used for dissemination. Hence, they should be designed at the statistical unit level using point-based location⁸ as the base geospatial variable, as it will provide a considerable adaptability to changes over time and flexibility to aggregate up to various dissemination-level geographies. For gridded geographies, it is important to use a grid system that is comparable with the existing regional or global grid system (e.g. Discrete Global Grid System (DGGS)⁹) as it will greatly increase usability of the output. Different types of grid (e.g. hexagon, rectangular) and their advantages and disadvantages can be assessed when designing gridded geographies.

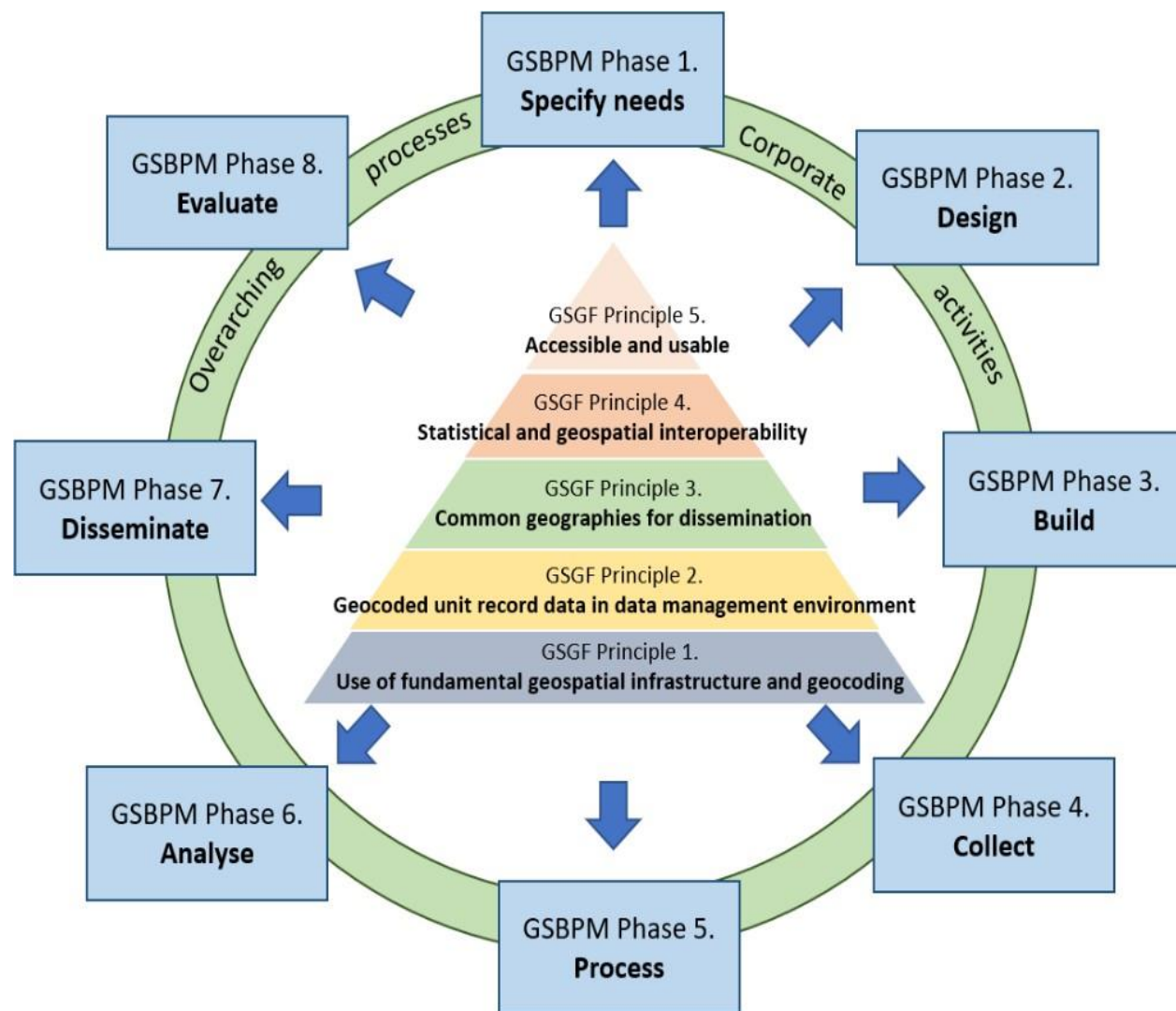
30. This sub-process may need to run in parallel with sub-process 2.3 (Design collection), as the definition of the variables to be collected, and the choice of collection instruments may be inter-dependent to some degree. Preparation of metadata descriptions of collected and derived variables, statistical and geospatial classification is a necessary precondition for subsequent phases

GSBPM original text

New geospatial text

Geospatial view of GSBPM

GeoGSBPM describes geospatial-related activities and considerations using the framework of the GSBPM





GeoGSBPM – Opportunities

- Help production of geospatially enabled statistics to be conducted **in a systematic and consistent way**
- Provide a common framework to **manage quality and metadata** of statistical and geospatial information and services.
- Facilitate **sharing of geospatial services, methods and tools** that can be applied regardless of data types, domains and output formats



**Geospatial View of
Generic Statistical Business Process Model**

GeoGSBPM

(version 1.0, May 2021)

[https://statswiki.unece.org/
display/GSBPM/GeoGSBPM](https://statswiki.unece.org/display/GSBPM/GeoGSBPM)



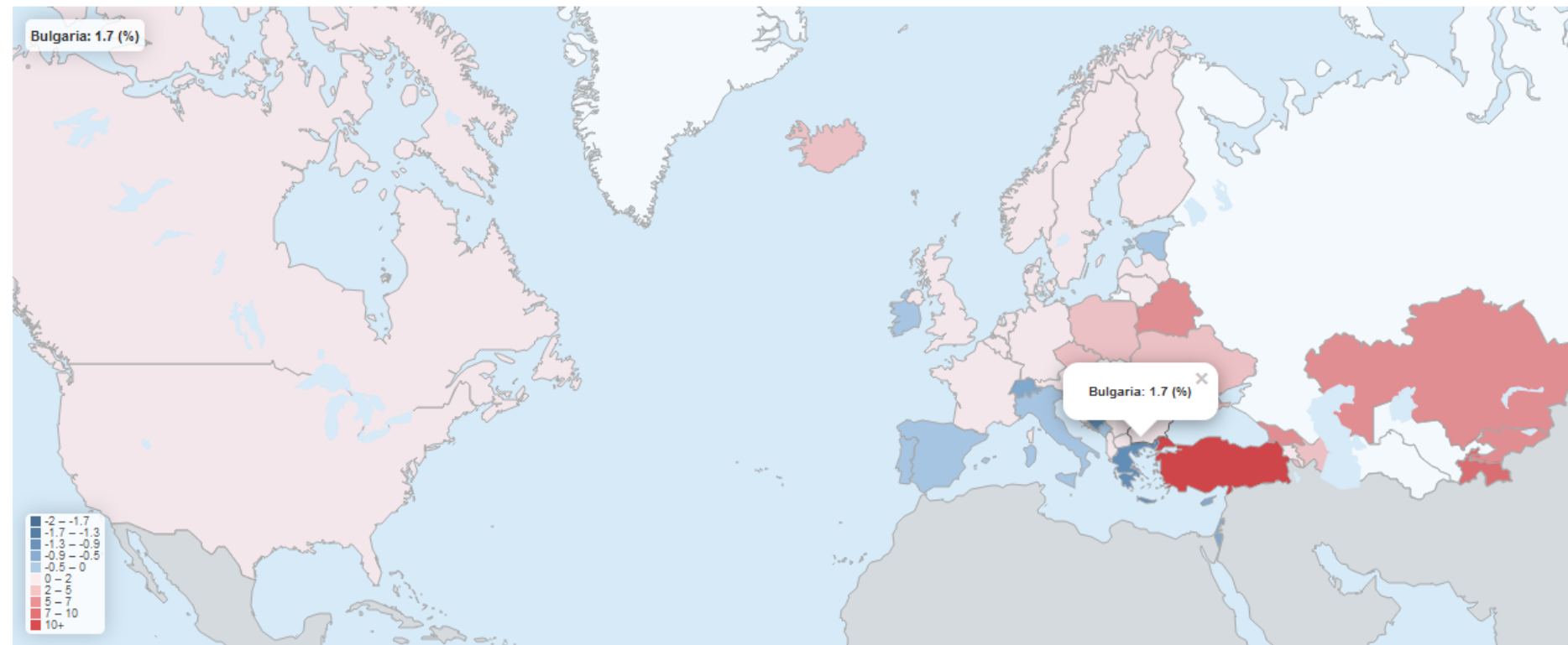
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Opportunities in data



Consumer price index (CPI) Growth rate (%) 2020

Chart Ranking Table **Map**

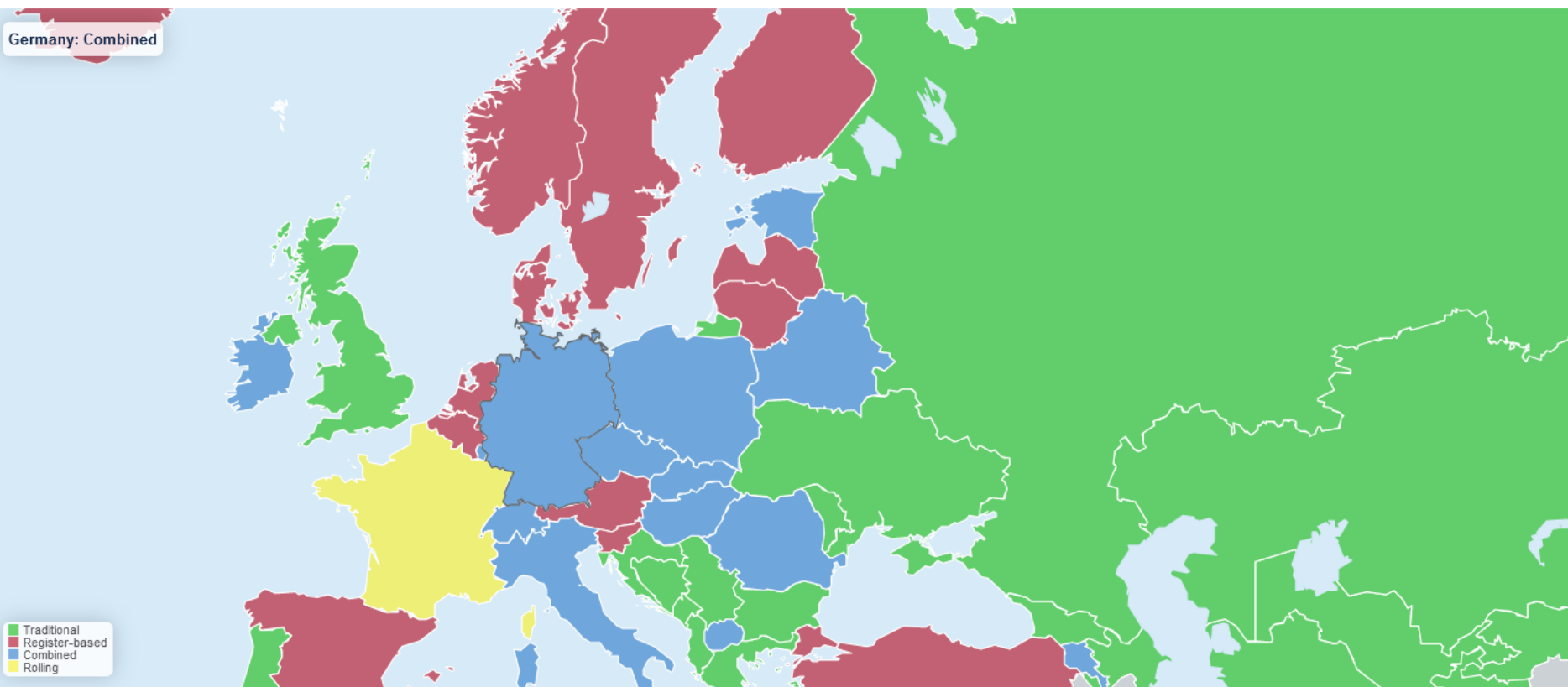


<https://w3.unece.org/PXWeb/en/DataMap?IndicatorCode=1>



Opportunities in metadata

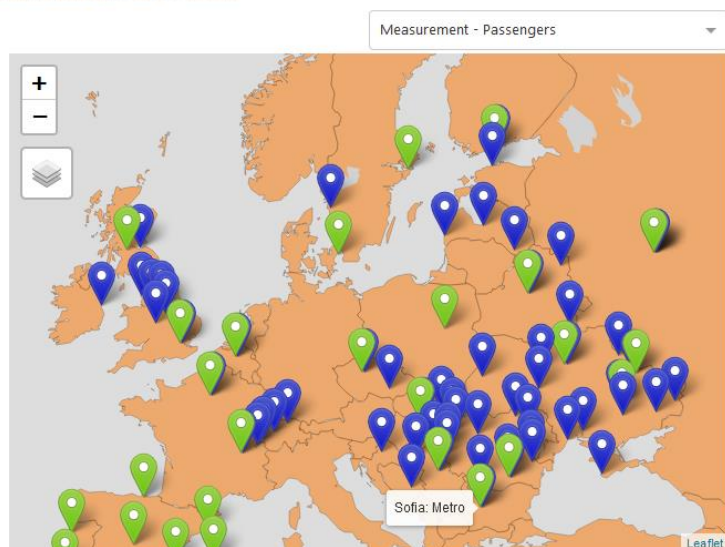
Population census methodology: 2020 round



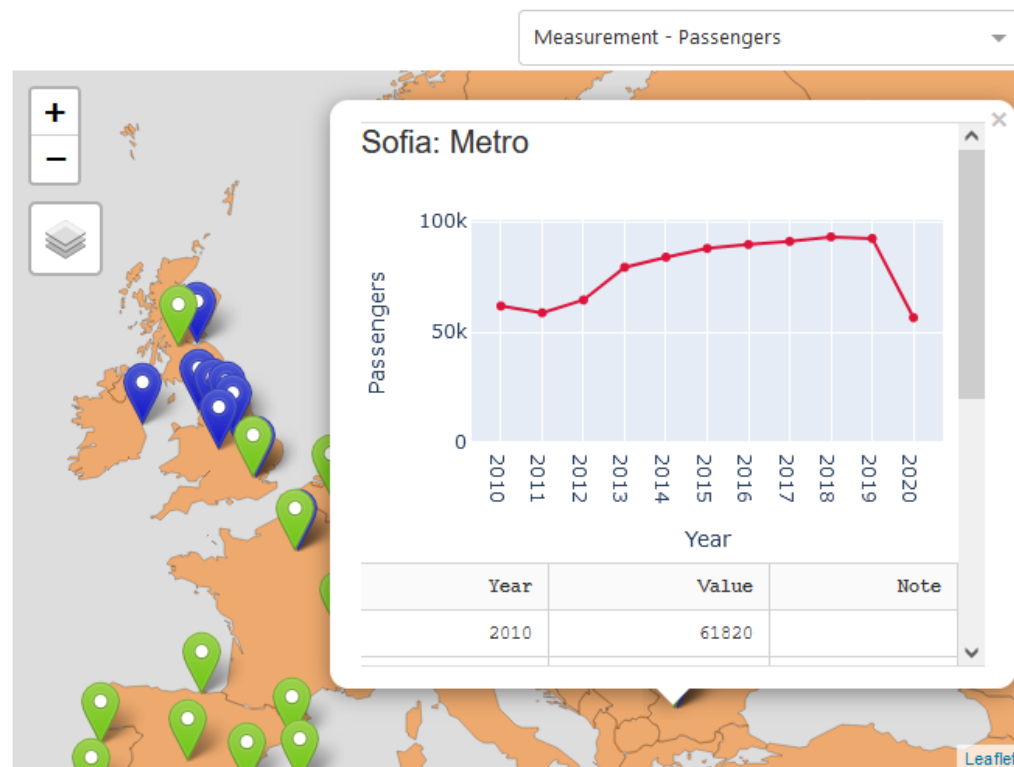
<https://statswiki.unece.org/display/censuses/Censuses+of+the+2020+round>

Opportunities in data science

Tram and Metro data



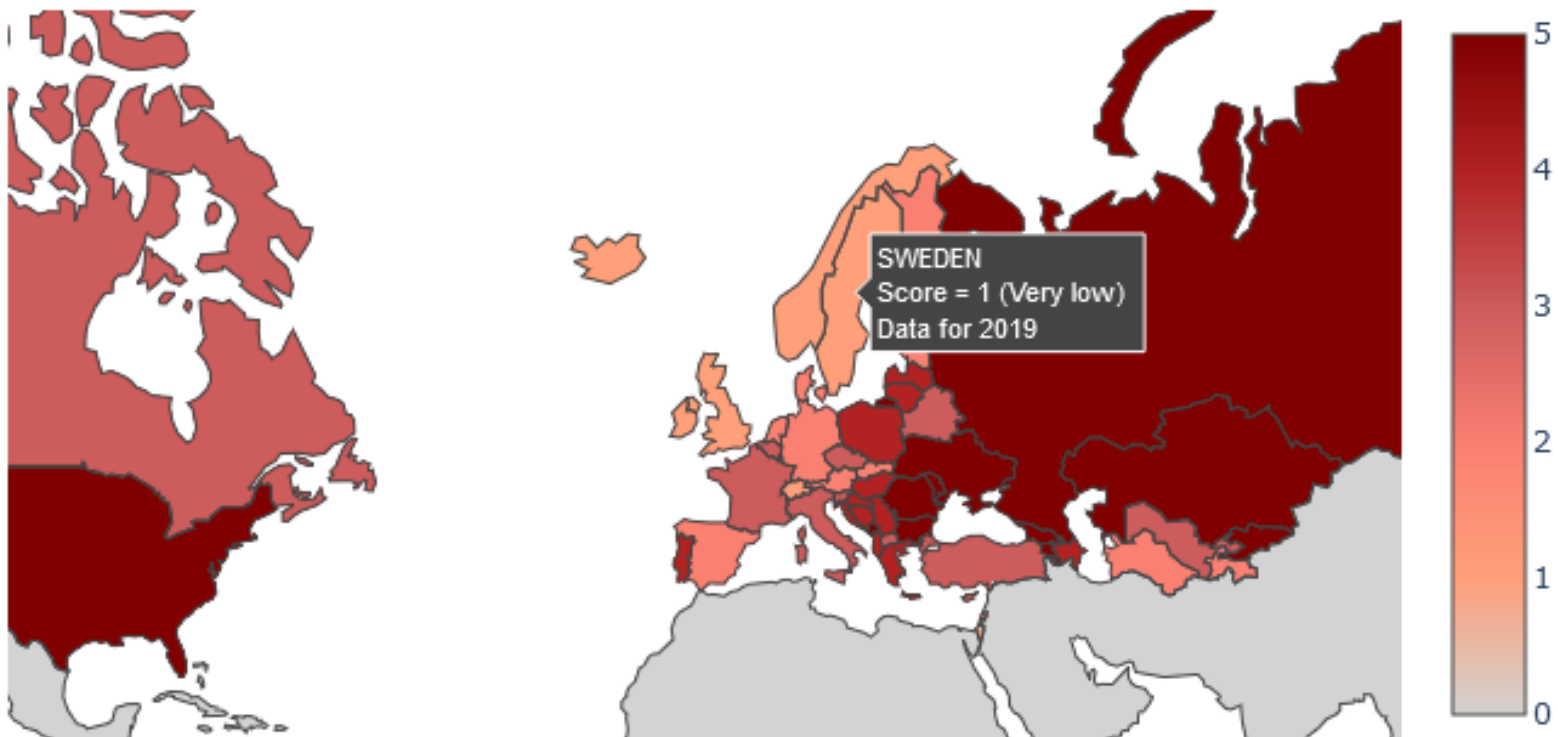
Tram and Metro data



<https://unece.org/tram-and-metro-data>

Opportunities in data science

Road fatality score (deaths per million inhabitants)



<https://stats.unece.org/infocard/en/040/>



Looking forwards

- ❖ New project with Eurostat (tbc)
- ❖ Dedicated expert for geospatial information
- ❖ New work on standards and interoperability
- ❖ Capacity development activities
- ❖ Joint session of Conference of European Statisticians and UN-GGIM: Europe – 21 June
- ❖ “Real” meetings 😊

Any questions?

