

## EC action to better use official Member State's data for pan-European data for the commission



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Eurostat

# **GISCO** role

- Answer needs of the EC+ for geographical information at EU/national/regional levels with:
  - Provision of GIS reference data, services and software to support EC+ GIS analysts
  - Support to cartographic and spatial analysis activities
  - Coordination of commission-wide GI activities
  - Stimulation of the use of GIS to support commission activities
  - Support to Eurostat activities on the integration of statistical and geographical information



# **Objective**

- Fill the gap for data need on various themes for large scale data
- Based on MS data sources
  - No restriction to INSPIRE format/services
- For EC+ internal use
- COGI 4/10/2018 decision: Eurostat-GISCO action on Member states' data combination for pan-European data for the commission







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## Main challenge





European Commission

## **Need for pan-European datasets**



- Need for central infrastructure
- Need for edge-matching
- Need for cross-country comparability « spatial interoperability »





## **Progressive approach**

- Step 1: MS data sources inventory
- Step 2: MS data retrieval
- Step 3: Initial data combination



• Step 4: Incremental update and maintenance



## **Progressive approach**

- Step 1: MS data sources inventory
  Output: Data sources per MS and per theme
- Step 2: MS data retrieval
  Output: Raw MS data
- Step 3: Initial data combination
  Output: Pan-European datasets, by theme
- Step 4: Incremental update and maintenance
  Output: Update processes



# **Step 1: MS data sources inventory**



<u>https://webgate.ec.europa.eu/fpfis/wikis/display/GISCO/MS+data+sources+i</u> <u>nventory+by+theme</u>



## **Step 2: MS data retrieval**

- Automated download processes of raw MS data
- Based on operational download services (if any)







# **Step 3: Initial data combination**

- Union (projection, format, structure)
- Generalisation & Edge-matching





### Railways



See:

https://www.arcgis.com/ apps/Styler/index.html?a ppid=d3c5b0b95c404a51 81833886df50912d



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## Railways

#### Data structure based on UN-GGIM: Europe core specs.

Туре	Attribute	Values / enumeration	UN-GGIM UNITED NATIONS COMMITEE OF EXPERTS ON GLOBAL GEOSPATIAL
	Geometry	GM_Curve	
RailwayLink (priority 1)	Туре	RailwayTypeValue * cogRailway * funicular * magneticLevitation * metro * monorail * suspendedRail * train * tramway	
	numberOfTracks	Integer	HERE Interest to Port PT (OTR Fail Database
	verticalPosition	EU_Ral_Network  EE_Ral_Network : Output  T_Ral_Network : Output	
	TransEuropean Transport Net	PL_Rail_Network : Output	Pesk_sinisse_opun_is turn_se_uses
	electrified	DK_Ral_Network : Output	Content
RailwayLine (priority 1)	definition	CH_Rail_Network : Output	PEU_Schema
	railwavLineCode	AT_Rail_Network : Output	P Martapula
	name	R_Ral_Network : Output	EU_Gipper
	Goomotry	F_Rail_Network : Output	EU_Gipper_R0 : ONTR_RAIL_LINES
RailwayStation (priority 1)	Geometry	UK_Ral_Network : Output	BU_CIOPOTEL: ONTR_RAIL_LINES   BU_CIOPOTER: OTTR_RAIL_LINES
	geographicalName	NL_Rei_Network: Output	BU_Gipper_AT ; ONTR_RAIL_LINES
	stationCode	PT_Rail_Network : Output	
	railwayUse	RO_Fiel_Network : Output EE_Ral_Network : Output EE_Ral_Network : Output EE_Ral_Network : Output	
	L	passengers	Commissio

#### **Geographical names**

#### **Addresses**





## Administrative units (LAUs)





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## **Building – Belgium**





## **Edge-matching & Generalisation**





## **Need for multi-resolution data**





# Step 4: Incremental update and maintenance

- Need for sustainable data provision and proper maintenance. Stop with one-shot project.
- Update:
  - From snapshot to incremental update model
  - Need for differential datasets
- Maintenance:
  - Follow progressive evolution/improvements of MS data



## Next

#### ES FI FR HR HU IE IT LT LU LV MT NL ...



Commission

## Next

## • On railways:

- Fill missing gaps
- Routable and multi-scale
- Integrate other data sources (RINF, UIC, OpenStreetMap, ERM, Eurostat stats, ERA-ERTMS, etc.)
- Automation, automation, automation
- Extend thematic scope
  - Health care and education services
  - Other transport networks



## Next

- Governance
- Collaboration
- Resources



# Thanks !



