

New scale, new needs, new statistics: Future prospects of European City statistics

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### Most densely populated...

Metropolitan region: Southampton

NUTS 3 region: *Paris*  **5000** *inhabitant/km*<sup>2</sup>

**21 000** inhabitant/km<sup>2</sup>

Local Administrative Unit: 11<sup>th</sup> arr. of Paris

**42 000** *inhabitant/km*<sup>2</sup>



#### ... the most dense 1 km<sup>2</sup> grid cell Hospitalet de Llobregat

Barcelona



# Population density based on the GEOSTAT population grid, 2011



Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat Cartography: Eurostat — GISCO, 10/2017

(number of inhabitants / 10 x 10 km)



http://ec.europa.eu/eurostat/statistical-atlas/gis/viewer









#### A system of urban/rural typologies

Three levels of urban/rural classification based on population distribution



Data sources Burostat, DE JRC, national statistical institutes, EFGS

and Urban Policy



### **Characteristics of the definition**

- Population based definition
- Starts from the population grid
  - Avoids distortions caused by large variations in the area of administrative territorial units
- Uses three categories at three spatial levels
- Has a legal recognition: Regulation of the European Parliament and of the Council amending Regulation (EC) No 1059/2003 as regards the territorial typologies
- Enables the collection, compilation and dissemination of harmonised statistics
- Allows better targeted policy-making at EU level



#### **Commuter flows of London**





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- Enables the collection, compilation and dissemination of harmonised statistics
- Allows better targeted policy-making at EU level
- Administrative boundaries do not necessarily mirror the current social and economic reality



# New Scale - Prospects for the future

 Complement existing territorial classifications with more flexible, more functional statistical geography





Source: Joint project of Statistics Belgium, Proximus and Eurostat

### Classification of the territory: residential, commuting and working areas profiles

#### **Belgium**

Data not available







Working profile



Note: experimental statistics based on a joint Eurostat, Statistics Belgium and Proximus project Source: Eurostat



# **Objectives of post 2020 cohesion policy**

- **1. A smarter Europe**
- 2. A greener, carbon free Europe
- **3. A more connected Europe**
- 4. A more social Europe

5. A Europe closer to the citizen: sustainable and integrated development in urban areas, rural areas and coastal areas.

## ... create new needs



# Measuring the accessibility of public transport

Location of all public transport stops

Timetables in 2 groups:

- bus and tram
- train and metro

For each stop: average number of departures an hour between 6:00 and 20:00 on a normal weekday





### Measuring access to public transport

Who has easy walking access to a public transport stop?

- Maximum 5 minutes walk to bus or tram stop
- Maximum 10 minutes walk to train or metro

Walking distance calculated using a street network

- Density of the street network matters
- Obstacles for pedestrians are taken into account

For each catchment area around a stop: total number of departures and number of inhabitants



### **Frequency classes**

#### 5 groups based on access and departure frequency

		Metro and train			
		High frequency (> 10 departures/hour)	Medium frequency (between 4 and 10 departures/hour)	Low frequency (less than 4 departures/hour)	No services
Bus and tram	High frequency (> 10)	VERY HIGH	HIGH	HIGH	HIGH
	Medium frequency (4 to 10)	HIGH	MEDIUM	MEDIUM	MEDIUM
	Low frequency (< 4)	HIGH	MEDIUM	LOW	LOW
	No services	HIGH	MEDIUM	LOW	NO ACCESS



# **Stockholm: areas and population by access to public transport and its frequency**





Source: H. Poelman, L. Dijkstra: Measuring access to public transport in European cities, Regional Working Paper 2015

Eurostat







## **Prospects for the future**

- Exploit novel data sources: open data, big data, etc.
- Promote geocoding of statistical and administrative data sources



# **Prospects for the future – New Statistics**

 Use technology embedded in smart systems aiming at transforming data into knowledge presented in the form of statistics : Trusted Smart Statisitcs



Commission

**Trusted statistics** 



- Ensuring validity and accuracy of the outputs
- Respecting data subjects' privacy and protecting confidentiality
- Confirm the principles covering the institutional environment, the statistical production processes and the output of statistics.
- Privacy by design, end-to-end security, auditable data life-cycle, transparency, satisfy consent and purpose conditions, assessment boards, ...





## "Smart statistics" in the business case 2018-2020

#### Smart cities and connected vehicles

- Use of smart vehicles, smart parking, meteorological stations
- <u>Statistical themes:</u> Urban mobility, road safety, optimised transportation resources, autonomous vehicles





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- Use technology embedded in smart systems aiming at transforming data into knowledge presented in the form of statistics : Trusted Smart Statisitcs











## Thank you for the attention!

http://ec.europa.eu/eurostat/web/regions-and-cities/overview

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