



IAOS Conference 2016

Abu Dhabi, 6-8 December 2016

New opportunities for statistics on population and mobility from the use of mobile phone data

Fernando Reis, Task-Force Big Data
European Commission (Eurostat)

Scheveningen Memorandum on Big Data

Heads of the National
Statistical Institutes of
the European Union

MEMORANDUM

Examine the **potential** of Big Data
sources for official statistics

Official Statistics Big Data **strategy** as
part of wider government strategy

Address **privacy** and **data protection**

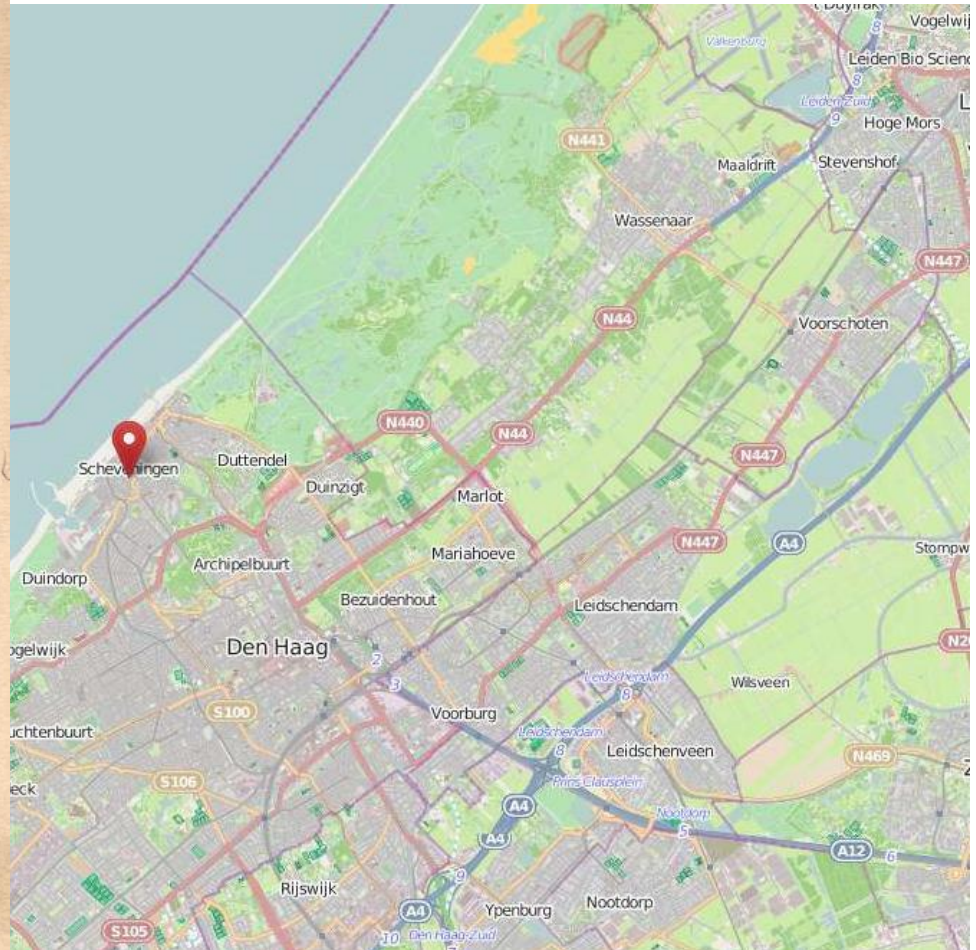
Collaboration at European and global
level

Address need for **skills**

Partnerships between different
stakeholders (government, academics,
private sector)

Developments in **Methodology**,
quality assessment and **IT**

Adopt **action plan and roadmap** for
the European Statistical System





Partnership



Albrecht Wirthmann, Christophe Demunter, Fernando Reis, Hannes I. Reuter



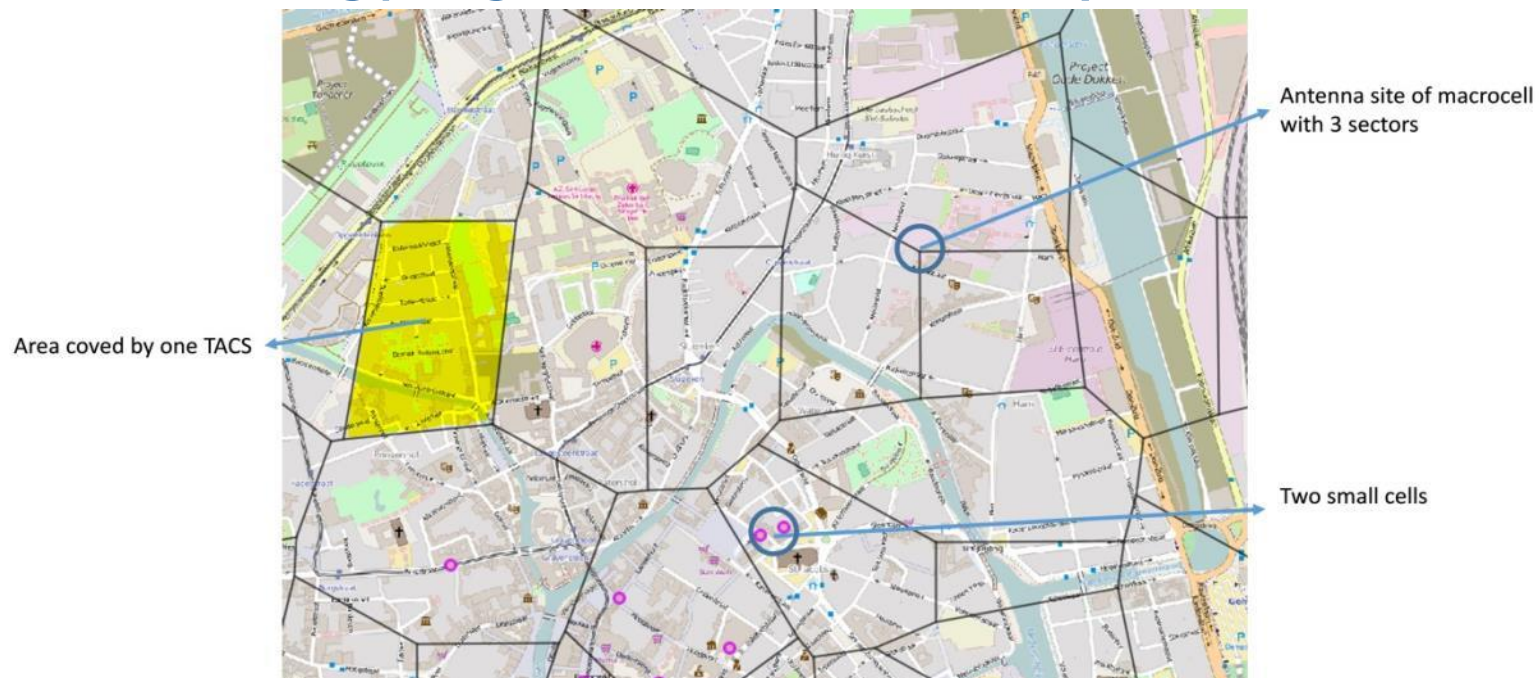
Freddy De Meersman, Gerdy Seynaeve



Marc Debusschere, Patrick Lusyne, Pieter Dewitte, Youri Baeyens

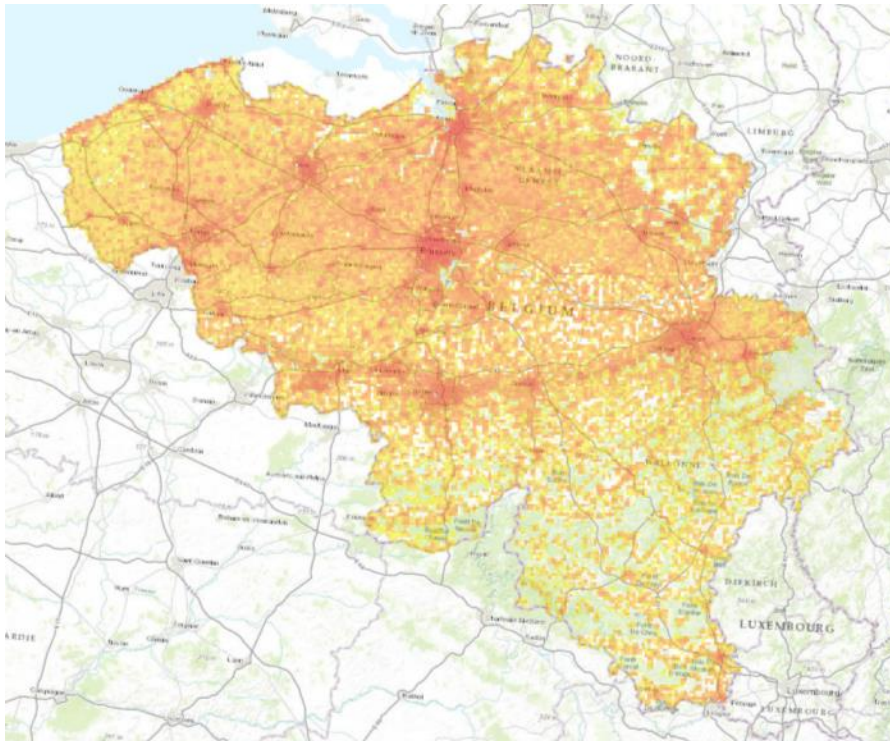
Data

Use of network signalling vs Call Data Records Abstraction of network complexity (TACS - Technology Agnostic Cell Sector)

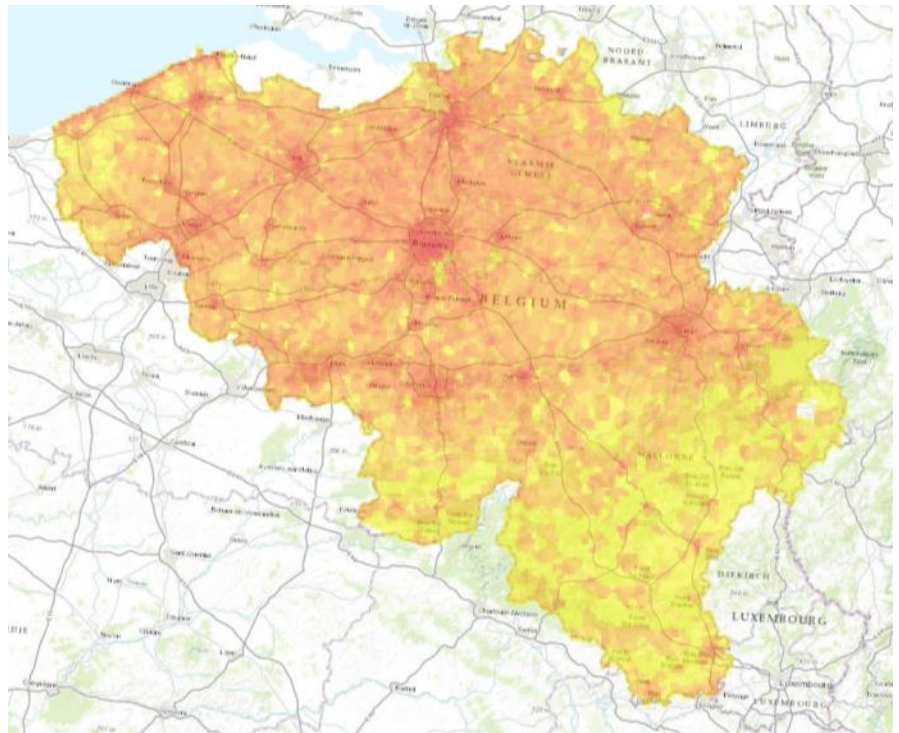


Mobile phone network data for population statistics (Belgium)

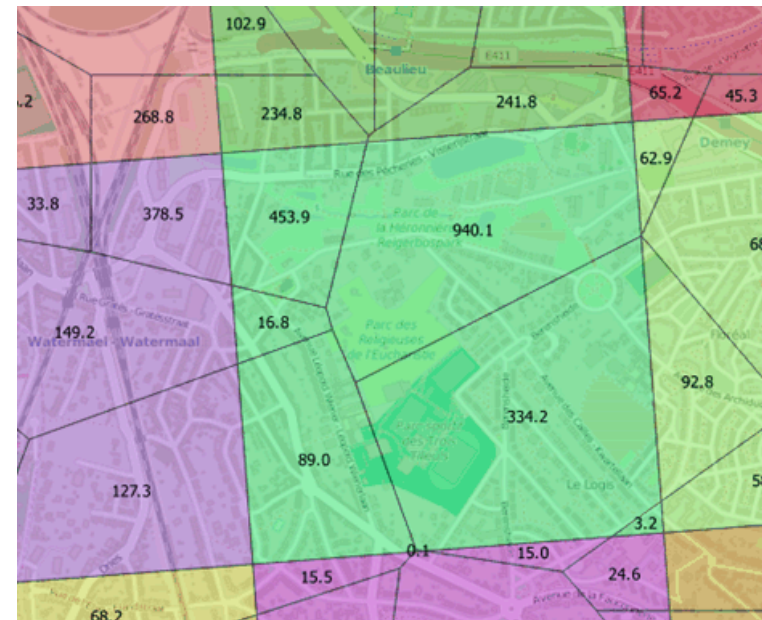
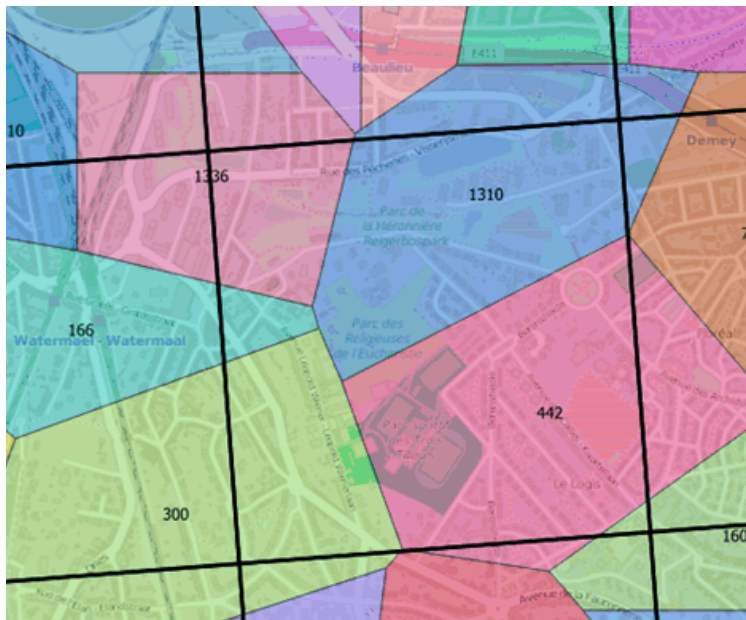
Census (2011)



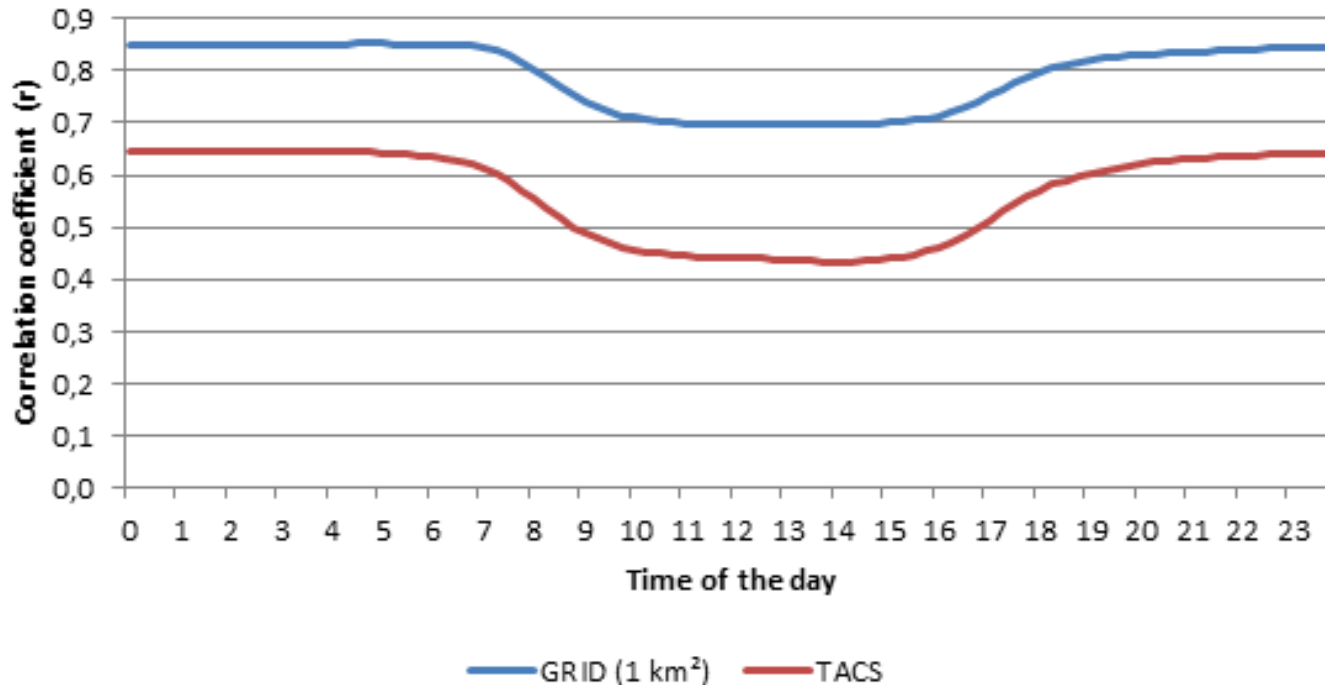
Mobile phones (2015)



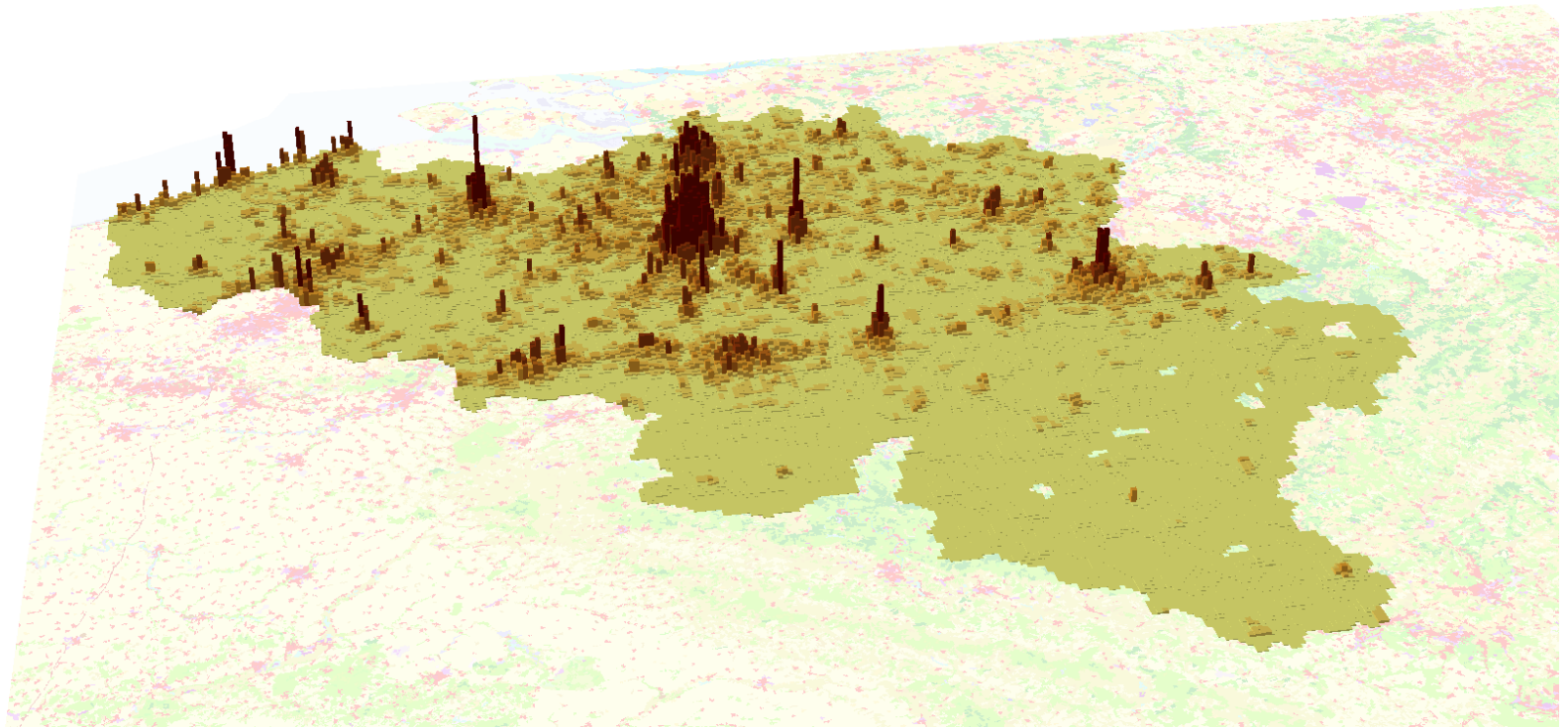
Mapping to a regular grid



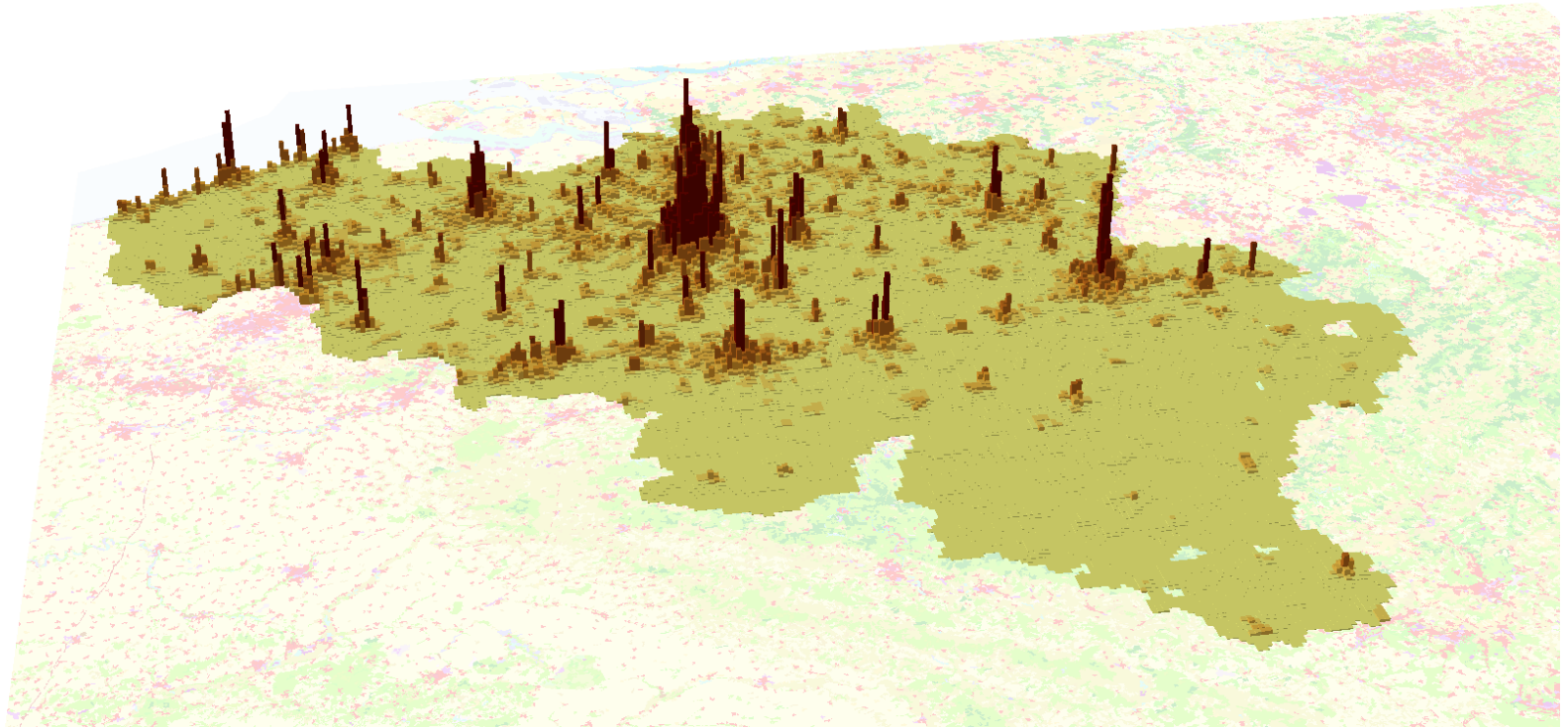
Correlation between Census data and mobile network data



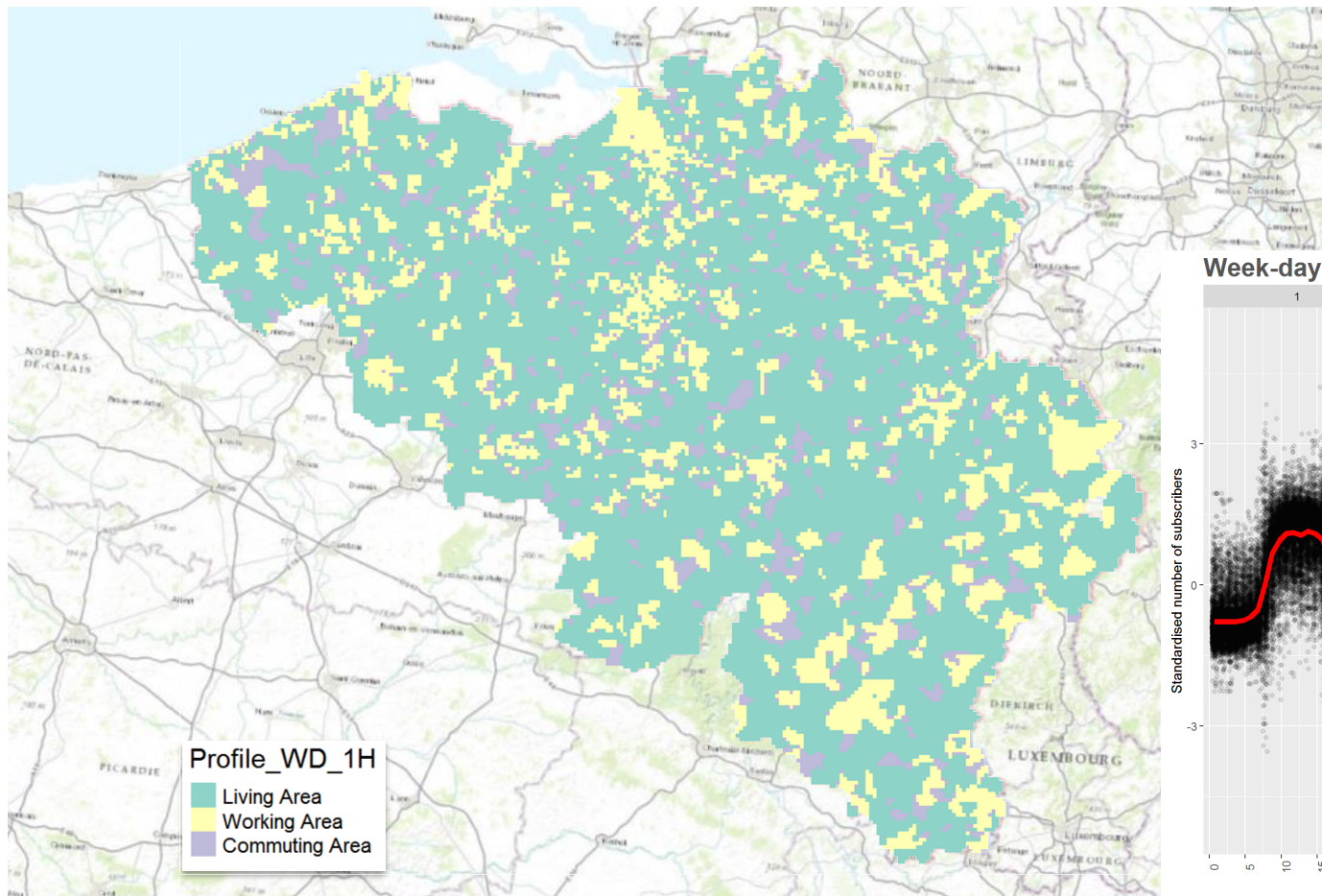
Present population at 00:00



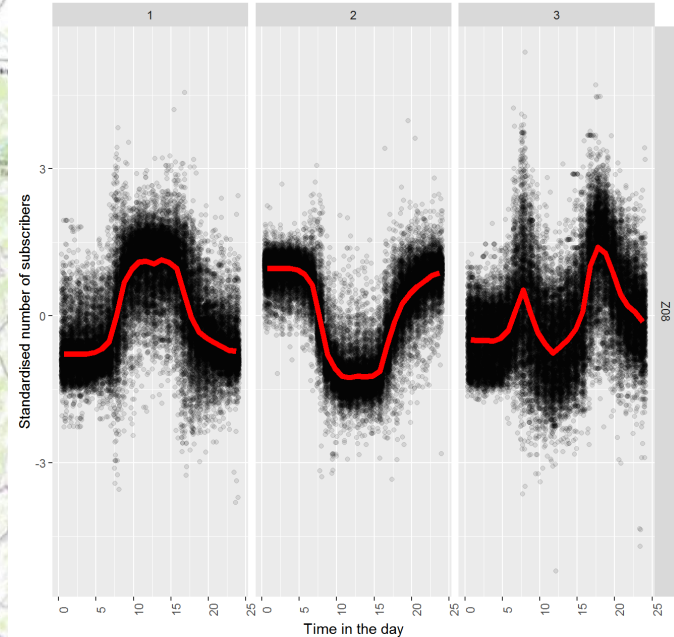
Present population at 12:00



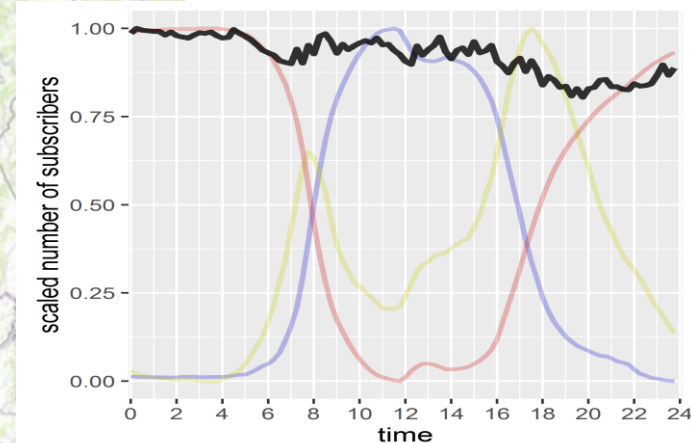
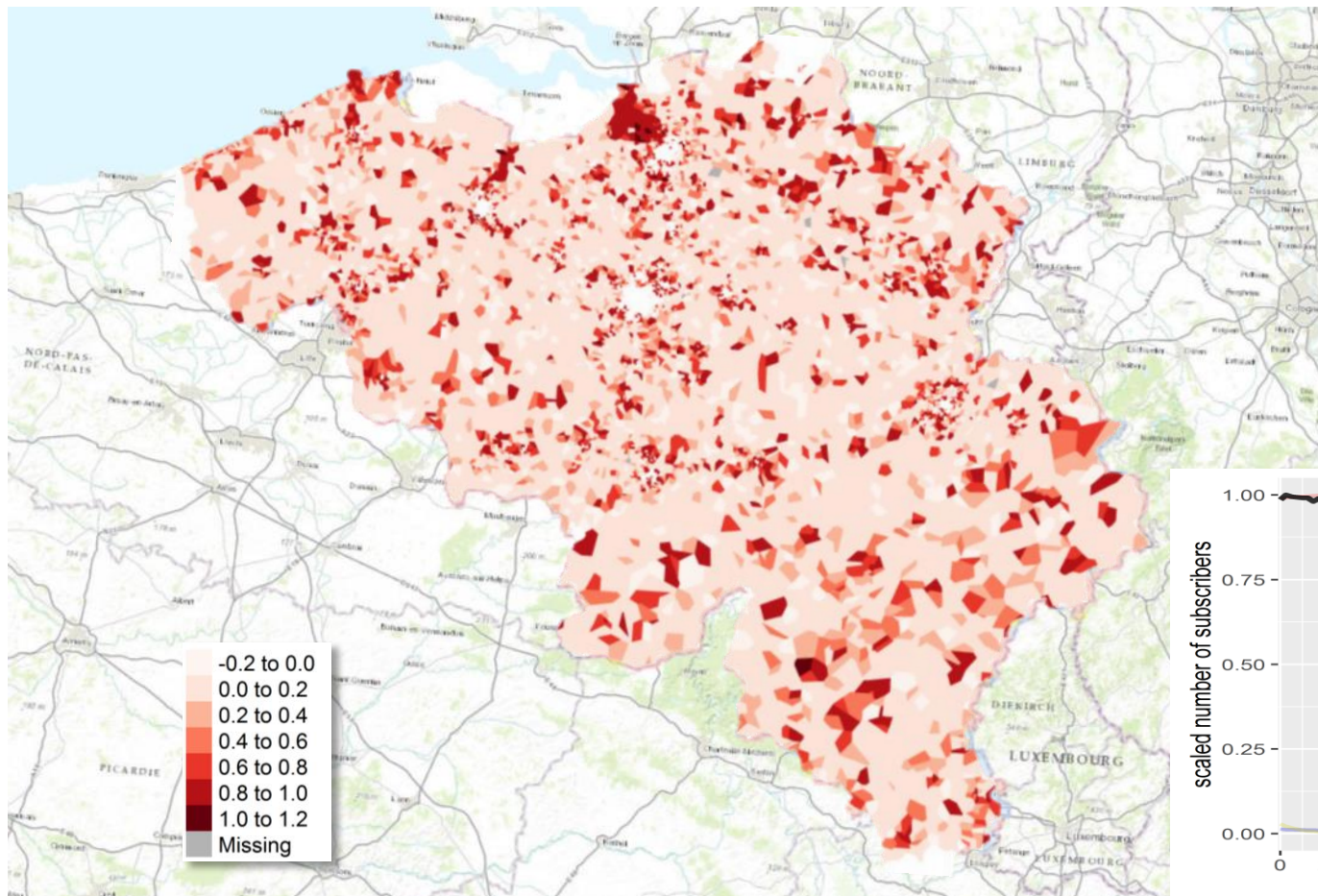
Mobile phone network data for automatic classification of territory



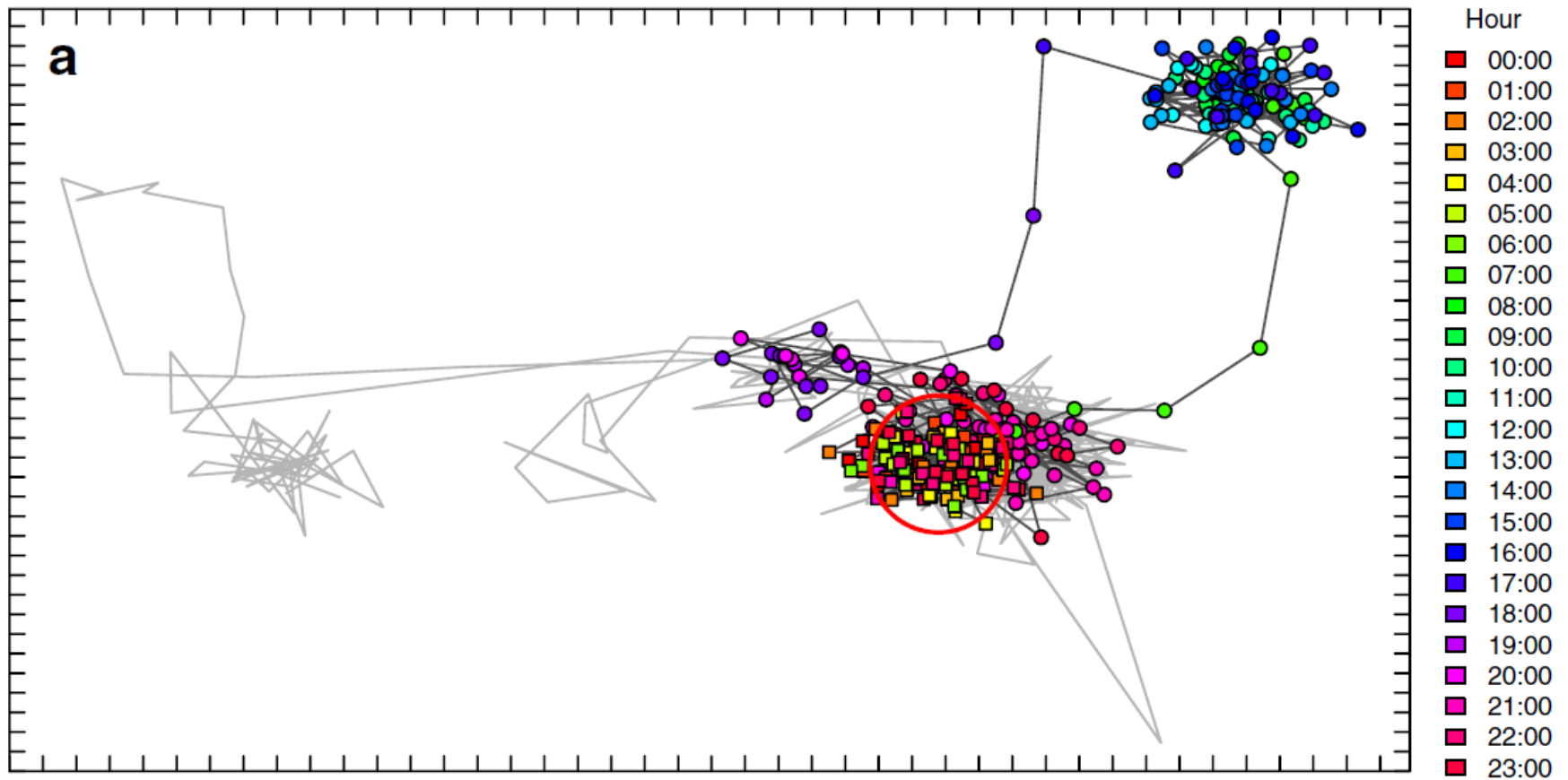
Week-day daily profile of subscribers by cluster



Mobile phone network data for automatic classification of territory



Towards a new definition of resident



Towards a new definition of resident

Classification of travellers (page 17)

http://unstats.un.org/unsd/publication/Seriesm/SeriesM_83rev1e.pdf

<http://unstats.un.org/unsd/tradeserv/egts/CG/IRTS%20compilation%20guide%207%20march%202011%20-%20final.pdf>

<http://ec.europa.eu/eurostat/documents/3859598/6454997/KS-GQ-14-013-EN-N.pdf/166605aa-c990-40c4-b9f7-59c297154277>

"A traveller is someone who moves between different geographic locations for any purpose and any duration."



Thank you for your attention

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<https://github.com/reisfe/>



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