International Transport Forum

Urban accessibility measurement *Some feedback on data and visualisation*

March 2017

OECD

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Data at ITF: what are the coming challenges ?

- Most of ITF data is collected from members countries
  - Mainly aggregated data
  - Consistency issues
  - Not global
- New forms of data (open, crowdsourced, satellite images, …) provide a unique way of expanding the scope of our analysis
  - Spatially disaggregated data (ex: working a the city level or even under)
  - Standardization
- **For the transport analyst, it is a radically different way of working**
  - An example : Towards a global indicator of urban accessibility
  - What did we learn from that ?

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An example: urban accessibility

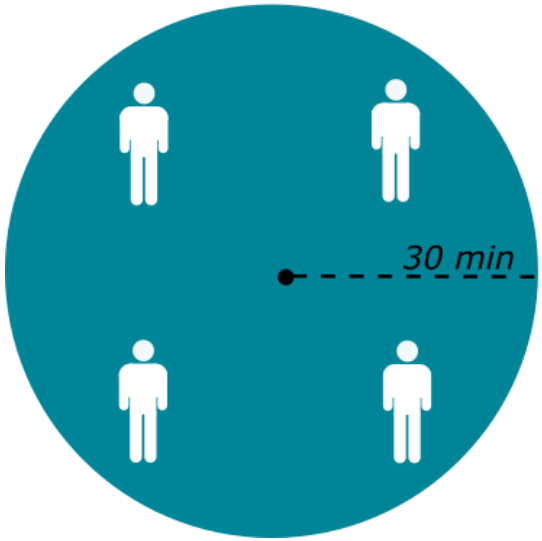
- Part of ITF transport outlook 2017 (chapter 5)
- Aim: assess urban accessibility
- Work on a global scale (large number of cities, not only OECD)

Global accessibility indicators

Performance of the transport system (speed)

Density of a city (pop/km2)

→ **Number of people you can reach within 30 minutes by car and by public transport**



High speed, low density, low accessibility

Global accessibility indicators

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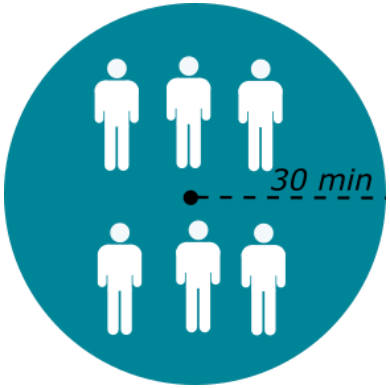
Density of a city (pop/km2)

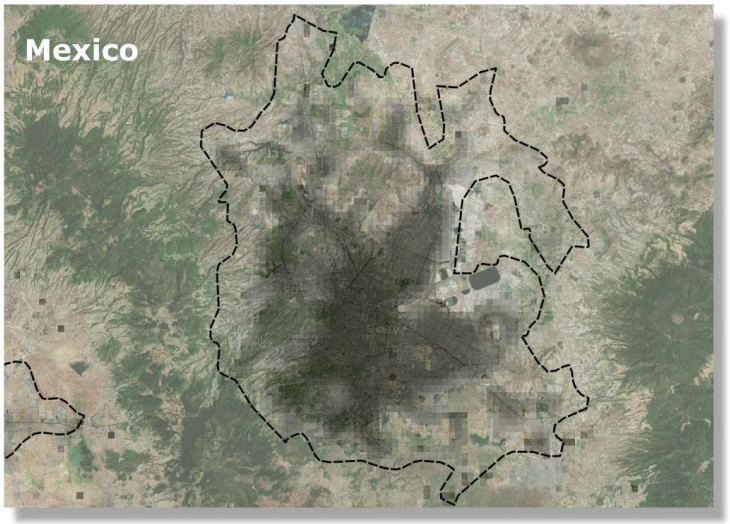
→ **Number of people you can reach within 30 minutes by car and by public transport**

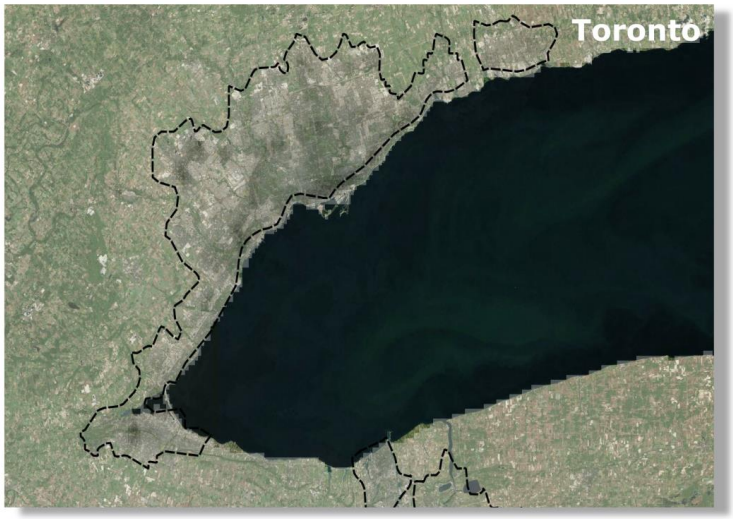


Low speed, high density, high accessibility

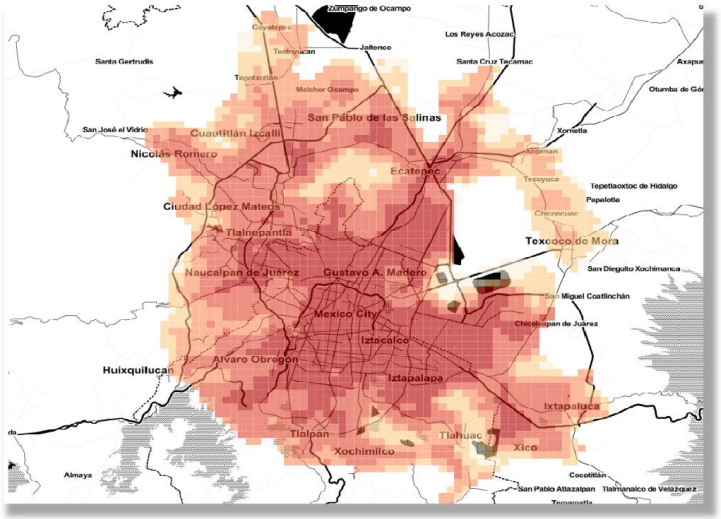
Data collection

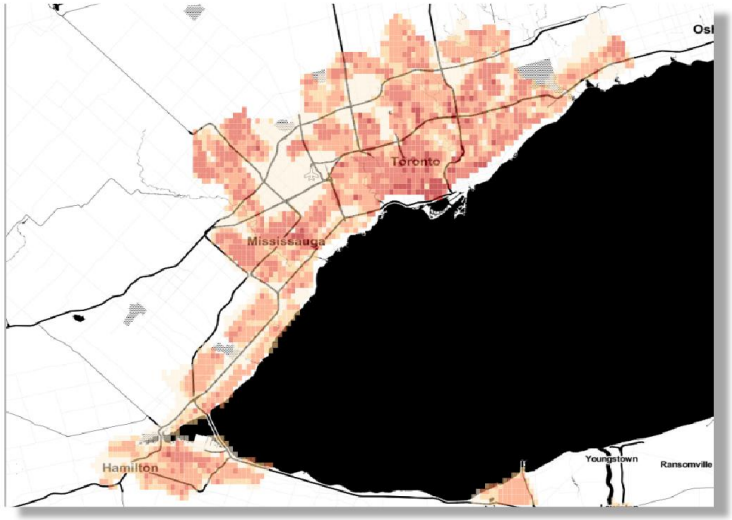
Data on built up area





Population distribution





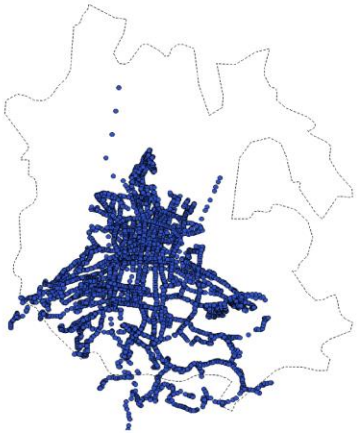
Data collection

Road network from open street map

Mexico

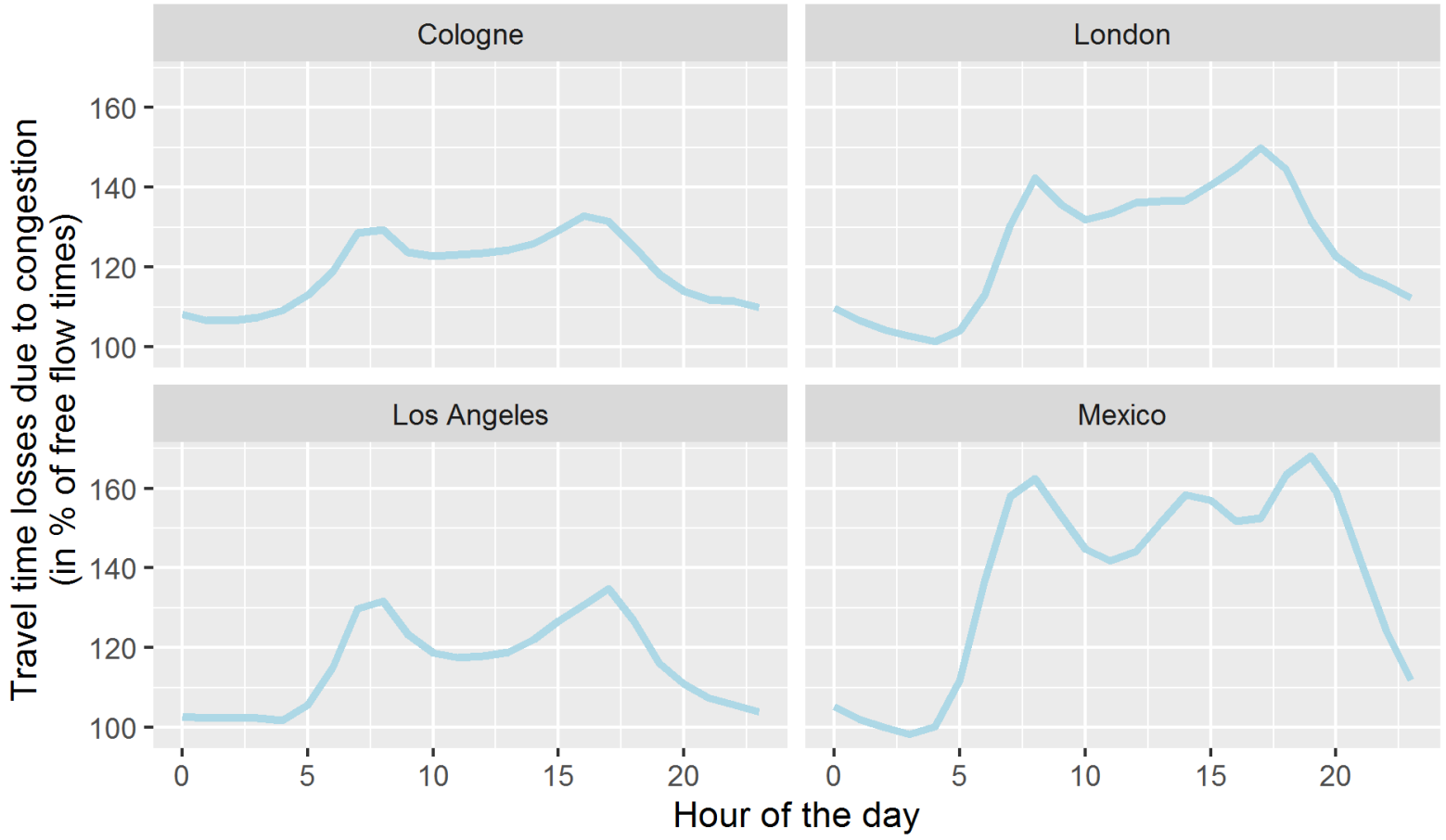
Toronto

Public transport stops and schedules from local authorities



Data collection

Data collected from INRIX via a partnership (sample)



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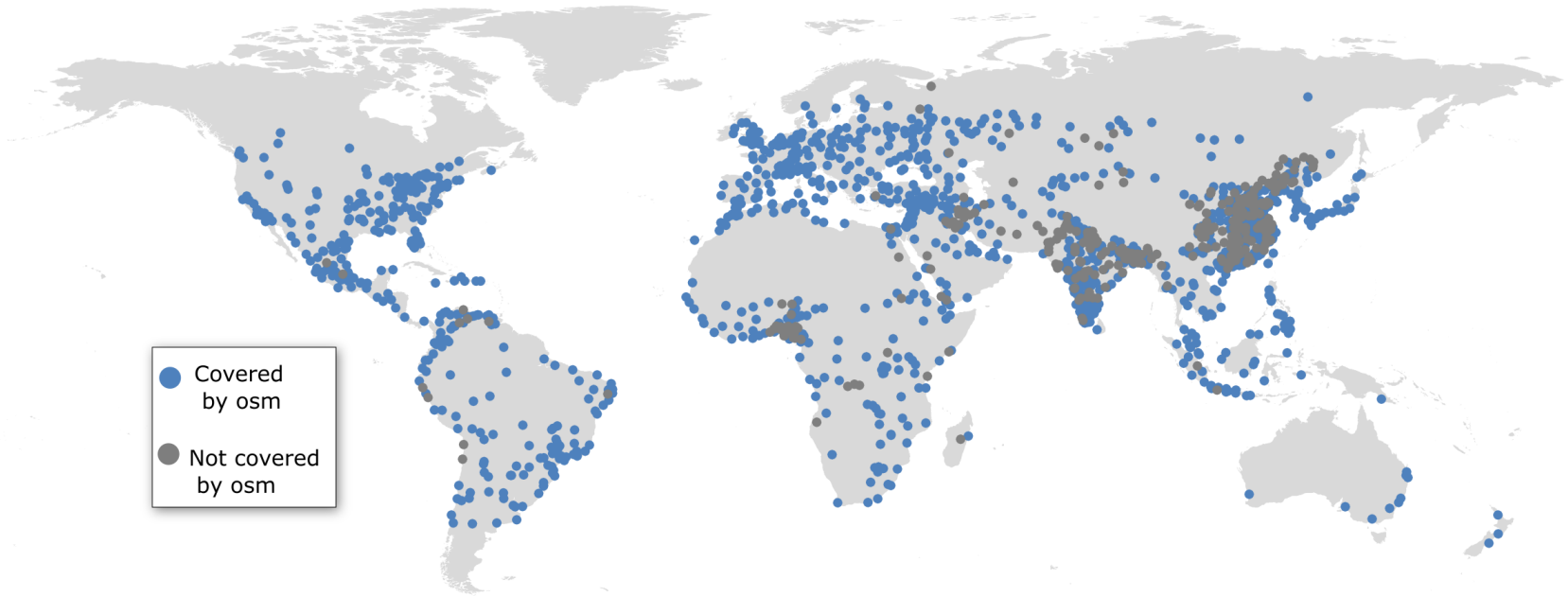
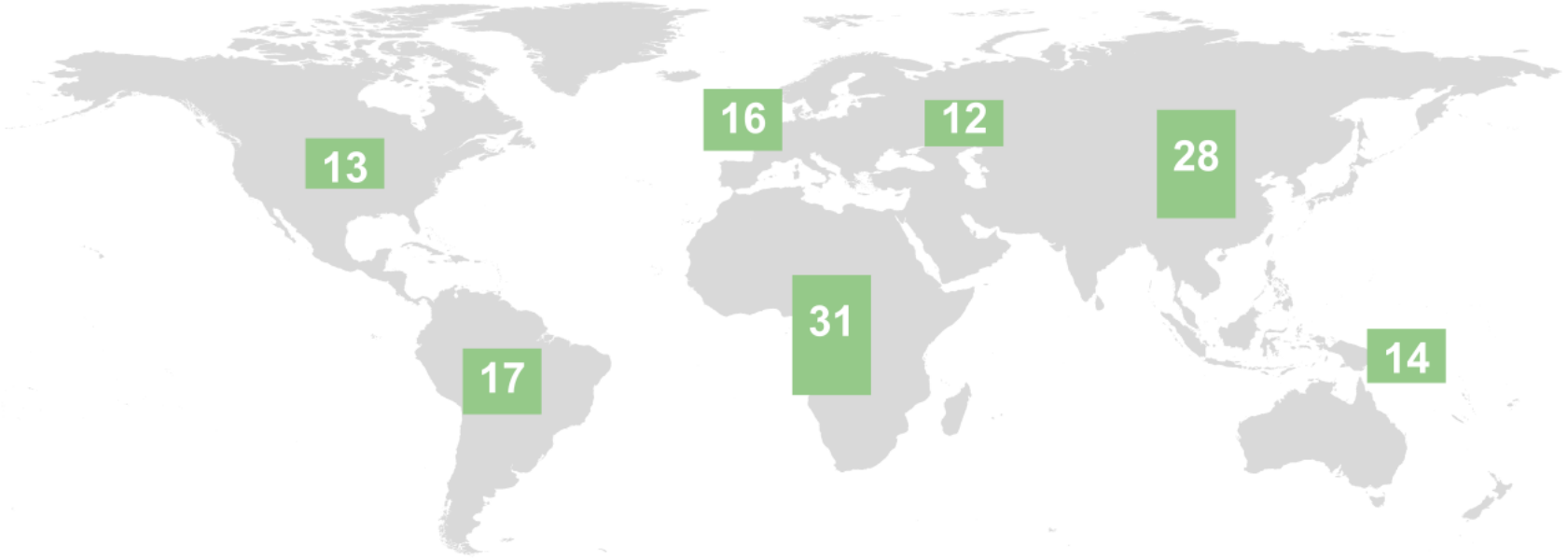
Data collection



Results

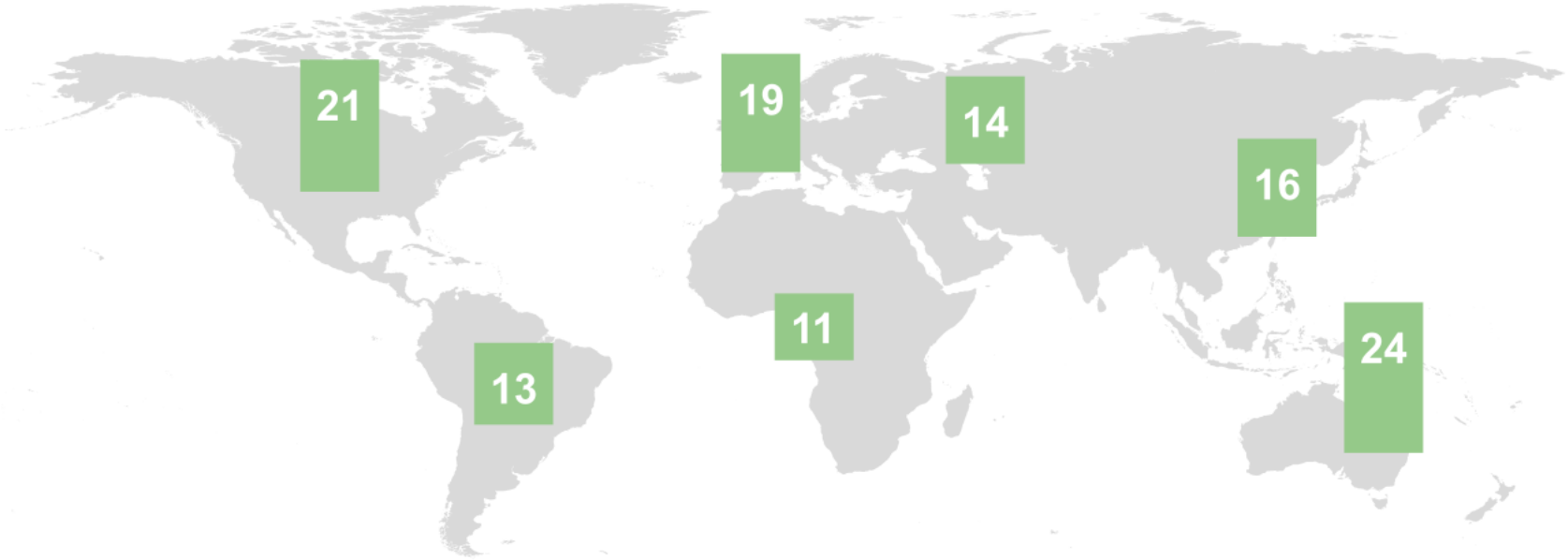
Car accessibility by region
% of the city accessible in 30 minutes



Scope: cities between 3 and 10 millions inhabitants

Results

Average car speed in cities
km per hour

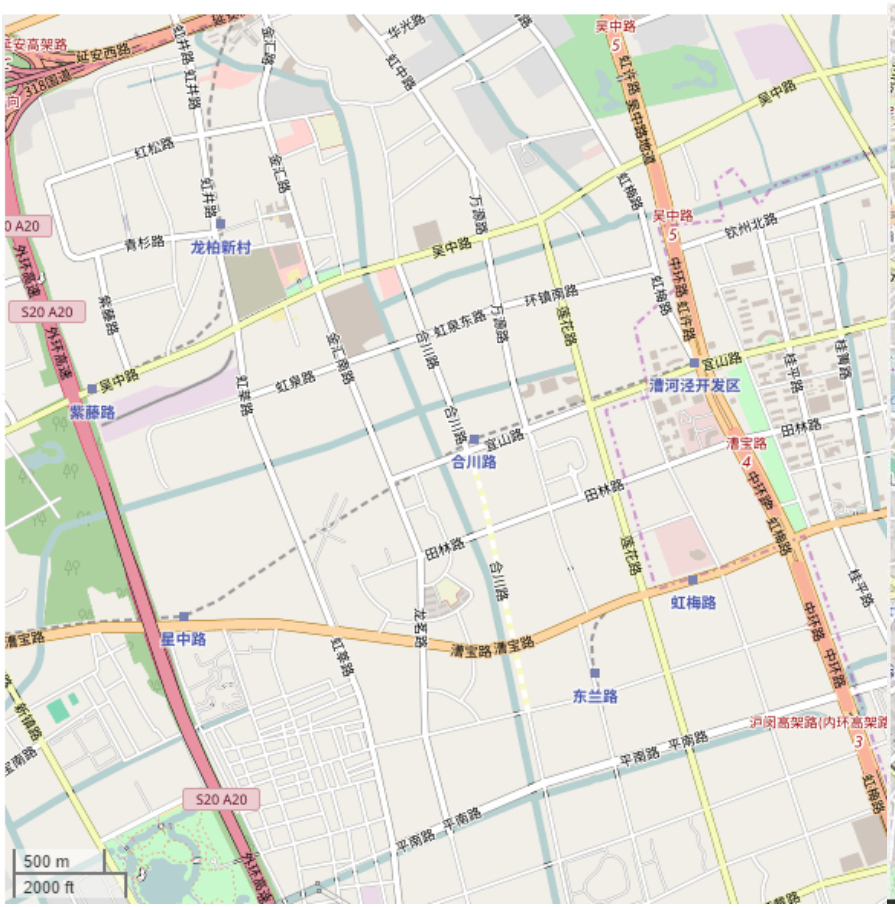


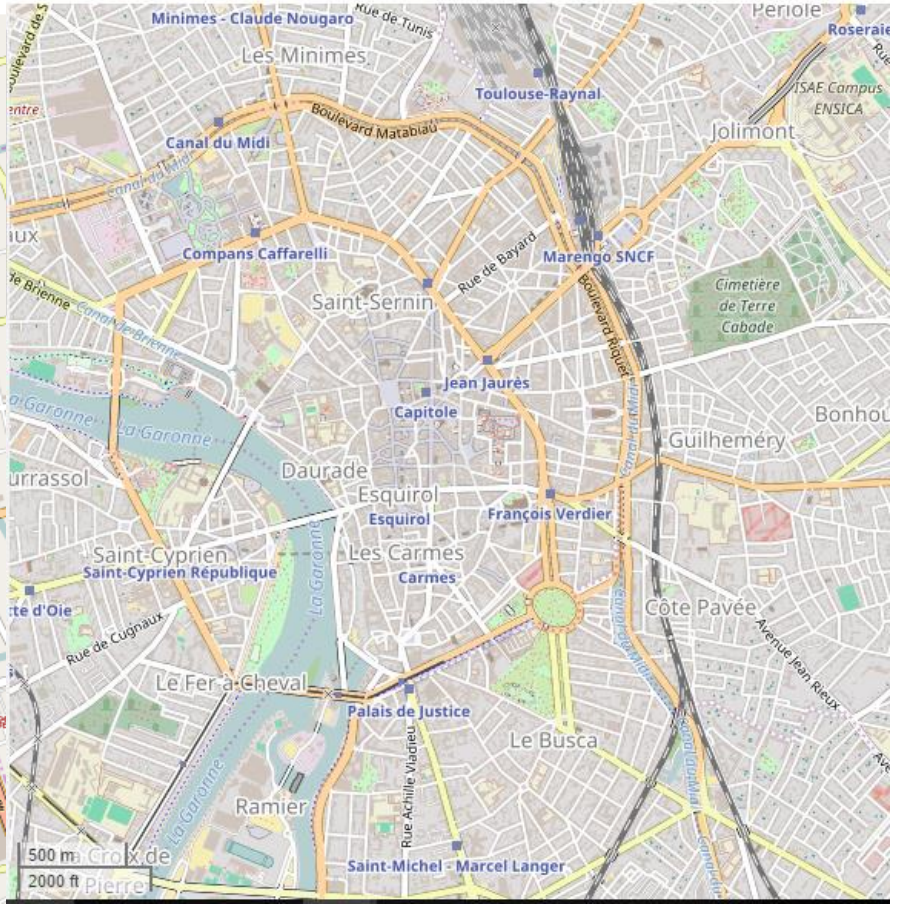
Scope: cities between 3 and 10 millions inhabitants

What did we learn ?

- The amount of open source data is impressive… but coverage is uneven and assessing quality is a challenge

Road networks of two cities (Hangzhong and Toulouse, same scale)





What did we learn ?

- The amount of open source data is impressive… but coverage is uneven and assessing quality is a challenge
- Establishing partnership between public and private sector is essential
  - How to bring value to both sides ?
- Data management and processing requires specific skills

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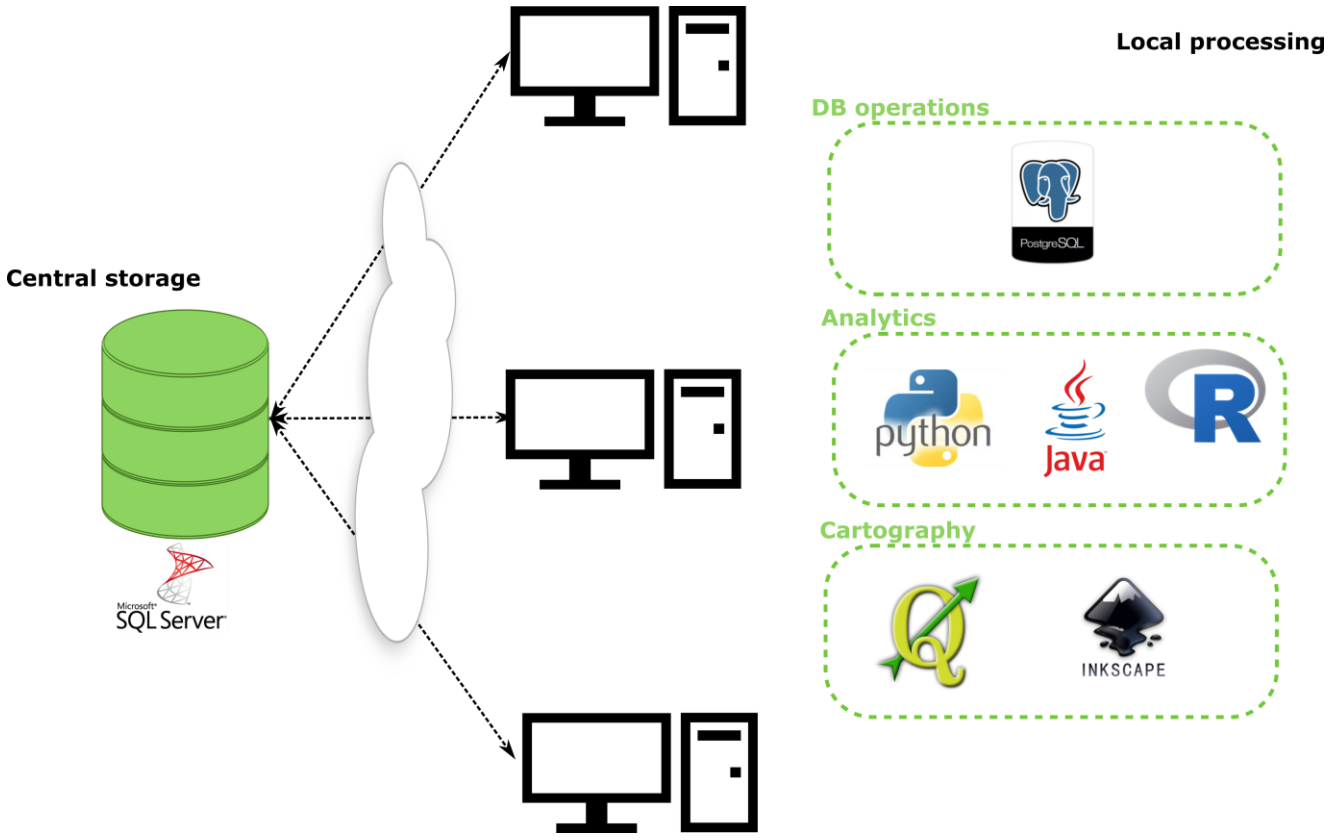
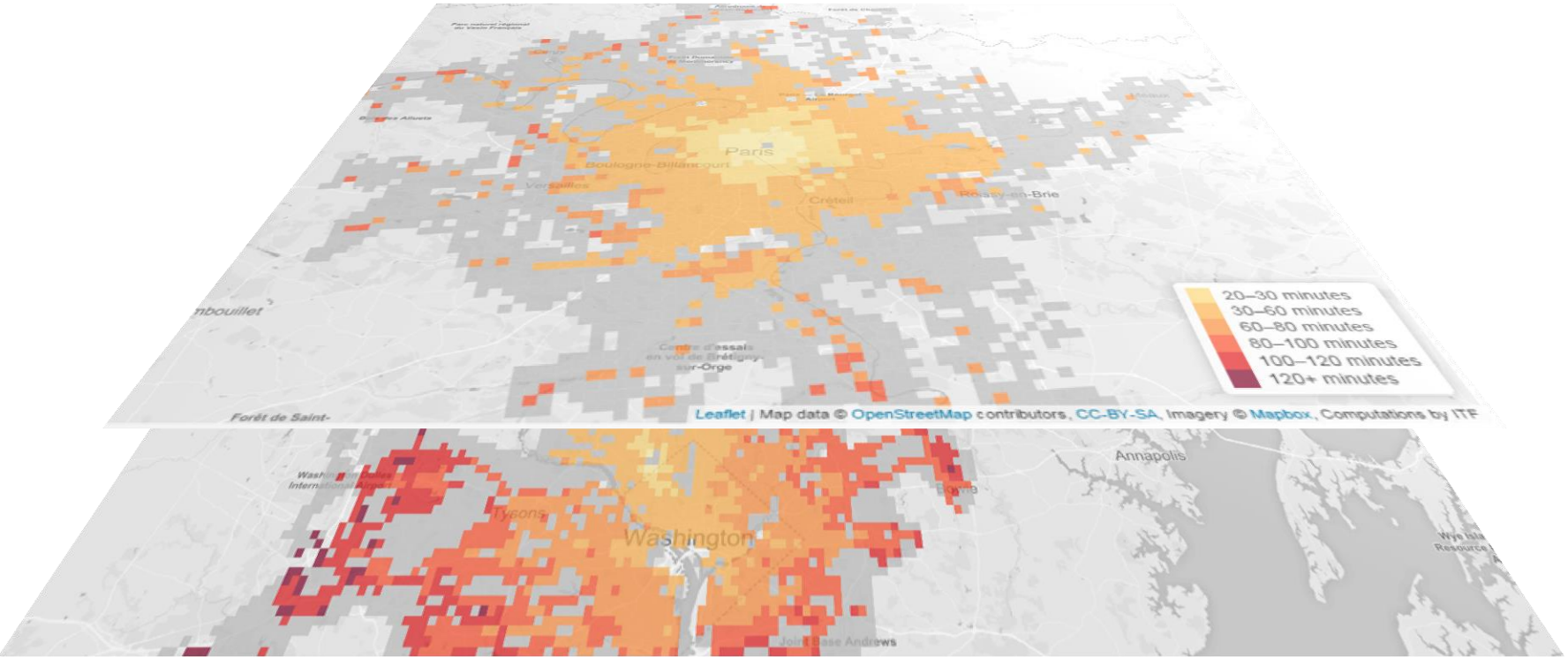


What did we learn ?

- The amount of open source data is impressive… but coverage is uneven and assessing quality is a challenge
- Establishing partnership between public and private sector is essential
  - How to bring value to both sides ?
- Data management and processing requires specific skills
- Analyzing and checking results is challenging

Visualizing accessibility data : the interactive way



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Thank you

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