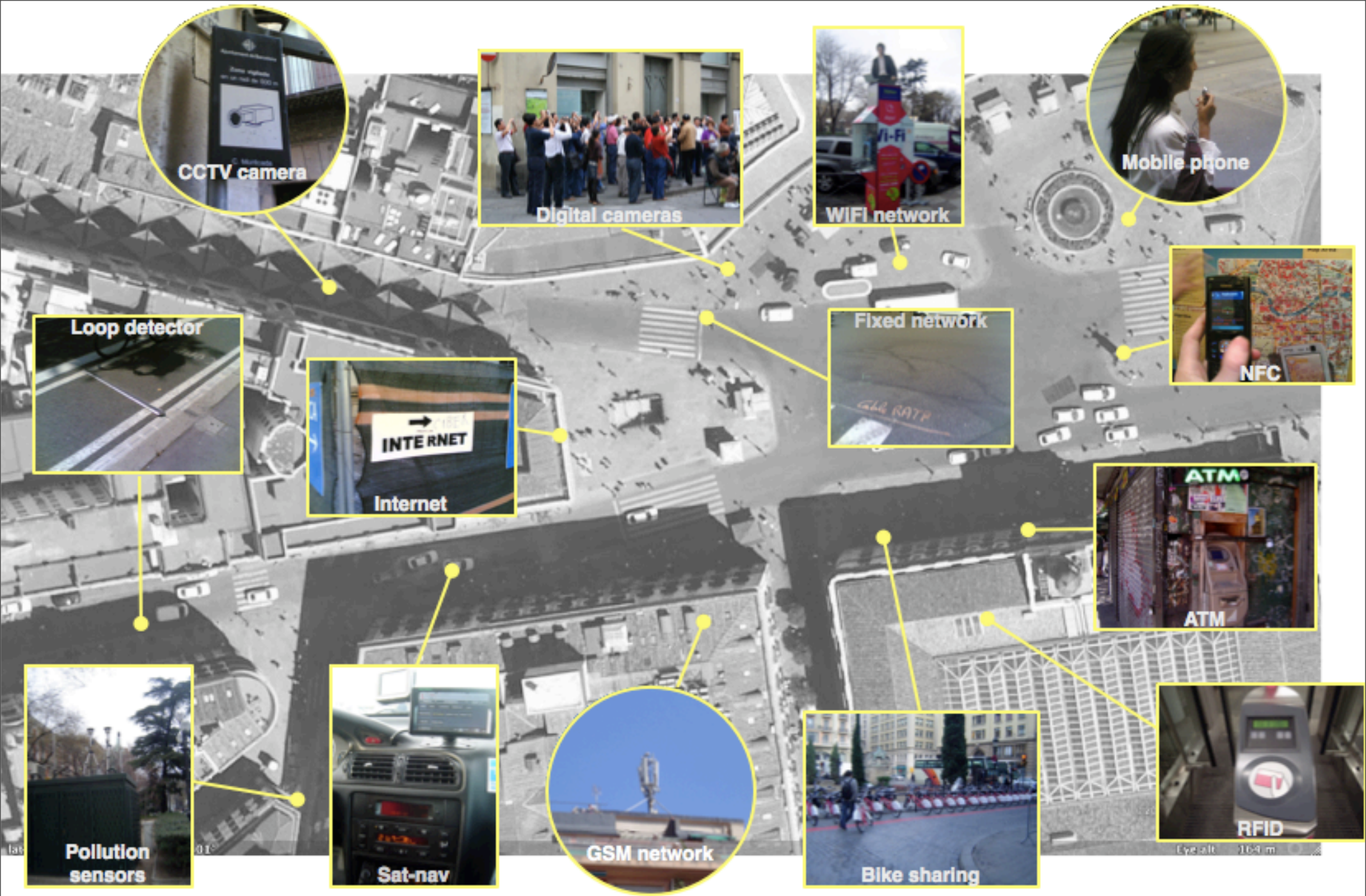


Fabien Girardin
Universitat Pompeu Fabra

People as sensors, people as actors
World-Information City conference
Data City workshop
Paris, May 31, 2009

Data city

from hard to soft infrastructures



new urban *actors*

*Current technology requires information to be served from somewhere and delivered to somewhere. Heisenberg's uncertainty principle notwithstanding, at geographic scales **a bit always has an associated location in real geographic space.** (Goodchild 1997)*

Sentient City

the end of the ephemeral

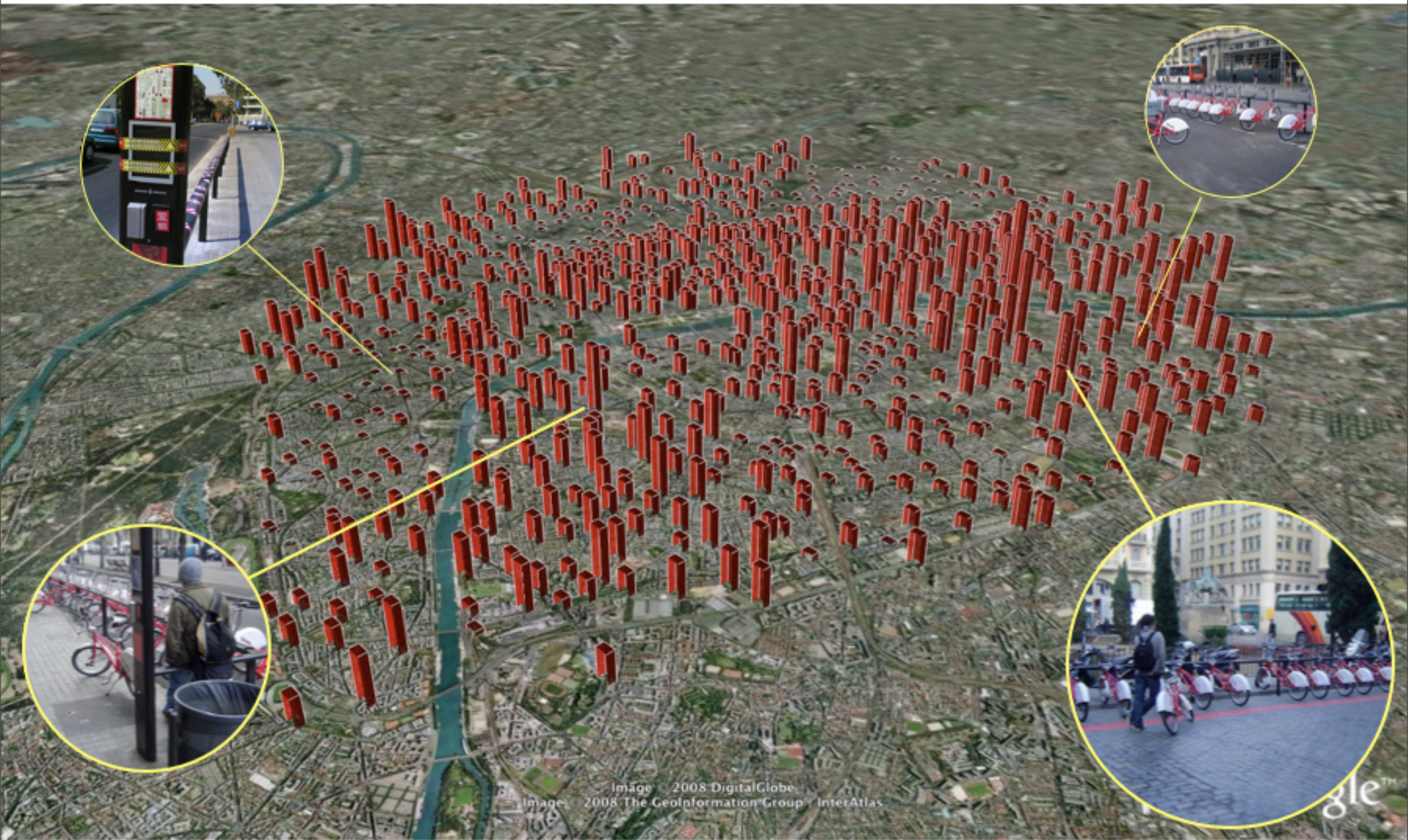
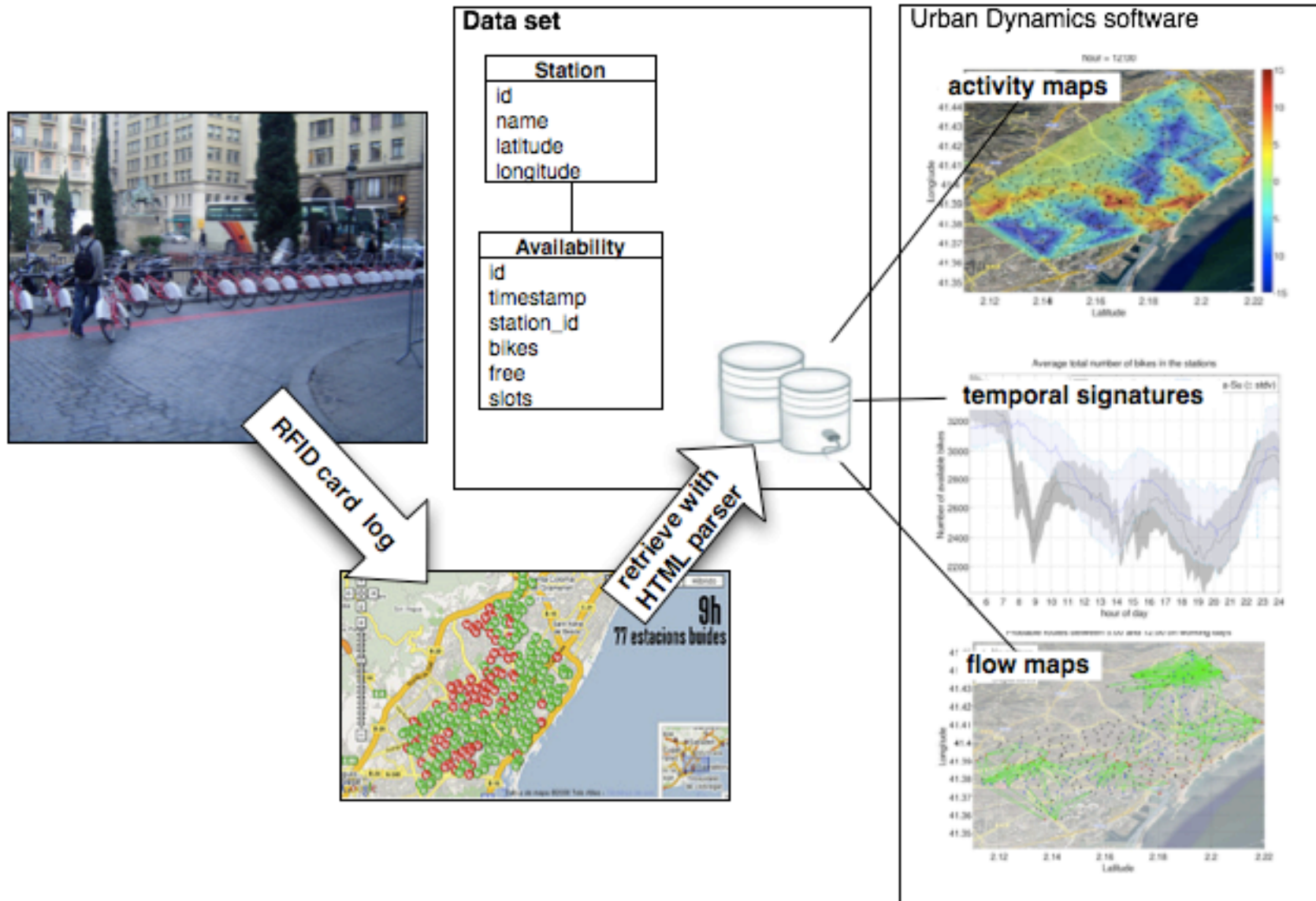
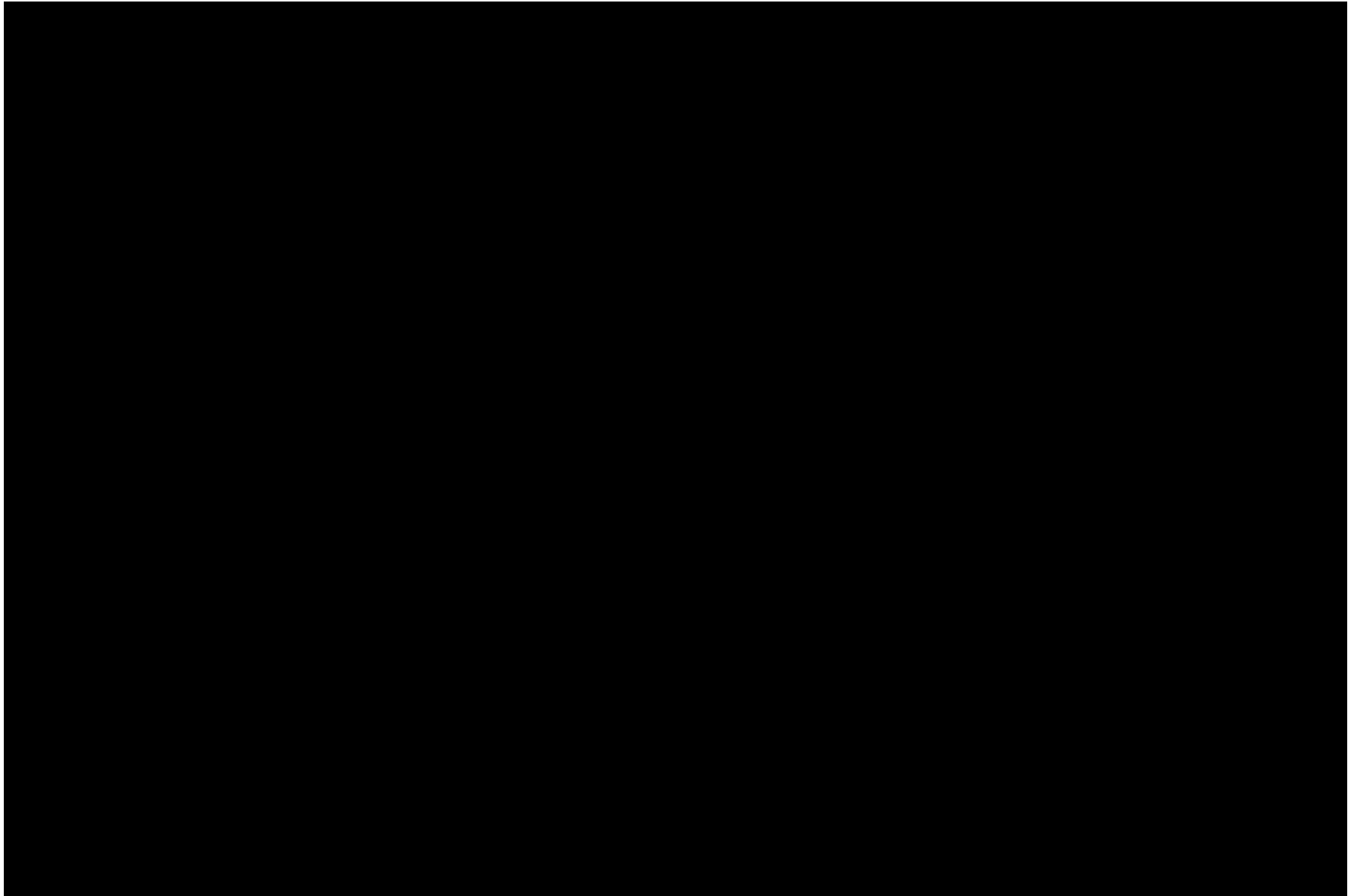


Image © 2008 DigitalGlobe
Image © 2008 The GeoInformation Group, InterAtlas

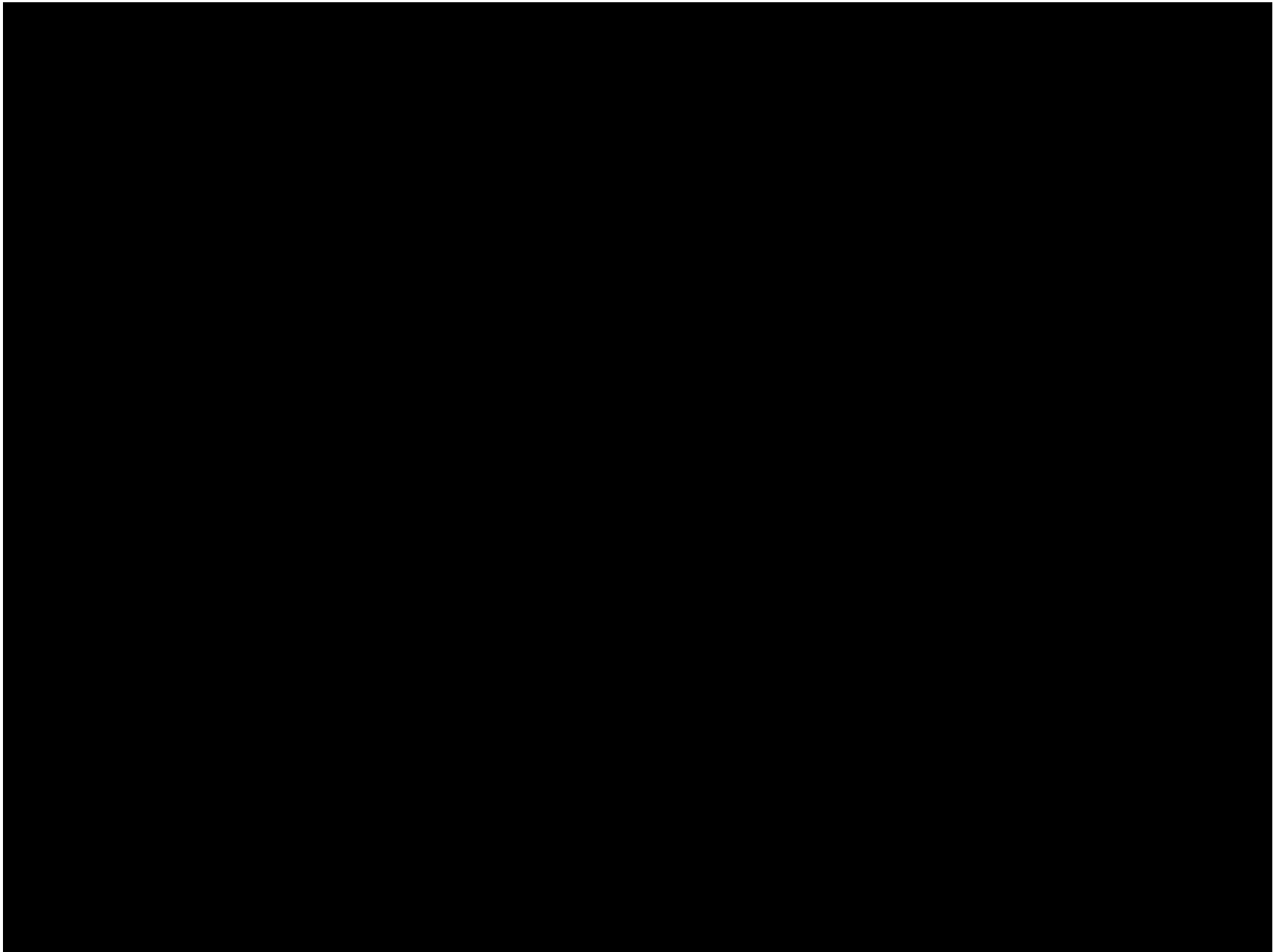
Digital footprinting



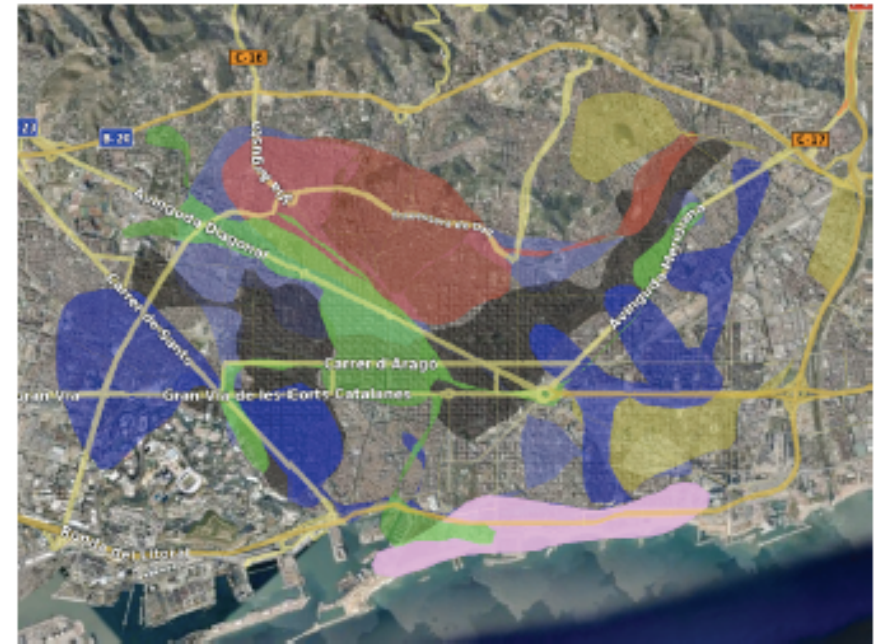
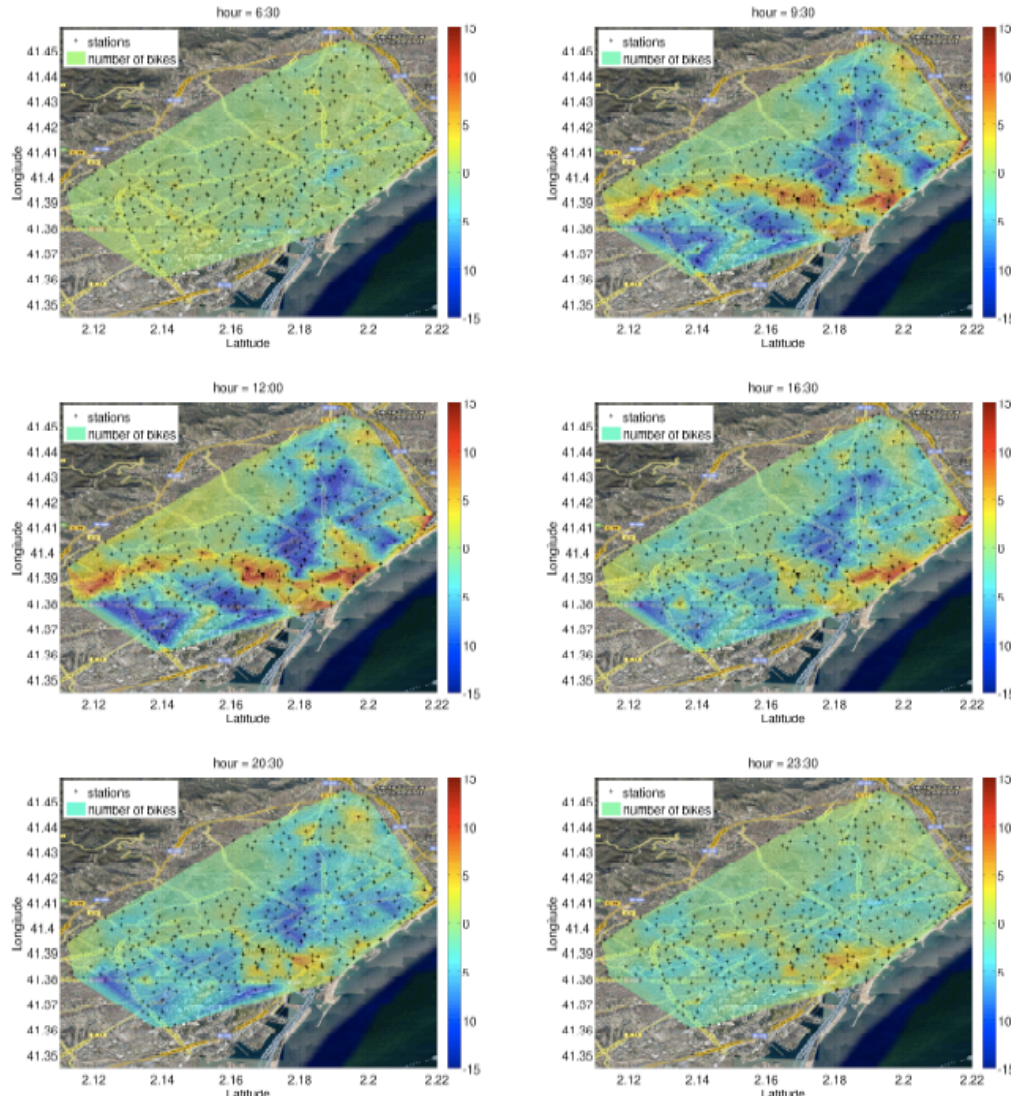
Paris Through Velib'



Sunny Sunday in BCN



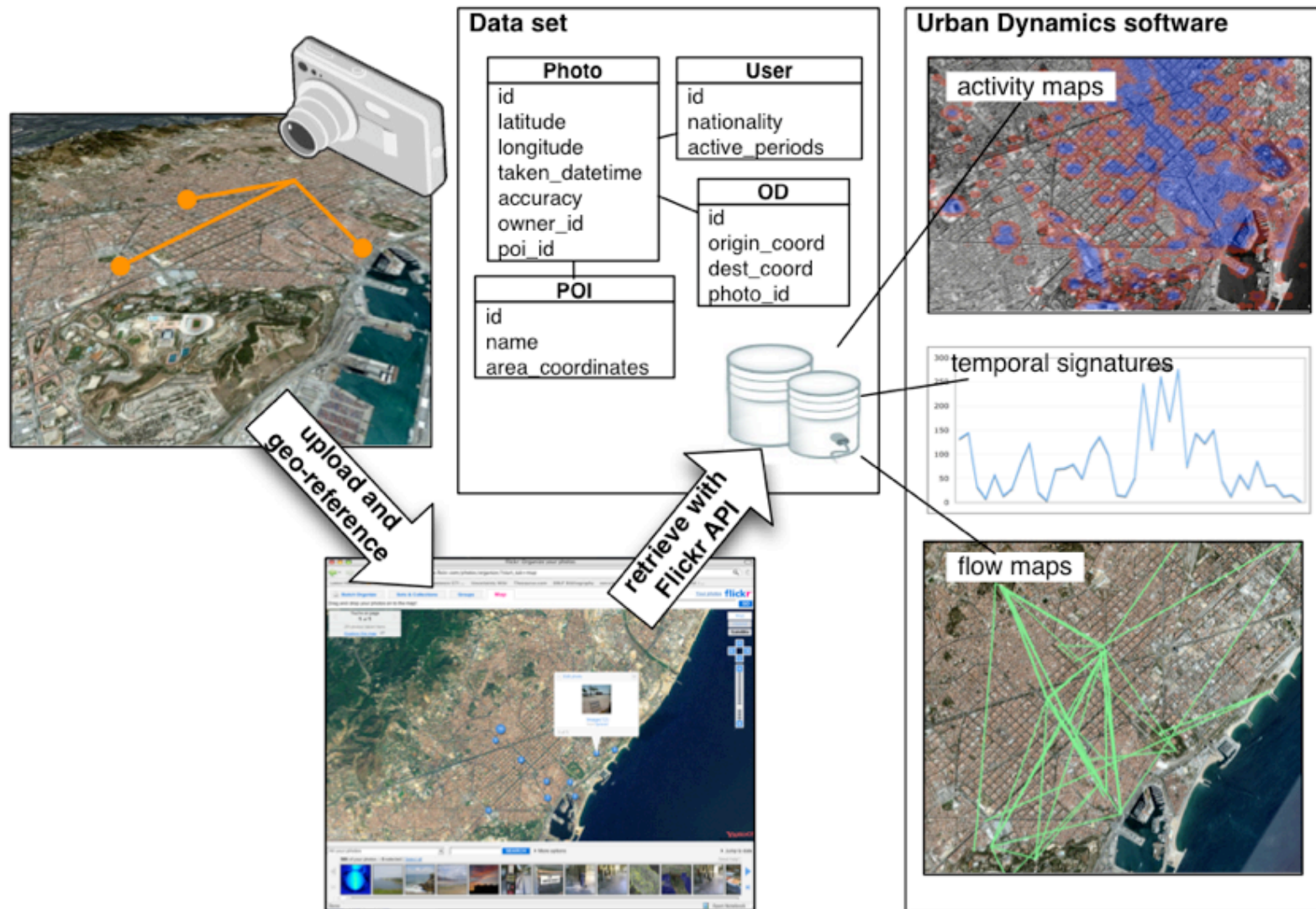
Spatial clustering from bike mobility patterns





Nowadays tourists leave digital footprints behind them that reveal their presence

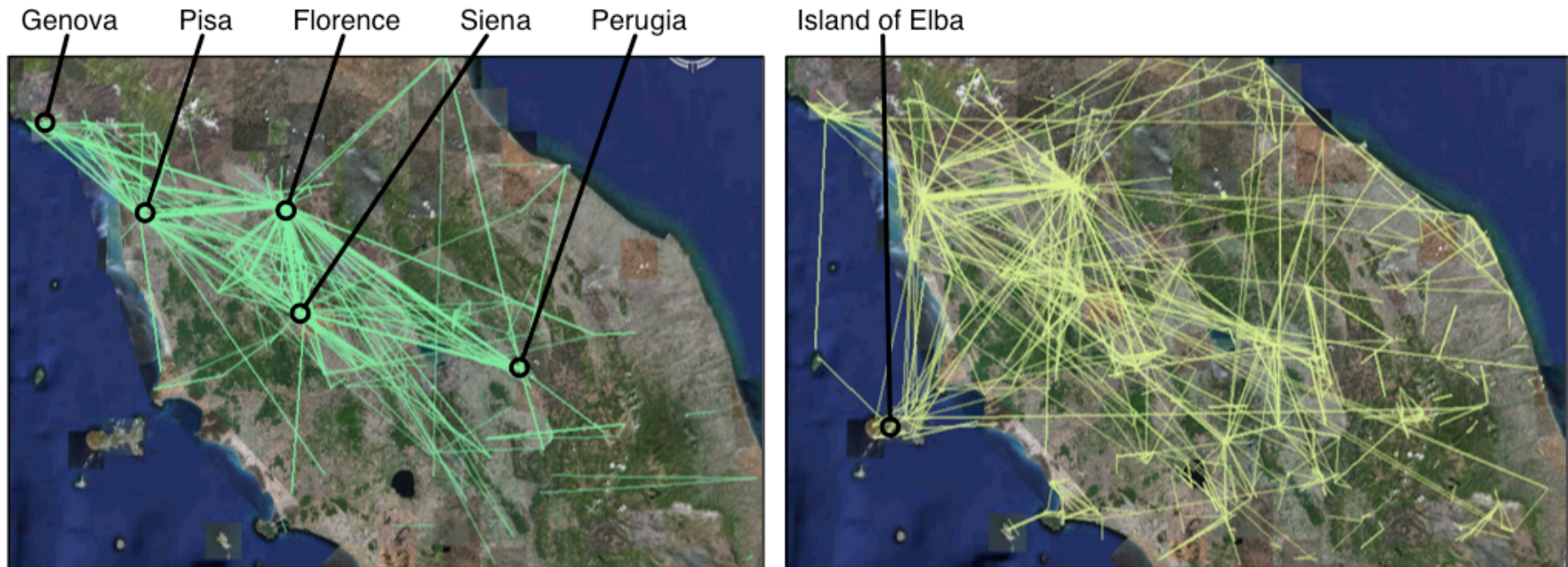
Digital footprinting





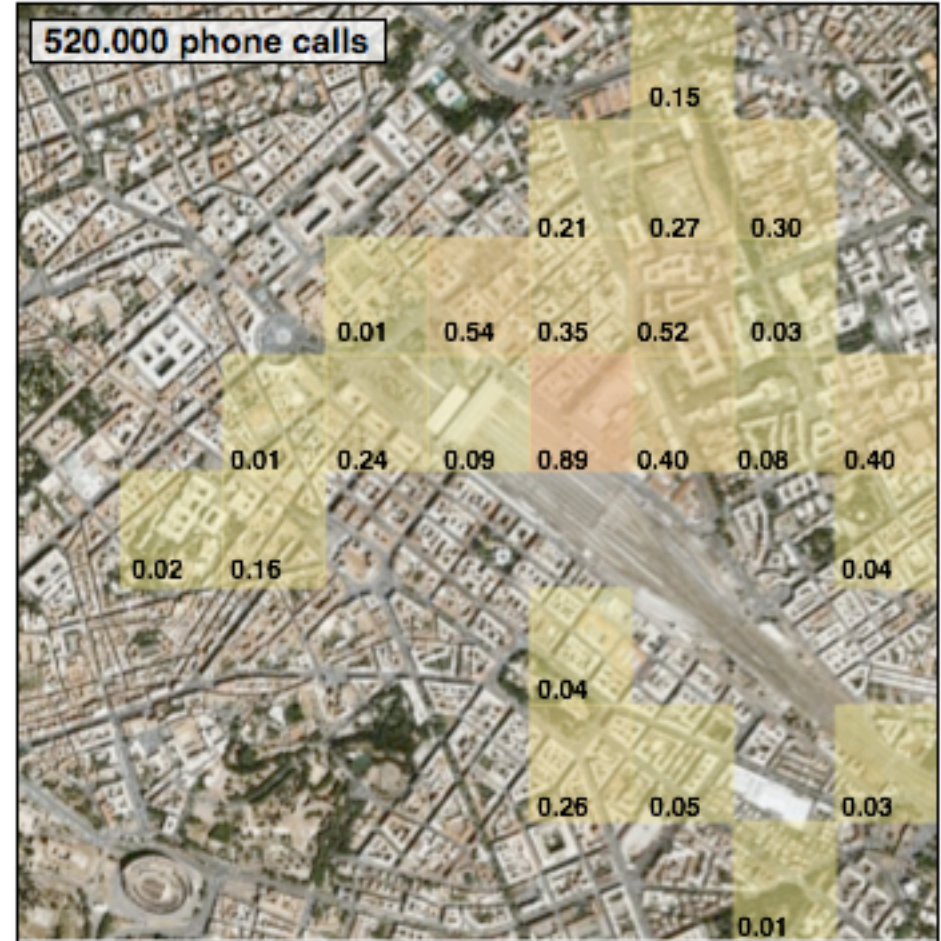
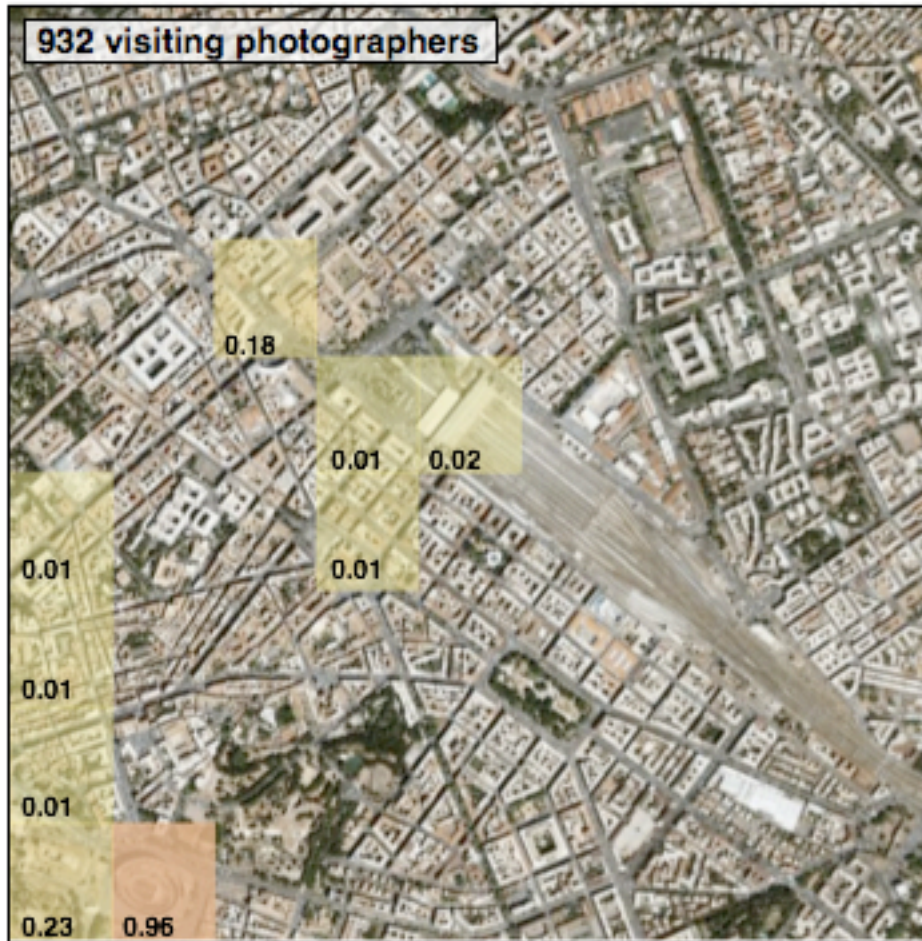
Act of communication

Types of visitors



Tourists and locals can be recognized from their practice
60% of users disclose their home country

Space and visitors activities



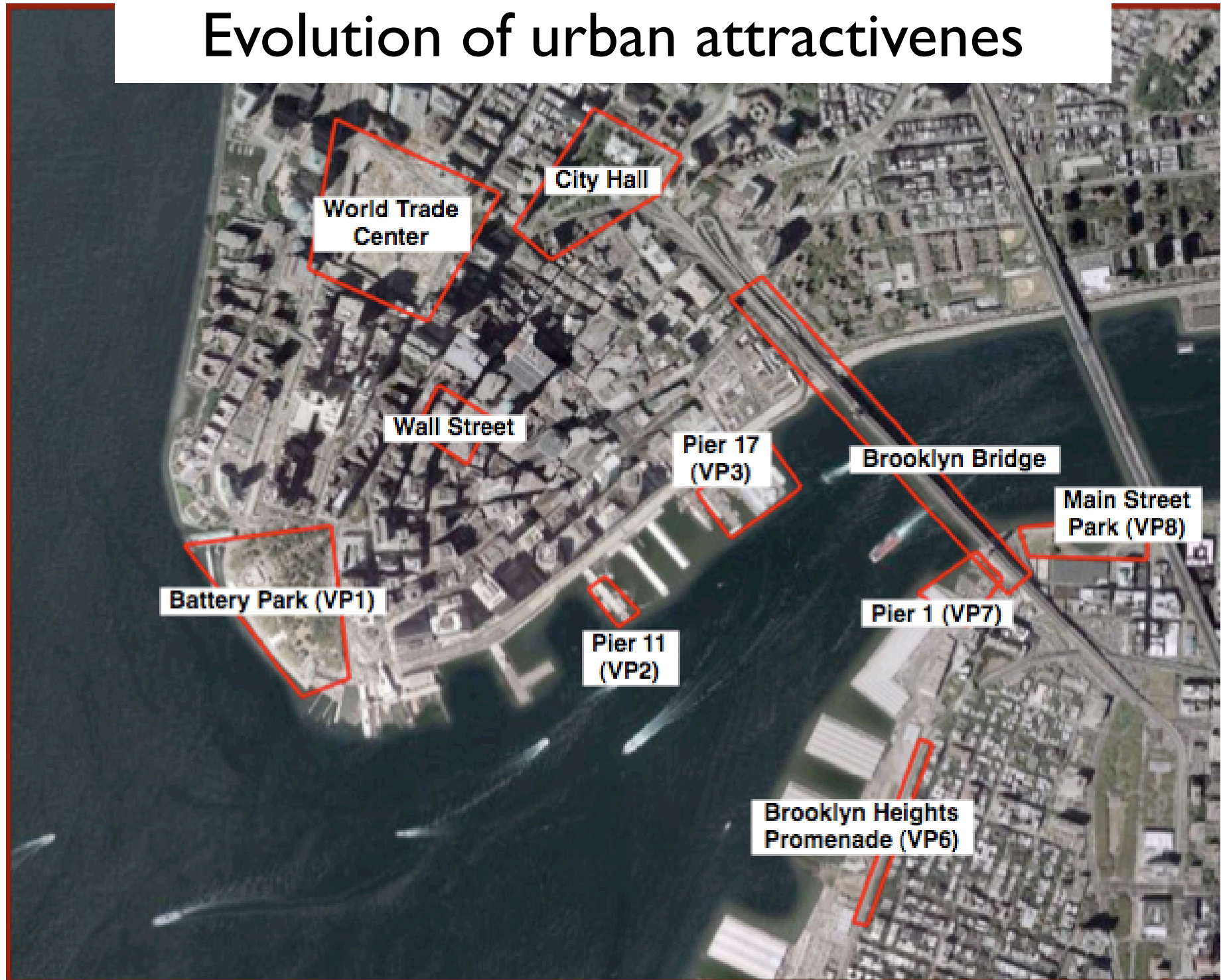
Responsive city

observe, evaluate and improve

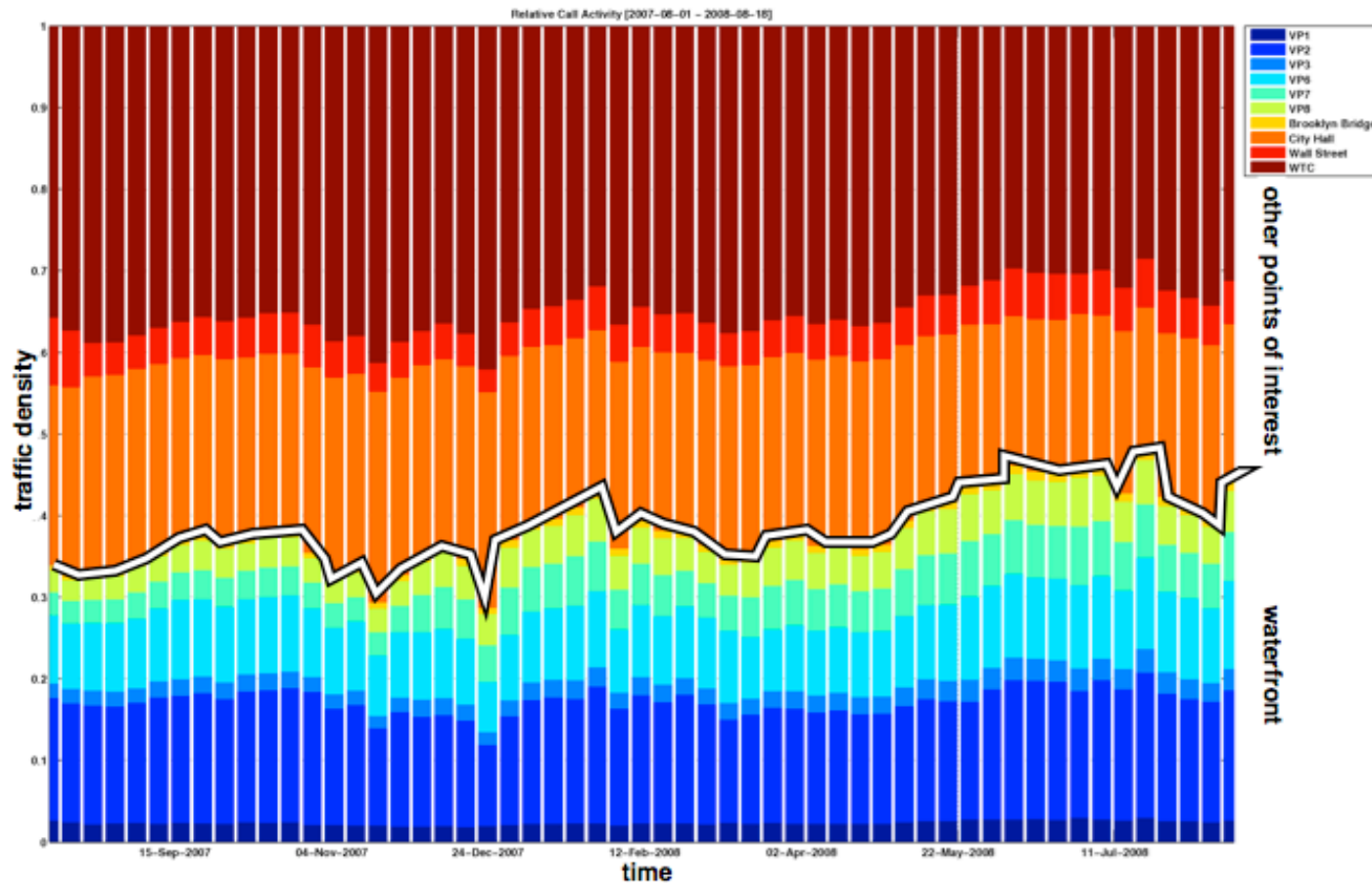


NYC Waterfalls

Evolution of urban attractiveness



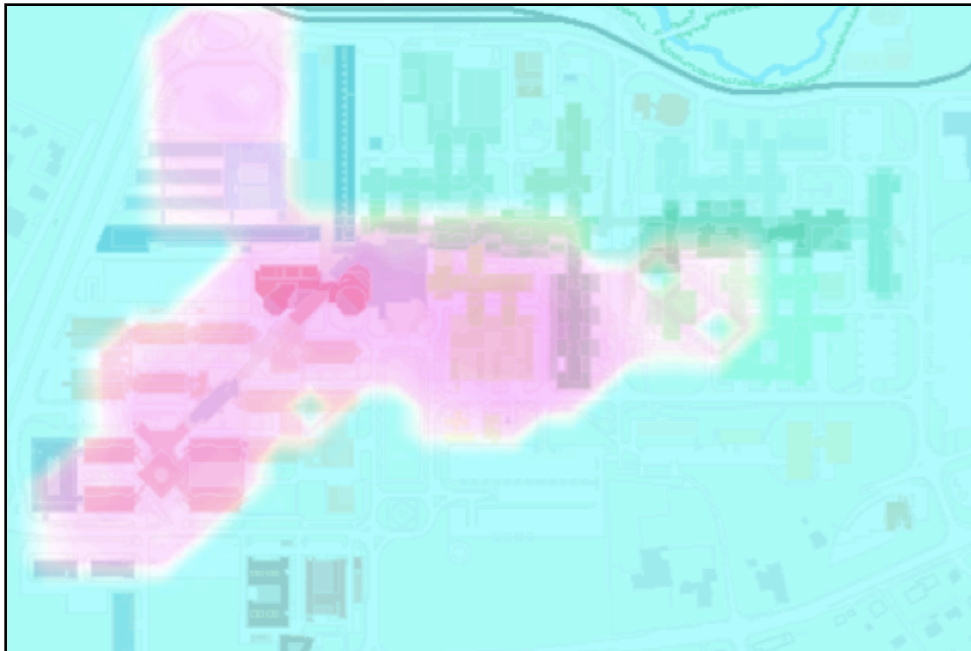
Comparative Relative Strength



Centrality (PlaceRank)



Affordances (weather)



Limitations

- Provide a glimpse to reality. Sense what is cheap to sense, plus lack of data calibration and interoperability
- Reveal phenomena. But does not explain them.
- Need to prove that these data bring at least the same amount of knowledge than their “manual” data (e.g. surveys).
- Need of new skills and techniques to analyze and grasp the significance of these data



We become a “world of witnesses” with a the production of myriads of little stories – a messy infinity of ‘Little Sisters’ rather than one omniscient ‘Big Brother’

I. gathering data from people without their knowledge?

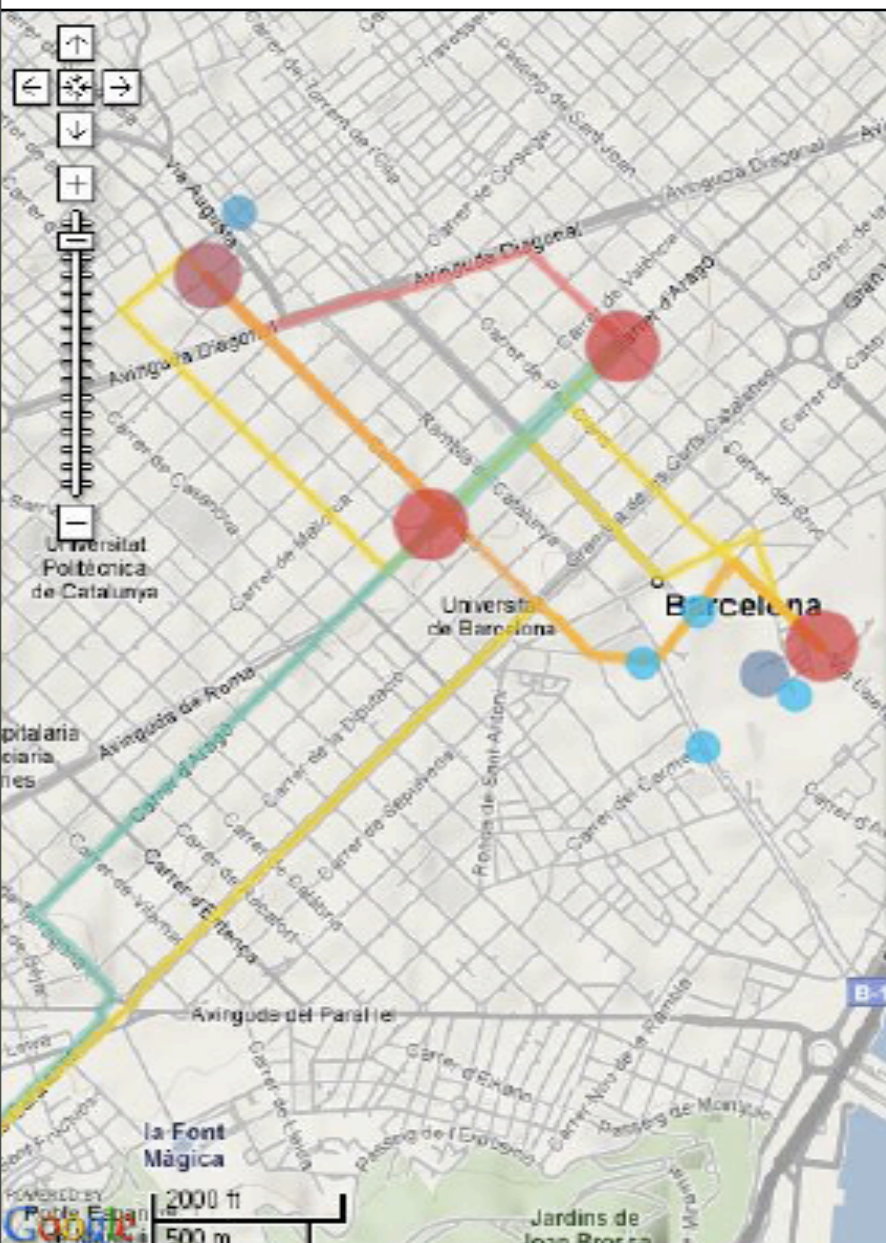
II. the risk to reveal individuals from anonymized and aggregated sensor data?

III. how much are people willing to give to get a service in return?

People as actors

of the data city

Open research Citilab



fabien.girardin@upf.edu



Thank you