

DigiTranScope

Digital Transformation and

Governance of Human Society



DISPOC
Interdisciplinary
Department



Digital platforms: interfacing the space of flows and the space of place.

*Cristina Capineri, Department Social, Political and Cognitive Sciences,
Università di Siena*

Antonello Romano, Università La Sapienza, Roma

Research framework



PRIN Project (2017- 2022) *Short Term City.*
Digital platforms and spatial justice



Romano A., Capineri C., (2020). Piattaforme e Big Data per una nuova geografia digitale, in Interpretare la quarta rivoluzione industriale: la geografia in dialogo con le altre discipline, *forthcoming*.

Bonini T., Capineri C., Romano A., Interfacing the space of flows and the space of place: ten years of Airbnb in Florence, The Network Society Today:(Revisiting) the Information Age Trilogy, IN3 – Internet Interdisciplinary Institute, Barcelona, *forthcoming*.

Context: platform society

- A shift from first-generation telecommunication networks (e.g. the superhighway defined by Al Gore)
 - applied to increase productivity, efficiency and gains
 - dominant activities operated through the space of flows,
 - global elites ensured their domination bypassing segmented, isolated localities.
- To platforms as a series of hubs that are mediating most of the flows
(the so-called “Big 5 “, Google, Amazon, Facebook, Apple and Microsoft)



**Digital infrastructure which enable interaction among
enable different user groups working like intermediaries.**

BIG DATA

ALGORITHMS

INTERFACES

TERMS OF SERVICES

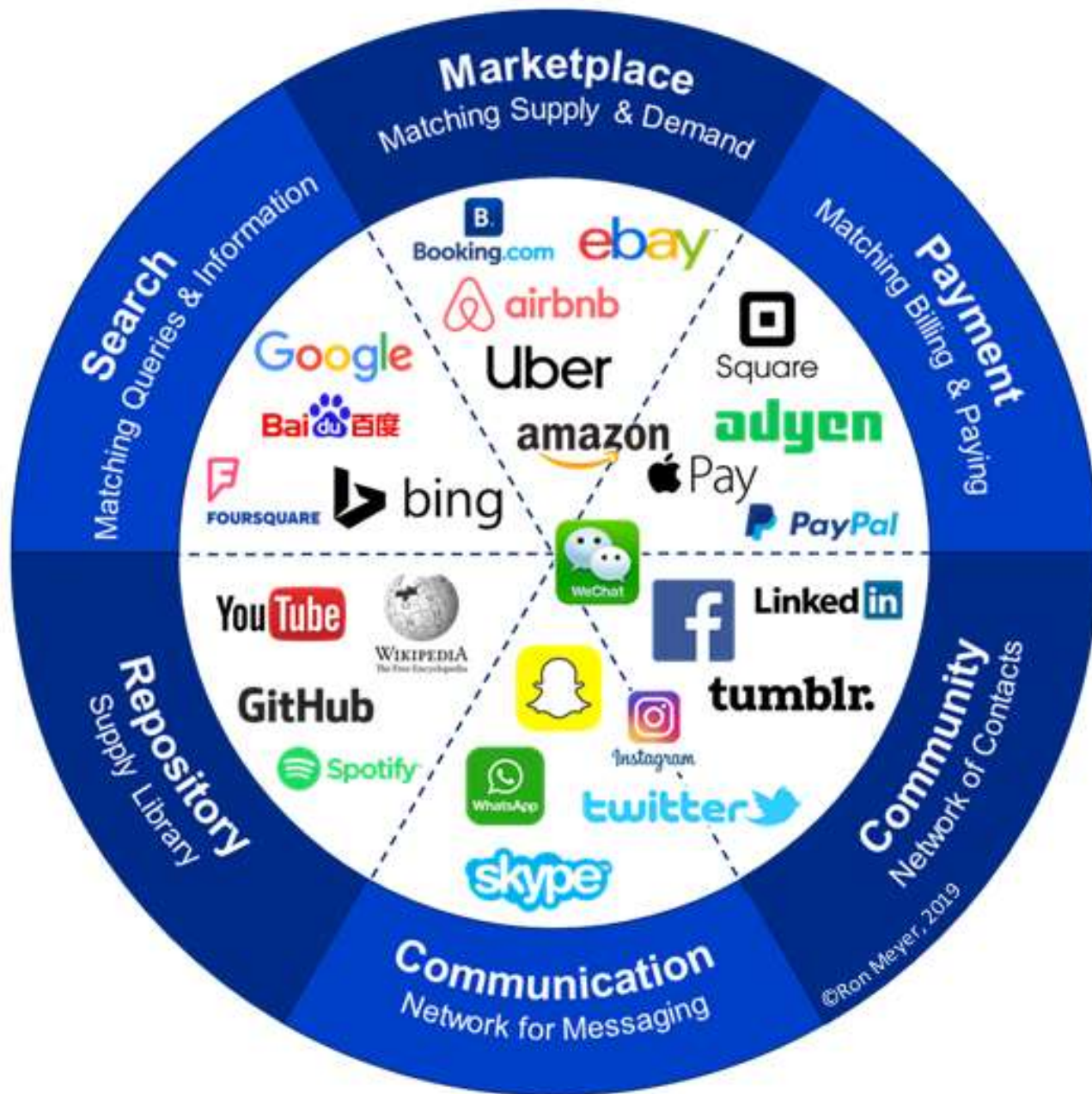
BUSINESS MODEL

NETWORK-EFFECTS


PILLARS

*«a platform is fueled by data,
automated and organized through
algorithms and interfaces, formalized
through ownership relations
driven by business model and
governed through user
agreement» (Van Dijck et al, 2018)**

*Van Dijck, J., Poell, T., & De Waal, M. (2018). *The platform society: Public values in a connective world*. Oxford University Press.



Platform capitalism

The digital economy is becoming an egemonic model.

Platforms are an emerging new business model.
(Srnicek, 2016)

A lean platform : Airbnb

- Airbnb leader in short term rentals,
- Based on a 'lean' business model, an extreme frontier of post-fordism based on minimal assets ownership (Srnicsek, 2016),
- Airbnb is “an interface between electronic communication and physical interaction” able to transform the cities “by the combination of networks and places”.
- Explore how the platform plays the key role of an interface between the space of places and the space of flows.
- investigate how the combination of networks and places transform urban space
- how such transformation is geographically uneven and highly concentrated at intra-urban scale, reproducing well-known patterns of value concentration and social inequalities

Focus on spatial dimension

- Space of flows

“The space of flows is the material organisation of time-sharing social practises that work through flows” which are “purposeful, repetitive, programmable sequence of exchange and interaction between physically disjointed positions held by social actors in the economic, political, symbolic structures of society” (Castells 1996, p.412).

cyberspace

- Space of place

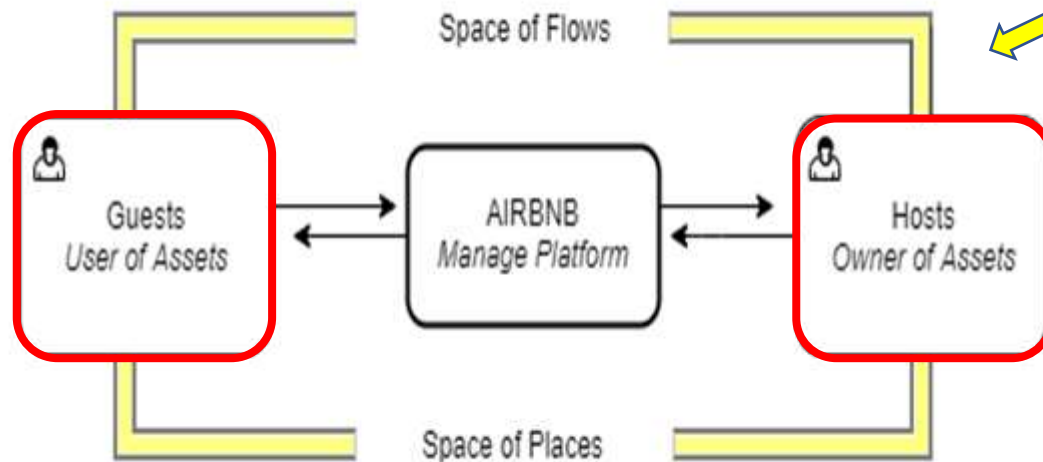
“I define a place as the locale whose form, function, and meaning are self-contained within the boundaries of territorial contiguity. People tend to construct their life in reference to places, such as their home, neighbourhood, city, region, or country” (Castells 1996, p. 423).

lived space / place

Cities are structured, and destructured simultaneously by the competing logics of the space of flows and the space of places

A network «orchestrator» (Libert et al., 2014)

Users are the owners and managers of the assets traded on the platform, crucial for regulating the market



Stock of information, a new “enclosure” produced by users (guests and hosts) in the form of reviews, descriptions, ratings.

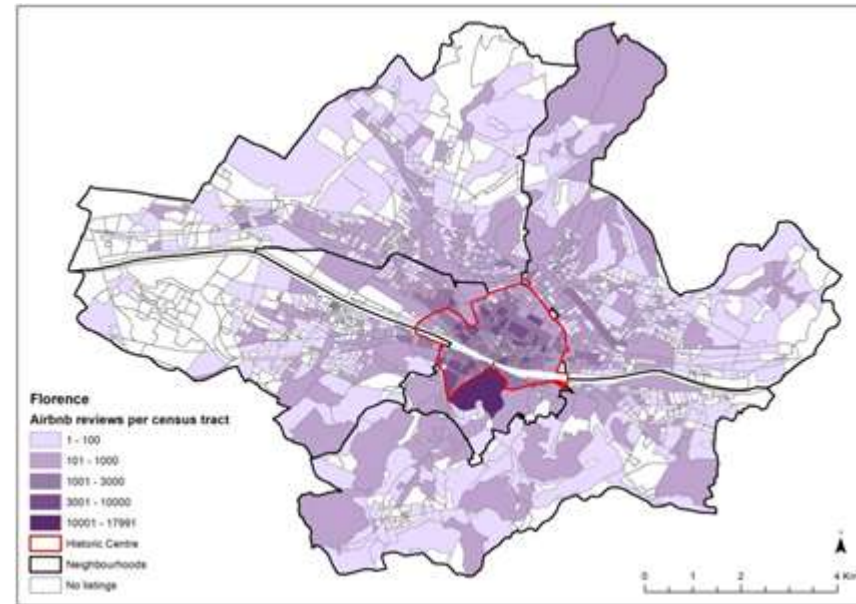
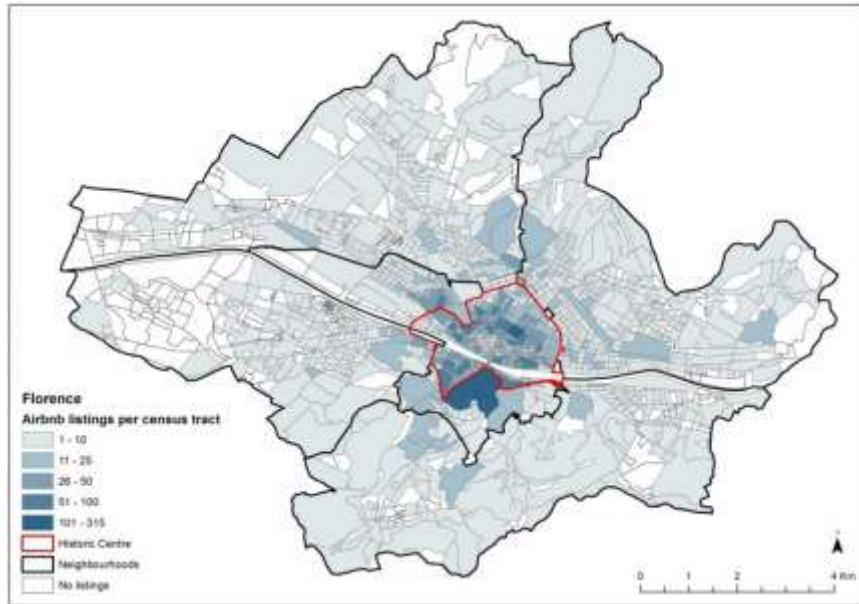
Airbnb manages the flows of data and information, captures a socially produced economic value («crowd-based capitalism», Sundararajan 2016)

Case study : Airbnb in Florence (2008-2019)

A spatio-temporal analysis of :

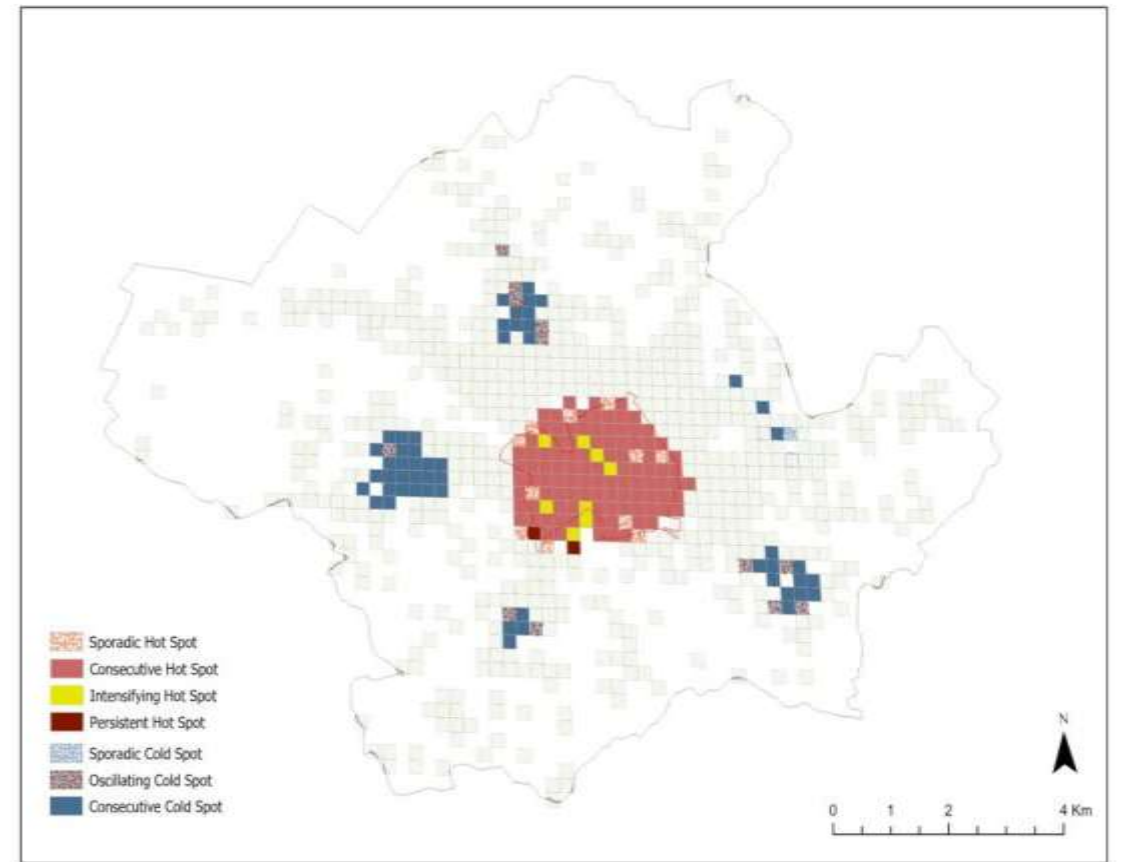
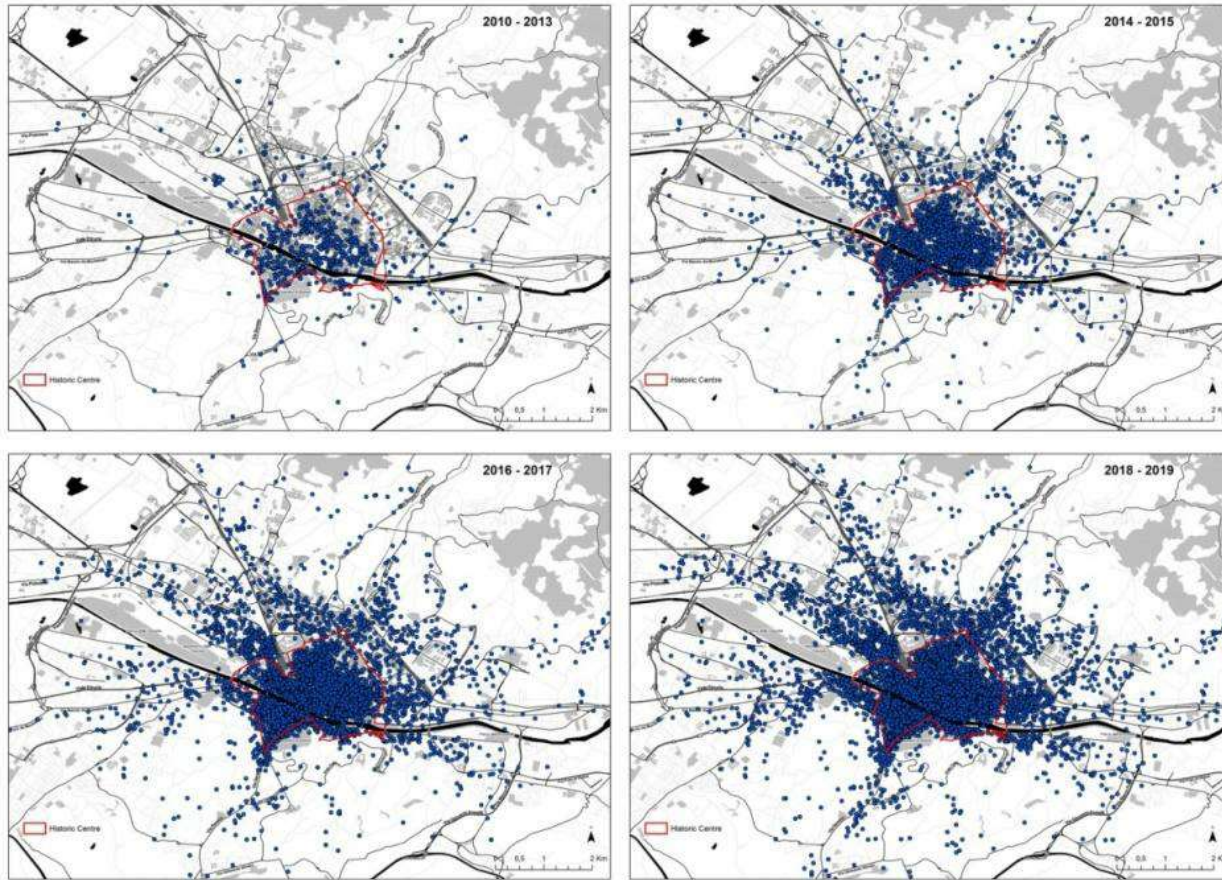
- 12.126 georeferenced listings (accommodations)
- 651.515 reviews left by Airbnb users on the platform from 2008 to 2019 in Florence (Italy).

Pervasiveness of the platform ?



The UNESCO area (5 km² equivalent to 4,8% of the total municipal area) accommodates 62% of supply (listings) 70,3% of demand (reviews) for short-term accommodation.

Cumulative and uneven dynamic



Source: Bonini, Romano, Capineri (2020), *forthcoming*

Performative power & reviewing mechanism

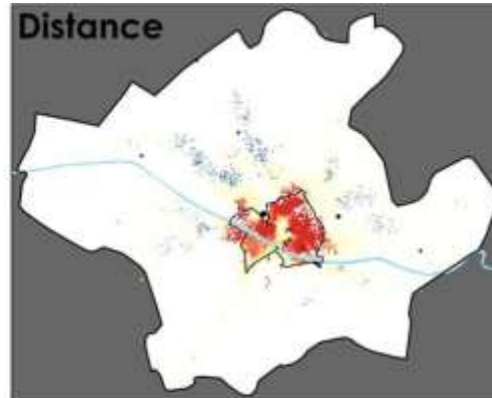
Spatial analysis of the main topics (and key words) in Airbnb listings' reviews Firenze (Italy)

Maps are ordered from the top-left per degree of importance (eigenvector centrality)

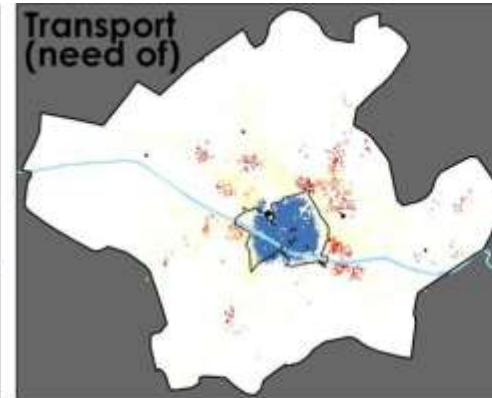
Spatial Clusters

- Cold Spot - 99% Confidence
- Cold Spot - 95% Confidence
- Cold Spot - 90% Confidence
- Not Significant
- Hot Spot - 90% Confidence
- Hot Spot - 95% Confidence
- Hot Spot - 99% Confidence

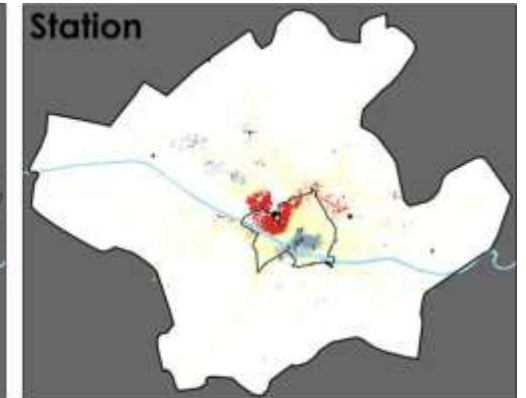
- Railway stations
- 1-10 Top 10 Attractions (ranking)
- Historical Centre
- Municipality
- Arno River



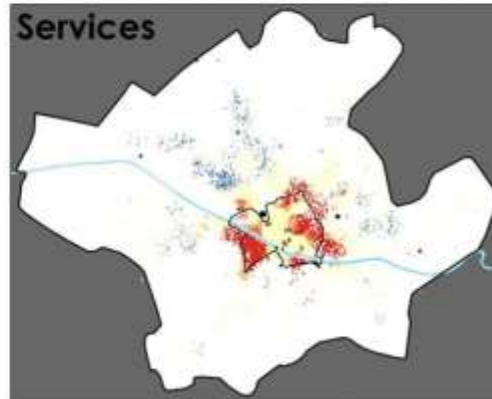
"distance", "walking distance", "major attractions"



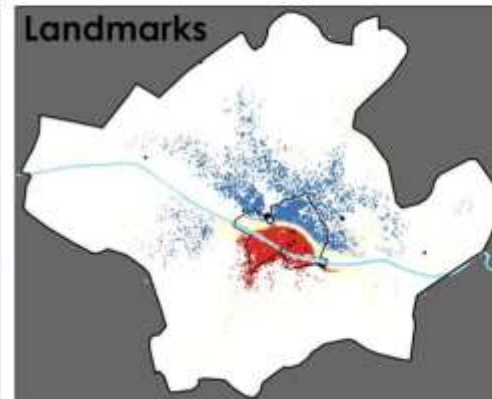
"bus", "bus stop", "city centre", "minutes"



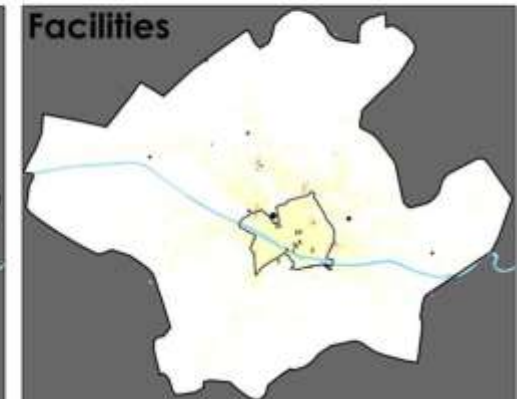
"main station", "minute walk", "close to the station"



"restaurants", "bars", "shops", "nearby"



"Duomo", "Ponte Vecchio", "Uffizi"



"shower", "living", "elevator", "washing machine"

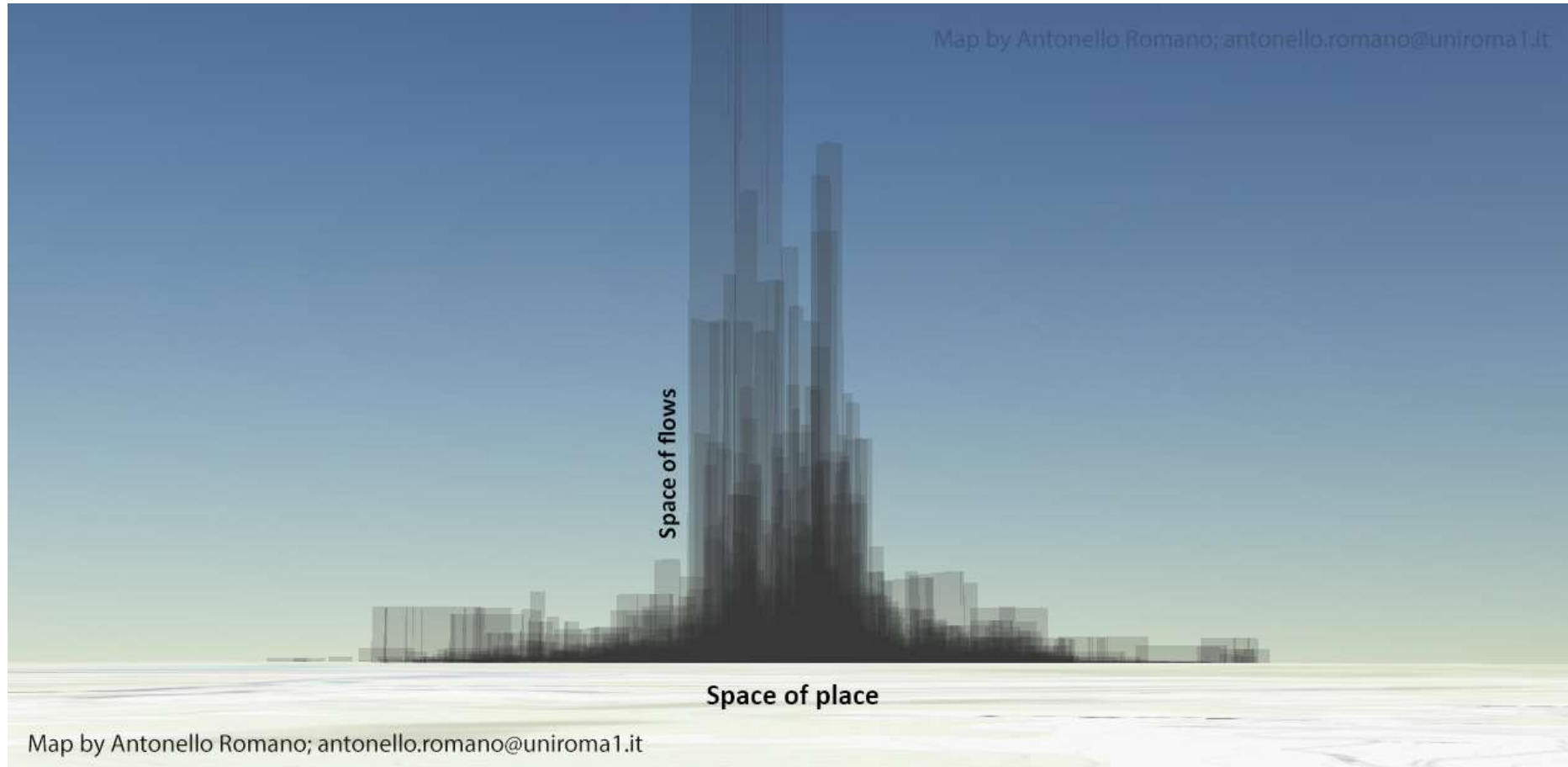
Source: Celata, Capineri, Romano, 2020

Distance and centrality override any other concern (the features of the accommodation, the host and the price)

Results

- the “interfacing process” is reinforcing the cumulative mechanism over space and time,
- the progressive transformation of private apartments into nodes in the space of flows,
- a geographically uneven process reproducing well known patterns of value concentration in the “space of place”
- an increasingly fragmented spatial division between globally connected portions of the city and other geographically contiguous but unconnected spaces.
- digital reputation (e.g.reviews) act as an echo chamber for the space of flows, forging some specific areas that meet the requirements of the Airbnb community.
- symbols create an urban virtually forged reality, destined to mimic the place projected in the platform.
-Research going public: many newspapers and tv channels interviewed us, local governments engaged with us!

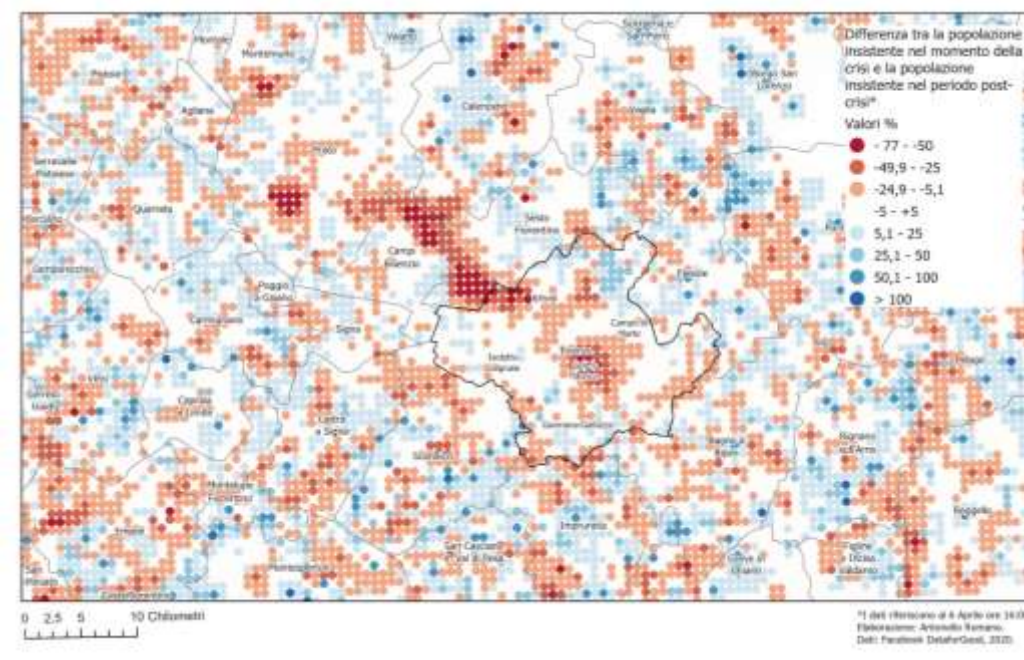
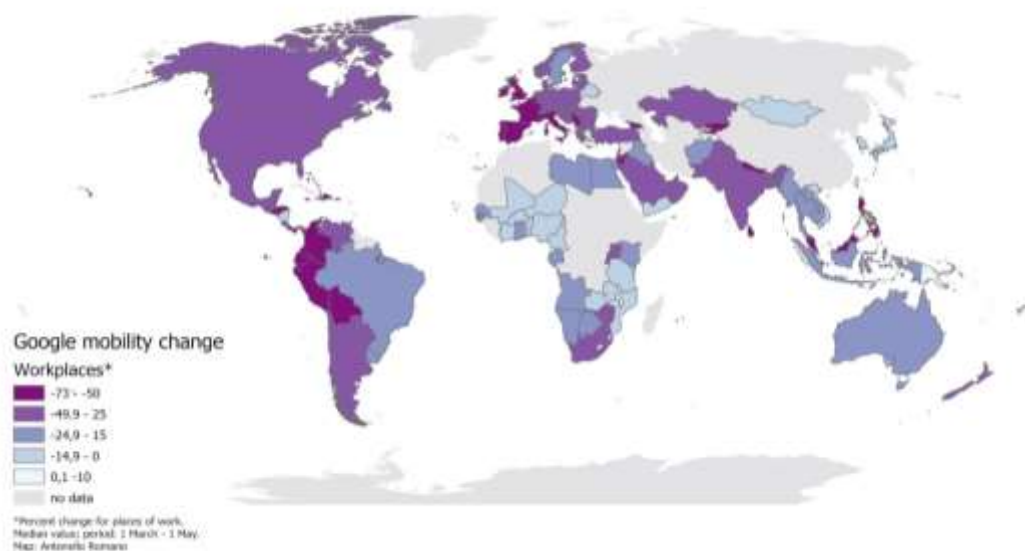
In-between space of flows and practices



Digital platforms: data & governance open issues

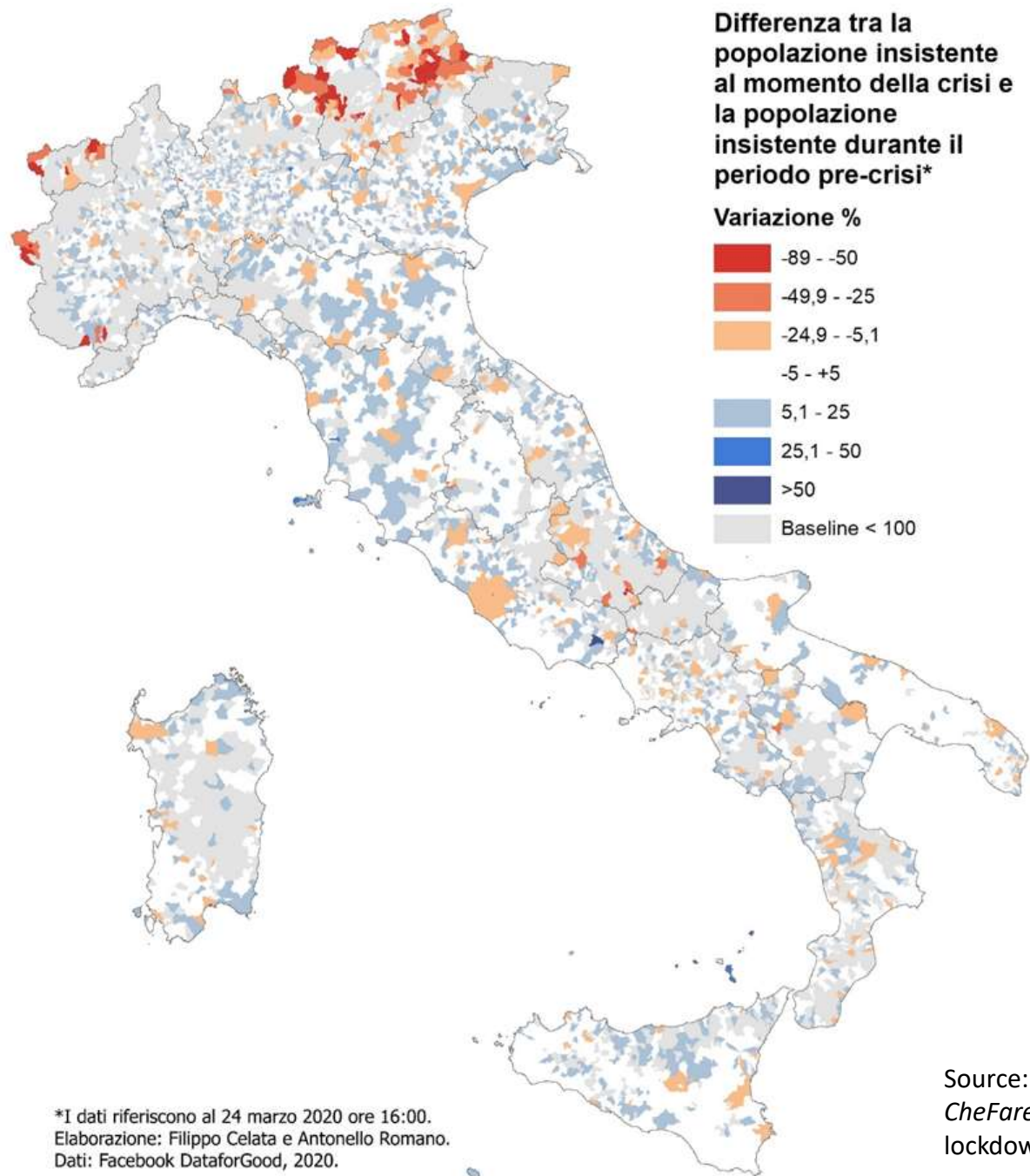
- Data ownership = owned by platforms (?)
- Data accessibility = advanced skills required (data mining, interoperability, etc.)
- Relevant for planning = high (market behaviours, spatial choices, etc.)
- Highlighting phenomena which require «governance» = e.g. overtourism....

(Im)mobility and COVID19

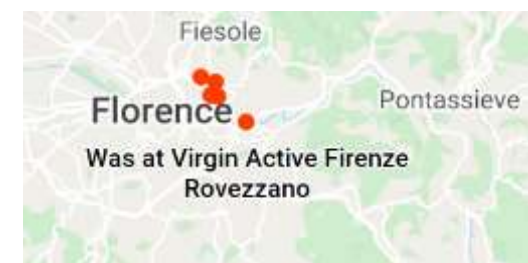


Source: Capineri, Celata, Romano, (2020), Spazi chiusi, dati aperti, *CheFare*, <https://www.che-fare.com/spazi-dati-mobilita-lockdown/>





*I dati riferiscono al 24 marzo 2020 ore 16:00.
 Elaborazione: Filippo Celata e Antonello Romano.
 Dati: Facebook DataforGood, 2020.



Source: Capineri, Celata, Romano, (2020), Spazi chiusi, dati aperti, *CheFare*, <https://www.che-fare.com/spazi-dati-mobilita-lockdown/>