

Logistics geographies, research from the Logistics City Chair

Dr. Laetitia Dablanc

- Social sciences, urban studies
- Macro spatial analyses to micro level studies
- Warehouses, innovations, new trends in consumption and impacts on city logistics

Results available online, eg:

- Observatory of ecommerce mobilities
- Survey reports on gig workers for instant delivery platforms in Paris 2016, 2018, 2020, 2021
- Logistics real estate and relationships with urban form, macro analyses

<https://www.lvmt.fr/en/chaire/logistics-city/>



New logistics landscapes in large cities



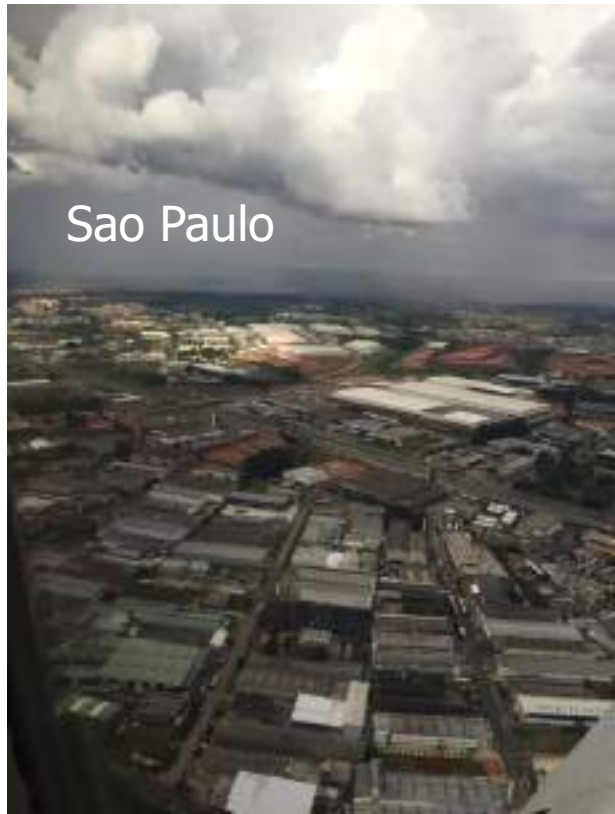
Hong Kong



Buenos Aires



Los Angeles



Sao Paulo

LOGISTIC SPRAWL ANALYSIS

In 74 large cities around the world, twice as many warehouses in 2015 compared with 2000

17 indicators

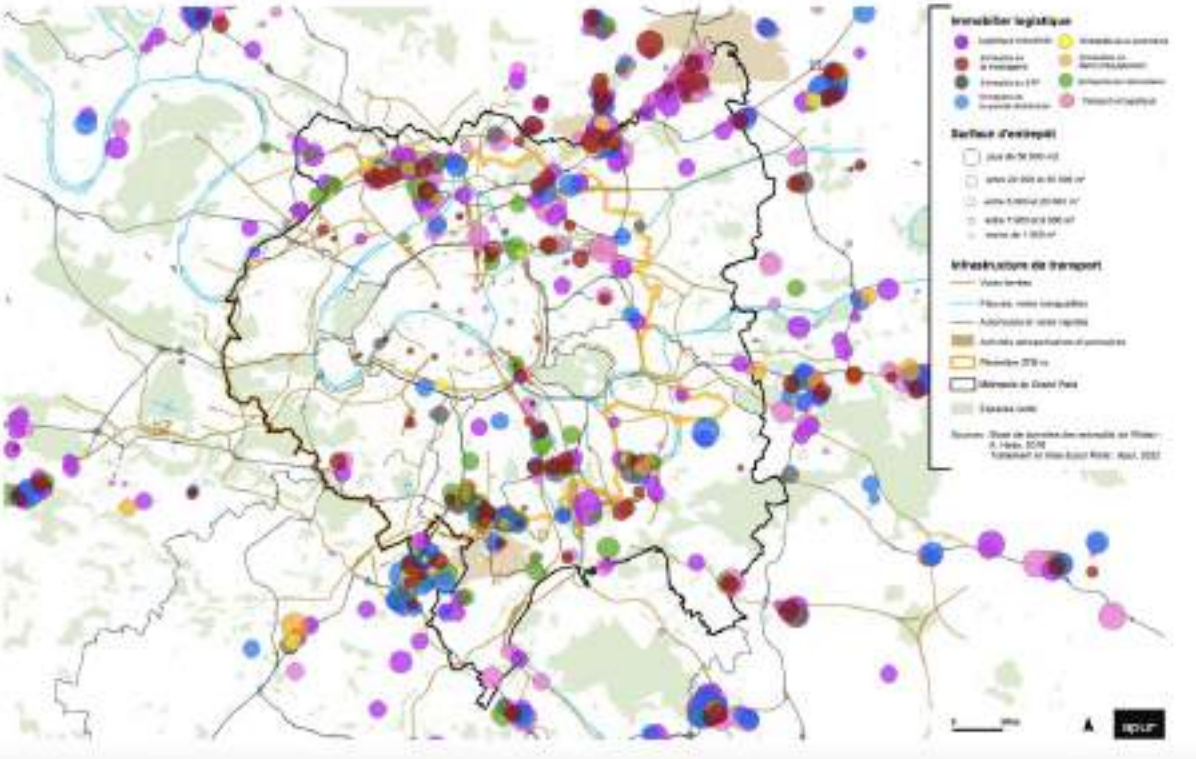
- Name and size of studied metro area
- Type of metropolitan area
- Population (million - most recent year)
- Population density (inhabitants/km²)
- Name of warehouse data source
- Number of warehouses (most recent year)
- **Number of warehouses per million people** (most recent year)
- % change per year in number of WH per million people
- **Number of warehouses per 1000 km²** (most recent year)
- Average size of warehouses (m²)
- Time period studied for logistics sprawl analysis
- Number of years of analysis
- Average distance of warehouses to centre of gravity (most recent year) (km)
- Change in average distance of WHs to centre of gravity (over the years) (km)
- **Change in average distance of WHs to centre of gravity per year** (km/year) (logistics sprawl)
- Cluster indicator
- **Type of land use control**

Relationships between urban forms and logistics

- The number of warehouses per capita has increased in all cities
- The larger the city the higher the number of warehouses per capita
- Logistics sprawl has happened in 80% of cases
- Logistics sprawl is positively linked to land cost differentials between central and suburban areas
- Logistics sprawl is positively linked to availability of large land parcels in suburban areas
- Logistics sprawl is negatively linked to regional land use control

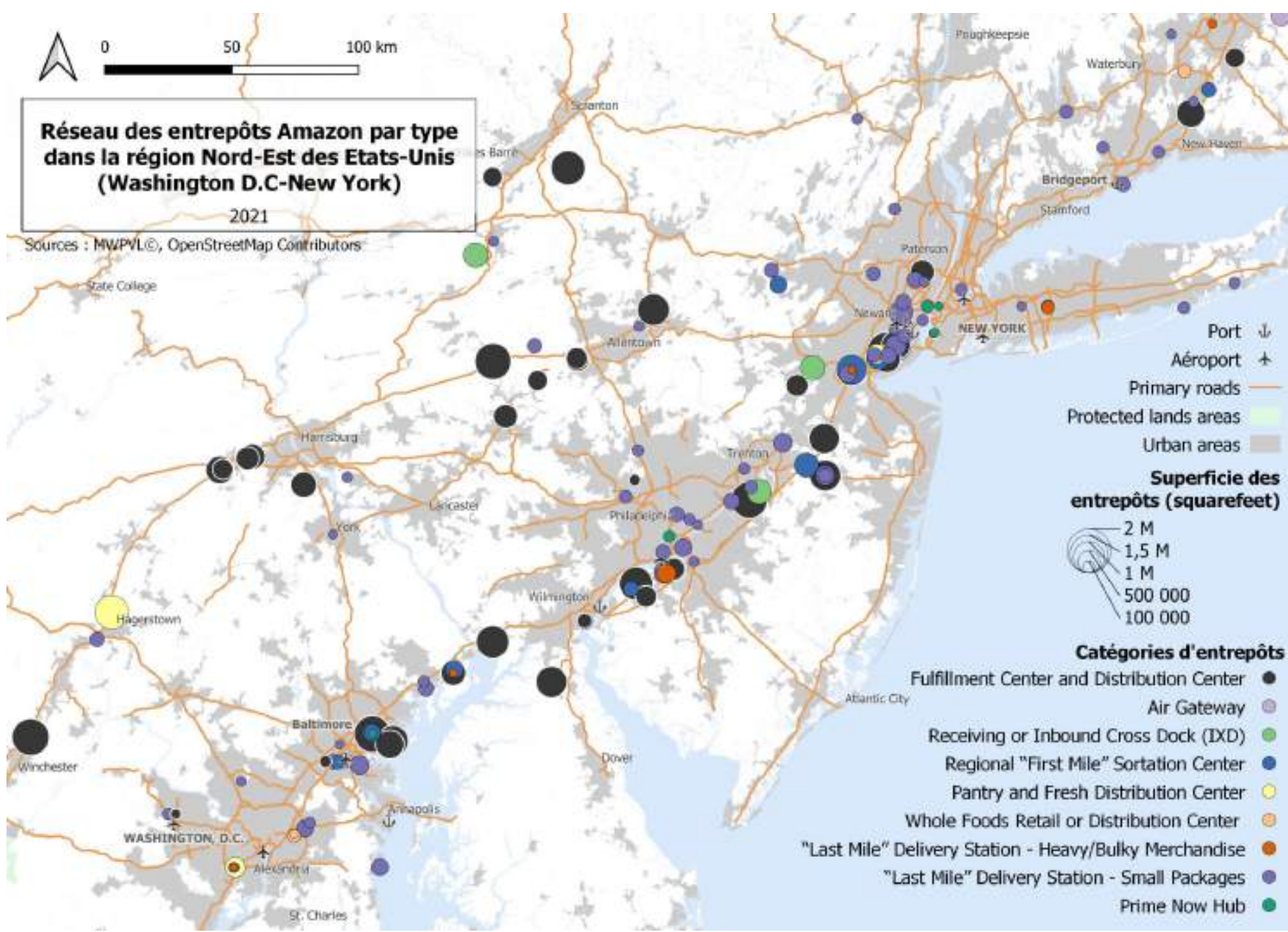
1000 warehouses in the Paris region

L'IMMOBILIER LOGISTIQUE DANS LA METROPOLE DU GRAND PARIS



New warehouse land areas over 5,000 sq m
 In red: Paris region, In orange: rest of France

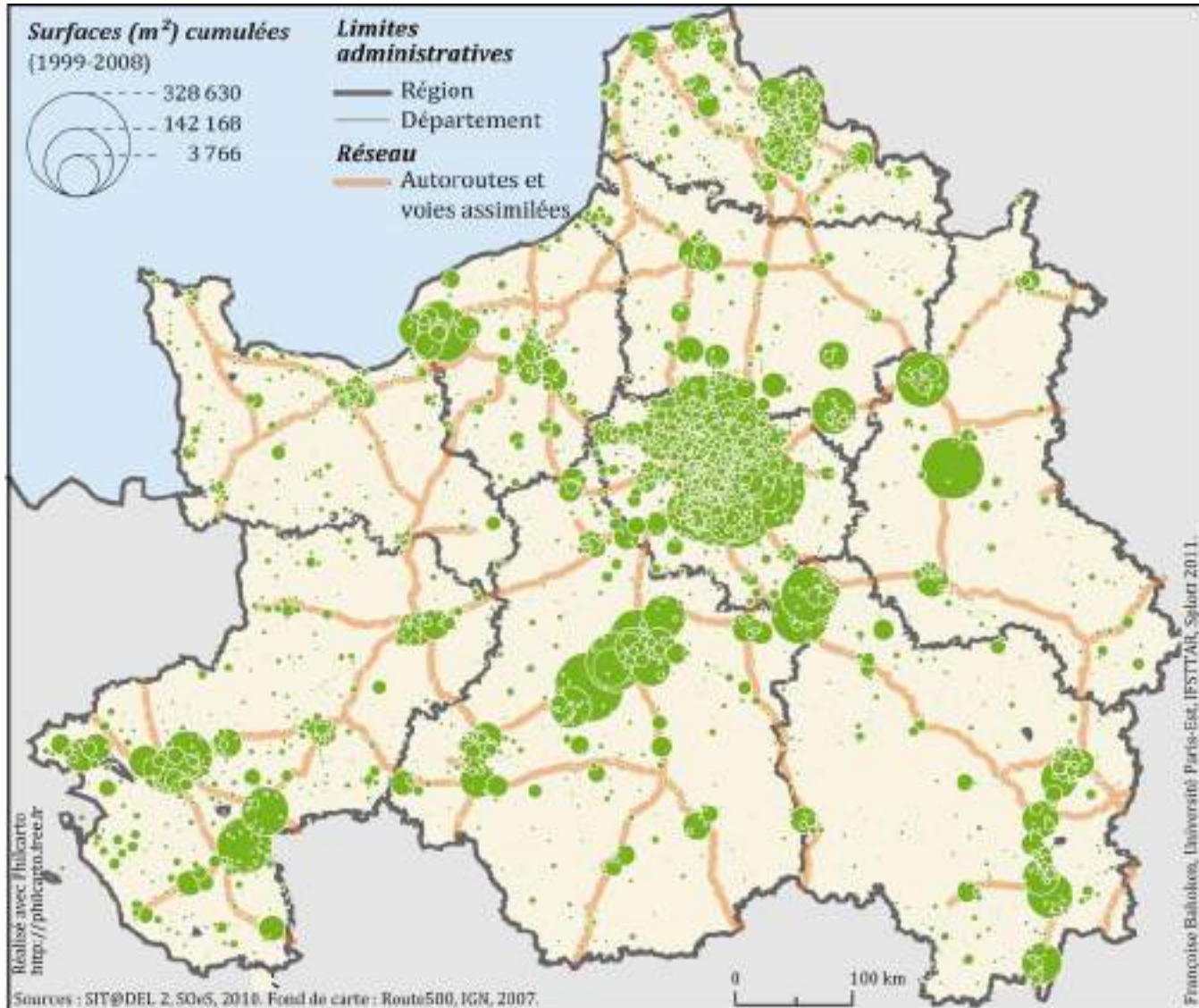




Amazon
warehouses
from
Washington
DC to NYC

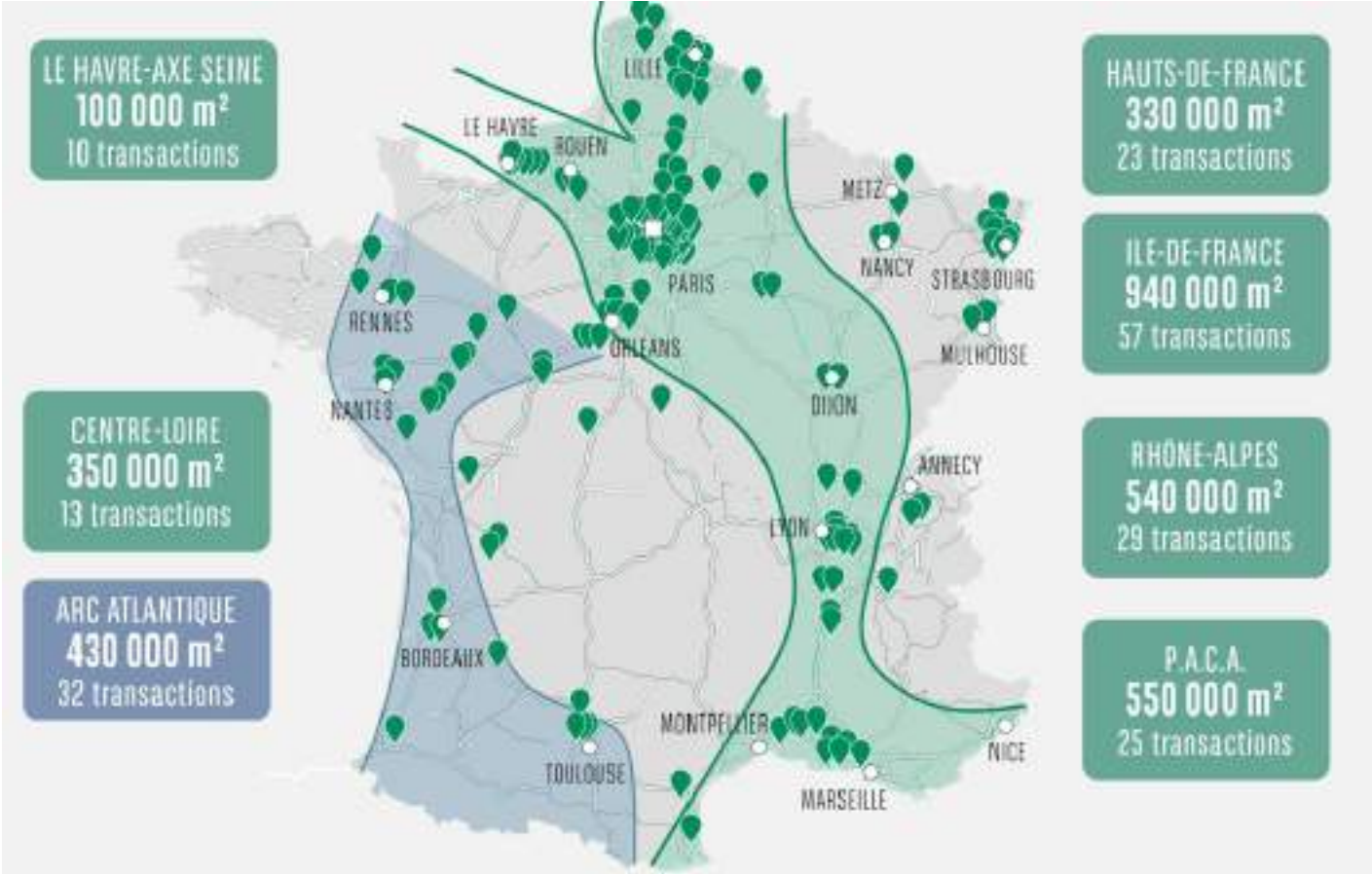
Schoring,
Lecourt, Logistics
City Chair, 2021

Warehousing clusters in megaregions



Bahoken, Raimbault, 2011

Lille, Paris, Lyon and Marseille metro areas concentrate 60% of all logistics property investments in France (2021)

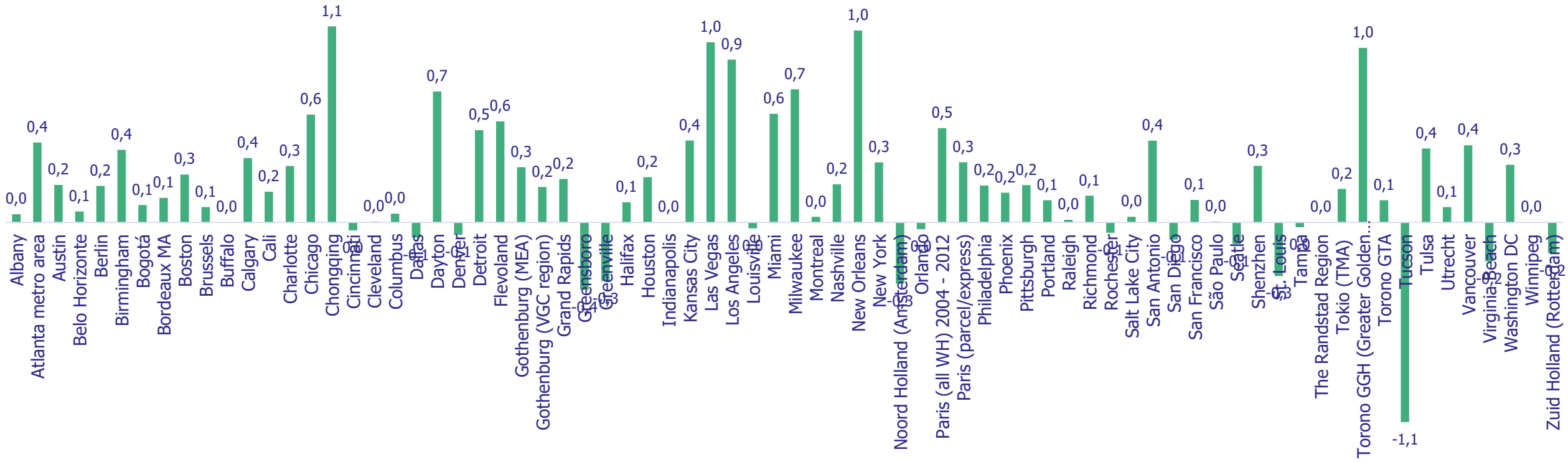


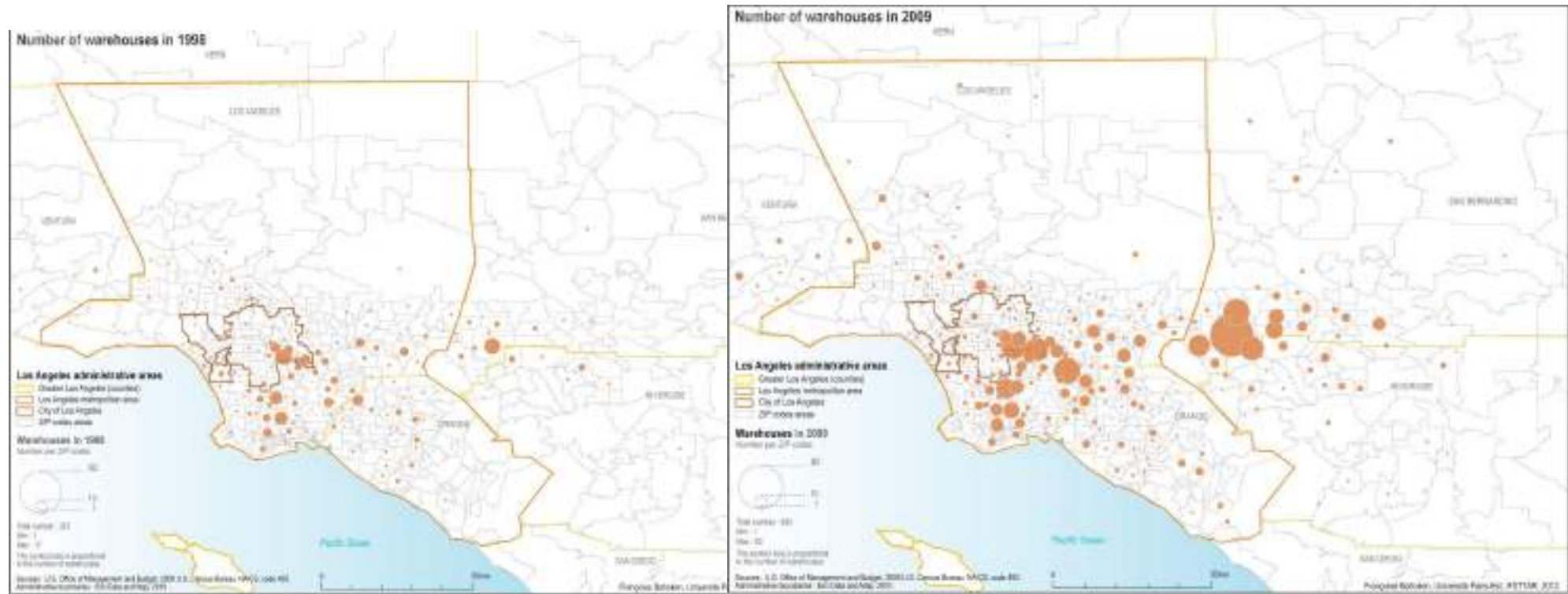
BNB Parisbas real estate, ImmoStat data

How to explain concentration in largest cities?

- Faster economic growth
- Largest consumer market
- Large and diverse workforce (need for 0.30 to 0.50 staff/m²)
- Nodes of transport infrastructure
- “Gateway cities”
- Outsourcing of logistics real estate investments: global firms prefer to site facilities where potential clients will be found

Logistics sprawl: change in average distance to center of gravity of all warehouses (km/y)





Dablanc and Farr, 2012

Los Angeles, warehouses 1998-2009

Recent trend: a reduction in logistics facilities' land footprint

- 2021 Amazon fulfillment center in Delaware, US
- 350,000 sq m of operations on 70,000 sq m land area



Warehouses: disruption of transport 'logic'



New large urban warehouses attract truck flows into cities

Tokyo



Brooklyn

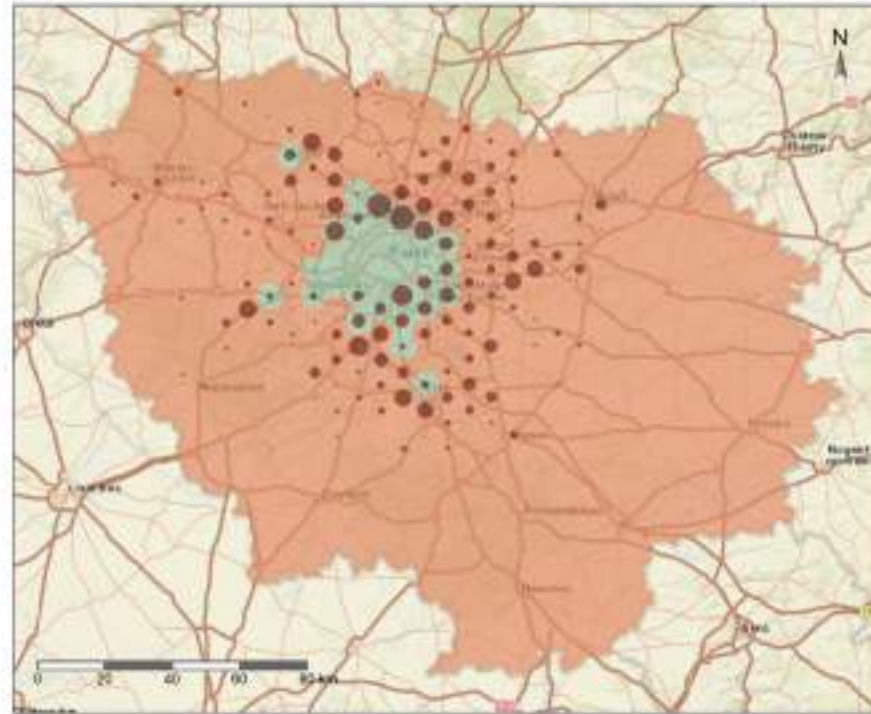


Paris



Automated data collection (Oliveira, Schorung, Dablanc, 2022)

- *Points of interest* from OpenStreetMap to identify urban v suburban areas
- Warehouse rental prices from real estate market sites

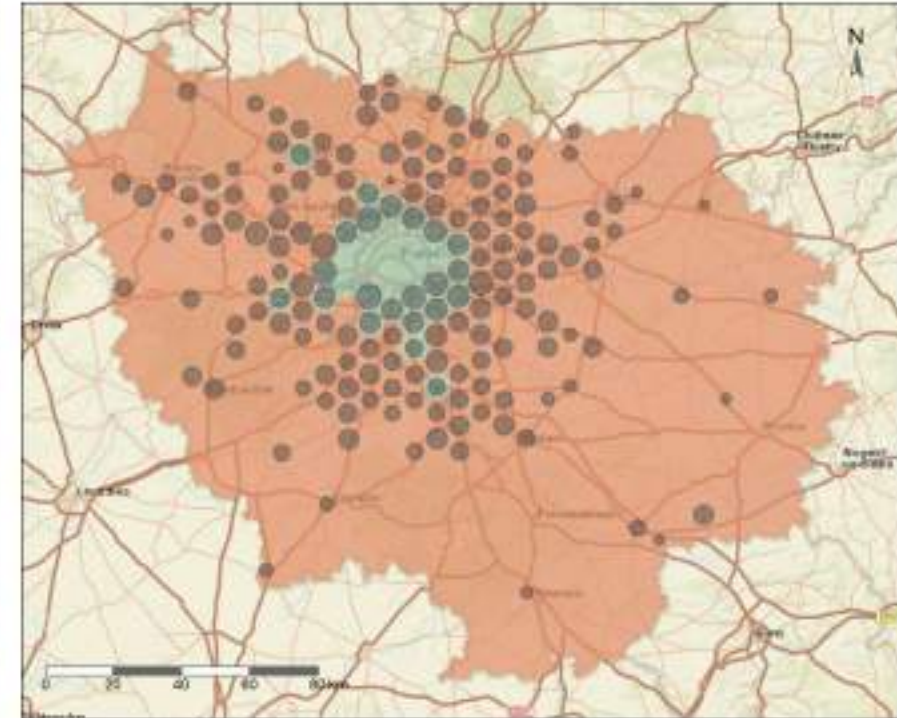


Number of warehouses

suburban
central

1 32 64 96 127

(A)



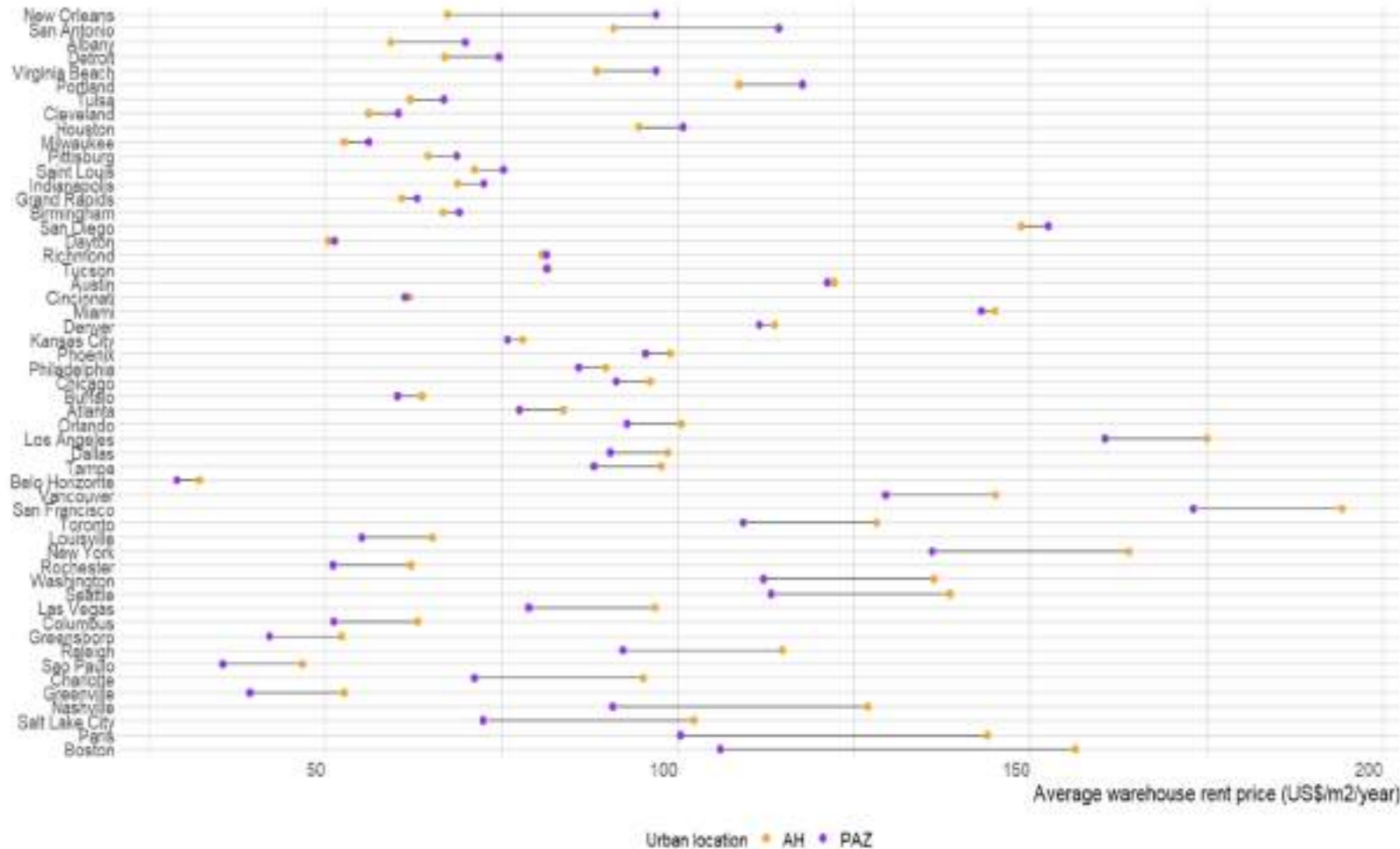
Warehouse average price

suburban
central

23.0 67.3 111.5 155.8 200.1

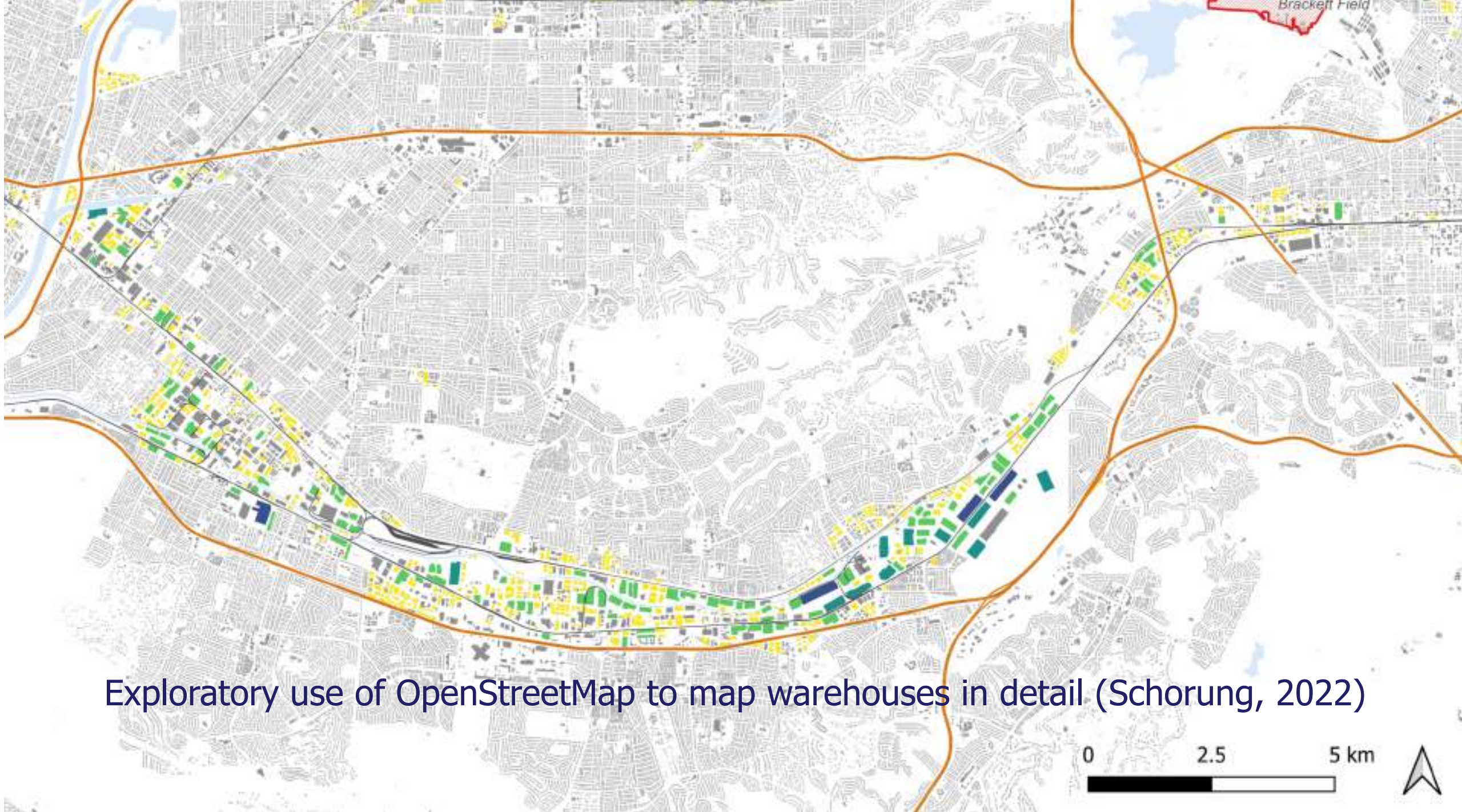
(B)

Paris among the most expensive markets for urban warehouses



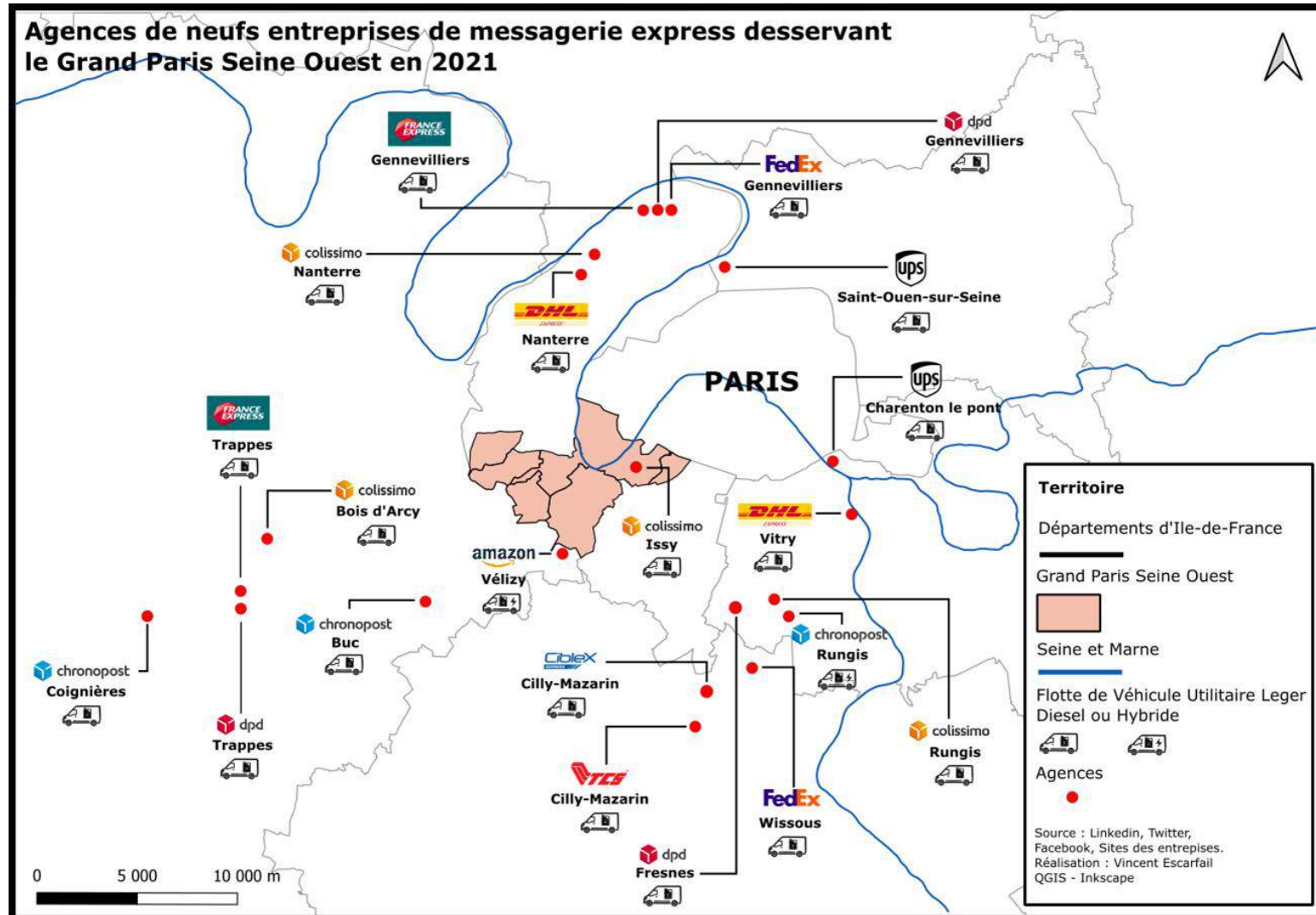
De Oliveira, Dablanc,
Schorung, 2022

Figure 4: Representation of warehouse average rent prices for AH and PAZ for each metropolitan region



Exploratory use of OpenStreetMap to map warehouses in detail (Schorung, 2022)

Wealthy areas served by warehouses located elsewhere: example of Issy/Boulogne in the Paris metro area



A very discreet Amazon warehouse in Brooklyn/Red Hook



- Amazon Flex delivery workers
- Street parking and difficult handling of cart

New formats in urban warehouses and micro-hubs

- **Vertical** (underground and multistory)
- **Mixed-use**: logistics hotels
- **Temporary**: use of spaces waiting for a development permit, use of spaces available during the day



Empty space turned into logistics hub under the Paris ring-road

New urban formats and architecture for warehouses from mainstream developers



Le projet Size à étages de Prologis sur la Zac des Batignolles marque une nouvelle illustration de sa stratégie en matière de logistique urbaine.

© Prologis / DTACC

Prologis, project 'Size' Paris 17th



Segro, project 'Centre Paris 19', Paris 19th

Ressources

- CHAIRE LOGISTICS CITY:
- Dablanc, L. (to be published 2022) Land use planning for a more sustainable urban freight. Chapter 3.1 in Handbook on City Logistics and Urban Freight, Edward Elgar, Eds Marcucci, Gatta, Le Pira
- Schorung, M., Lecourt, T., Dablanc, L. (to be published 2022) Atlas of logistics sprawl in the US, e-book.
- METROFREIGHT www.metrotrans.org/metrofreight
- Dablanc, L., Frémont, A. (Dir) (2015) La métropole logistique, Armand Colin

Sous la direction de
Laetitia Dablanc et Antoine Frémont

LA MÉTROPOLE LOGISTIQUE

LE TRANSPORT DE MARCHANDISES
ET LE TERRITOIRE DES GRANDES VILLES



ARMAND COLIN

ATLAS OF LOGISTICS SPRAWL IN THE USA

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