

# Regional land-use planning and sustainable logistics

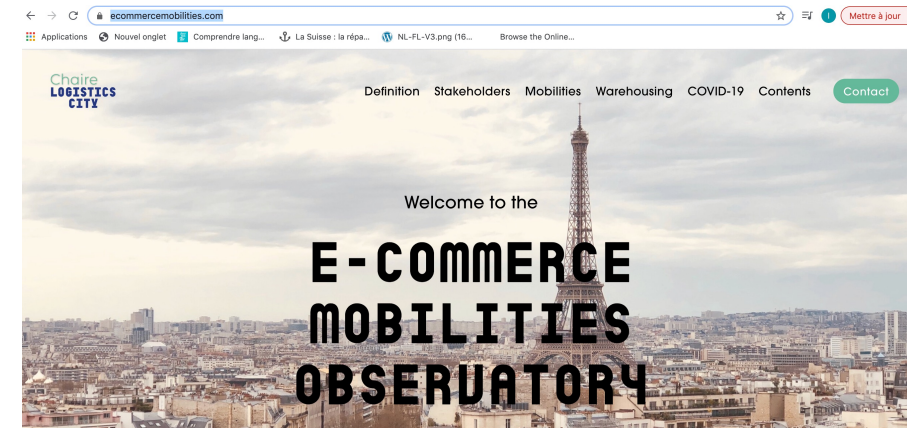
Dr. Laetitia Dablanc

- Warehouses, innovations, new trends in consumption and impacts on city logistics

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

Results available online:

- Observatory of ecommerce mobilities
- Logistics real estate and relationships with urban form in 74 large cities around the world
- 'Instant delivery' gig workers in Paris (surveys 2016 to 2022)

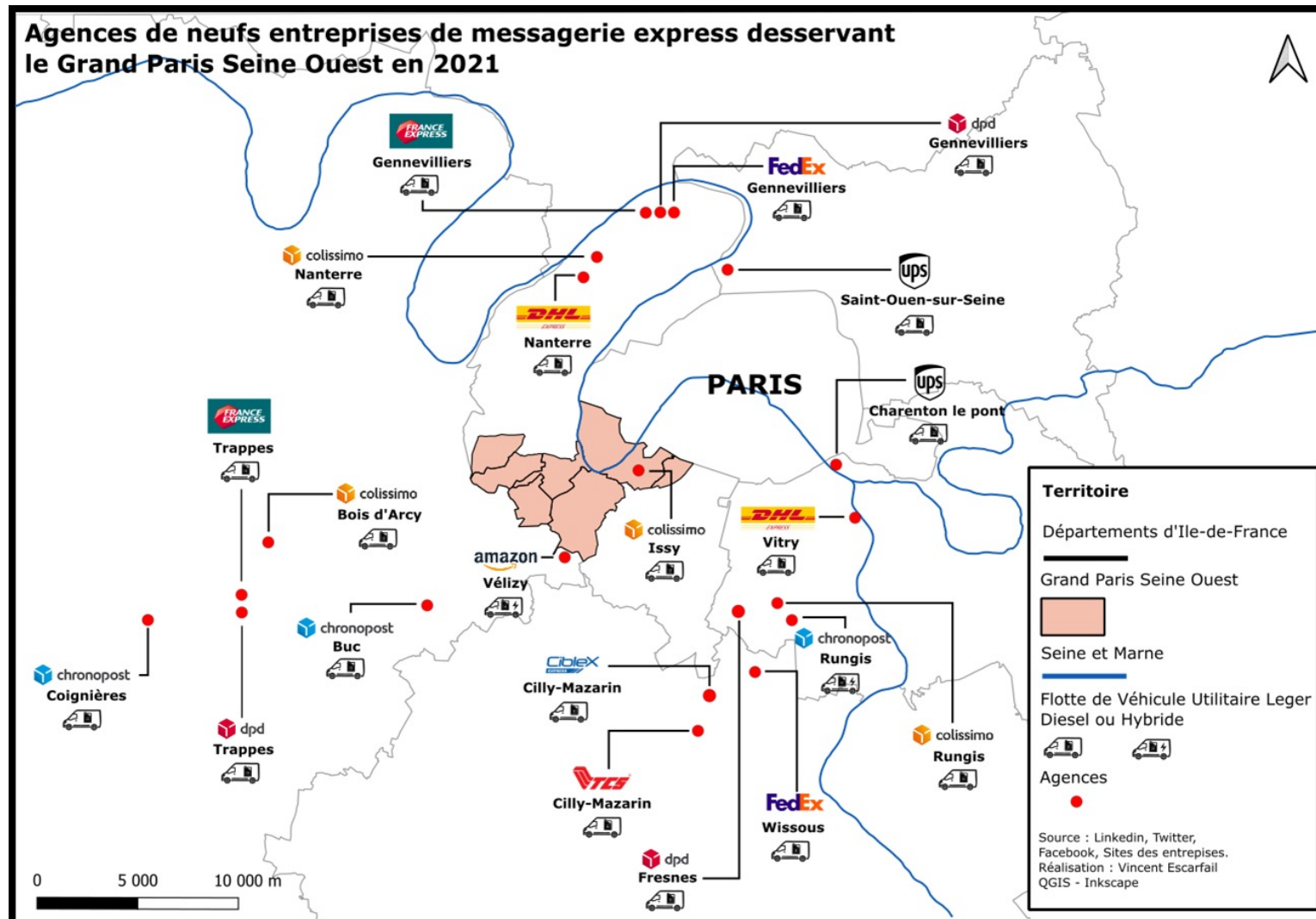


# What are the links between regional land-use planning and sustainable logistics?

- Land-use choices have an impact on the organization of logistics activities
  - Eg a medium size mall generates 150 deliveries a day
  - Eg a new housing complex of 300 apartments receives 30 parcels a day
- Logistics land-uses (warehouses) have an impact on regional traffic
- Suburban warehouses versus urban warehouses
- Warehouses related to energy issues, land artificialization, and environmental justice



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



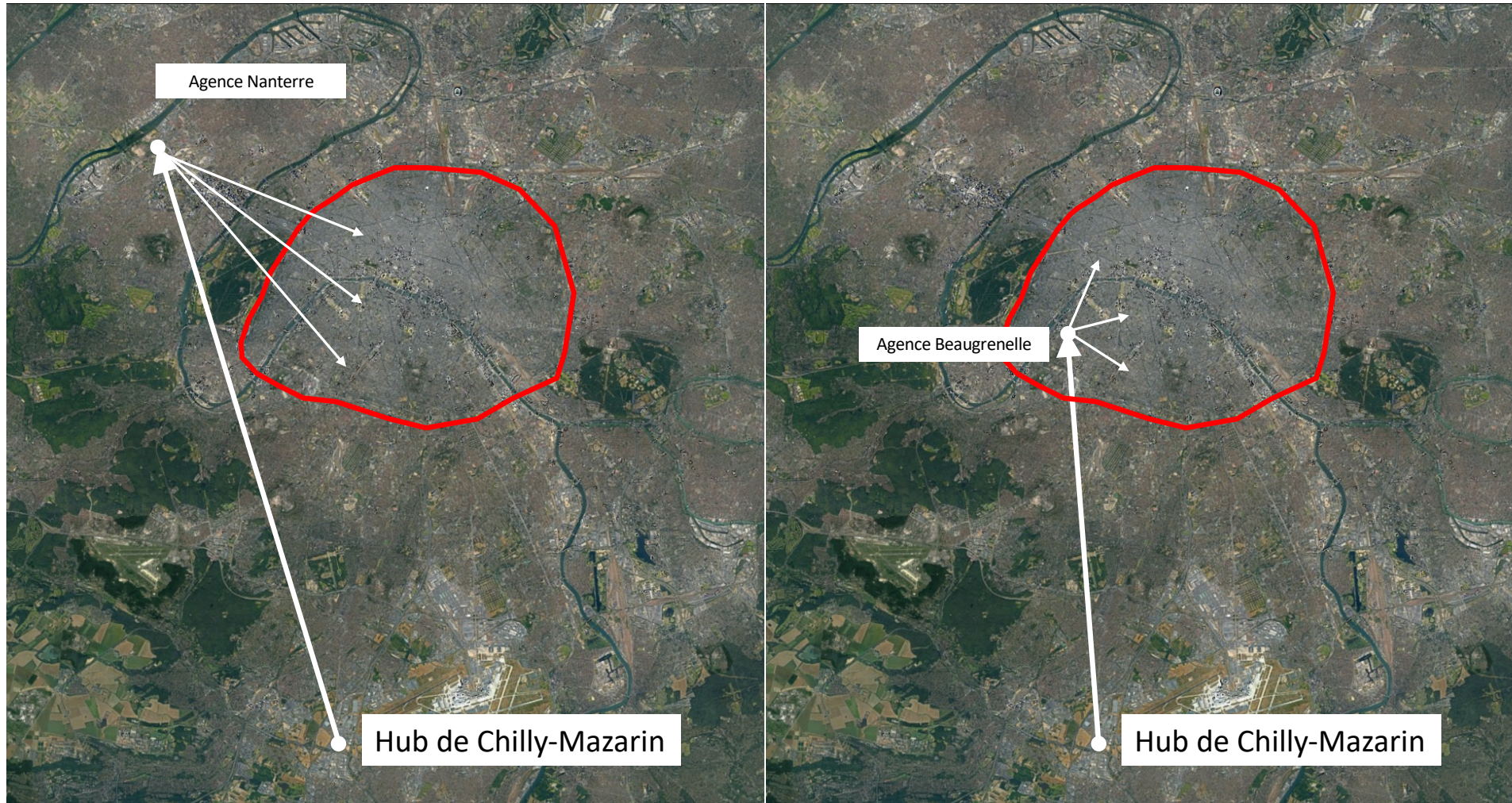
V. Escarfail,  
Chaire Logistics  
City, 2022



# Reducing CO<sub>2</sub> emissions by using an urban logistics hub, example of Chronopost parcel deliveries

Without an urban hub: 151 tons CO<sub>2</sub>/y

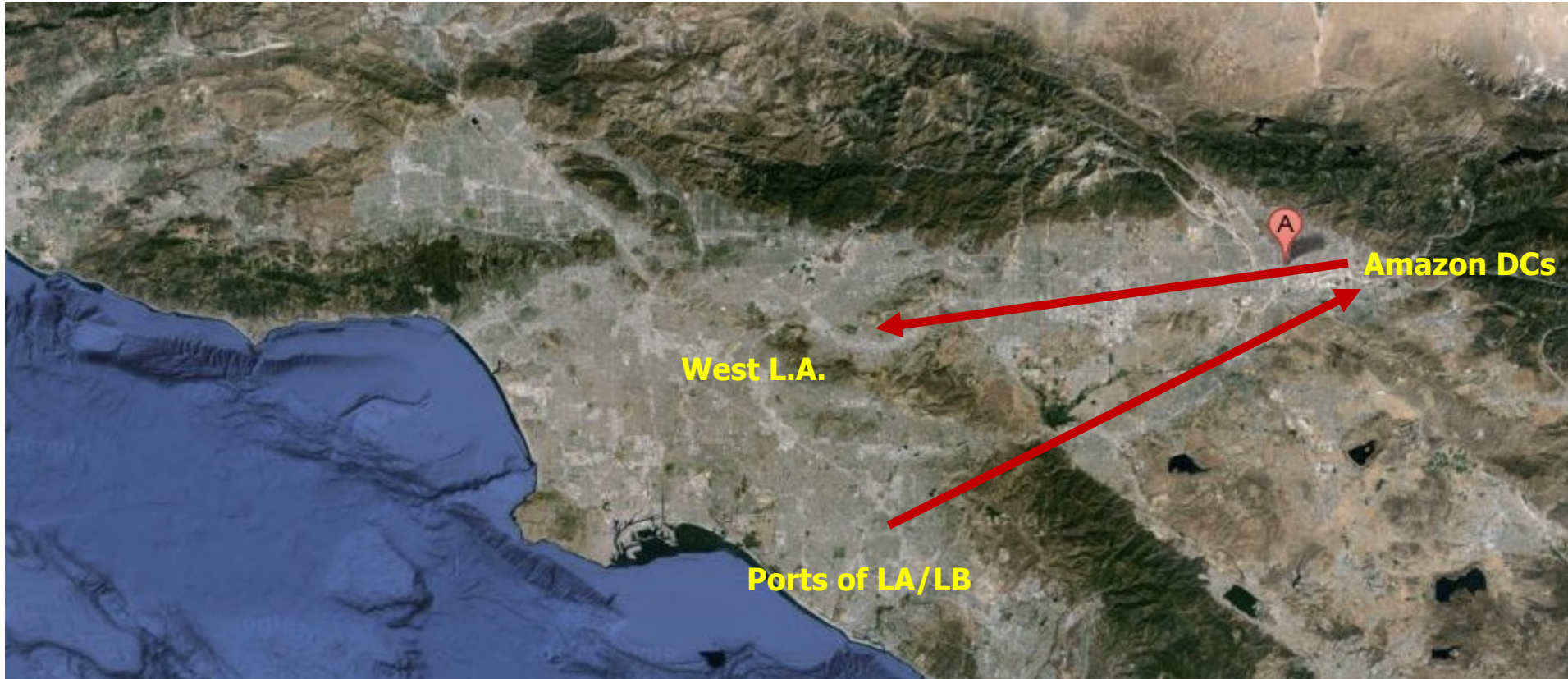
With an urban hub: 74 tons CO<sub>2</sub>/y



*Jonction 2017 +  
Grelier 2020*



# The location of warehouses disrupts the spatial logic of traffic flows





Los Angeles



Warehouses: new logistics  
landscapes in large urban regions  
*0.8% of total land-use*

Buenos Aires



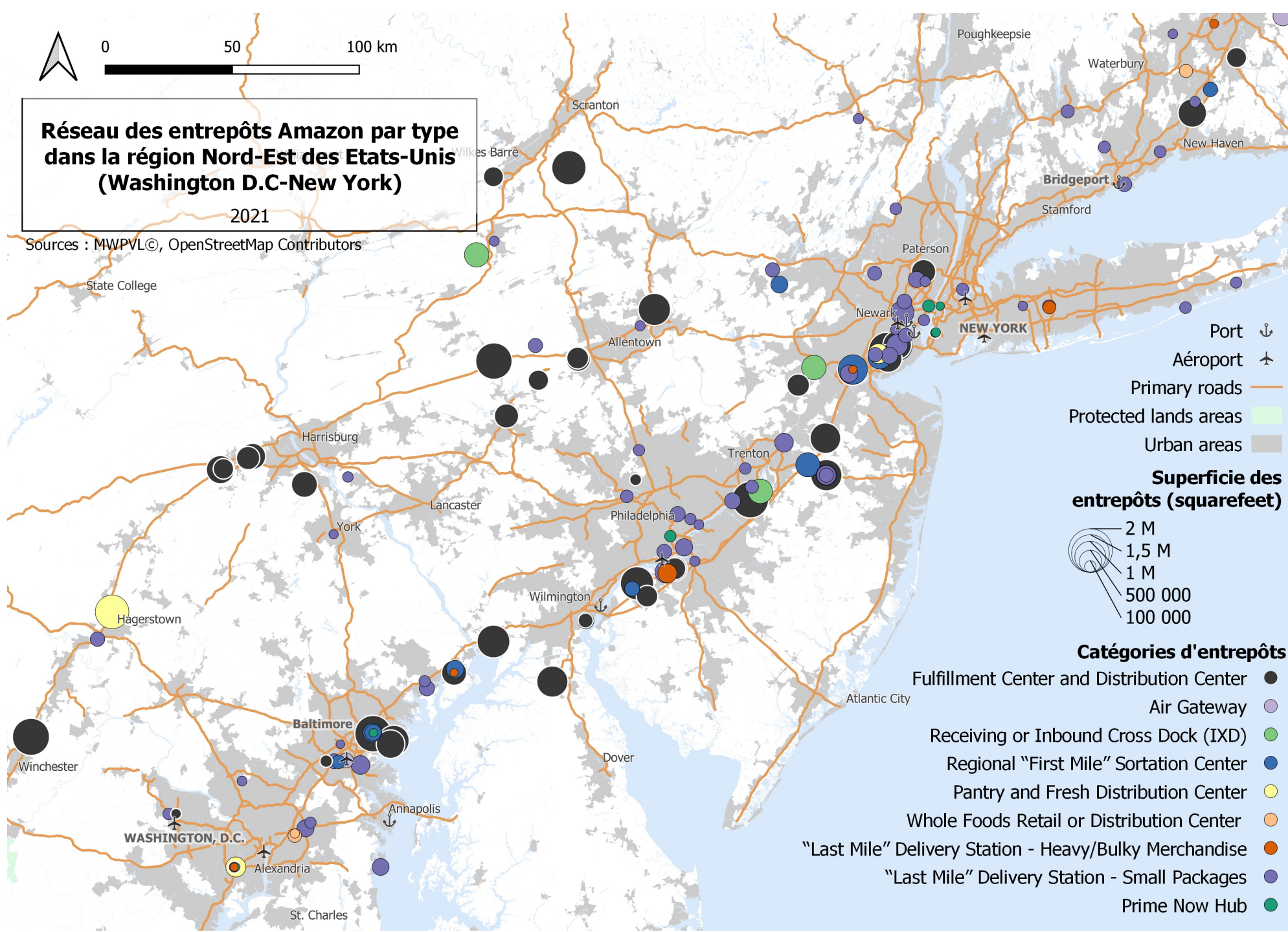
Sao Paulo



Gothenburg



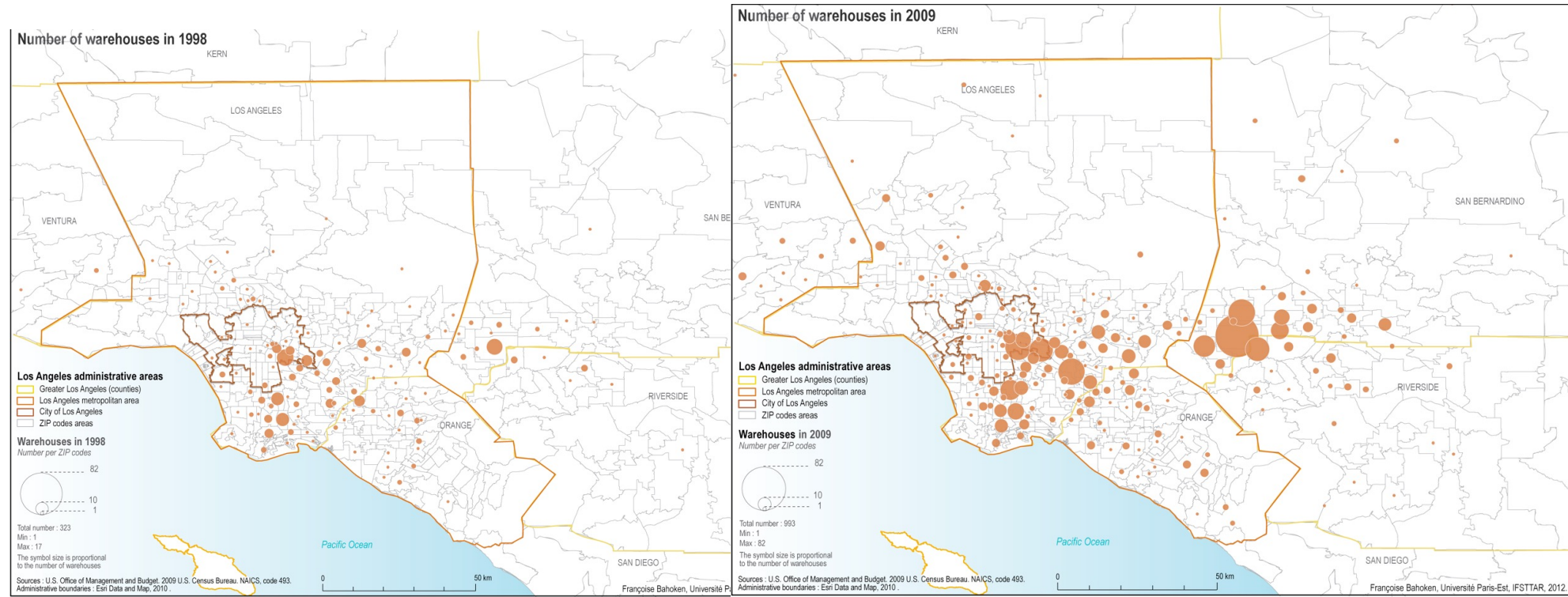




Warehousing clusters in megaregions

T. Lecourt,  
M. Schorung  
Logistics City  
Chair, 2021

# Logistics sprawl: decentralization of warehouses in suburban areas of large cities



Dablanc and Farr, 2012



# Two recent evolutions

**Solar pannels**  
Amsterdam, 2022



**Reduction in  
land footprint**

2021 Amazon  
*fullfilment center*  
in Delaware, US

350,000 m2 on  
70,000 m2  
footprint





# New formats in urban warehouses, micro-hubs, logistics hotels

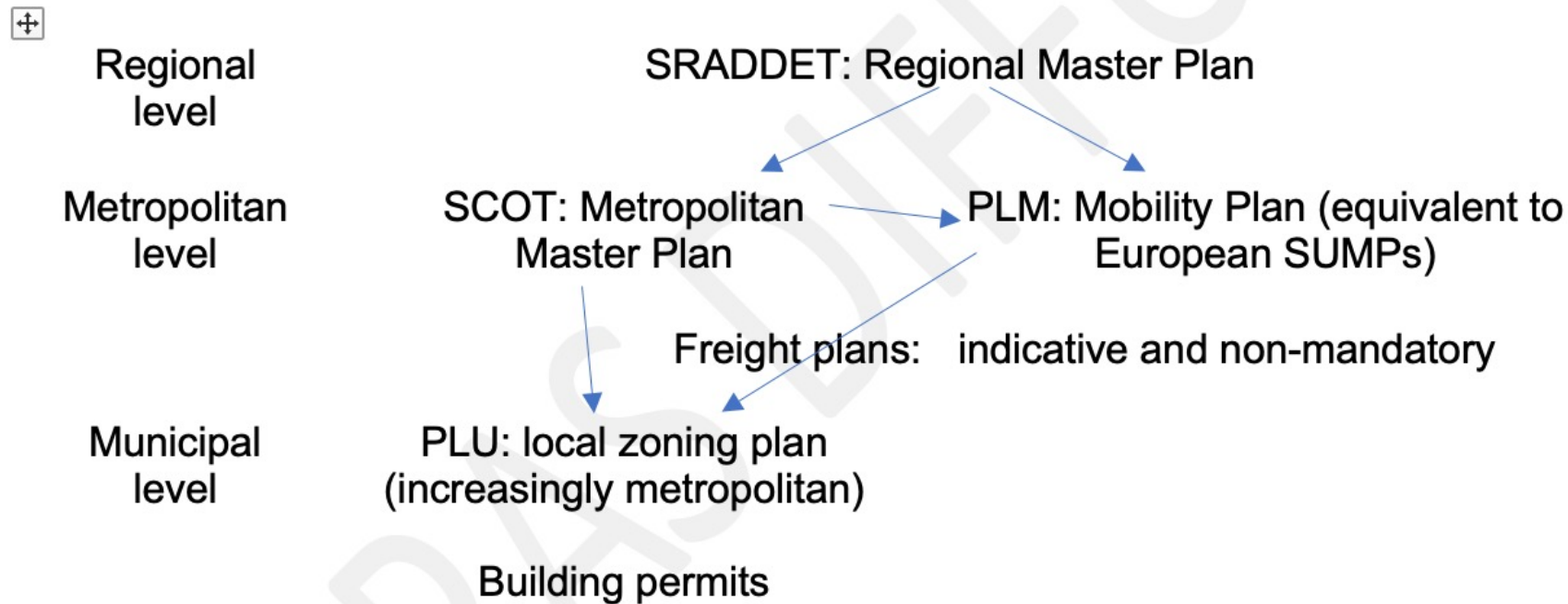
- **Vertical** (underground and multistory)
- **Mixed-use**: logistics hotels
- **Temporary**: use of spaces waiting for a development permit, use of spaces available during the day



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

# French spatial planning: also complicated!

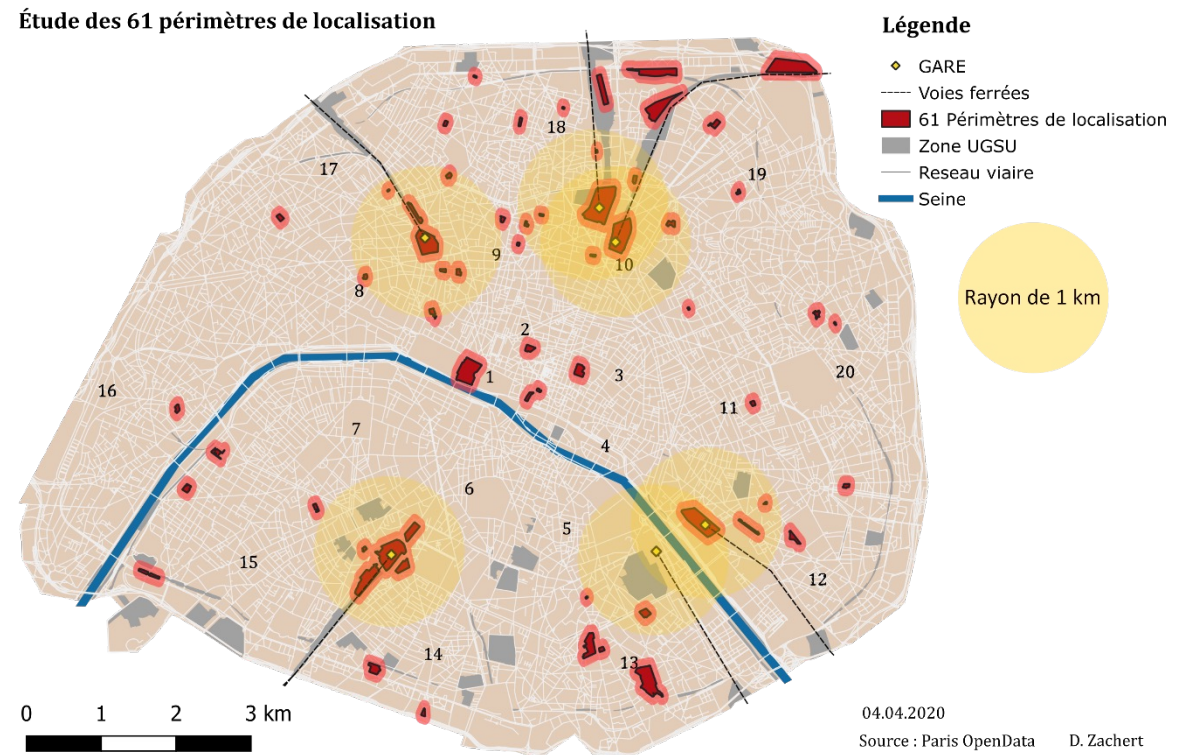
Figure 2. Master and Mobility Plans in French freight spatial planning (arrow means prevalence)



Dablanc, 2023

# “Location perimeters”: any development project must include at least 500 or 1,000 m<sup>2</sup> for logistics

- 61 location perimeters in the 2016 Paris zoning ordinance





# Vertical and multi-story

Tokyo



Brooklyn



Paris



Hôtel logistique de Chapelle internationale (18e arr.) inauguré en juin 2018. © JGP



# Delivery services from underground municipal car parks

Under the Louvre, Paris



Under Plaza Mayor, Madrid (FM Logistic Ibérica)



News

## CITYLogin opens micro-hub under Madrid's Plaza Mayor

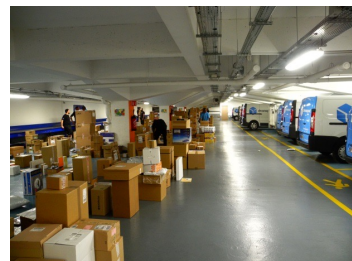
CITYLogin and Madrid's Municipal Transport Company (EMT) have inaugurated a micro-fulfilment centre under Plaza Mayor, the Spanish capital's famous main square. The 200-sqm...

On October 20, 2021

Opera



Beaugrenelle



Concorde



# Time-sharing



Amazon, Paris 14th  
use of of a bus depot  
during the day



# Conclusion on spatial patterns and warehouses

- A very active real estate market in suburban areas
- A new niche market in central areas
- Can help consolidate freight operations and reduce freight veh-kms
- And reduce warehousing spatial footprint
- Need for zoning plans and architectural innovation

# Ressources

- CHAIRE LOGISTICS CITY: [www.lvmt.fr/en/chaire/logistics-city-sogaris/](http://www.lvmt.fr/en/chaire/logistics-city-sogaris/)
- METROFREIGHT [www.metrotrans.org/metrofreight](http://www.metrotrans.org/metrofreight)
- Dablanc, L., Frémont, A. (Dir) (2015) La métropole logistique, Armand Colin
- Enquêtes sur les livraisons instantanées à Paris : <https://hal.archives-ouvertes.fr/hal-02374915>
- Browne, M., Behrends, S., Woxenius, J., Giuliano, G., Holguin-Veras, J. *Urban logistics. Management, policy and innovation in a rapidly changing environment*. Kogan Page, London
- Urban freight platform: <https://www.chalmers.se/en/centres/lead/urbanfreightplatform/Pages/default.aspx>



[laetitia.dablanc@univ-eiffel.fr](mailto:laetitia.dablanc@univ-eiffel.fr)

