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
New logistics landscapes in large cities

- Buenos Aires
- Los Angeles
- Sao Paulo
- Hong Kong
In 74 large cities around the world, twice as many warehouses in 2015 compared with 2000

Dablanc, Palacios, Oliveira 2020
17 indicators

- Name and size of studied metro area
- Type of metropolitan area
- Population (million - most recent year)
- Population density (inhabitants/km\(^2\))
- 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 km\(^2\) (most recent year)
- Average size of warehouses (m\(^2\))
- 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

New warehouse land areas over 5,000 sq m
In red: Paris region, In orange: rest of France
Réseau des entrepôts Amazon par type dans la région Nord-Est des États-Unis (Washington D.C-New York)

Sources : NVPVL, OpenStreetMap Contributors

2021

Amazon warehouses from Washington DC to NYC

Schorung, 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)
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)
Los Angeles, warehouses 1998-2009

Dablanc and Farr, 2012
Recent trend: a reduction in logistics facilities’ land footprint

- 2021 Amazon fullfilment 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 vs suburban areas
- Warehouse rental prices from real estate market sites
Paris among the most expensive markets for urban warehouses

De Oliveira, Dablanc, Schorung, 2022
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

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


• METROFREIGHT www.metrans.org/metrofreight
