



Dr. Laetitia Dablanc
IFSTTAR/Univ of Paris-Est
METROFREIGHT
laetitia.dablanc@ifsttar.fr

Urban Freight, the Last Mile Challenge for Cities

September 26, 2014, Palestra, London

**International best practice in urban
freight management – Insights from
research**

800,000 deliveries a day in the Paris region

- New urban freight survey for the Paris metropolitan area (LET, 2014)
- 0.70 delivery per day per employment job
- 2% of these deliveries are innovative urban logistics

Different cities, different needs

- Chicago: the main **rail** hub for North America
- Los Angeles : **air pollution** and urban trucking associated with the port
- Shanghai: largest cargo port in the world, logistics as a major economic activity
- Tokyo: truck **congestion** to and from the ports
- Mexico City, 42% of the working population works in micro companies of which half are **home-based workshops or street-based**, generating specific patterns of deliveries



Urban freight is a highly performing activity

- Serves customers despite fast changing urban economy and difficult traffic conditions
- The urban economy today is not the one from twenty years ago:
 - less independent retail activities
 - increased demand for express and courier deliveries
 - decrease of storage and demand for more frequent deliveries
 - development of e-commerce and home deliveries



'City logistics' is emerging

- *City logistics = any service provision contributing to an optimised management of the movement of goods in cities and providing innovative response to customer demands*
- Main postal/parcel delivery players still dominant
- New players: Star's Service, Shurgard, Kiala (UPS), The Green Link, Colizen, Cargo Hopper, Binnenstadservice
- New concepts: automated lockers, urban consolidation centres, electrically assisted cargo tricycles, city barges

Environmental issues

- Very large companies on the one hand and very small operators on the other
- Huge diversity of vehicles - on the whole, the fleets are older in cities than on roads
- In French cities, freight is responsible for a quarter of transport-related CO₂, a third of transport-related NO_x and half of transport-related particulate matter
- In metro Mexico city, 71% of PM_{2.5} by mobile sources were from freight vehicles

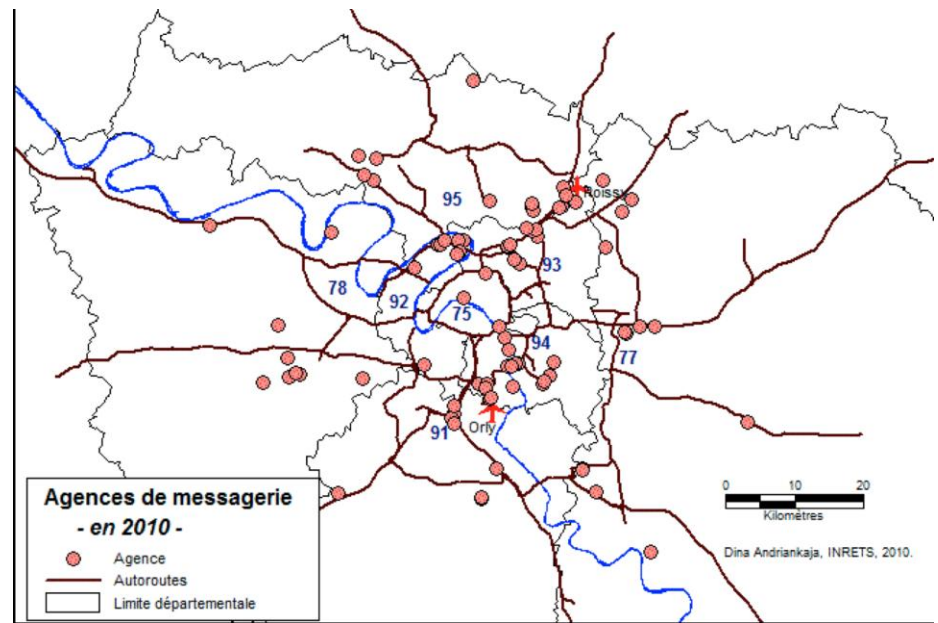
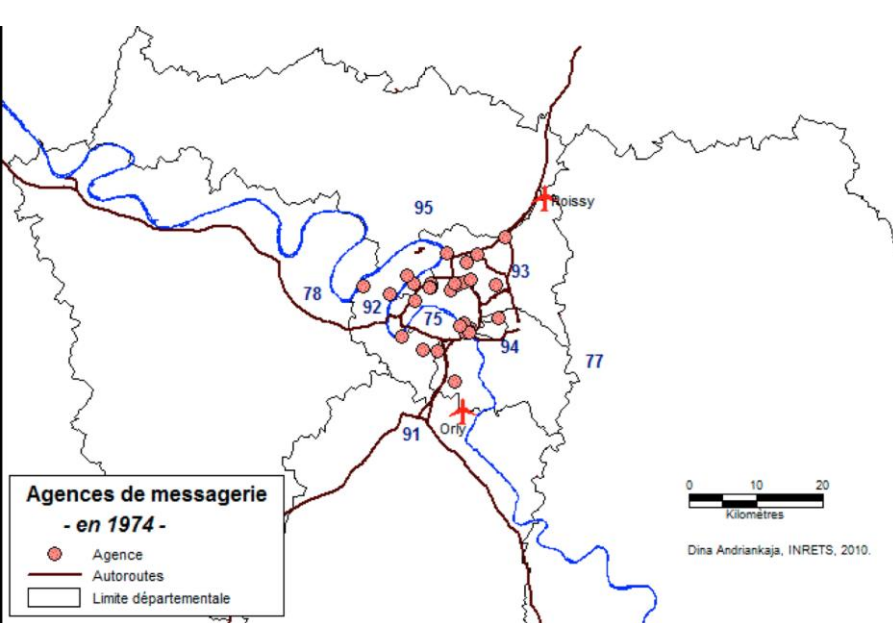


A huge increase in warehouses and distribution centers in metro areas

- +200% freight facilities and warehouses in metro areas such as Atlanta and L.A. b/w 1998 and 2009
- Serving an import-based economy and global supply chains
- And new markets (fulfillment centers for e-commerce)

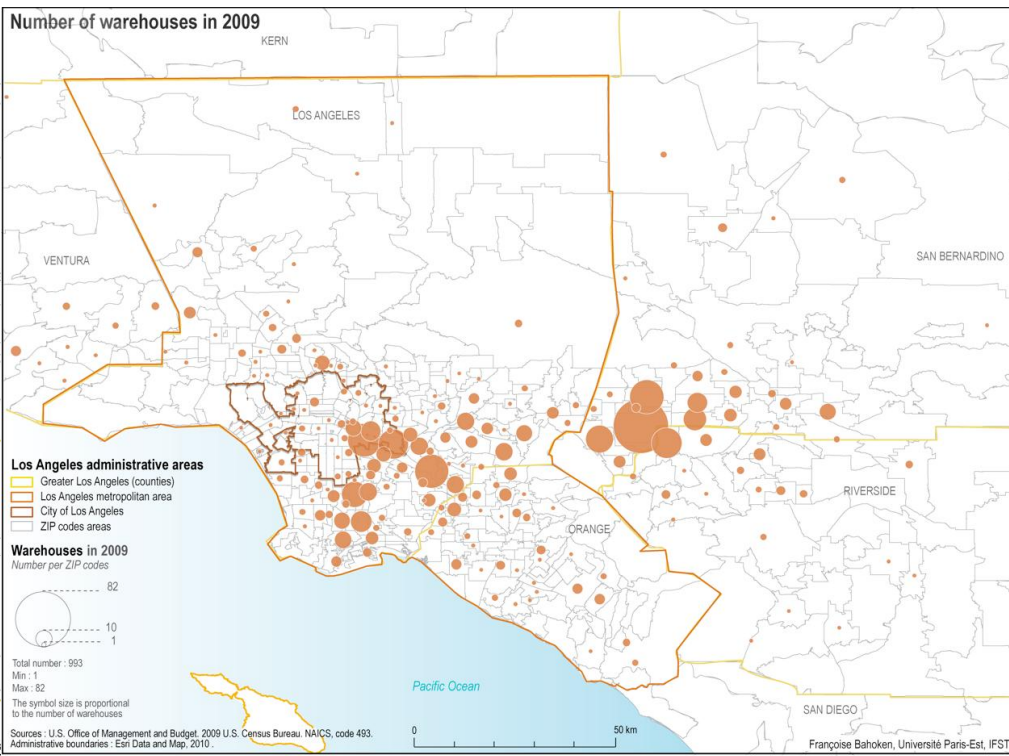
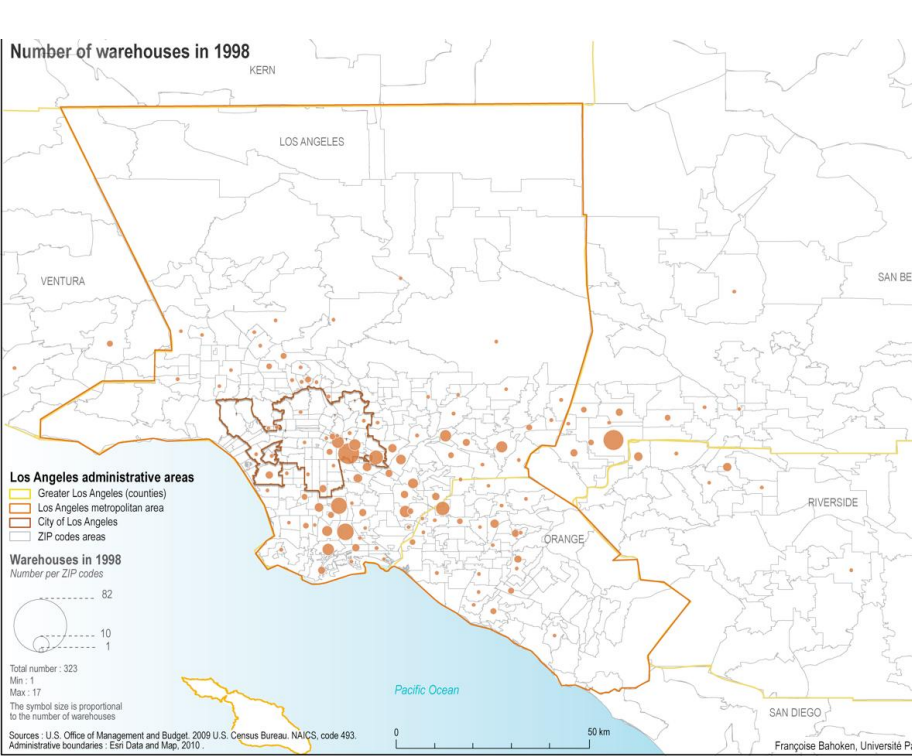


The location of cross-dock parcel companies' terminals in the Paris region between 1974 and 2010



Dablanc and Andriankaja, 2011

Paris, parcel transport industry, 1974-2010



Dablanc and Farr, 2012

Los Angeles, warehouses, 1998-2009 (NAICS 493)

Best practices: consultation, certification and training programs

- Freight forums, information portals, labels and training programs provide incentives for voluntary changes of behaviour and enhance the cooperation between local authorities and urban transport operators



Transport for London initiatives



Sustainable City Logistics Charter signed in Paris, 2013

Night-time deliveries

- Night and off-peak hour deliveries, combined with low noise delivery equipment, can be an efficient strategy to reduce vehicle-miles and congestion
- Ex. PIEK programme (NL), tests in Manhattan, Paris, Barcelona



Pick-up points for e-commerce deliveries



PackStation, Frankfurt train station



Innovative street designs



UK 'bus and lorry lane'



Barcelona's multi use lanes and delivery triangles



Paris' « Lincolns »



E-vans and cargo-cycles with an electric assistance can improve the productivity of mail and package deliveries while reducing externalities

- E-vans and cargo cycles with an electric assistance can improve the productivity of mail and package deliveries while reducing externalities



MF

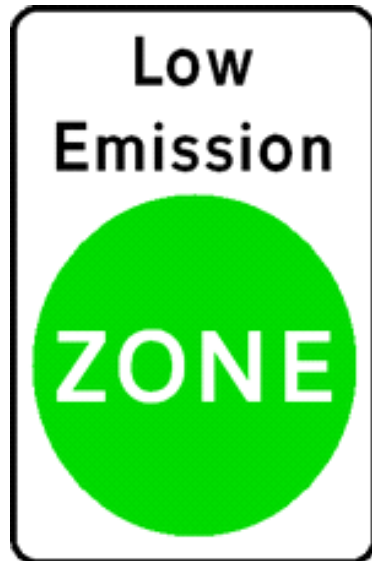
METROFREIGHT
Global Center of Excellence





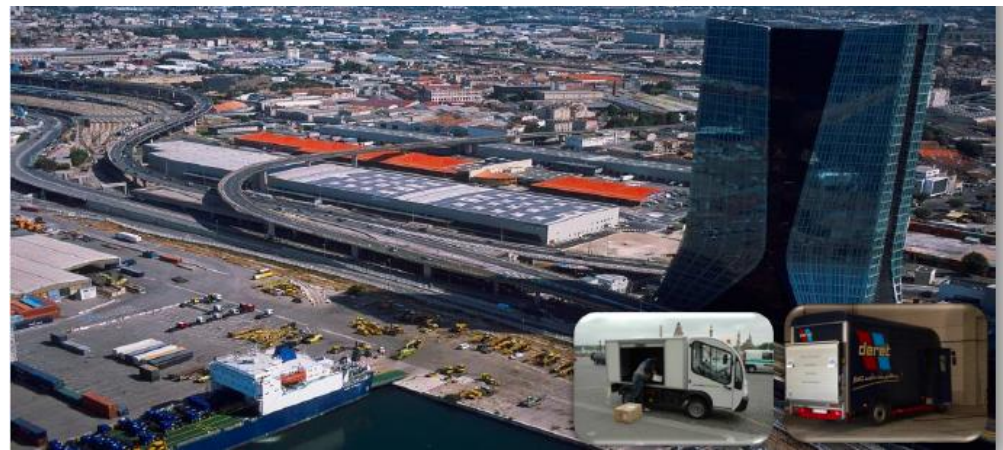
Low Emission Zones

- Access to a certain area (e.g. city centre) is denied to vehicles which do not meet pollutant emissions levels
- 191 cities in Europe with LEZ
- Recent research: a LEZ reduces the number of delivery companies while keeping quality of service



New logistics buildings

- A diverse set of new logistics buildings are emerging in cities
- Freight villages, urban logistics spaces, micro-terminals, multi-story terminals, urban consolidation centers



Experiments in non road transport

- A larger use of waterways, heavy rail and light rail can reduce the number of trucks and vans
- Ex. Volkswagen tram in Dresden, Monoprix and Franprix retailers deliveries in Paris



Conclusion

- Urban freight represents many jobs and an important economic asset for cities
- Innovative logistics services in cities are emerging but freight transport still generates environmental impacts
- Local decision-makers can implement simple and effective policies to address part of the issues
- Freight and logistics issues also depend upon global economics, technical/organisational innovations or long-term national policies

Resources

- www.urban-mobility-solutions.eu
- www.sugarlogistics.net
- www.bestufs.net
- www.citylogistics.org
- Bestufs (2007) *Good Practice Guide on Urban Freight Transport* (www.bestufs.net/gp_guide.html)
- *City Distribution and Urban Freight Transport, Multiple Perspectives*, ed. by S. Melo and C. Macharis, NECTAR Series in Transportation and Communication (2011)
- Dablanc, L. (2009) *Freight Transport, A Key for the New Urban Economy*, Report for the World Bank as part of the initiative *Freight Transport for Development: a Policy Toolkit*, 52p
- Dablanc L. (2008), *Urban Goods Movement and Air Quality, Policy and Regulation Issues in European Cities*, *Journal of Environmental Law*, [Volume 20, Number 2](#), pp. 245-266
- Dablanc L. (2007) *Goods Transport in Large European Cities: Difficult to Organize, Difficult to Modernize*, *Transportation Research Part A* 41, pp. 280–285