



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

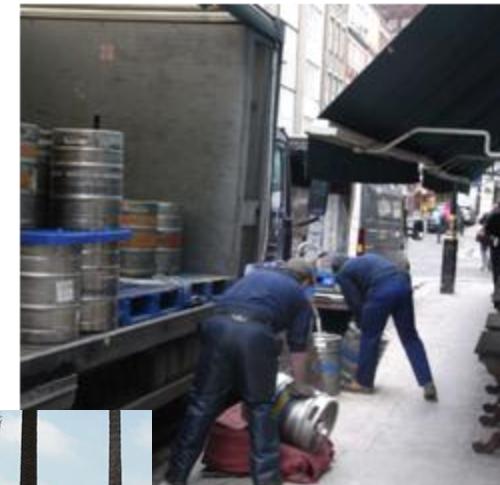
# Different cities, different needs

- 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



# City logistics innovations

# 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 CO<sub>2</sub>, a third of transport-related NOx and half of transport-related particulate matter
- In metro Mexico city, 71% of PM<sub>2.5</sub> by mobile sources were from freight vehicles

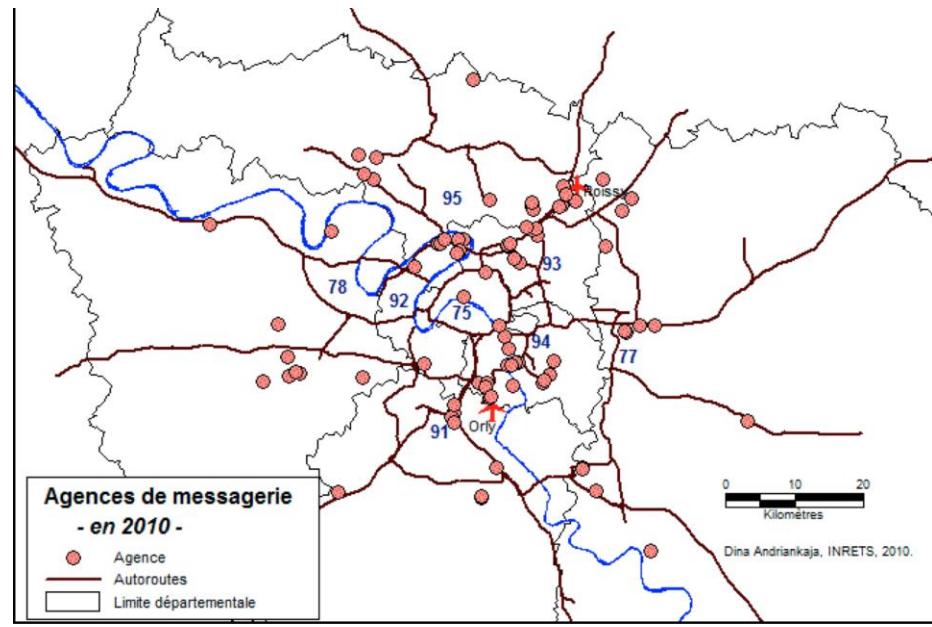
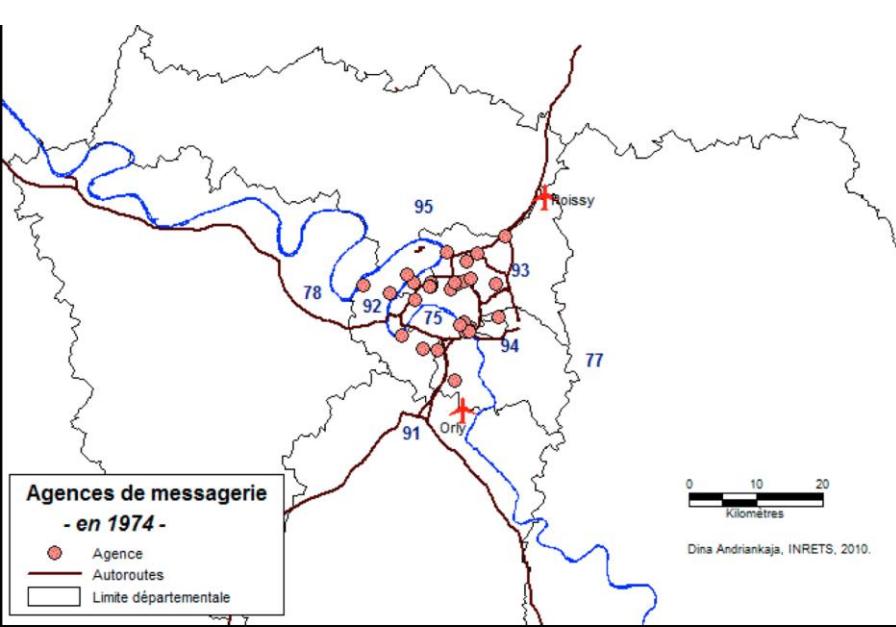


# A huge increase in warehouses and distribution centers in metro areas

- +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 (fulfilment centers for e-commerce)

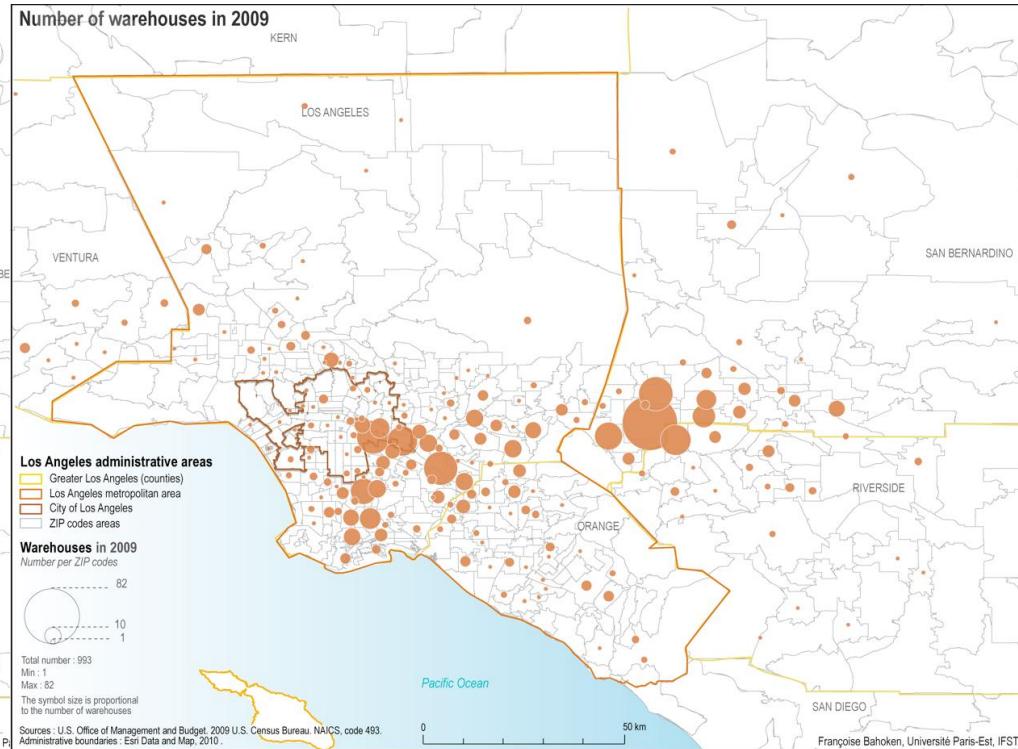
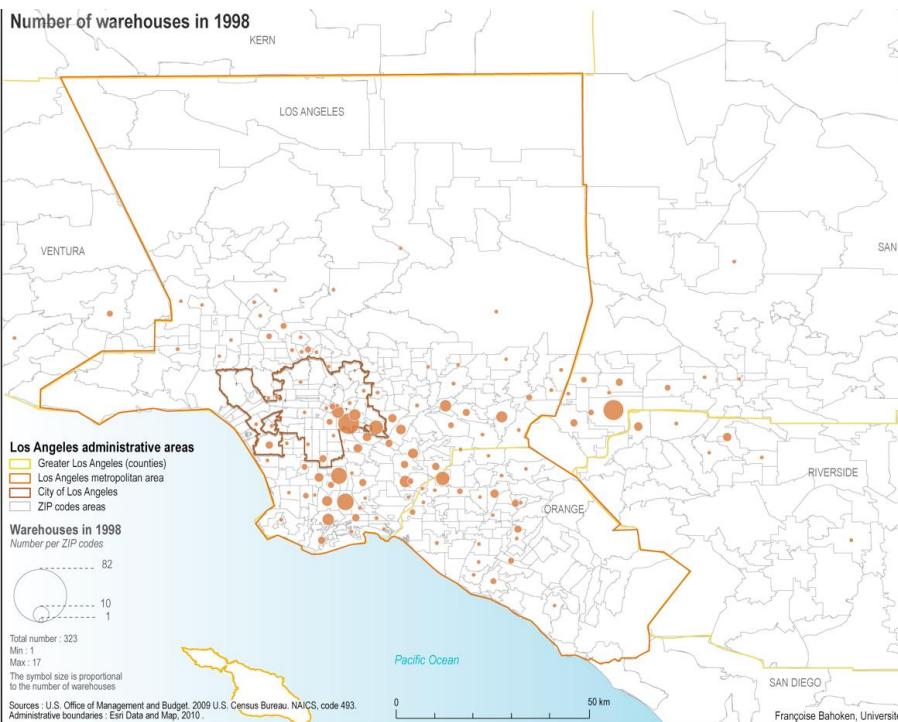


# The location of cross-dock parcel companies' terminals in the Paris region between 1974 and 2010



*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*



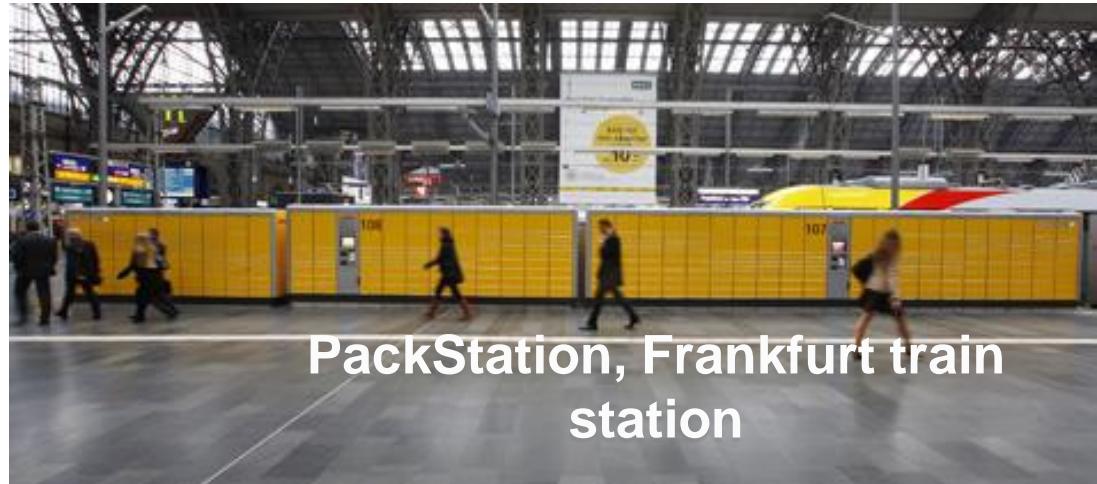
*Sustainable City Logistics  
Charter signed in Paris, 2013*

# 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



# Innovative street designs



UK 'bus and lorry lane'



Barcelona's  
multi use lanes  
and delivery  
triangles



Paris'  
« Lincolns »



# E-vans and cargo-cycles in city centers

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

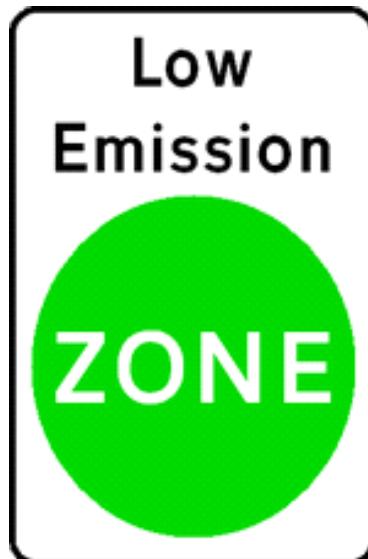






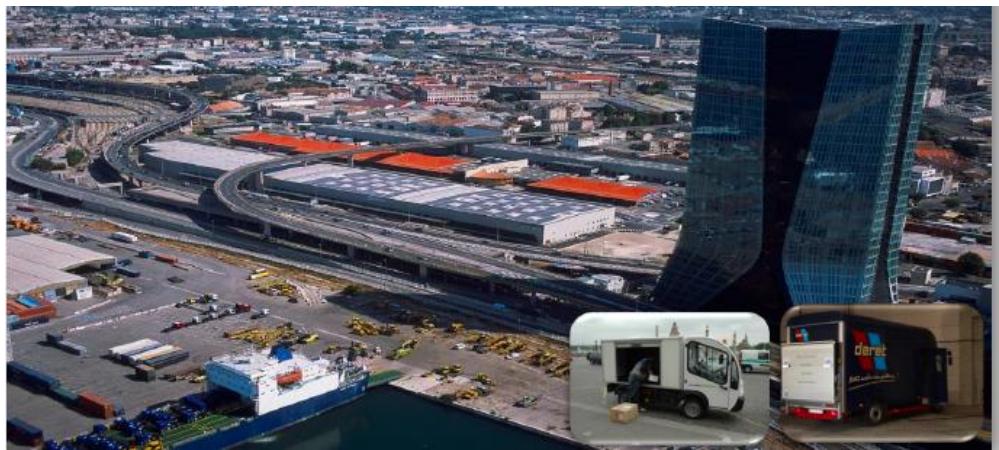
# Low Emission Zones

- 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



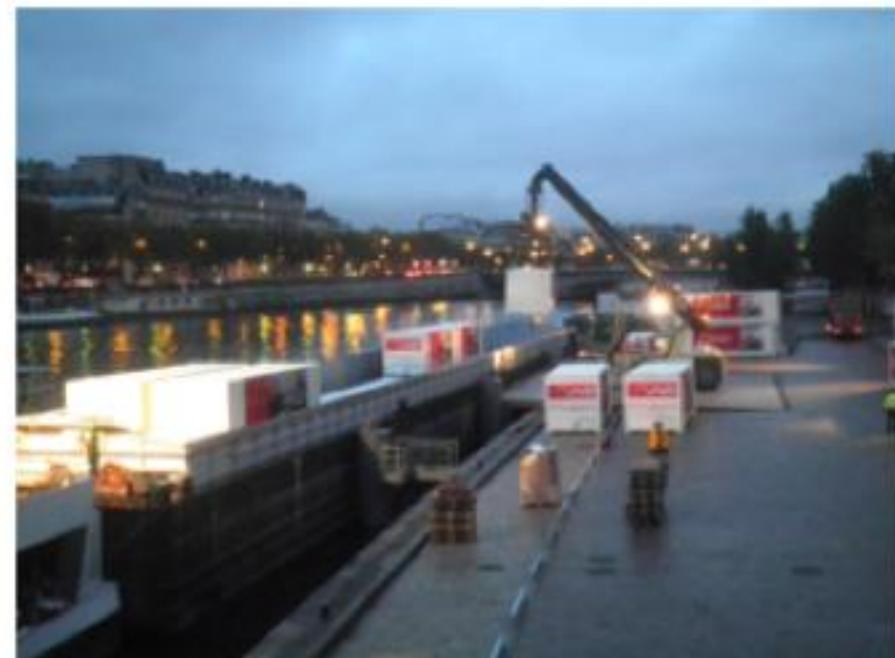
# New logistics buildings

- 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](http://www.urban-mobility-solutions.eu)
- [www.sugarlogistics.net](http://www.sugarlogistics.net)
- [www.bestufs.net](http://www.bestufs.net)
- [www.citylogistics.org](http://www.citylogistics.org)
- Bestufs (2007) *Good Practice Guide on Urban Freight Transport* ([www.bestufs.net/gp\\_guide.html](http://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