Urban Freight, the Last Mile Challenge for Cities
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International best practice in urban freight management – Insights from research

Dr. Laetitia Dablanc
IFSTTAR/Univ of Paris-Est
METROFREIGHT
laetitia.dablanc@ifsttar.fr
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 CO₂, a third of transport-related NOx and half of transport-related particulate matter
- In metro Mexico city, 71% of PM₂.₅ 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 (fulfilment centers for e-commerce)
The location of cross-dock parcel companies’ terminals in the Paris region between 1974 and 2010

Paris, parcel transport industry, 1974-2010

Dablanc and Andrianakaja, 2011
Los Angeles, warehouses, 1998-2009
(NAICS 493)

Dablanc and Farr, 2012
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.
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

ByBox UK

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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
• www.sugarlogistics.net
• www.bestufs.net
• www.citylogistics.org


• *City Distribution and Urban Freight Transport, Multiple Perspectives*, ed. by S. Melo and C. Macharis, NECTAR Series in Transportation and Communication (2011)

