Curbside space and urban freight deliveries

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VREF Urban Freight Platform Gothenburg
Outline

Background

Range of users and their needs

Planning and design for freight deliveries
Urban freight: Importance and examples

Importance of freight
Essential for economic activity
Multiple sectors: Construction, waste, retail, offices, industry...
Vans and trucks are 15-20% of total urban traffic
Freight can be 30% of peak time traffic in the central urban areas

NYC: Manhattan
300,000 truck/van deliveries/day
56 buildings generate 4-8% of truck traffic

London: Regent Street
27,000 vehicles/day
5,500 freight vehicles
1,000 freight vehicles stop to make a delivery

Paris: Freight traffic represents
20% of vehicle kilometres
25% of traffic related CO2
33% of traffic related Nox
50% of traffic related PM
Truck and van weekday movements in central London


Morning peak activity overlaps with personal trips
Curbside complexity

Many different demands on curbside space - many different users

Planning and design often comes late in the process

Very important to consider how to share the space but difficult to do

Time of day has a strong influence on use (and potential problems)

Freight is one of many activities that need to be accommodated

It may not be a priority in terms of use - but it should not be forgotten or overlooked
So many demands on the curbside

Walking
Eating
Shopping
Building repairs
Waste collection
Moving
Cycle hire
Waiting
...
...
Range of users and needs: Pedestrians

Safe environment

Wide range of ages

Encouraging walking (and cycling)

Health - air quality
Range of users and needs: Business

Reliable deliveries and access at the right time

Safe working environment

Many items time sensitive - food, urgent packages etc
Range of users and needs: Transport companies

Importance of cost and efficiency

Operate safely and within the law

Complex regulations

Time taken to deliver often more than driving time
Range of users and needs: Residents

Parking

Deliveries to the home

Services - building, renovation, repairs
Planning and design for freight

Guidance – broad perspectives and city initiatives

Many of the ideas can be generalised
Planning and design for freight: Guidance to help get started

#1: Deliveries by design (off street parking)
#2: Curb-side Orchestration (on street parking)
#3: Retime deliveries
#4: Consolidate deliveries and pick-ups
#5: Alternative delivery sites
#6: A healthy mix of vehicles
#7: Stewards of the environment
#8: Making safety a top priority

The measures can be effective as stand-alone initiatives, or they can be packaged together in a complementary fashion.
Planning and design for freight: Loading space design and allocation and timing of deliveries

Scope for improved loading spaces exist in many cities

If freight deliveries can be made outside the peak periods then there are often many benefits

Technology (vehicle and handling equipment) and driver behaviour and management

But space needs to be available and the way that delivery and unloading is done needs to be appropriate for the time of day
Example from central London

Multiple use (bus and unloading)
Planning and design
Enforcement
Cooperative loading and designated space

Measuring needs and design of the street

Changing the time of delivery

Using the space in a new way

More examples: Japan, France, USA
Planning and design for freight: Current trends and how that will lead to change

Rise in e-commerce may mean more frequent deliveries by smaller vehicles.

Consider design options for buildings to ensure deliveries can be made more efficiently.
Thank you
References
Acknowledgements
José Holguin-Veras: Information about New York.
Eiichi Taniguchi: Cooperative freight systems in Japan.
Ian Wainwright: Future City Logistics: Information and images.
Johan Woxenius: University of Gothenburg: Information and images.

Some useful links for further information
1) Urban Freight Platform an initiative at University of Gothenburg and Chalmers supported by the Volvo Research & Educational Foundations (VREF):
http://www.chalmers.se/en/centres/lead/urbanfreightplatform/Pages/default.aspx
2) VREF Urban Freight Conference, Gothenburg (17-19 October 2016) Information and presentations at:
http://www.chalmers.se/en/centres/lead/urbanfreightplatform/vrefconf16/Pages/default.aspx
3) Center of Excellence: Sustainable Urban Freight Systems (supported by VREF) for webinars and other information available see: https://www.coe-sufs.org/
4) METROFREIGHT Center of Excellence (supported by VREF) for more information see:
http://priceschool.usc.edu/metrofreight-the-localglobal-challenge-of-urban-transportation-planning/
5) Why Goods Movement Matters - by the RPA in collaboration with the VREF (2016) - weblink:
http://www.vref.se/publications/researchsynthesisreports/researchsynthesisreports/whygoodsmovementmattersbytherpaincollaborationwiththevref.5.1feef8b156cfde87aa3d60e.html
Interactive website: http://goodsmovementmatters.org