SOLUTIONS Training Kit
Cluster 3: City logistics

www.urban-mobility-solutions.eu

This project is funded by the Seventh Framework Programme (FP7)
of the European Commission.

About SOLUTIONS

SOLUTIONS aims to foster knowledge exchange and boost the uptake of innovative sustainable urban mobility solutions through the further exploitation of existing knowledge.
The main focus of the SOLUTIONS project is on the exchange between cities from Europe, Latin America and the Mediterranean.

The project looks at the following thematic areas:

- public transport
- transport infrastructure
- city logistics
- integrated planning / sustainable urban mobility plans
- network and mobility management
- clean vehicles

Introduction to Cluster 3: City logistics

City logistics: (1) delivery and collection of goods for local companies; (2) supply of households which include individual travel and home delivery and; (3) more specific supply chains (public works, waste handling, etc…)

Issues: essential factor for economic activity, but high impacts on the environment and on the health of the most vulnerable residents, in particular in cities in emerging countries

Main focus: effectively respond to freight requirements for the economy while decreasing the environmental and social impact, promote innovative logistics services

SOLUTIONS for	Type of impact
Urban deliveries with cargo-cycles	Improve (avoid)
Low Emission Zones (LEZ)	Avoid (improve)
Forums, portals, labels and training programs	Improve
Promotion of off-hour deliveries	Improve (avoid)
Networks of pick up points	Avoid
Larger use of rail and water	Shift (avoid)
Urban Consolidation Centers (UCCs)	Avoid (improve)
Municipal procurement reorganization	Avoid (improve)
Lorry lanes for urban freight transport	Improve
Pricing schemes, taxes and tolls	Improve

Solution 3.1: Urban deliveries with cargo-cycles for the last mile

Solution 3.1: Urban deliveries with cargo-cycles for the last mile

Objectives and implementation

- For companies: bypass congestion in order to improve productivity and quality of service, demonstrate environmental efforts
- For public authorities: mitigate transport externalities (congestion, atmospheric pollution, etc.) by changing diesel vans and trucks to ‘clean’ cargo-cycles
- Cooperation between the cycle operator and the local administrations can help implementation

Solution 3.1: Urban deliveries with cargo-cycles for the last mile

Opportunities and transferability

- Perfectly transferable to the big cities worldwide
- Mainly applicable in dense and congested city centers
- In Rio de Janeiro, Brazil, the benefit of the cargo cycles was estimated to be important for the economy of the city according to Associação Transporte Ativo' (Active Transport Association)

Solution 3.1: Urban deliveries with cargo-cycles for the last mile

Examples

- Several cargo cycle companies in Paris (France), London (UK) and other European large cities, examples in dense US cities (Manhattan)
- SMILE pilot in Barcelona (Spain)
- CIVITAS-Archimedes project in San Sebastian (Spain)

Solution 3.2: Low Emission Zones (LEZ)

Solution 3.2: Low-Emissions Zones (LEZ)

Objectives and implementation

- In an LEZ, access to a certain area is denied to vehicles which do not meet certain criteria – typically pollutant emissions levels
- Environmental objectives: mitigation of pollutant emissions, decrease in particulate matter
- Main types of control: video surveillance (London); ‘visual’ control by local police (Germany)
- Effectiveness is still somewhat unproven but helps modernize the urban trucking market
- Main positive point: it is a broadbase strategy, targetting many polluting vehicles in one single measure

Solution 3.2: Low Emission Zones (LEZ)

Opportunities and transferability

- Some regulations already implemented in many developing and emerging countries
- Starting conditions are particularly favourable in Asian cities
- Possible transfer of experience from Asia to Europe
- Integration of already existing schemes into a wider sustainable freight transport policy package

Solution 3.2: Low-Emissions Zones (LEZ)

Examples

- LEZs have been widely implemented in Europe (>250 cities/regions), a good overview of which is available at www.lowemissionzones.eu.
- London Low Emission Zone: most comprehensive, large vans and all types of trucks included, implemented in a very large zone and not only in the city centre, well enforced

Solution 3.3: Freight forums, information portals, labels and training programmes

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Objectives and implementation

- Good solutions for cities who do not wish to regulate too much (force) but wish to encourage good initiatives
- Provide incentives for voluntary changes of behaviour
- Enhance cooperation between local authorities and urban transport operators

Solution 3.3: Freight forums, information portals, labels and training programmes

Opportunities and transferability

- Portals in many parts of the world, like the green freight and logistics program of Clean Air Asia Portal' http://cleanairinitiative.org/portal/greenfreightandlogistics
- Can be developed nearly everywhere, for large or specific issues and can be rather cost effective
- A very good way for municipalities to get to know freight operators better and solve problems in cooperation

Solution 3.3: Freight forums, information portals, labels and training programmes

Examples

- Partnership on Good Practices – Toulouse (France)
- Strategic Freight Holders Club in Urban Areas – Norwich (UK)
- London Freight Partnership (2007)
- Paris Sustainable Logistics Charter (2013)

Solution 3.4: Pick-up points

Solution 3.4: Pick-up points

Objectives and implementation

- Secured places where customers can take parcels they have bought
- Targets internet customers
- Avoids many truck-kilometers all the way to final customers
- Make supply chain more flexible and increase efficiency and reliability
- Easier route planning & timing

Solution 3.4: Pick-up points

Opportunities and transferability

- Leading cities in Asia (Japan), Europe (France, Germany, UK, Netherlands) and North America
- Transferable to any regions, mainly where e-commerce is developing fast
- Initiative mostly from private companies

Solution 3.4: Pick-up points

Examples

- Binnenstadservice, Nijmegen (Netherlands)
- DHL Packstation, Germany
- Walmart stores, North America
- Kiala network of pick-up points in France (bought by UPS in 2012)

Solution 3.5 Vehicle and operation regulations on time, weight and size

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Objectives and implementation

- Time regulations can be imposed on goods vehicles in a particular road or urban area
- Protect residents or to reduce congestion associated with urban freight (sometimes contradictory)
- Time windows can lead to traffic congestion in peak hours and to a poor utilization of vehicles

Solution 3.5 Vehicle and operation regulations on time, weight and size

Opportunities and transferability

- Potential take-up cities are large cities with major congestion problems
- Main focus should be on promoting off hour deliveries

Examples

- Dutch cities: PIEK program including R&D to develop low noise vehicles and equipment
- New York City (USA) off hour strategy being tested
- European cities: Dublin (Ireland), Barcelona (Spain), Paris (France) – on a more limited scale

Solution 3.6: Urban consolidation centres (UCC)

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Objectives and implementation

- Logistics facilities located within or close to urban agglomerations, to enable consolidation of deliveries into the target area
- Allows long distance freight to be carried by larger, more efficient vehicles and inner-city deliveries to be made by smaller vehicles
- Environmental benefits (noise, local pollution and CO2 emissions)
- Economic advantages (reduced delivery times, transport costs) but costs to implement an urban terminal
- Frequently implemented with the help of public subsidies

Solution 3.6: Urban consolidation centres (UCC)

Opportunities and transferability

- Centres often fail to meet the potential ascribed to them
- While UCCs have shown limited success in European metro areas (current: Italy, UK, northern Europe), they might be effective in other parts of the world, e.g. Asia
- May well be a solution for the future, which requires cities to make sure urban land will still be available for such schemes

Solution 3.6: Urban consolidation centres (UCC)

Examples

- Many German cities: Frankfurt, Nuremberg, Berlin and Hamburg
- Project in London (UK)
- Padua (Italy)
- La Rochelle (France)
- Motomachi (Yokohama, Japan)

Solution 3.7 Municipal procurement, delivery reorganization at building level

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Objectives and implementation

- Procurement decisions have direct impact on transport and so on emissions and congestion
- City administrations should require environmentally-friendly freight deliveries for their own supplies
- A municipality can also promote a reorganization of deliveries within large buildings, including its own buildings

Solution 3.7 Municipal procurement, delivery reorganization at building level

Opportunities and transferability

- Potential Take-up cities: All of them, to set examples
- In practice, municipal administrations with no severe financial constraints are suited best

Solution 3.7 Municipal procurement, delivery reorganization at building level

Examples

- Delivery Servicing Plans in London (UK)
- Projects in Gothenburg (Sweden) for clean deliveries in municipal buildings
- Green Link in Paris (France): delivery of municipal meals to old people’s homes with cargo-cycles

Solution 3.8 Rail and waterways for freight deliveries

Freight delivery in Utrecht (CIVITAS)

Solution 3.8 Rail and waterways for freight deliveries

Objectives and implementation

- Reduce congestion, atmospheric pollution and noise resulting from trucks
- Costs may be high, according to the existing infrastructure
- Use of non road-based means generally implies additional transhipments and a lack of flexibility
- Noise emissions from rail freight activities or from transhipment operations

Solution 3.8 Rail and waterways for freight deliveries

Opportunities and transferability

- Mainly suited for big flows of heavy products like building materials
- For other product (pallets) some sort of public subsidies are required to cover for additional costs
- Potential gains are high if infrastructure (railway, waterway, urban terminals) is available

Solution 3.8 Rail and waterways for freight deliveries

Examples

- Waterways: “Beer boat” for beverage delivery in Utrecht (NL); in Paris (FR) Lafarge for building materials, Franprix (a large retailer) for pallets
- Heavy rail: Monoprix, a French retailer, is supplying 90 supermarkets in Paris by train, from an intermodal terminal located 35 km south of Paris to a rail terminal located within Paris (Bercy station in the East)
- Light rail: “Cargotram” in Zurich (CH); Volkswagen factory in Dresden (Germany); “Tramfret” project in Paris (France)

Solution 3.9 Urban truck lanes

Solution 3.9 Urban truck lanes

Objectives and implementation

- Reducing congestion & mitigating impacts of truck traffic especially in high-truck-volume corridors
- Separating trucks from cars to improve safety and reliability
- Providing improved travel times and reliability for trucks serving ports and intermodal sites
- Complementing innovative freight-oriented land use strategies (e.g. inland ports or freight villages)

Solution 3.9 Urban truck lanes

Opportunities and transferability

- Can potentially be transferred to other cities
- …but no data so far

Solution 3.9 Urban truck lanes

Examples

- Street use management scheme in Barcelona (Spain)
- Combined lanes for buses and trucks in Berlin (Germany)
- Padova (Italy) and other Italian cities allow goods vehicles to enter bus lanes if they meet environmental standards
- Projects for truck only lanes on Los Angeles freeways connected to ports

Solution 3.10 Pricing measures

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Objectives and implementation

- Reduce peak hour travel and ease traffic congestion
- Generate revenue and/or ease congestion
- Toll roads, toll bridges and toll tunnels are often used for revenue generation to repay the long-term debt issued to finance facilities/infrastructure
- Price externalities (emissions)

Solution 3.10 Pricing measures

Opportunities and transferability

- Can improve the overall efficiency of urban freight movements
- Can foster the development of more sustainable logistics and distribution strategies
- In large agglomerations, suitable pricing schemes for urban freight transport may yield reliability and travel time benefits that exceed the cost for the measures

Solution 3.10 Pricing measures

Examples

- Cordon pricing scheme in Bergen, Oslo and Trondheim (NO)
- London (UK) congestion charging zone
- Stockholm (SE) congestion charging zone
- Milan (IT) “Area C”
- New Zealand (RUC), Switzerland (LSVA), Germany (LKW-Maut, but not on urban roads), Austria (Go-Maut), Czech Republic, Slovakia, Poland
- Oregon, New York, Kentucky and New Mexico (USA)

Thank you!

Contact us:

info@urban-mobility-solutions.eu

www.urban-mobility-solutions.eu

@SOLUTIONS_EU

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