



Background Cluster 3: city logistics

The main focus of Cluster 3 is on 'city logistics': effectively acknowledging freight requirements for economic development, while decreasing its environmental and social impacts. This implies decreasing the number of commercial vehicles without increasing other traffic, decreasing commercial vehicles' emissions (PM, NO_x and CO₂) and preventing traffic congestion caused by vans and lorries double-parking during delivery. Among the solutions that can be introduced by public authorities are regulations (traffic restriction, low emissions zones), transport pricing and taxes, transport planning and the development of infrastructure dedicated to urban freight.

Solution 3.1 urban deliveries with cargo-cycles for the last mile

This solution consists of using cycles for deliveries in city centres, where trucks and vans are very slow because of congestion. Bicycles are currently used in many cities for small packages and mail deliveries. For larger volumes of goods and weight (up to 200 kg), tricycles can be used. These cycles often have electric assistance; and can be ridden on normal roads, on bike lanes and even in pedestrian areas (this has to be specifically allowed in local regulations).

Solution 3.2: Low-Emissions Zones (LEZ)

The main objective of LEZs is environmental: mitigation of pollutant emissions. The main environmental result is a decrease in particulate matters. The operational costs of LEZs are highly variable according to the type of control and the cost of the changes in the transport market (services and companies), due to the introduction of the LEZ. Its results are very dependent on the efficiency of control and enforcement. The main types of control are video surveillance (London) and 'visual' control by local police (Germany). In Europe, many implementations of LEZs are attributable to violations of the air quality standards prescribed in the EU's Air Quality Directive (96/62/EG).

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

The objective of freight forums, information portals, labels and training programs is knowledge exchange, providing good solutions for cities who do not wish to impose much regulation, but wish to encourage good initiatives, provide incentives for voluntary changes of behaviour and enhance the cooperation between local authorities and urban transport operators

Solution 3.4. pick-up points

Pick up points are secured locations where customers can pick up packages addressed to them (e.g. goods they have bought on the internet). This approach avoids many truck-kilometres and delivery to final customers by reducing the delivery round-distances and by suppressing the need of rescheduling failed deliveries to home addresses. Pick-up points are advantageous for retailers and delivery operators, as well as for customers. There are different kinds of pick up points (parcel lockers, proximity warehouses, convenience stores and local shops serving as networks, etc.).

Solution 3.5: vehicle and operation regulations on time, weight and size

Weight and size regulations can be enforced by public authorities preventing vehicles of a particular size and weight operating on certain roads. This could also apply to load factors of goods vehicles, but enforcing this last type of regulation is very difficult.

Solution 3.6: urban consolidation centres (UCC)

Urban Freight Consolidation Centres are logistics facilities located within or close to urban agglomerations, where separate deliveries are collected in order to enable consolidation of deliveries into the target area: long distance freight can be carried by larger, more efficient trucks or trains and inner-city deliveries by smaller vehicles, using more of their potential capacity. Consolidation centres can lead to reduced delivery times and to a reduction in the total distance of delivery trips,



i.e. reduced traffic, emissions, fuel use and noise within the city. They require cooperation, trust between the actors involved and may reduce delivery flexibility and also requires financing for their establishment.

Solution 3.7: municipal procurement, delivery reorganization at building level

Procurement decisions have a direct impact on transport, and thus on emissions and congestion. Consolidation of deliveries and working with suppliers to reduce emissions should be a priority for cities. City administrations, for their own supplies, should require environmentally-friendly freight deliveries. This theoretically-simple solution is very rarely implemented. The city can also promote a reorganisation of deliveries within large buildings, including its own. Transport for London, for example, has reorganised its own deliveries, reducing the number of trucks and vans serving its main building.

Solution 3.8: rail and waterways for freight deliveries

Increased use of rail and waterways can reduce the number of trucks and vans on the roads in and around urban areas, although generally this must be combined with the use of road vehicles for the final delivery to the consignee.

Two types of rail infrastructure can be used: heavy rail and 'mainly passenger rail' (subways and tramways). For heavy rail, the scheme is the same as for waterways: goods are consolidated in a terminal located outside of the urban area and transported on shuttle trains or barges to an urban distribution terminal. From this urban terminal, goods are transhipped to motor vehicles, preferably low emission ones, for final delivery. Road traffic is reduced according to the distances and to the freight volume involved.

Solution 3.9: urban truck lanes

The basic idea of this solution is to introduce truck-only lanes to certain sections of roadway in an urban area. A variation of this solution would allow access to such lanes to other

selected types of vehicles, such as busses or high occupancy vehicles, in addition to trucks. Within an urban context, truck lanes may have an impact in reducing traffic delays and improve reliability for goods vehicles on sections of congested urban roads. The following different types of truck lanes exist considering both the exclusive or mixed use of road lanes by goods vehicles:

- Dedicated urban truck lanes – the use of these lanes is restricted to goods vehicles only, which are separated from other traffic through either physical or operational treatments
- No-car lanes – lanes used by both busses and goods vehicles
- High occupancy vehicles lanes – lanes used by buses and cars with specified number of occupants, and certain load factors for goods vehicles.

In addition to the above, bus lanes may also be used, in specific locations, for the (un)loading of goods vehicles but not for travel.

Solution 3.10: pricing measures for freight

Imposing or modifying taxes and providing subsidies or incentives may have a significant impact on urban freight transport services. Road pricing or fuel taxes will increase the price of urban freight, forcing transport operators to seek alternatives like better consolidation of shipments, to reduce costs, thus addressing major inefficiencies and negative externalities. Subsidies and incentives, provided by local authorities, can also encourage the development of sustainable urban freight distribution operations.