

# Containerisation of parcels to support urban logistics

## Urban Logistics

Driven by the growth in online shopping, there is rapid growth in the market to deliver parcels in urban areas.

This growth comes despite there being a desire on the ground to reduce traffic in urban areas, to minimise its negative impacts and improve the quality of life of local residents. This activity represents around 20% of urban traffic, and produces 25% of total urban mobility greenhouse gases.

## Current alternatives

A range of alternatives are developing in an attempt to provide viable solutions to this contradiction.

### *Bike Delivery*

With unparalleled accessibility for tight urban areas, bike delivery is expanding throughout a number of European cities. Starting out with couriers and small packages, this activity is now expanding to include the last mile of the journey being sub-contracted by large organisations (La Poste, Geodis, DHL, etc.), thanks to electric bikes with containers varying in size from 0.2 to 2m<sup>3</sup>.

Some operators also offer bike delivery of temperature managed products or pallets.



La petite Reine - Paris

### *Urban Consolidation Centres*

Acting as an interface between logistics platforms on the edges of large cities and the urban areas to be supplied, Urban Consolidation Centres provide the ability to group/divide and store flows of merchandise.



They also provide the ability for mutual handling of flows from multiple order placers allowing optimal final distribution rounds that can then use different vehicles that are better suited to the urban environment.

## Problems

These two complementary alternatives always face difficulties arising from the transloading required when different vehicles are used for the last mile of a delivery. Aside from the additional handling this requires, they also need to use easily accessible space that is ideally located in the heart of (or at least on the edge of) areas to be supplied.



## Containerisation

### Illustration

The growth in international maritime traffic is supported by the principle of standardised containers suited to holding a large variety of merchandise. These Intermodal Transport Units facilitate the transloading of merchandise when transferred from one leg of the transport chain to the next.

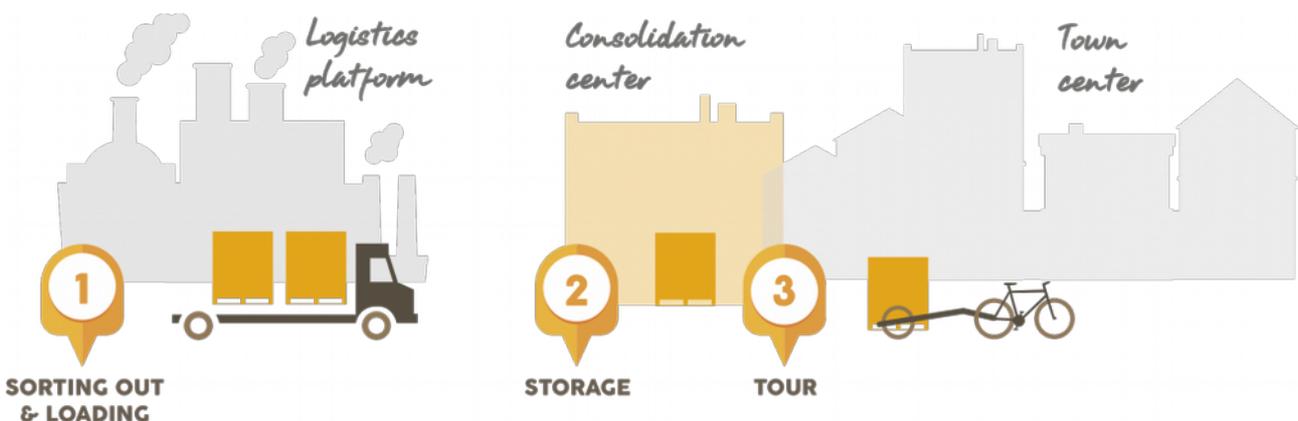


Transposing this to the scale of urban logistics, the introduction of an Intermodal Transport Unit minimises the impact of transloading for the last mile of the parcel's journey.

In this case, a lorry is used to transfer merchandise containers from logistics platforms to Urban Consolidation Centres, which have become the equivalent of a port in the maritime example, with the bike becoming the equivalent of the lorry collecting this and completing the last mile of the journey.

### Principle

At logistic platforms of organisations placing orders, the packages are sorted by delivery round and loaded into containers.



The containers are then transferred to the Urban Consolidation Centres where they are stored awaiting collection for the delivery round.

## Advantages

Using this containerisation for urban parcel delivery provides numerous advantages:

- reduced handling of parcels (increase in productivity, reduced lateness & reduced risk of damage to merchandise)
- The merchandise is protected in secured containers
  - the transfers of liability between order placers and sub-contractors are simplified and more secure
  - the flow of standardised containers entering city centres can be more easily shared and used on a mass scale
- The personalisation of containers with the image of order placers reduces the loss of image that can in many cases result from using sub-contracting for last mile delivery
- By decoupling the container from the delivery vehicle, containers for delivery rounds can be prepared while the delivery agent is out on a previous round (increased respect of delivery schedules & increased productivity)
- A wide range of containers (controlled temperature, returns logistics, remote storage, etc.) allows a diversification in the types of merchandise flows (increased profit from material and facilities)

## Perspectives

These advantages also change the situation when it comes to requirements for Urban Consolidation Centres right at the heart of cities, which can be complicated to set up and operate. The minimisation of transloading as a result of containerisation results in reduced space requirements for sorting and protecting the merchandise.

Various experiments have been performed in recent years using barges and road vehicles (semi-trailers & mobile containers). These mobile units can be used to transfer merchandise from the outskirts of the city, and then serve as Urban Consolidation Centres at the heart of the areas to be supplied.



TNT

However, the transloading involved in these solutions often led to them being abandoned.

The supply of solutions minimising the impact of transloading will allow these experiences to be appreciated from a new perspective.



Vert chez Vous - Groupe Labatut

## Bike Delivery Containers

Intermodal Transport Units in Euro pallet format (120/80cm) are particularly well suited to bike delivery, fitting perfectly into current logistics chains (systems for handling, transport, storage, etc.).

Multiple European manufacturers of utility bikes are starting to implement these solutions with major players in the logistics industry.



Armadillo from Velove

FlexiModal in particular has developed its BicyLift solution, which combines a handling system with a delivery vehicle. Aside from the ability to deliver pallets by bike, this facilitates the use of containerisation for an urban final mile.



**Bicy**lift  
— levez, livrez —

For further information please see [www.fleximodal.fr/en](http://www.fleximodal.fr/en)