

Sustainable solutions for logistics and urban freight delivery in the Alpine region

Alpine Convention
Working Group
“Transport”
Sub-group
“Soft Mobility”

Executive summary



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Table of content

1Background.....	1
2National framework	1
3Towns concerned by the study.....	2
4Measures and best practices.....	3
5Main findings.....	4
6Recommendations of the Working Group.....	5
Development of public-private partnership and promotion of sustainable urban logistics charters	5
Using regulations to develop carbon-free deliveries	5
Taking into account deliveries in urban spaces design.....	5
Carrying out specific surveys to improve knowledge.....	5
Preservation of non-road infrastructures and promotion of their use	5
Development of the use of cargo bikes	5
Prevention of logistics' dispersion by preservation of existing logistics space	5

1 Background

In 2012, the 51st Permanent Committee of the Alpine Convention defined the mandate for the Transport Group for 2013-2014. It asked the Alpine delegations to further investigate on the issue of logistics and urban freight delivery. Actions, experiments and projects in Alpine towns were analysed, measures and solutions aiming at improving urban efficiency and quality of life for residents were reported. It was decided to focus on case studies in selected towns in the Alpine area, but not to ignore relevant external approaches if they can be transferred. This synthesis report summarises the national contributions.

2 National framework

Knowing the legal framework and the organisation of local authorities is a prerequisite to any comparative work and to any transposition to other towns. Consequently, the report comprises a short description for Austria, France, Germany, Italy and Switzerland:

- **Austria:** The transport policy has a clear strategy of shifting freight transport from road to rail. In relation to the discharge of urban streets from heavy freight trucks, direct rail connections to / from factories and freight distribution centres are considered. On the level of company strategies and measures to reduce costs and environmental impacts have already been successfully implemented. The combined transport network NINA and some combined transport terminals have an important function for urban and regional logistics, e.g. Hall in Tyrol and Cargo Center Graz. Further national supporting programs for research, development and implementation of measures are considered as important contributions to improve efficiency of urban and regional freight logistics. Examples for such programmes are Klima:aktiv mobil and Future Mobility.
- **France:** The urban transport authorities, which have several legal forms (communes, groups of communes, intercommunal boards or joint management boards), are responsible for preparing and managing sustainable urban mobility plans, which comprise also urban freight transport. The authority to issue access restrictions to certain roads in the conurbation is the commune. When conurbations include several communes, they often cover areas with different regulations for transport introduced by local authorities. A single conurbation may therefore have dozens of regulations and standards concerning delivery vehicles. Delivery companies often face inconsistent regulations that are difficult both to understand and to follow. The task of organising freight delivery is rather complex due to the vast array of institutional stakeholders.
- **Germany:** Due to the federal structure the legal framework for freight transport is complex - the responsibilities are delegated to authorities on different regional levels. In relation to freight traffic within the urban road network, the towns have the most relevant authorities. They can compile a transport development plan and integrate goods transport, but this is

not mandatory. The present transport development plans are often rather dedicated to public transport issues than goods transport or urban logistics.

- **Italy:** Regarding mobility the Italian legal framework assigns full autonomy to municipalities. In order to reduce the environmental impact of pollutant emissions and city traffic, the mayors of several Italian municipalities introduced restrictions on traffic circulation, generally in the inner areas. As these measures are very heterogeneous, the Ministry for Transport and Infrastructure highlighted the need for a more harmonised legislation on urban traffic in 2010. Currently, the Ministry of Transport is working on a process aiming not only at promoting a harmonisation procedure between stakeholders, but also at developing a long-lasting sharing of experiences and know-how that municipalities should accrue under the actions of the agreement.
- **Switzerland:** There is no specific national regulation for urban transport, but infrastructure projects in urban areas can be co-funded with means from the so-called infrastructure fund. Two programmes for infrastructure projects in agglomerations have been launched since the fund exists, but their focus is clearly on passenger transport. There are two important general regulations influencing freight delivery also in urban areas. The first is the so-called night ban, prohibiting the use of heavy goods vehicles during night hours between 10 p.m. and 5 a.m. The second regulation is the performance-related heavy goods vehicle fee, which includes external costs and is therefore relatively high. Moreover, the municipalities can enact traffic regulations like e.g. limited access to specific roads.

3 Towns concerned by the study

The delegations have been asked to conduct an analysis on logistics and urban freight delivery in selected Alpine towns as presented in the table below. The detailed analyses are included in appendix 1 of the report.

France	Grenoble, Annecy and Chambéry
Germany	Rosenheim, Bad Reichenhall, Garmisch-Partenkirchen, Kaufbeuren, Kempten and Lindau
Italy	Aosta, Torino, Como and Trento
Switzerland	Thun, Bulle and Zizers

The framework of the analysis included :

- Overview of the town
- The issue of urban freight delivery in regional organisations
- The current freight delivery situation in the conurbation
- The actions, experiments and projects

4 Measures and best practices

The report uses a distinctive categorisation of measures which was applied in the European reports on urban logistics such as COST321, BESTUFS or SUGAR. The "Soft Mobility" Sub-group of the Alpine Convention has chosen 8 categories to classify the national measures. The delegations documented almost 50 best practices of these measure categories within and outside the area of the Alpine Convention. They are specified in appendix 2 and 3 of the report.

Governance and cooperation	Measures like establishing a governing body or a consultation processes.
Regulation and organisation	Regulation is the main tool that a town can use to ensure a more efficient last mile delivery. Currently, towns use preferably truck access restrictions, which are based on various criteria like time frames, weight, size, emissions, loading factor, type of goods. Regulations need to be enforced in order to prevent drivers ignoring them, but this can, however, require significant resources.
Infrastructure	New infrastructure can be built with a certain emphasis on urban goods transport. The most widely used tool in urban areas is the loading bay, probably because of its local nature and its relatively easy incorporation into the road network. Another type of infrastructure measures are Urban Logistics Spaces (ULS), which aim at breaking up and reorganising the flows through the town. They are an effective response to demand for more designated logistics space from logistics companies. There are several types of ULS : • Urban Logistics Zones (ULZs) are main entry points for freight into conurbation. • Urban Distribution Centres (UDCs) are designed for parcels that are coming from or heading to a problematic area of the town. • Local Logistics Spaces (LLSs) are small logistics spaces (150 to 300m²), designed to provide a logistics facility located in close proximity to businesses or individuals concerned, and thereby improving the efficiency of delivery rounds.
Urban planning	It is quite uncommon to use town planning measures in urban freight transport policy, but it could be an interesting solution to achieve more sustainable goods mobility in town centres.

Education and information	Urban authorities can provide freight transport companies and drivers with information such as maps or the use of real-time information. Examples are lorry route maps, web-based information on traffic problems and roadworks, information boards.
Supply chain management	Physical distribution of goods to consumers is a crucial factor of the last mile business model. Possible solutions are e.g groups of reception boxes. In this case, the customer to be the last part of the chain. Another example is the introduction of environmentally friendly vehicles (EFV) into urban transport, which at present is most common in Western European countries.
Intelligent transport system (ITS)	ITS makes use of technologies like telematics, GPS, smart cards etc. It can be divided into freight transport management systems mainly used by freight companies which allow effective planning of vehicle loads and journeys, in-cab communication etc. and traffic management systems which are used by authorities to manage traffic on certain roads.
Data acquisition and modelling tools	To model and simulate the traffic system and transport it is very important to manage and forecast urban freight. This applies for public agencies as well as for the private sector. Freight demand models are one component of transportation planning at strategic, tactical and operational levels.

5 Main findings

The case studies of Alpine towns and the best practices lead to six main conclusions :

- There is no major difference between the problems of urban logistics in Alpine towns and other locations, except for the negative impacts.
- In most of the towns, there is a lack of statistics concerning urban freight transport. The data availability is poor compared to passenger transport.
- Transportation issues in towns are often focused on passenger transport. Urban freight is not taken into account locally.
- Coordinated freight transport has to be performed as a combination of positive incentives and restrictions.
- In some towns freight transport is perceived as a completely private issue. Freight transport is not on the agenda of policy and administration in small towns, as negative effects of freight transport are perceived as a minor problem compared to commuting and passenger transport.
- Some themes are well-known and thus well-implemented while some are ignored completely. These ignored topics are therefore going to be developed in more detail in this report below.

6 Recommendations of the Working Group

To support innovative and functional logistics concepts in urban freight delivery the "Soft Mobility" subgroup drew up seven recommendations:

Development of public-private partnership and promotion of sustainable urban logistics charters

Urban logistics involves many different institutional and professional stakeholders. Consultation is thus a crucial success factor of any project. A sustainable urban logistics charter should contain requirements for local authorities and freight delivery companies to promote solutions that are beneficial to urban deliveries. These may include the use of environmentally friendly vehicles, the harmonisation of delivery times, or more efficient use of dedicated spaces. An urban distribution charter should be the result of local negotiations and its content should vary according to the partners (including individuals) involved, their objectives and their willingness to commit themselves to the process.

Using regulations to develop carbon-free deliveries

Restrictions for heavy vehicles can be a very effective short-term instrument, but positive measures can be more effective, such as greater time frames for electric vehicle deliveries.

Taking into account deliveries in urban spaces design

Delivery vehicles require space which should be planned and reserved during retrofitting of streets and neighbourhoods or in new urban projects.

Carrying out specific surveys to improve knowledge

Permanent or periodic surveys and statistics on urban freight transport are needed for a sound analysis and the development of an efficient goods transport system.

Preservation of non-road infrastructures and promotion of their use

Non-road infrastructure, if available, has to be preserved, even if it is not used currently. Otherwise, the idea of modal shift will disappear with them and re-installation would be more costly.

Development of the use of cargo bikes

Promoting the use of cargo bikes can be a solution to reduce the negative impact of freight transport in town centres and electric bikes may extend their operating distances.

Prevention of logistics' dispersion by preservation of existing logistics space

The dispersion of logistics activities induces many problems like land use, longer distances, road sharing and congestion. Therefore it should be ensured that logistics activities stay close to the urban tissue, even if the price of land in the town centres is too exuberant for logistics activities. It is a challenge for communities to reserve land through planning documents.

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The following experts have participated in the study: Inga Ahrens (DE), Paolo Angelini (IT), Céline Avril (FR), Ueli Balmer (CH), Franziska Borer Blindenbacher (CH), Daniel Chemin (FR, coordinator), Laura Clergue (Fr), Karl Fischer (DE), Wolfgang Grubert (AT), Veronika Holzer (AT), Ernst Lung (AT), Stefan Marzelli (DE), Nicola Neumeier (DE), Stefanie Pfändler (CH), Thomas Plantier (FR, editor), Zlatko Podgorski (SI), Christian Rankl (AT), Massimo Santori (IT), Claudia Schwarz (DE), Harry Seybert (DE) and Raffaele Vergnani (IT).

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