



URBAN FREIGHT TRANSPORT AS A PART OF TRANSPORT CHAIN

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Abstract: *The contribution deals with urban freight transport and city logistics. It solves how to minimize number of transport means in the center of cities. It describes specialities and problems of urban freight transport, and new trends in urban freight transport. The paper deals with organisation and research on freight transport in urban areas.*

Key words: *urban freight transport, urban areas, freight village, land consumption, traffic jams*

INTRODUCTION

In big areas and cities are highway and in-town congestions a significant problem. Some cities have banning automobile and truck traffic during certain hours of the day. Closely related to congestion is vehicle emission. In addition to delays in transmit times, vehicle emissions must necessarily increase as truck „sit“ in traffic jams or travel at very slow speed on public highways. One of the solutions of this problem is to build an urban freight villages as a part of transport chain near big towns.

CITY LOGISTICS

A large demand on transport capacity (in goods transport as well as passenger transport) stands in opposition to a very limited offering on the side of infrastructure in the centre of metropolitan areas. This leads to road congestion, which has the repercussion of considerable delays in the transport process. Further infrastructure development is hardly possible because of intensive land use and is additionally associated with great financial expenditures.

In the centres of metropolitan areas, transport should have been dealt with as environmentally friendly as possible, because of the higher

settlement densities. Corresponding to this is emissions controls, as well as noise barriers and land consumption.



Pic. 1: Traffic congestions in big cities

An effective freight villages has a major impact on the success of the freight transport in towns. To maximize the opportunity to positively affect the transport mission, the freight villages must be located at the optimal site, employ handling systems appropriate or the nature of the product, utilize proper handling equipment, and be supported by an effective information system.



Pic. 2: Traffic jams

Urban freight transport has become an important issue in urban planning. There are many challenges and problems relating to increasing levels of traffic congestion, environmental impacts and energy conservation. In addition, freight carriers are expected to provide higher levels of service with lower costs. To address these complicated and difficult problems, numerous City Logistics schemes have been proposed and implemented in several cities, including: cooperative freight transport systems, advanced information systems, public freight terminals and the regulation of load factors. City Logistics schemes are relatively new concepts that are aimed increasing the efficiency of urban freight transport systems as well reducing traffic congestion and impacts on the environment.

The aim of city logistics is to minimize number of transport means into the center of city. One of the most popular methods is to build freight villages near big cities.

INFRASTRUCTURE AND SERVICES OF FREIGHT VILLAGE

There is the diversity of conception in understanding the scope of a freight village. To ensure coherence and transferability because of the widespread use in different countries, a common definition of freight village was developed in the Best Practice Handbook:

A freight village is a centre in a defined area, within which are activities relating to transport and distribution of goods – both for national and international transit, are carried out by various operators on a commercial basis.

The operators can either to be owners or tenants of buildings and facilities (warehouses, distribution centre, storage areas, offices, truck services, etc.), which have been built there. In order to comply with free competition rules, a freight village must be open to allow access to all

companies involved in the activities set out above.

A freight village must also be equipped with all the public facilities to carry out the above – mentioned operations. If possible, it should include public services for the staff and equipment of the users. In order to encourage intermodal transport for the handling of goods, a logistics centre should be preferably be served by a multiplicity of transport modes (road, rail, deep sea, inland waterway, air).

The freight village has many function. Its activity scale are:

- long –distance transportation,
- transshipment,
- storage,
- warehousing,
- consolidation and deconsolidation,
- gathering,
- packaging,
- material-handling,
- information technology.



Pic. 3: Freight village Graz



Pic.4: Freight village Bologna

NEW TECHNOLOGIES IN FREIGHT VILLAGE

In freight villages there are many possibilities to provide their activities better:

- cheaper transshipment,

- separation of long distance transport and short distance transport (adequate vehicles for short distance transport),
- promotion of rail transport.

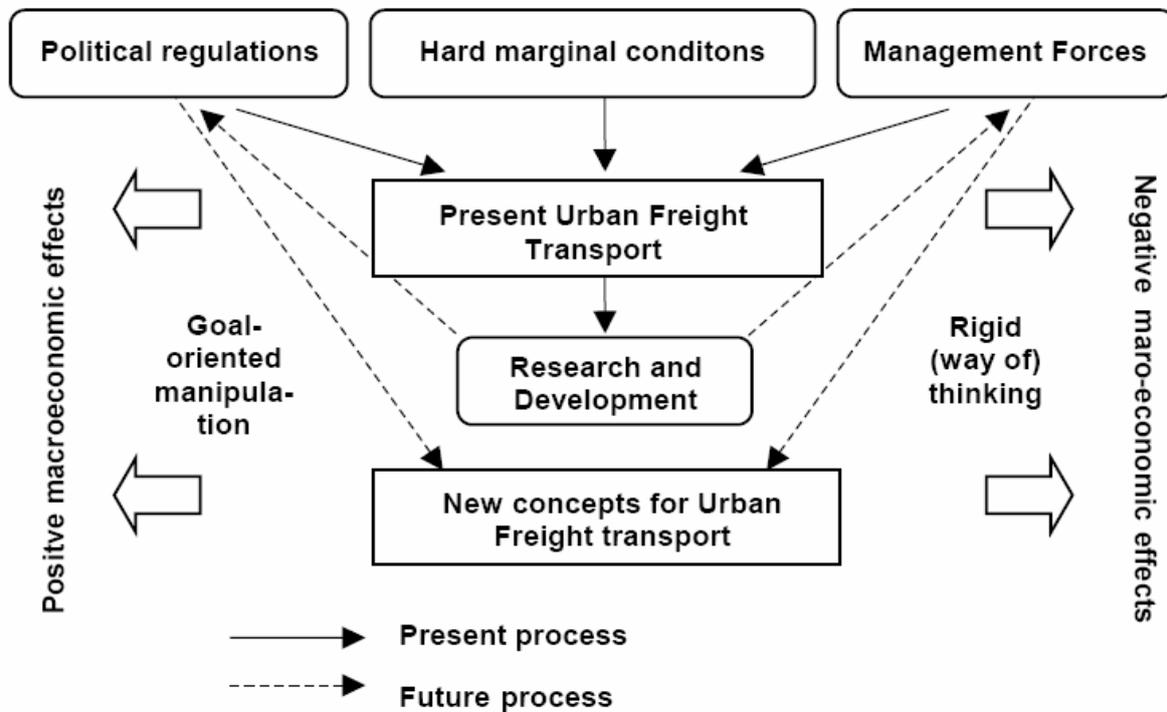
As a first part there is possibility to provide new transshipment techniques to promote combined transport. Nowadays are used technologies as Cargo-beamer, Modalohr, Krupp. Other technology is to use smaller containers in the freight villages. The reasons are more adequate load units for supply and delivery, cheaper deconsolidation, long distance container = short distance container (no interruption in transport chain), better degree of utilisation of loading capacity.

New technologies we can implement into an administrative control mechanisms, for example

creation of regulations (weight, emission, delivery times, access roads, loading zones), taxation or subsidy and infrastructure development.

The conditions under which freight transport in urban areas must be transacted differ greatly from those in rural areas.

One reason for the characteristic of freight transport in urban areas is the significant environmental sensitivity of densely settled areas. As a result, extensive research in this field has been undertaken in recent years. However, these new developments in the freight transport sphere have not come to the forefront, although they are essential for future development. Improvements are only possible when all participants are well versed in the new knowledge and begin to put it into practice.



Pic.5: Research on freight transport and city logistics

CONCLUSION

Generally speaking, freight villages may be an important element in city freight transport solving.

Freight villages represent the only transport realities that could offer the required infrastructures to develop rail/road/maritime transport and synergic actions with inland ports and then have to be considered strategic nodes

because they support the optimization of the logistics chain, decrease of congestion/concentration of the transport flows, (the concentration of the flows and the road traffic in only one node can support a more efficient rationalization of road transport and decrease the level of congestion inside urban areas), decrease of environmental problems, decrease of the industrial product total costs/ increase of the industrial sector competitiveness (the decrease of

the total costs implies an increase of the competitiveness among the enterprises and supports the economic development of the local area), decrease of the de-industrialization (the concentration of all major transport flows and logistics activities implies a decrease both of the relating costs and the de-industrialisation trend).

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This work was supported by the Slovak Resaerch and Development Agency under the contract No. APVV-20-002805 and Vega č. 1/3329/06.

ГРАДСКИЯТ ТОВАРЕН ТРАНСПОРТ КАТО ЧАСТ ОТ ТРАНСПОРТНАТА ВЕРИГА

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СЛОВАКИЯ*

Резюме: Докладът е посветен на градския товарен транспорт и градската логистика. Решава се как да се минимизира броят на транспортните средства в центъра на градовете. Описани са спецификата и проблемите на градския товарен транспорт и новите направления в градския товарен транспорт. Докладът представя организацията и изследванията върху товарния транспорт в градските райони.

Ключови думи: градски товарен транспорт, градски райони, товарни терминали, потребление на земя, задръствания.