

FUT Symposium 2012-10-01

Urban Freight for Livable Cities:

-How to deal with collaboration and trade-offs.

A. Sharing the Urban Space

Sharing the urban space: a story of stakeholder support

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Today, the distribution of goods in urban areas is generally perceived as a problem. On the one hand, there are the urban citizens having a problem with the nuisance the often half-empty diesel vans and trucks cause to them, e.g. congestion, noise, environmental pollution, etc. On the other hand, the professionals involved are not able to organise their supply chains in the most efficient way because they have to operate in an existing urban space they have to share with many other actors. During the past few decades, multiple solutions have been developed by local policy makers, research institutes and private companies. Each time, the goal was to optimize urban freight transport according to their objectives or, in the case of research institutes, to the objectives of a particular actor. Still, practice has shown that when implemented, many of these solutions are granted only a short life, mainly because this one-sided approach does not take into account the goals of the other actors. A well-known example is the conventional urban consolidation centre which is often imposed and heavily supported by the local government but does not receive support from the local carriers and receivers. In order to enhance their chances for success, a new generation of urban freight solutions should aim to address the needs of all actors involved and use the extent to which a particular solution succeeds in doing that as a basis to decide whether or not to implement it.

The question is how to compare different solutions mutually and how to balance the often conflicting objectives of the stakeholders against each other. This presentation (paper) proposes the multi-actor multi-criteria analysis (MAMCA) as the appropriate method for this. It differs from a classical multi-criteria decision analysis (MCDA) because it introduces the different stakeholders in a very early stage. Once the problem is defined and the alternatives are identified, all stakeholders are listed together with their objectives and the importance they attribute to each objective. Afterwards, criteria are defined to be able to score each alternative on every objective of all stakeholders. The next step is the construction of an evaluation matrix, aggregating each alternative contribution to the objectives of all stakeholders. Finally, the MCDA yields a ranking of the various alternatives and reveals the strengths and weaknesses of the proposed alternatives.

To illustrate that the MAMCA is a practical tool to mutually compare urban freight solutions, the presentation (paper) shows how it will be applied to decide whether it is a good idea for TNT Express to permanently implement a Mobile Depot for its Brussels inner-city deliveries. This Mobile Depot is a trailer equipped with all depot facilities from where last-mile deliveries are carried out by electrically driven tricycles. This solution was developed within the framework of the European research project STRAIGHTSOL and will be tested for a period of 3 months at the beginning of 2013. Afterwards, its performance will be compared to two alternative ways of working by using the MAMCA.