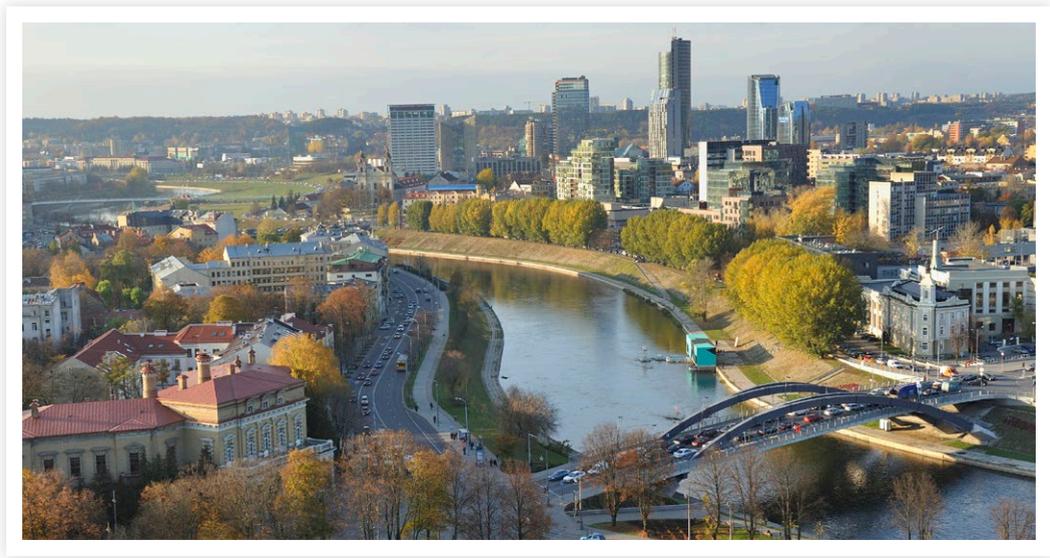


The development of sustainable freight transportation in urban areas

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Introduction

The purpose of this thesis is to offer local authorities with a basis for planning to enable sustainable freight transport in urban areas. The thesis presents seven case studies of towns in Northern Europe with an overview of the situation and of how existing problems are addressed – or, as some studies show, not addressed. The studies were made in small, medium and large towns in Eastern as well as Western Europe, for example Gothenburg, Bremen and Kaunas.

In working towards long-term and sustainable development strategies, local authorities often take decisions that affect freight transportation in regions and urban areas. Unfortunately, the authorities are not always aware of the consequences of the decisions and their impact on freight transport. Freight transport is in many ways a neglected area, and few towns have a comprehensive strategy for

transport planning. As a consequence, there is a clear need for an increased understanding of goods distribution and the characteristics of sustainable freight transportation in urban areas.

Several research studies indicate that freight transport represents a problem in city centers and that more resources and improved knowledge is needed to enable local authorities to include the aspect of freight transport in their overall traffic and transport planning processes. Freight transport and deliveries are crucial to the economic development and attractiveness of a region. This thesis highlights the need for measures and aims to help local authorities include these in their sustainable development planning.



Maria Lindholm's definition of urban freight transport:

”Urban freight transport is defined as all movements of goods (as distinct from people) in to, out from, through or within the urban area made by light or heavy vehicles, including also service transport and demolition traffic, shopping trips made by private households and waste (reverse logistics).”

Focus on problems – as opposed to solutions

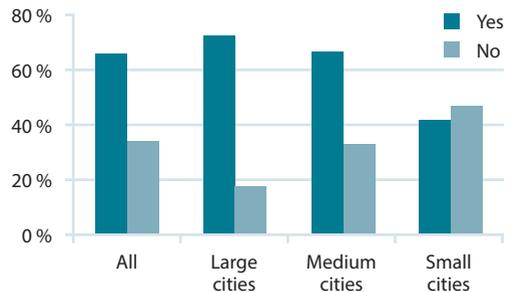
Previous research in this field has focused primarily on Dutch, French, Italian or British towns. In Northern Europe, many towns still lack freight transport plans and strategies; in the study, only three towns had a dedicated person in charge of this area. Freight transport planning is poor in Swedish towns and towns in the Baltic states despite a general awareness that freight transport is a significant factor in the economic development of the towns.

The interviews showed that aspects of freight transport is not a prioritized area and is not allocated a proportionate part of traffic planning compared with public transport, cycling or walking routes. Freight transport is included on the agenda mostly in connection with complaints or solution of specific problems. In these cases, freight transport is mostly handled as a disturbing element that warrants restrictive measures, which always aim to reduce the negative effects of freight transport. The measures are rarely focused on the necessity of the transport operations or on how they could be more efficient. Towns, which do include freight transport aspects in their planning do so with a focus on logistics from a broad perspective, and do focus specifically on freight transport.

Because there is also a lack of data and statistics in this field, the established tools available for traffic planning cannot be used. This situation is a result of the fact that transport operators are often unwilling, for competitive reasons, to share

information, and local authorities simply do not know what information they should request. None of the towns in the study collects data on a regular basis.

The towns in the study are all located in Northern Europe, but are of different sizes. The theory that size is a crucial factor for how towns handle freight transport has turned out to be false. There was no evidence that differences were due to the size of the towns, even though this does not, as such, prove that there are no differences. On the other hand, the investigation shows that all measures must be adapted to regional and local conditions and that most of these are scalable.



Answers from the Swedish form to the question "Do you think that freight transport in urban areas is a problem?"

Committed individuals and better information

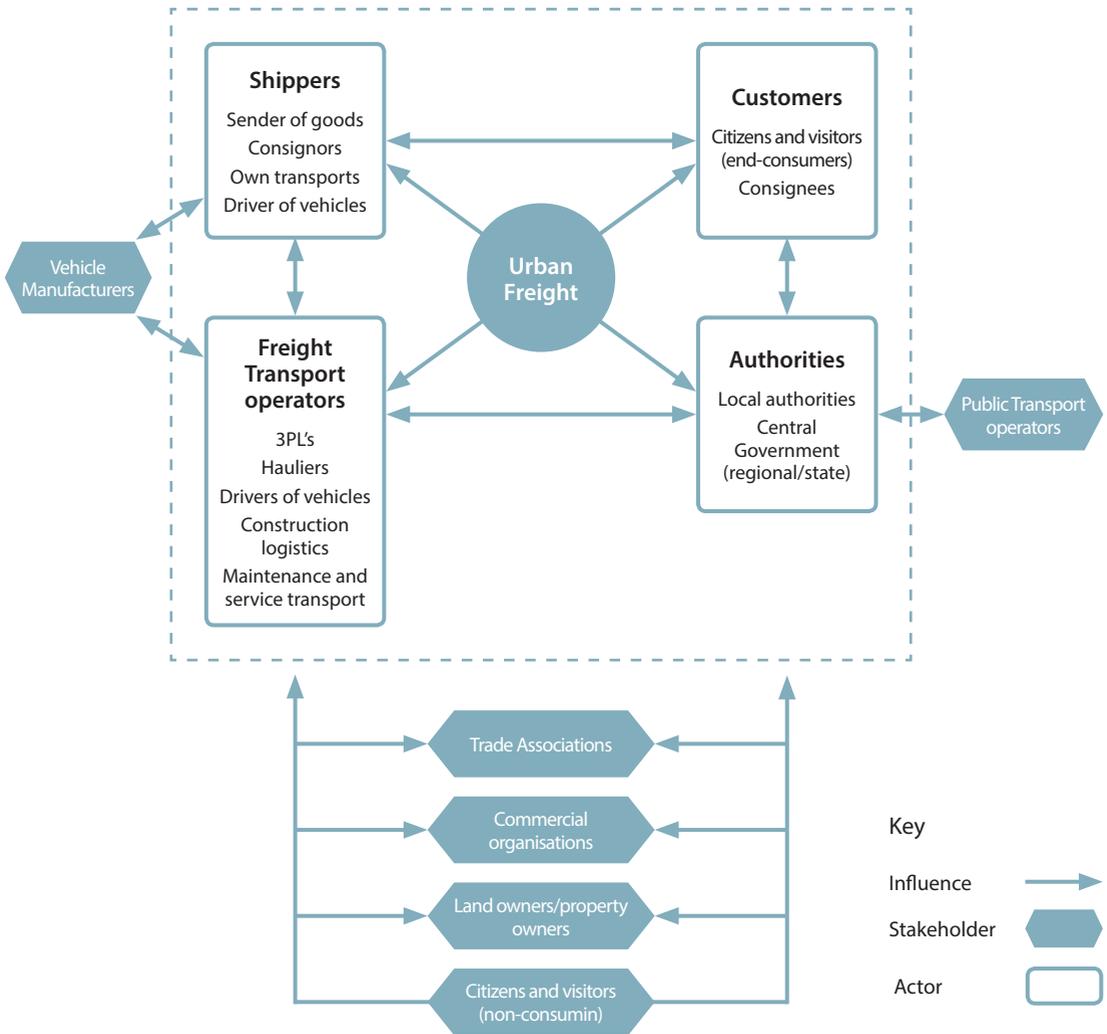
Freight transport is included on the agenda only of those towns where a dedicated person interested in these issues has been appointed. There is some collective knowledge about freight transport management from previous studies, but the spread of knowledge is often poor, and as a consequence mistakes are repeated. Information is available, but must be actively researched. This is one reason why it is important to have a person dedicated to this area of work.

There are several generally acceptable definitions, but no established definition of sustainable urban development in relation to freight transport. In order to be classified as “sustainable”, a transport system must meet all of the following criteria:

- Provide access for all types of freight transport operations
- Keep air pollution, greenhouse gas emissions, waste and noise at levels which do not have negative consequences for the environment or the health of residents
- Increase resource and cost efficiency having regard to external costs
- Contribute to the attractiveness and quality of the urban environment with respect to safety, land use and mobility of residents.



Who, then, are the key actors and stakeholders with respect to freight transport? The thesis shows that there is no easy answer to these questions. Urban freight transport is a complex area, and there are many actors with significant interests and influence who can be perceived as “key actors”. The identity of those actors depends, in each individual case, on the specific urban area and context. The image shows the complex interdependencies in this area.



The figure shows the direct and indirect influence of various actors and stakeholders and the complexity of urban freight transportation.

Reflections and comments

The interviews show that many local decision-makers often treat the aspects surrounding freight transport as an infrastructure problem or, even worse, as a non-existing problem. Neither of these approaches leads to less congestion, reduced noise or more efficient transport.

There is thus a clear need to improve the knowledge and awareness around urban freight transport. This thesis identifies two core areas:

- Resources – not necessarily financial, but mainly employment of individuals with freight and/or logistics competency
- Information – about interested actors and stakeholders in urban freight transport, but also about the general transport situation, by collecting statistics about freight and vehicle movements.

The thesis shows that there is often a lack of long-term transport planning that covers all types of transport movements – and specifically freight transport. The work has showed that it is possible to achieve good results with long-term planning that includes aspects such as local freight networks and various forms of partnerships. There are examples from Gothenburg as well as London.

A crucial issue is whether the local authorities work – or why they do not work – with freight transport aspects by identifying relevant obstacles and driving forces. This applies not only to positive and negative incentives, but also to lack of incentives. By including aspects of freight transport in the town's overall transport planning

process, it is possible to develop cost effective and sustainable alternatives, however this requires both knowledge and increased commitment.

Future research will focus on a closer study of the cooperation between the parties involved, and, specifically, the roles of the various actors and how they are influenced by and impact on freight transport in urban areas. One example could be how authorities can improve the conditions for urban freight transport by using so-called freight networks.

References and reading tips

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The development of sustainable freight transportation in urban areas

In working towards long-term and sustainable development strategies, local authorities often take decisions that affect freight transport in regions and urban areas. Unfortunately, the authorities are not always aware of the consequences of the decisions and their impact on transport operations.

The size and resources of a town are not decisive in developing the freight transportation alternatives of the future. This thesis highlights the need for measures and aims to help local authorities include these in their sustainable development planning.



Over the last 10 years, **Maria Lindholm**, Tech. Dr., has gained a broad experience from several national and international projects in sustainable urban planning and city logistics. She has participated in several working groups and networks with a focus on these issues both in Sweden and abroad. Her research focuses on vertical cooperation by so-called “Freight quality partnerships”.

In 2013-2014, Maria headed efforts to develop a national roadmap for city logistics at the request of Forum for transport innovation, raising important issues in city logistics. She also participates as an expert in advisory committees and is the director of the research center Northern LEAD at Chalmers University of Technology and the University of Gothenburg.



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