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Freight transport with vans: Developments and measures

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Abstract

Road freight transport in urban areas is growing regarding number of trips and mileage. Main reasons are the decreasing consignment sizes and increasing frequencies of delivery transports which are caused by individualisation of demand (incl. e-Commerce, home delivery) and the reduction of storage in central urban areas. These developments have a negative impact on the environment, quality of life and traffic safety. Only limited research has been carried out on freight transport by light freight vehicles below a maximum weight of 3.5 t. The research project which has been carried out in the framework of a Swiss national research programme on freight transport aimed to investigate the role of the van in logistics and freight transport against the backdrop of developments and influencing factors, to identify key issues, to deduce need for action, to propose strategic thrust and measures as well as to judge them in terms of impact and acceptance.

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1. Introduction

Freight transport by vans received little attention regarding data collection, research or transport planning and policy (Browne et al. 2011). However the situation changed a little bit with research carried out in UK on the use of vans and factors influencing it (Allen et al. 2002).

Freight transport in Europe and also in Switzerland is growing faster than passenger transport since mid of the 1990's; especially road freight transport (Fig. 1). The traffic performance by vans show with over 50% the highest growth (light green line); higher than road truck transport with about 40% growth (orange line). The share of vans on the total road freight transport reached in Switzerland over 60%.

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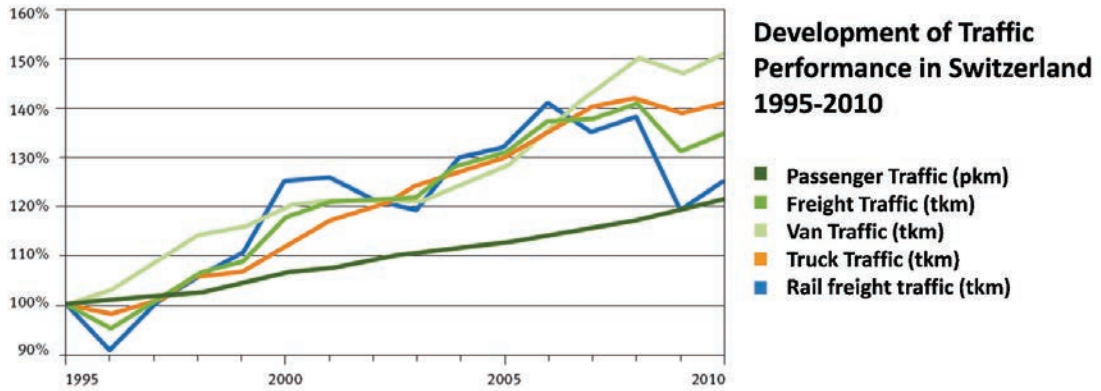


Fig. 1. Development of traffic performance in Switzerland (Ruesch et al. 2013b)

The freight transport intensity (measured in trips per inhabitant and workplace) increased strongly in the last 20 years (Ruesch et al. 2013b). This is especially true for urban freight transport, where we can observe declining consignment sizes and increasing delivery frequencies. Current trends in the individualisation of demand and increasing e-commerce will intensify this development. The logistics market segments of courier and express services, postal services and less-than-truckload (LTL) services are growing. Freight transport by delivery vans plays a major role in this context.

The research project aimed to investigate the role of the van in logistics and freight transport against the backdrop of developments and influencing factors, to identify key issues, to deduce need for action, to propose strategic thrust and measures as well as to judge them in terms of impact and acceptance. It was part of the Swiss national research programme dedicated to freight transport funded by the Federal Department of the Environment, Transport, Energy and Communications (Stucki 2014). The final report on freight transport with delivery vans has been published in September 2013 (Ruesch et al. 2013a).

2. Approach and methodology

The overall scope of the investigation was freight transport by delivery vans in urban areas in Switzerland. Delivery vans are vehicles with a maximum weight of less than 3.5 tonnes. The focus was on freight transport of goods which was separated from service trips with vans, where the main purpose of trips is service provision. For the research work an approach (see Fig. 2) with three phases and eight work packages was chosen.

In the analysis phase I the use of delivery vans in the logistics and transport market was investigated. This included an international literature review, data analysis, interviews with stakeholders from relevant fields, as well as case studies. Especially the role of delivery vans regarding transport volumes, traffic safety and environment was analysed. In subsequent workshops with stakeholders the results were discussed and verified. The results of phase I were the developments, trends, key problems and the need for action in the freight transport segments relevant for delivery van services.

In phase II strategies and measures were developed on the basis of objectives and requirements which were derived from the results of phase I. This involved focus group workshops, where results of desk research for impact analysis and assessments were discussed.

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