Institute for Transport Planning and Systems Project Summary

Strategies for Increasing Intermodal Transport between Eastern and Western Europe





Eidgenössische Technische Hochschule Zürich Swiss Federal Institute of Technology Zurich

Institute for Transport Planning and Systems

Strategies for Increasing Intermodal Transport between Eastern and Western Europe

Background

Rapid trade growth caused by new economic development will place increasing demands on transportation infrastructure and logistics management on European east-west connections.

Eastern Europe's infrastructure is relatively undeveloped, and this has given rise to fears that trade growth will increase traffic congestion, logistic bottlenecks and environmental problems.

Research Goal

The goal of this research was first, to identify the potential for increasing intermodal transport between Eastern and Western Europe by evaluating the current infrastructure network, legal framework, market conditions and cost structure, and, second, to identify possible business, market, and operating strategies needed to achieve that potential.

Methodology

The study methodology consisted of the following steps: first, to evaluate market conditions, infrastructure, and legal conditions in central and Eastern European countries, second, to identify the most promising transport relations between these countries and Western Europe (EU 15), third, to prepare a detailed market and cost analysis for these relations, and, fourth, to identify potential business, market and operational strategies for the operators involved to ensure a sustainable development of intermodal transport on these East-West axes.

Market Analysis

The evaluation of market conditions, infrastructure, legal conditions, and poten-

tial volumes showed that, out of 6 possible corridors, a pair of east-west axes running from Southern Germany/Switzerland to Ukraine/Bulgaria has the highest potential for increasing intermodal transport in the future.

Cost Analysis

An important part of the research was a cost analysis of road and intermodal transport. The cost break-even point between intermodal and road-only transport today is at approximately 1400 km (see Figure 1).





The research analysed how transport costs are likely to develop in the coming years assuming an expected rise in fuel prices and wage costs in Eastern Europe consistent with the appropriate EU legal framework. The cost analysis results show that within the next 10 – 15 years intermodal transport has a good chance of becoming competitive on medium distance routes of 500 – 700 km.

Strategies

Given the existing cost, coordination, and quality problems the most effective strategy to pursue for increasing intermodal transport is to minimise the impact of interfaces in the transport chain. This strategy consists of better coordinating the haulage. The model proposes an operational process with an intermodal provider managing the terminal operation with direct control of the pre- and post-haulage and main haulage processes. Figure 2 illustrates an operational strategy based on this model.



Figure 2: 3-Level Model for a Trans-European Network

IVT Contributions

Country, market, and cost analysis; Development of business, market and operational strategies

Applied Methods

Literature and market research

Contact

Nikolaus Fries, Institute for Transport Planning and Systems, ETH Zürich, 8093 Zürich, Switzerland fries@ivt.baug.ethz.ch www.ivt.ethz.ch Phone: +41 44 633 31 09 Fax: +41 44 633 10 57

