



National Research Programmes Addressing Commercial Urban Transport

Country Presentation Switzerland

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Overview Transport Research in Switzerland



European research involvement

FP 5 and 6

COST

INTERREG

CEMT/ECMT

EUREKA

National Government

Department Research of the Swiss Federal Government

(ARE, ASTRA, BAV, BFE, BFS, BUWAL,)

Swiss Science and Technology Council, Centre for Technology Assessment

Swiss National Science Foundation (Research programs, research priorities)

Swiss Federal Office for Education and Science

Commission for Technology and Innovation

Swiss Federal Institute of Technology / Universities

ETH/EPFL

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Completed National Research Programs (NRP) in Transport



☰ NRP 25: Cities and Transport

- 🌐 1989-1995, Swiss National Science Foundation
- 🌐 Main focus: urban planning and transport (mostly passenger)
- 🌐 Some projects with relevance to urban freight
 - External Costs of urban transport
 - Road Pricing for urban transport
 - Intermodal transport / liner trains to serve urban areas

☰ NRP 41: Transport and Environment

- 🌐 1997-2001, Swiss National Science Foundation
- 🌐 Budget: 6 Mio. Euro
- 🌐 9 projects in freight transport, main focus national/international
- 🌐 Some projects with relevance to urban freight:
 - Behaviour and decision making process of shippers (B1)
 - Corporate Strategies and Freight Transport (B3)
 - Freight platforms and Urban Planning (B9)

DIANE 6 (1992-1997): „Energy saving and environmental friendly freight transport“



Framework

- ⊕ Part of Action Program Energy 2000
- ⊕ Application of innovative concepts and technologies

Objectives for the topic Freight Transport

- ⊕ Reduction of energy consumption
- ⊕ Reduction of pollution
- ⊕ Reduction of other negative effects

Demonstration Projects with relevance to urban freight

- ⊕ City Logistics Zürich
- ⊕ City Logistics Basel
- ⊕ Regio-Logistics Biel
- ⊕ Horizontal transshipment equipment
- ⊕ Measures on the shippers side

DIANE 6 (1992-1997): Organisation, Budget and Financing



☰ Organisation

- ⊗ Swiss Federal Office of Energy (Lead)
- ⊗ Swiss Federal Office of Spatial Development
- ⊗ Swiss Federal Roads Authority
- ⊗ Swiss Agency for the Environment, Forests and Landscape

☰ Budget

- ⊗ approx. 3 Mio. CHF/ 2Mio. EURO

☰ Financing

- ⊗ National Government (FOE) (budget for department research for program Energy 2000)
- ⊗ Co-financing by local authorities and involved transport actors

Swiss activities within COST 321 „Urban freight transport“ (1994-1998) (1)



☐ Objective of COST 321:

- ⊗ Studying the design and operation of innovative measures to improve the environmental performance of freight transport in urban areas.
- ⊗ Effects analysis for technical, operational, infrastructural, administrative etc. measures.

☐ CH one of 12 european countries

☐ Active CH-Cities:

- ⊗ Zürich, Lausanne, Bern, Luzern, Basel

☐ 4 Swiss projects:

- ⊗ 1: Key figures for urban freight transport based on GTS 1993 (1995-1996)

Swiss activities within COST 321 „Urban freight transport“ (1994-1998) (1)



4 Swiss projects:

- ⊗ **2: Proof of the efficiency of measures in urban freight transport (main focus, urban lorry) (1996-1998)**
- ⊗ **3: Goods transport in the Lausanne region (1997-1998)**
- ⊗ **4: Analysis of deliveries in the city of Bern and of the potential for city logistics (1997-1998)**

Budget:

- ⊗ **approx. 500'000 Euro**

Financing:

- ⊗ **public means**
 - national research budget for COST actions/coordination
 - other national research budget

Planned national program for conurbations / urban areas (1)



Background

- ⊗ challenges in urban development, transport, environment and social area including integration and financing
- ⊗ conurbation are not able to solve the problems without a border-crossing approach and national support
- ⊗ Main objective: sustainable development in urban areas
- ⊗ Not planned as a research programme!

Structure

- ⊗ Strategy for over all development
- ⊗ Action modules
- ⊗ Projects and realisation

Main areas in a first step

- ⊗ Urban planning
- ⊗ Environment
- ⊗ **Transport (passenger and freight)**

Planned national program for conurbations / urban areas (2)



☰ Role of urban freight transport

- ⊗ **to be defined by the authorities of the urban areas !**

☰ Organisation

- ⊗ **Swiss Federal Office of Spatial Development (lead, strategy, financing)**
- ⊗ **Cantons / Regions (action plans, projects, regional organisation)**

☰ Planned budget for the transport area (incl. infrastructure)

- ⊗ **Additional 30-45 Mio CHF / 20-30 Mo Euro (2003-2005)**
- ⊗ **300 to 350 Mio CHF / 200 to 230 Mio Euro per year (from 2006)**

☰ Financing

- ⊗ **Public means**
- ⊗ **National law about the use of appropriated mineral oil taxes (Art 3 MinVG)**
- ⊗ **Changes of the law needed (2006) --> public vote 2004/2005**

ASTRA-Research



- ☰ **ASTRA : Swiss Federal Roads Authority**
- ☰ **Main objective for national research in transport is **sustainability** (Protection of the environment, economical efficiency, societal solidarity)**
- ☰ **Budget:**
 - ⊕ **around 6 Mio. Euro per year (transport planning and engineering)**
- ☰ **Financing:**
 - ⊕ **National law about the use of appropriated mineral oil taxes (Art 3 MinVG)**

ASTRA-Research: SVI (1)



☰ SVI: Swiss Association of Transportation Engineers

⊕ National research in transport planning

⊕ Projects relating to freight transport 1980-2002:

- **Urban Freight Transport, conformities (1980-81)**
- **Urban Freight Transport, distribution models (1982-83)**
- **Decision factors in freight transport (1987-88)**
- **Surveys and inquiries im Freight Transport (1990-91)**
- **Key figures for freight transport (1997-1999)**
- **Conformity in freight transport and modelling (1997-1999)**
- **Value of time in the freight transport (1999-2000)**
- **Pilot investigations relating to freight transport with cars (2000-2001)**

ASTRA-Research: SVI (2)



⊕ Ongoing projects freight:

- **Technology Assessment in transport: Case study „Access management concepts in urban areas“ (2001-2003)**
- **Pre- and endhaulage in intermodal transport (2002-2003)**

⊕ Planned projects (2004 - 2008)

- **Conformities of delivery transports**
- **Value of time in freight transport (stated preference approach)**
- **Models for road pricing (including passenger)**
- **Data needs and surveys in freight transport planning**
- **Demand functions in freight transport**

ASTRA-Research: SVI (3)



⊕ Planned projects (2004 - 2008)

- **Modal split functions in freight transport**
- **Modelling of freight transport chains**
- **Affinity factors in freight transport**
- **Application of simulation tools in freight transport**
- **Monitoring in freight transport**
- **How to consider freight transport on urban and regional level**
- **Freight transport management in urban areas**
- **Possibilities and potential of PPP in freight transport**
- **Effects of e-commerce on freight and passenger transport**

ASTRA-Research: VSS (1)



☰ VSS: Swiss Association of Road and Transportation Experts

- ⊗ National research in transport engineering and standardisation
- ⊗ Expert group 8.04 Freight Transport

☰ Completed Projects:

- ⊗ Freight transport chains: Analysis and need for standardisation (2001-2002)
- ⊗ Use of telematics at freight terminals (2002-2003)

☰ Ongoing Projects:

- ⊗ Design of freight terminals (2002-2004)

ASTRA-Research: VSS (2)



☰ Planned Projects (2003-2008):

- ⊗ Location planning for freight infrastructure
- ⊗ Management systems for freight transport
- ⊗ Access concepts for freight terminal and freight areas
- ⊗ System analysis and evaluation for intermodal transport systems
- ⊗ Surveys and demand analysis for freight transport
- ⊗ Linking freight and fleet management systems with traffic management systems
- ⊗ Intermodal and multimodal traffic information for freight transport

Conclusions



- ☰ **There is at the moment no specific national program for urban freight transport** but there are urban freight topics within
 - ⊕ the urban area transport program (potential to be identified)
 - ⊕ permanent national research activities
- ☰ **Urban freight should and could play a more important role in Switzerland** (compared to passenger transport)
- ☰ **Cities and regions should be more active** in defining the research needs in urban freight --> urban area transport programm
- ☰ **The national government should be more aware of the importance of urban freight issues** (compared to national and international freight)
- ☰ **The possibilities and acceptance of a specific National Research Program on urban freight should be followed and proved!**