



CENTRUM
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Possibilities of the Transfer of Road Freight Transport to Rail

Vít Sedmidubský

www.cdv.cz

Content of this Paper:

1. Current measures at the International level
2. Cause analysis of rail freight transport non-success
3. Further necessary measures for a enhancement of rail freight and combined transport
4. Projects solved by CDV

Main Principles of Transport Policies

The principle of sustainable development:

- Environmental
- Economic
- Social

Further growth of transportation is expected –
it's necessary to utilize possibilities of rail
and Waterway transport.

Competitiveness of Rail Transport

- Necessary condition – stable heavy transport flows
- Higher starting and finishing costs = long-distance transportations
- Road transport is successful also in transport market segment that is suitable for rail transport

Actions Aimed at Higher Competitiveness of Rail Transport

- Interoperability of rail systems, removing obstacles between national rail systems
- Projects aimed at promoting of combined transport (Marco-Polo)
- Transformation process in railway sector
- Creating competitive surroundings for transport enterprises
- Program Strategic Rail Research Agenda 2020
- ...

Development of competitiveness distance of rail haulage

It's used some simplification, competitive distance depends on many other conditions.

- critical (competitiveness) distance gradually increases
- according to this trend the competitiveness of rail transport is endangered

This is important area for research.

Some Other Remarks as to Rail and Combined Transport

- The unit costs of movement in rail transport are lower
- The most frequent present technologies of combined transport transhipments are slow and expensive

The Main Reasons of Reducing of Rail Transport

- **Commodity composition**
- **Door-to-door services**
- **Just-in-time services**
- **Well-balanced of all kind of transport infrastructure**
 - problem of approaching countries
 - non capacity problem in case of rail infrastructure but quality and technically obsolete
- **Transportation technology**
 - more complicated rail technology due to capability to haul greater volumes with lower energy consumption
 - technical equipment of rail transport is insufficient
- **Involving in logistic procedures**

Higher involving of Combined Transport into Logistic Processes

- Commercial logistic centres operating in the Czech Rep. are aimed at road connection
- Railway as a criterion plays insignificant role
- Only 18 % of logistic capacity is linked to rail
- Non conception of public logistics doesn't exists
- Public logistics centres can concentrate traffics flows, can contribute to levelling conditions between rail and road transport

Modern Technologies in Combined Transport

- Some concepts of horizontally oriented transshipment technologies imply lower unit costs
- Project INHOTRA (Interoperable Intermodal Horizontal Transshipment) monitors 61 systems
- It's necessary to draw up a conception of suitable system and safeguard support of public sector
- It's necessary the analysis of weakness, threats and opportunities of combined transport and specify useful features of the technology

Features of Combined Transport Technology

- Optimal range transshipment points in public logistic centres in regions
- Simple transshipments technology, low-cost, practicable under the trolley-line on the running track
- Short transshipment time, practicable at the same time along whole train
- Only selected loading and unloading operations destined for the station
- Intervallic time-table

Features of Combined Transport Technology

- Safeguard delivery transport
- Efficient information system and telematics
- Exclusion of not necessary interlinks
- Offering of wide range services
- Capability handle the most categories traffic units

CDV Projects

CDV is engaged in several projects dealing with modal split problem

Solving possibilities - according to feasibility in:

- long-term time steps
- short-term time steps

Study of unaccompanied Combined Transport between Czech Rep. and Saxony

Reasons of the study:

- Expected closure of the current Ro-La link Lovosice-Dresden after motorway D8/A17 construction finishing
- Reduction of environment impacts in České Středoohoří protected area

Main goal:

- Implementation of unaccompanied combined transport between Czechia and Saxony

Suggestions of the Study

Several possible options:

- Extending of existing Ro-La link on both sides
- Exploiting of existing combined transport terminals or terminals recently closed

Study Possibilities of Modal Shift to More Environmental Friendly Modes Focused on the Central Bohemia Region

Main goal:

- Possibilities of using the rail and waterway transport for supplying of the region

Central Bohemia motorway network attracts about 75 % of all logistics capacity of the Czech Rep. without rail connections.

Proposed Options

1. Intermodal network based on system of public logistic centres:

- Based on private capital with support of public sector
- Low-cost transshipment technology of combined transport
- Providing of additional services and distributional functions
- The most effective and the most expensive option

Proposed Options

2. Network of public logistics established by a strong railway operator or by a consortium of operators:

- Private logistic system of railway operator
- Low-cost transshipment technology of combined transport
- Providing of additional services and distributional functions
- The creation of a consortium with other rail companies would be necessary

Proposed Options

3. The current logistics centres connected to rail network:

- Cooperation between railway operators and current important logistical companies if they are additionally connected to rail network
- This option is less expensive than previous
- Disadvantages are difficult implementation, missing out of smaller companies and less efficiency of modal shift.

Proposed Options

4. Existing private logistics centers without connection to the railway:

- Better conditions for usage of rail transport without construction of rail sidings
- Connection of current commercial logistics centres to nearest suitable railway station (low-cost transshipment technology)
- More effective than third version, but less than first two versions

Proposed Options

5. Citylogistics as a mean for enhancement of railway freight transport attraction:

- Implementation of only small, less expensive logistics centres by railway carrier for high density populated area operation
- Only goods suitable for railway transport produced at one place or region for needs of served agglomeration
- Efficiency of measures is low, investment needs are low, version is suitable for implementation in the case of insufficient investment resources.

Summary

Requirements for increasing the competitiveness of rail transport:

- Using of new trends in the area of integrating of transport into logistics chains. Accompanying services provided by logistics centers will be requirement of competitiveness in the future even for carriers.
- The range of goods suitable for combined transport has to be practically the same (with some exceptions) as products suitable for road transport. Flexibility and the speed of transport are not sufficient arguments for inapplicability of combined transport.
- It is necessary to solve the technical problems of transshipments from railway to road and also increased its speed and make it less expensive.



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**Thank you for your
attention**

**Vít Sedmidubský
Transport Research Centre
Praha**

[vstedmidubsky@cdvgis.cz](mailto:vsedmidubsky@cdvgis.cz)

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