Republic of Slovenia

Current state and development of transportation system

Dr. Drago Sever

About me

Dr. Drago Sever, univ.dipl.ing. of civil eng.

Associated professor from the fields
Traffic eng. and Transportation technology

Director of Institute of transp. sciences
Head of the Chair of trans. technology and organization

Subjects:
- Dynamics of traffic flow
- Theory of traffic flow
- Traffic technique I and II
- Transportation technology
- Transportation organization and other.

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Content

- Current state of Slovenian transportation system
  - Road infrastructure
  - Rail infrastructure
  - Ports and airports
  - Operators
- Development strategy – sustainable transport development
- Conclusion
General – geopolitical environment

Paneuropean corridors

Helsinki agreement – 1997
(10 corridors):
- V. corridor: Venice – Kiev
- X. corridor: a: Salzburg – Zagreb
  b: Graz - Zagreb

Geopolitical environment
TEN-T 2011

Current state: Appending to TEN-T guidelines – EU commission okt.2011

Rail freight transport

Road transport

Rail passenger transport

Priority projects

- Priority projects - nov. 2011

  - works started after 2013
  - works started between 2011 - 2013
  - ongoing works
16.4.2015

Danube region strategy

- Cross border cooperation in the frame of Danube region strategy, PA 1 (PA1b) accepted EU commission in 2011
- Preparation the new projects with added value (not only the track, connection points are needed)
- Put the new project into the evaluation scheme of the Danube region strategy

General – geopolitical environment

Spatial planning axes in Slovenia
## General – Export and import

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## General – geopolitical characteristics

**Daily migration between cities in Slovenia**

![Map of daily migration between cities in Slovenia](image-url)
General – geopolitical characteristics

Modal split – passenger and freight transport

Current state – road infrastructure

- State roads (DARS and DRSC)
  - Highways 746 km(A) + 16 km (H) - vignette
  - Main roads 819 km (G1, G2)
  - Regional roads 5.117 km (R1, R2, R3, RT) density: 1,92 km/km²

- Local roads (municipalities - 211)
  - Local roads 13.598 km
  - Public paths 18.626 km
Rail history in SE Europe

- South railway Wien – Trieste (1841-1857)
- 2. June 1846 (Graz – Celje was opened)

Zidani most – Zagreb (1862)
Grobelno – Rogatec (1903)
Rogatec – Krapina (1930)
1228 km of tracks:
- 1120 km for mixed (freight and passenger traffic)
- 330 km double tracks
- 503 km electrified by a one-way system with a rated voltage of 3 kV
  (Austria - 15 kV, 16.67 Hz, Croatia - 25 Hz, 50 Hz)
Current state – rail infrastructure

Organization of Holding SŽ:

- Infrastructure
- Freight traffic
- Passenger traffic
- Other services
- divided accounts

Current state – ports and airports
NAPA Ports (Ravenna, Venice, Trieste, Koper, Rijeka)
- 6 to 8 days shorter transit times like from north European ports.
- Efficient combination of cost, time and energy savings

<table>
<thead>
<tr>
<th>Country</th>
<th>Jan-Sep 2012</th>
<th>Jan-Sep 2011</th>
<th>Index 12/11</th>
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<tbody>
<tr>
<td>Rijeka</td>
<td>6,488,252</td>
<td>7,056,505</td>
<td>-8.1%</td>
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<td>Koper</td>
<td>13,249,312</td>
<td>12,562,991</td>
<td>+5.5%</td>
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<td>Trieste</td>
<td>34,254,544</td>
<td>35,867,860</td>
<td>-4.5%</td>
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<td>Venice</td>
<td>18,677,472</td>
<td>20,140,649</td>
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<td>Ravenna</td>
<td>16,046,949</td>
<td>18,133,445</td>
<td>-11.5%</td>
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<tr>
<td>Total</td>
<td>88,716,529</td>
<td>93,761,450</td>
<td>-5.4%</td>
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</table>
Current state – ports and airports

Aerodrome J. Pučnika Ljubljana:
- main Slovenian airport
- 1.5 mio. passenger annual
- 10 daily operations
- 40,000 t cargo annual

Aerodrome E. Rusjana Maribor:
- regional hub airport

Current state – operators

Road sector:

<table>
<thead>
<tr>
<th>Logistics companies</th>
<th>Companies</th>
<th>Turnover in €</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small companies</td>
<td>2,318</td>
<td>1,356,704,569</td>
<td>11,624</td>
</tr>
<tr>
<td>Middle companies</td>
<td>33</td>
<td>400,710,192</td>
<td>3,043</td>
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<tr>
<td>Large companies</td>
<td>24</td>
<td>1,664,272,487</td>
<td>22,115</td>
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<tr>
<td>TOTAL</td>
<td>2,375</td>
<td>3,421,687,248</td>
<td>36,783</td>
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</table>

7,082 Transport companies
28,458 trucks over 3.5 tonnes load cap.
31,303 professional drivers
Current state – operators

**Railway sector:**
3 operators: SŽ, RailCargo Austria (till 2010), Adria Transport (till 2011)

**Air sector:** Adria Airways (national air operator)
13 planes:
A 320, A319 and CRJ

Development strategy

Ministry of infrastructure:
**Transportation development strategy in Republic of Slovenia**

**Main aim:**
- to define development of transportation infrastructure till 2030
- to assure regular financing of transportation infrastructure
- to be possible of usage of EU funds 2014 – 2020

**Type of analyses:**
- modal split
- transportation efficiency
- spatial and social admissibility

**Approach:**
- transport model
- scenarios 2011 and 2030 > problems > alternative measures
- alternative analysis > list of relevant measures > priorities > strategy
Transportation model – main submodels

- macroscopic 4-levels model for passenger transport
- 5-levels for freight transport
- Model development, calibration and validation of motorization model
- Environmental impact models (gas emissions, hrup imisions, traffic safety)

**GENERAL APPROACH**
- coning
- network modeling
- demand modeling
- loads
- calibration
- validation by international criteria

**Transportation model – passenger transport model**
Transportation model – freight transport model

Multimodal approach - 56 freight groups and in 11 logistical systems

- Model units: netto ton/year, day, hour

Development strategy - Scenario „TO DO NOTHING“

Conclusions (problems):
- modal split in passenger and freight transport will not follow sustainable mobility approach
- core TEN-T and overall rail network will not assure requirement of minimal TEN-T standards, will not assure relevant capacity in passenger practicability
- it is expected that over 230 km of road the capacity will be overdraft in 2030
  - unbalancing between demand and supply
- low competitiveness of public transport
- irrelevant infrastructure of Port of Koper, airports

Measures (the list of wishes):
- to establish modern, integrated public passenger transport
- better quality of PPT (speed, frequency, P+R, cycling, walking)
- modernization of core TEN-T and regional rail network based at least on minimal standards (electrification, ERMTS)
- to establish the logistic centers
- modernization of road network (ITS, etc.), Port of Koper, airports
Main strategic goals - roads:
- modernizing the national roads network;
- improving traffic safety;
- development of intelligent transport systems;
- introduction of an electronic road toll system
Future development

Main strategic goals - rail:
- development of the efficient and modern public railway infrastructure;
- shifting of freight from roads to rails;
- multimodality;
- safe and efficient transport.

Most important projects

... 2. rail track Divača – Koper
... the Port of Koper?
Questions?

THANKS FOR YOUR ATTENTION!

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