Challenges and solutions for transport in the Danube region

Business models and solutions for the Adriatic – Danube multimodal platform

Ljubljana, November 2012
## Rail transport – Does it matter?

<table>
<thead>
<tr>
<th>City</th>
<th>Rail</th>
<th>Road</th>
<th>Barge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amsterdam</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antwerp</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bremerhaven</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constanta</td>
<td>47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dunkirk</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hamburg</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Le Havre</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marseilles</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotterdam</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zeebruge</td>
<td>37</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Logistic demand & competence

1. Destinations (port / terminals)
2. Number and regularity of connections
3. Range of services
4. Reliability of transportation
5. Safety of shipments

1. Tracking of consignments
2. Status of consignments
3. Open system (customer integration)
4. Connectivity of messages and systems
5. IT support

Quality of terminal/port services

Quality of hinterland connections/services

Managing the information flow

Monitoring of the transport chain

Quality of logistic /shipper services
North Adriatic Ports example

### NAPA Throughput (in Mio TEUs, 2011)

<table>
<thead>
<tr>
<th>Port</th>
<th>Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotterdam</td>
<td>11.8</td>
</tr>
<tr>
<td>Hamburg</td>
<td>9.0</td>
</tr>
<tr>
<td>Antwerp</td>
<td>8.6</td>
</tr>
<tr>
<td>NAPA</td>
<td>1.8</td>
</tr>
<tr>
<td>La Spezia</td>
<td>1.1</td>
</tr>
</tbody>
</table>

### NAPA Investments planned (in Mio EUR)

<table>
<thead>
<tr>
<th>Port</th>
<th>Investments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ravenna</td>
<td>470</td>
</tr>
<tr>
<td>Venice</td>
<td>850</td>
</tr>
<tr>
<td>Trieste</td>
<td>642</td>
</tr>
<tr>
<td>Koper</td>
<td>500</td>
</tr>
</tbody>
</table>

**NAPA**  
North Adriatic Ports Association  
Venice, Ravenna, Trieste, Koper
NAPA & The “Blue Banana”

The “Blue Banana”

- London-Benelux-Rhine-Milan
- Economic zone with greatest development potential in Europe (highest population density and industrial concentrations)

The rise of new giants

- The “Blue Banana” might lose its dominant position – EU expansion towards East
- New growth zones emerging
  - “Sunbelt” Milano – Valencia
  - “Yellow Banana” Paris-Berlin-Warsaw
- Shift of the center from Benelux to Germany

New development possibilities in the Adriatic and Danube region
NAPA Region

Corridor V
France/Italy – Hungary/Ukraine
- extension Romania

Corridor X
Germany – Turkey
- extension Romania
- extension Macedonia/Greece

Baltic Axis
Poland – Slovenia/Koper

Regional Logistic Platform
NAPA hinterland connections

NAPA Maritime market excellence

<table>
<thead>
<tr>
<th>Cargo Type</th>
<th>Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid Bulk</td>
<td>Trieste</td>
</tr>
<tr>
<td>Containers</td>
<td>Venice, Trieste, Koper, Ravenna</td>
</tr>
<tr>
<td>Dry Bulk</td>
<td>Ravenna</td>
</tr>
<tr>
<td>Ro-Ro</td>
<td>Ravenna</td>
</tr>
<tr>
<td>General Cargo</td>
<td>Venice</td>
</tr>
<tr>
<td>Car Carriers</td>
<td>Koper</td>
</tr>
<tr>
<td>Timber</td>
<td>Koper</td>
</tr>
</tbody>
</table>

CTN CAPACITY
-2011- 1,500 mio TEU
-2015/20- 3,800 mio TEU

NAPA Logistic descriptives

- Central entry point to Central and Eastern Europe
- Geographical proximity of port areas (100 km range)
- Shorter hinterland connections (700km Germany/Hungary)
- Shorter maritime connection (5 days Egypt/Benelux)
- Direct railway links to Austria, Germany, Czech Republic, Poland, Hungary, Slovakia, Ukraine and Russia (in development)
Footprint of the NAPA Ports

To MOSCOW (via Belarus)

- Distance:
  - Koper: 3,715 km
  - Rotterdam: 6,947 km
  - Hamburg: 7,022 km

- Energy:
  - Koper: 1.160 liter-diesel equivalent
  - Rotterdam: 1.791 liter-diesel equivalent
  - Hamburg: 1.754 liter-diesel equivalent

- CO2:
  - Koper: 7.5 t
  - Rotterdam: 4.1 t
  - Hamburg: 4.1 t

To MOSCOW (via Ukraine)

- Distance:
  - Koper: 4,054 km
  - Rotterdam: 7,890 km
  - Hamburg: 7,566 km

- Energy:
  - Koper: 1.331 liter-diesel equivalent
  - Rotterdam: 2.163 liter-diesel equivalent
  - Hamburg: 2.126 liter-diesel equivalent

- CO2:
  - Koper: 2.6 t
  - Rotterdam: 4.5 t
  - Hamburg: 4.5 t

Source: www.EcoTransIT.org  Calculation parameters: Suez maritime route considered, Gioa Tauro based seaside, 40' ocean container, 30 tons average goods, average train, electrical traction
Adria/Danube Region as Reliable Alternative

- Asia-Pacific Region
  - Hamburg/Rotterdam
    - 22,000 km
    - 45-50 days
  - NAPA (ITC #5)
    - 18,000 km
    - 31 days

- Development of international container flow from Kotka and Hamina ports to S. Petersburg and Moscow
- Up to two block trains weekly mainly to S. Petersburg
- JV to be created in China to operate this route (MoU signed)
- Project LandBridge (operated jointly with Far East Land Bridge company since 2007) - 3 block trains per month go from Austria to Beijing through Zabaikalsk. Supply spare parts to BMW plants in China

- Alternative Asia-Russia route to standard route through Hamburg
- Capacity of Adriatic ports provide significant opportunity to increase volumes
- This route offers significant time savings (about 8 days)
Common responsibility for sustainable traffic development – base for the Danube region transport strategy

BUYERS
- Environmentalism in purchasing decisions

INFRA MANAGERS
- Parameters
- Capacities
- Interoperability

OPERATORS
- Services
- Technology
- Capacities
4 types of investments are required to enable future growth on the rail corridors

<table>
<thead>
<tr>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Infrastructure parameters*</td>
</tr>
<tr>
<td>Harmonization and optimization of infrastructure parameters to corridor standards to enable optimal end-to-end usage of corridors by RUs and related productivity gains</td>
</tr>
<tr>
<td>2 Bottlenecks</td>
</tr>
<tr>
<td>Provisioning of sufficient number of train slots for section and nodes that cannot accommodate the assumed volume growth</td>
</tr>
<tr>
<td>3 Terminals</td>
</tr>
<tr>
<td>Extension of existing terminals and construction of new terminals to accommodate strongly growing intermodal volumes</td>
</tr>
<tr>
<td>4 ERTMS</td>
</tr>
<tr>
<td>Standardization of signaling on corridors mainly to ETCS level 2 to enable interoperability of traction units on corridors</td>
</tr>
</tbody>
</table>

* Train length, axle load, loading gauge, maximum speed

Source. CER Corridor Project 2007
Removal of the bottlenecks must be the first step

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Name</th>
<th>Countries</th>
<th>Corridor section length</th>
<th>Volume 2006</th>
<th>Absolute growth* until 2020</th>
<th>CAGR Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>Netherlands-Germany-Switzerland-Italy</td>
<td>~ 2,000</td>
<td>56</td>
<td>86</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td>B+</td>
<td>Sweden-Denmark-Germany-Austria-Italy</td>
<td>~ 3,500</td>
<td>62</td>
<td>62</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>C/D+</td>
<td>Belgium-Luxembourg-Germany-France-Spain-Portugal</td>
<td>~ 8,500</td>
<td>95</td>
<td>63</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>D+</td>
<td>France-Italy-Slovenia-Hungary</td>
<td>~ 2,000</td>
<td>22</td>
<td>55</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>E+</td>
<td>Germany-Poland-Austria-Czech Republic-Slovakia-Hungary-Romania</td>
<td>~ 6,000</td>
<td>88</td>
<td>56</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>F+</td>
<td>Belgium-Germany-Poland</td>
<td>~ 3,000</td>
<td>77</td>
<td>46</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>~ 25,000</td>
<td>~ 400</td>
<td>Ø 61</td>
<td>3.4</td>
<td></td>
</tr>
</tbody>
</table>

Source. CER Corridor Project 2007
Best Practice 1  
From Ljubljana to Istanbul

Important reduction of travel time by optimising customs procedures and technical cooperation

<table>
<thead>
<tr>
<th>Mode</th>
<th>Time</th>
<th>Reduction (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorry + Vessel</td>
<td>48–57 h</td>
<td>– 49%</td>
</tr>
<tr>
<td>Lorry</td>
<td>35 h</td>
<td>– 30%</td>
</tr>
<tr>
<td>Bosphorus Europe Express „25“</td>
<td>57–64 h</td>
<td>– 39%</td>
</tr>
</tbody>
</table>

Ljubljana (SVN) – Istanbul (TUR)
Best Practice 2
From loose cooperation to effective project entity

Service organisation dedicated to:
- logistic and train system development
- optimization of corridor services
- promotion of corridor performance
Best Practice 2 (ctnd.)
Integrated Corridor Management

- Higher level of international cooperation
  - Optimize train organisation and productional activities
  - Operative coordination and management of trains along the whole route
  - Develop and monitor common quality targets of train performance
  - Launch and coordinate internal improvement programs

- Business development / borderless transport solutions
  - Once face to the customer as international cargo manager on the corridor
  - New (optimised) train/logistic services for known customers
  - Increase responsiveness of railway operators towards customers

- Promotion
  - Promotion of the transport route and the trains system in place
  - Increase awareness of the performance parameters
Conditions to grow rail freight traffic in the Danube region

1. Supporting all **technical, operative and commercial solutions** that increase the competitiveness of the rail freight transport and efficiency of operations

2. Supporting all **infrastructural improvements**, which aim towards utilization of longer and heavier trains

3. Implementation of **just and leveled framework conditions** for all traffic modes / types, considering the environmental effects and other externalities

4. Implementation of **fiscal and other measures** to promote and stimulate intermodality, as well as to direct the traffic systems towards modern and economical supply chain solutions

5. Development of **logistic infrastructure**, i.e. terminals, transhipment facilities and intermodal gateways
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Thank you for your attention.