Logistic approach to the development of railway container transportation between Europe and Asia using the potential of Trans-Siberian route

The Report of Senior Vice-President JSC RZD Mr. B.Lapidus

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Russian market of transport and logistic services

Volume and dynamics (bln. $)

Structure of market, services (%)

Growth in segments (bln. $)

Source: RBC
JSC RZD on the market of transport services

Part of railway transport in total freight turnover of Russian transport system

Pipe-line 50.2%
Air Freight 1%
Internal Water-Carriage 50.2%
Automobile 4.2%
Sea Freight 1.3%
Railway 42.6%

Development of cargo transport

<table>
<thead>
<tr>
<th>Year</th>
<th>JSC RZD</th>
<th>Private carriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>26.5%</td>
<td>73.5%</td>
</tr>
<tr>
<td>2004</td>
<td>31.5%</td>
<td>68.5%</td>
</tr>
<tr>
<td>2005</td>
<td>34.0%</td>
<td>66.0%</td>
</tr>
<tr>
<td>2006</td>
<td>35.0%</td>
<td>65.0%</td>
</tr>
<tr>
<td>2007</td>
<td>35.5%</td>
<td>64.5%</td>
</tr>
<tr>
<td>2008</td>
<td>39.0%</td>
<td>61.0%</td>
</tr>
</tbody>
</table>
Volume of international traffic by railway (mln tons)

- **Totally through Russian border points**
- **incl. through Russian ports**

<table>
<thead>
<tr>
<th>Year</th>
<th>Traffic (mln tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>402.4</td>
</tr>
<tr>
<td>2004</td>
<td>433.0</td>
</tr>
<tr>
<td>2005</td>
<td>465.7</td>
</tr>
<tr>
<td>2006</td>
<td>480.4</td>
</tr>
<tr>
<td>2007</td>
<td>515.9</td>
</tr>
<tr>
<td>2008</td>
<td>515.1</td>
</tr>
<tr>
<td>2015</td>
<td>713.5</td>
</tr>
<tr>
<td>2020</td>
<td>820.6</td>
</tr>
</tbody>
</table>

Railway container transportation in Russia

Volume of railway container transportation in Russia, thousand TEU

Structure of railway container transportation, 2008

Export-Import and Transit Container Traffic, 2008

Export 24.4%

Import 24.4%

Transit 6.3%

2.5 Mln TEU

Internal transport 45.9%

CAGR 14.1%*

Total

Internal

EU States

2007 г. 303 thousand TEU 6 %
2008 г. 438 thousand TEU 45 %

China

2007 г. 236 thousand TEU 48 %
2008 г. 276 thousand TEU 17 %

Republic of Korea

2007 г. 207 thousand TEU 64 %
2008 г. 224 thousand TEU 9 %

Japan

2007 г. 44 thousand TEU 24 %
2008 г. 57 thousand TEU 31 %

Volume of transportation in International Transport Corridor “East-West”

2007 г. 637 thousand TEU 44 %
2008 г. 715 thousand TEU 12 %

* - total rate of annual growth
International Transport Corridor
«East – West»

Containers delivery time across the territory of Russia – 11 days, perspective goal – 7 days

Corridor Nakhodka – western border of Russia
length – 9867 km
### Basic Parameters of the Product «TSR for 7 days»

<table>
<thead>
<tr>
<th>Feature</th>
<th>Graphics</th>
</tr>
</thead>
<tbody>
<tr>
<td>New technologies in intermodal transportation</td>
<td>![Image]</td>
</tr>
<tr>
<td>New technologies in cooperation with custom services</td>
<td>![Image]</td>
</tr>
<tr>
<td>New technical characteristics of the infrastructure</td>
<td>![Image]</td>
</tr>
<tr>
<td>New fleet of locomotives and wagons</td>
<td>![Image]</td>
</tr>
<tr>
<td>Usage of the different types of containers</td>
<td>![Image]</td>
</tr>
<tr>
<td>New possibilities in container tracing</td>
<td>![Image]</td>
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<tr>
<td>New system of tariffing</td>
<td>![Image]</td>
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<tr>
<td>New system of sales</td>
<td>![Image]</td>
</tr>
</tbody>
</table>

#### Product «TSR for 7 days»

- Frequency;
- Delivery time;
- Fixed delivery schedule;
- Accuracy of schedule abidance;
- Possibility of the online containers movement tracing;
- Safety of cargoes in container;
- Single transportation operator;
- Single transport document;
- Transport-logistic service Complex;
- Flexible system of pricing;
- Complex through rate.
Formation Stages for the Product «TSR for 7 days»

Ref.:
- Technical speed of freight trains movement via West-Siberian railway for 11 months 2008 57.8 km/hour

- 2008: 910 km/day 10,8 days
- 2009: 1070 km/day 9,2 days
- 2010: 1160 km/day 8,5 days
- 2011: 1260 km/day 7,8 days
- 2012: 1400 km/day 7 days
- 2015 and further: 1680 km/day 5,9 days

NAKHODKA – KRASNOE 9847 km

- Reducing of quantity and duration of stops
- Increase of crossing capacity and transportation speed
- Correcting of regulatory and legal basis
- Optimization of guarantee hauls
- Increase of crossing capacity and transportation speed
- Implementation of automatic control system with the usage of electronic way-bill
- Increase of crossing capacity and transportation speed
- Increase of crossing capacity
- Increase of transportation speed - new wagons
- New locomotives
- New locomotives
Perspectives of Terminal-Logistic RZD’s Complexes Development

- Ports
- Terminal-logistic centers
- Intermodal terminals
- Grouped terminals
- Feeder terminals