The most important current trends of railways and transport development in Russia

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Department of economic conjuncture and strategic development
JSCo “RZD”

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JSC Russian Railways profile

Strategic player on the Russian and international transport market

- 43% of freight turnover in the Russian transport system (more than 85% if pipeline are excluded) and 31.5% passenger turnover
- 79% of freight turnover and 66% passenger turnover in the CIS transport system

One of the largest railway companies in the world

- 85,200 km of railway track
- About 1 million employees
- Affiliated companies and research institutes have significant research capacity
- JSC Russian Railways is among the three largest global railway companies

Stable financial position

- Authorized capital of 41.6 billion Euros
- Profitable performance despite the global economic crisis
- Agencies rate JSC RzD as outlook stable: Moody’s (Baa1), Standard & Poor’s (BBB), Fitch (BBB)
Position of Russian Railways among the leading global railway systems (as of 2011)

<table>
<thead>
<tr>
<th></th>
<th>EU</th>
<th>USA (Cl. I)</th>
<th>China</th>
<th>Russia</th>
<th>India</th>
<th>Canada</th>
<th>Japan (JNR)</th>
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</thead>
<tbody>
<tr>
<td><strong>Operation route length, th. km</strong></td>
<td>215.7</td>
<td>194.1</td>
<td>91.2</td>
<td>85.2</td>
<td>64.0</td>
<td>36.3</td>
<td>20.1</td>
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<tr>
<td><strong>Lenght of electrified tracks, th. km</strong></td>
<td>114.6</td>
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<td>Russia</td>
<td>43.2</td>
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<td>China</td>
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<td>India</td>
<td>18.9</td>
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<td>Japan (JNR)</td>
<td>12.4</td>
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<td><strong>Freight turnover, bn. ton-km</strong></td>
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<td>India</td>
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<td><strong>Passenger turnover, bn. pass-km</strong></td>
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<tr>
<td>India</td>
<td>903.5</td>
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<td>Japan (JNR)</td>
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<tr>
<td>Russia</td>
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<td><strong>Locomotive fleet, pcs.</strong></td>
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<tr>
<td><strong>Fleet of passenger cars, pcs.</strong></td>
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<tr>
<td>Japan (JNR)</td>
<td>23,937</td>
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</table>

The Russian Railways takes the leading position along with railway main lines of China and USA in terms of traffic volumes and track length and is integrated into the 1,520 mm gauge railway network.
Structure of the world investment needs in transport infrastructure, %*

* Source: OECD

Railways are recognized the investment priority type of transport infrastructure in the world
East-West and North-South international transport corridors

International transport corridors (ITC)
- ITC West – East
- ITC North – South
- Lines under construction
- Alternative sea routes
The plan for transport at the Sochi-2014 Winter Olympic games
High-speed passenger traffic

16th March 2010

Dmitry Medvedev, President of the Russian Federation, signed Decree “On measures to organise a high-speed rail transport service in the Russian Federation”

Moscow – N. Novgorod
L=442 km V = 160 km/h
T = 3 h. 55 min.

Moscow – St. Petersburg
L=650 km V = 250 km/h
T = 3 h. 45 min.

St. Petersburg - Helsinki
L=415 km V = 220 km/h
T = 3 h. 30 min.

Moscow

St. Petersburg

Helsinki

Nizhniy Novgorod
High-speed international passenger traffic

- existing high-speed traffic testing ground (250 km/h)
- potential testing ground for arrangement of high-speed passenger traffic (140 km/h)
- potential testing ground for arrangement of high-speed passenger traffic (160-200 km/h)
- arrangement of intermodal passenger traffic in airport-to-city connections

L – length
V – potential maximum speed
T – potential travel time
N – potential amount of traffic

- Sapsan train
- Tverskoi carriage plant
- Talgo carriage
- Allegro train

National population density:
- above 200 people/km²
- 100 - 200 people/km²
- 50 - 100 people/km²
- below 50 people/km²

Saint Petersburg – Helsinki
L = 415 km
V = 200 km/h
T = 3 h 30 min
N – 4 pairs

Moscow – Riga
L = 922 km
V = 140 km/h
T = 11 h 30 min
N – 2 pairs

Moscow – Berlin
L = 1898 km
V = 160 km/h
T = 18 h 00 min
N – 5 pairs

Moscow – Kiev
L = 856 km
V = 160 km/h
T = 6 h 30 min
N – 3 pairs

Moscow – Tallinn
L = 380 km
V = 140 km/h
T = 6 h 30 min
N – 1 pair

Moscow
Moscow – Saint Petersburg – Helsinki

Saint Petersburg
Saint Petersburg – Tallinn
L = 380 km
V = 140 km/h
T = 6 h 30 min
N – 1 pair

Tallinn
Moscow
Riga

Moscow – Berlin
L = 1898 km
V = 160 km/h
T = 18 h 00 min
N – 5 pairs

Moscow – Kiev
L = 856 km
V = 160 km/h
T = 6 h 30 min
N – 3 pairs

Moscow

Saint Petersburg

Ukraine

Kiev

Moscow

Russian Federation

Saint Petersburg

Tallinn

Riga

Moscow

Warsaw

8
Russian Railways’ international projects

- Cooperation with Finnish railways (VR) in the field of passenger and freight transport
- Ust-Luga – Baltiysk – Sassnitz rail ferry service
- Strategic cooperation with DB AG
- Implementation of infrastructure projects in Serbia
- Cooperation with Siemens AG on the high-speed Moscow – St. Petersburg rail service
- Involvement in developing the railway system in Mongolia
- Formation of a new Eurasian transport corridor to Bratislava and Vienna
- Armenian railways concession
- Implementation of infrastructure projects in Iran
- Cooperation with Chinese railways in the field of organising Eurasian freight transport
- Refurbishment of the Hasan – Rajin line and construction of a terminal in Rajin port
- Cooperation with leading companies and consignors in Japan and South Korea
- Russian Railways – the main integrator in the “1520 space”
- Implementation of infrastructure projects in Iran

Geography of Russian Railways’ foreign projects:
- Integration in the “1520 space”
- Implementation of infrastructure projects
- Involvement in management and development of railway systems
- Cooperation in the field of organising freight and passenger transport, and also developing rolling stock
Freight business of Russian Railways group

- JSC «Russian Railways Logistics»
- JSC «RailTransAuto»
- JSC «Freight One»
- JSC «Freight Two»
- Black Sea Ferries LTD
- JSC «Refservice»
- JSC «TransContainer»
- Trans Eurasia Logistics GmbH
- JSC «Russkaya Troyka» Ltd.

- Logistics
- Cars transportation
- Freight forwarding
- Railroad ferries
- Transportation of refrigerated wagons
- Intermodal container transport

- Joint company with FESCO Transportation Group
- Shipping
Russian Railways’ group logistics projects

- Strengthening cooperation between Russian Railways and the Ministry of Railways of China in the field of transportation of goods, including container transit from China to Europe and back. In 2011 was started a new container train Chongqing (China) - Duisburg (Germany)

- Rail ferry connection Sassnitz - Baltiisk and Sassnitz – Ust-Luga

- On the base of subsidiary of the group of companies «Black Sea Ferries» (BSF) preparing a project of rail-ferry service on the Black and Baltic Seas

- JSC «Russian Railways» and «Deutsche Bahn AG» continue cooperation on creating a terminal and logistics center «White Rust» (Moscow Region)

Developing of logistics and intermodal transportation service - one of the key areas of Russian Railways group activity
Integration of the railway systems of 1520 mm and 1435 mm

Common Economic Space

Common Transport Space

- Borders of the 1520 mm Domain
- Borders of the European 1435 mm Domain
- Member states of the Common Economic Space
- Member states of the European Union
- States of the 1520 Domain – members of the European Union
### Interaction of JSC Russian Railways with international organisations

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Working group on automobile and railway transport within the framework of transport dialogue Russia – EU</td>
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<tr>
<td>Contact group within the Organisation for Co-operation between Railways (OSJD) and European Railway Agency (ERA)</td>
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<tr>
<td>The International Union of Railways</td>
<td>(development of international transport corridors and making of standards of quality and certification)</td>
</tr>
<tr>
<td>Participation in the activities of the ITC UNECE</td>
<td>(working group on railway transport, intermodal transportations and logistics, transportation of dangerous goods, customs issues)</td>
</tr>
<tr>
<td>Official representative of the Russian Federation in the UNECE project of the Trans-European Railway network (TER)</td>
<td></td>
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<tr>
<td>Participation in the development of Intergovernmental agreement on the Trans-Asian Railway network within the framework of the UN Economic and Social Commission for Asia and Pacific (ESCAP)</td>
<td></td>
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</tbody>
</table>
Formation of a new Eurasian transport corridor to Bratislava and Vienna

States, which are economically tending towards the project: **Germany, Switzerland, Austria, Slovenia, Czech Republic, Hungary, Slovakia, Serbia, Croatia, Italy**

- Creation of a competitive direct railway link between the countries of Europe, Russia and the Asia-Pacific region
- Elimination of the need to reload the goods at the jointing stations of the railway gauges in Europe with the gauge widths 1520/1435 mm
- Reduction of the cost and time frame of transportation, as well as of the transport component in the final price of the transported goods
International scientific and technical cooperation of JSC Russian railways with foreign partners

- Passenger locomotive with an asynchronous traction drive
- Freight locomotive with an asynchronous traction drive
- New generation freight car (boxcar)
- Systems of railway automation and telemechanics
- Systems of train traffic safety management and provision of security ITARUS-ATC
- Passenger trains with an automatic width adjustment to the railway gauge

Manufacturers:
- ALSTOM
- SIEMENS
- TATRAVAGÓNKA POPRAD
- BOMBARDIER
- FINMECCANICA
- Talgo

Partners:
- Tрансмашхолдинг
- CTM
- Трансмашхолдинг
- Совместное предприятие

ITARUS
Thank you for attention!