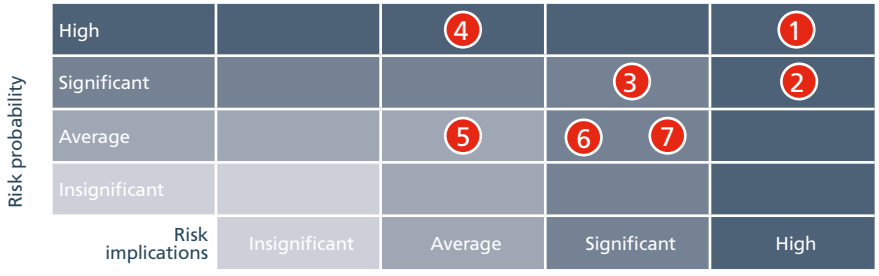
Risk map for business units of the Russian Railways Group

Main risks of the Transportation and Logistics Business Unit

Risk matrix



An analysis of the activities of the Transportation and Logistics Business Unit produced a risk matrix of the following risks that have the greatest impact on the Group's income base.

Main risks and their implications for Russian Railways

Main risks	Risk implication
1. Decreased transportation volumes.	■ Loss of income from railway freight transportation.
2. Increased competition on the freight railcar handling market.	■ Dumping prices from competitors. ■ Decreased rates of return.
3. Changes to the freight turnover structure, increase in the proportion of low-margin freight and a decrease in export shipments.	■ Loss of income from railway freight transportation.
4. Changes to the exchange rate of the national and foreign currencies.	■ Increased expenses due to exchange rate differences.
5. Changes to the refinancing rate.	■ Increased cost of debt capital. ■ Curtailed investment programmes.
6. Government restrictions on the flexible tariff policy.	■ Decreased income from basic services.
7. Continued imbalance in legislative pressure on railway and road transportation.	■ Decrease in the amount of freight for short- and medium-distance transportation (handling level). ■ Loss of income from transporting freight over short and medium distances.

In order to mitigate the most probable and significant risks, the following key working areas were identified along with measures to optimise them:

■ Measures to reduce the negative impact from the decrease in freight transportation volumes on the performance results of operator companies (Freight One and TransContainer):

- attracting customers to railway transportation from other types of transportation (road, pipeline, sea);
- increasing the volume of transit freight;
- flexible tariff regulation (a tariff corridor);
- fully utilising the fleet of the Russian Railways Group's operating companies in transportation for the needs of the Russian Railways Group.

■ In order to potentially improve competition on the freight railcar handling market, the following measures are being implemented:

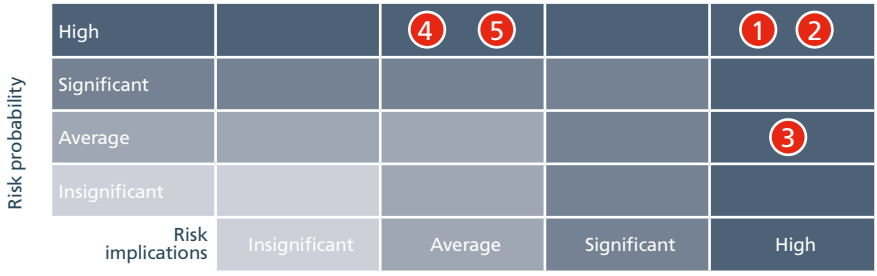
- the use of a customer-focused approach in providing services;
- a higher level of service must be offered to attract consignors and provide services using the Group's rolling stock;
- revised approaches to the pricing of railcar provision services for freight transportation with respect to Russian Railways.

■ In order to possibly alter the freight turnover structure, the following measures are being implemented:

- consignors with high-margin freight must be attracted by offering additional services, utilising the capabilities of the Group's logistics companies and the Centre for Corporate Transportation Service.

Main risks of the Passenger Transportation Business Unit

Risk matrix



Main risks and their implications for Russian Railways

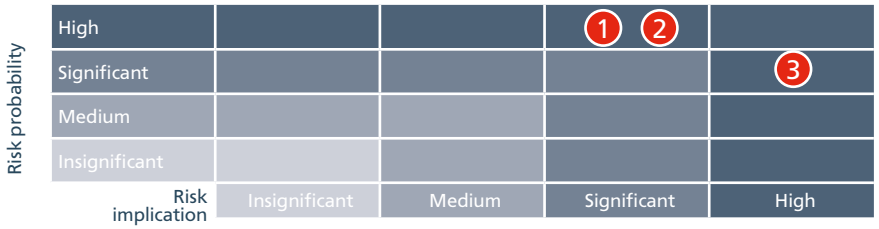
Main risks	Risk implications
1. Infrastructural constraints.	■ Reduced transportation availability for the public.
2. Possible decrease in transportation volumes due to tariff growth and/or a decrease in disposable incomes.	■ Lower revenues for carriers.
3. Lack of the required volume of subsidies, including with respect to the investment component.	■ Reduced traffic in the subsidised segment and sequestering of the fleet renewal programme.
4. Intensified inter-industry competition, including due to the government's stimulation of other types of transportation.	■ Loss of railway transportation's market share.
5. Higher-than-anticipated growth in supplier prices.	■ Increased price burden on the passenger.

The Russian Railways Group's main corrective measures to minimise the most significant and probable risks include:

- Infrastructural constraints:
  - further development of infrastructure as regards the implementation of the 'Daily Express' programme and the development of the Moscow Transport Hub.
  - development of multimodal transportation.
- A possible decrease in transportation volumes due to tariff growth and/or a decrease in disposable incomes:
  - implementation of a range of marketing campaigns and loyalty programmes, expansion in the scope of the yield management system and possible changes taking into account the elasticity of demand for price and comfort;
- Lack of the required volume of subsidies:
  - performing targeted work with the constituent entities of the Russian Federation to subsidise suburban transportation at the level of the Government Transportation Commission.

Main risks of the Railway Transportation and Infrastructure Business Unit

Risk matrix



Main risks and their implications for Russian Railways

Main risks	Risk implications
1. Increase in the length of railway infrastructure sections of Russian Railways carrying tonnage in excess of industry standards given limited financial resources (25,200 km as of 31 December 2015).	■ Reduced safety levels. ■ Breach of contractual deadlines for freight delivery (the proportion of consignments delivered by the required (contractual) time; delivery speed of loaded freight).
2. Deterioration of electrification and power supply fixed assets.	■ Reduced safety levels. ■ Increase in the number of failures of electrification and power supply equipment. ■ Growth in unit costs for equipment maintenance and service.
3. Shortage in the locomotive fleet compared with the requested transportation volume.	■ Traffic safety violations due to the operation of locomotives with abnormally worn-out nodes and components. ■ Increase in the number of hardware failures due to locomotives exceeding their viable operation time. ■ Increased claims concerning fines for violating the freight delivery deadlines due to shortages in the fleet.

The Russian Railways Group's main corrective measures to minimise the most significant and probable risks include:

- Increase in the length of railway infrastructure sections of Russian Railways carrying tonnage in excess of industry standards:
  - revision of the regulatory framework for rules concerning the repair of fixed infrastructure assets, including changes to repair diagrams;
  - increase in the volume of repair work, including through the seamless replacement of rails supported by mid-life repairs;
  - decrease in the procurement price for material and technical resources and services performed by third-party organisations;
  - introduction of resource-saving technologies.
- Deterioration of electrification and power supply fixed assets:
  - differentiated approach to repair work on railway line power supply equipment depending on their class and specialisation;
  - drafting of (new) rules on the maintenance of the contact network, power supply lines, suction lines, shunting lines and electricity transmission lines;
  - revision of the maintenance rules for traction substations, transformer substations and linear devices of the traction electric power supply system.
- Shortage in the locomotive fleet compared with the requested transportation volume:
  - revision of the regulatory framework for rules concerning the repair of traction rolling stock;
  - decreased demand for locomotives due to the improved quality of rolling stock utilisation;
  - reduced downtime for locomotives under repair;
  - increased repair volumes;
  - introduction of efficient technologies that aim to improve the reliability and failure-free performance of traction rolling stock.

Main risks of the International Engineering and Transportation Construction Business Unit

When implementing major infrastructure development projects abroad, the Russian Railways Group may encounter economic and political risks related to the possible instability of a political regime or the economic situation in the countries where it implements foreign projects.

The Group also takes into account the probability of technological risks and human factor risks caused by the possible lack of technologies or skills to work in highly competitive segments of the foreign transportation construction market.

These types of risks were recorded in the Russian Railways Group's Development Strategy until 2030.

Main risks and their implications for Russian Railways

Main risks	Risk implications
1. Risks of an economic and political nature in countries where foreign projects are implemented.	■ Unfavourable changes in the political or economic situation of a country where a project is being implemented which may result in the foreign customer being unable to meet its payment obligations on time or the violation of other contractual terms.
2. Possible technological risks (lack of production capacity) and human factor risks (lack of skills).	■ Increased competition from foreign engineering companies working in the Russian Railways Group's targeted regions for international railway projects.
3. Risks of competition from foreign companies that are willing to independently finance projects.	

Risk management within the business unit takes place based on requirements that ensure the Company is among the global leaders in terms of infrastructure construction, the formation of a long-term order portfolio as well as a high standard of project implementation.

The business unit's risk management system is based on the following elements:

- A detailed analysis of the political, economic, social and technological components of promising projects during the pre-project implementation phase (PEST analysis);
- Hiring internationally recognised legal and financial consultants to prepare design documentation during the pre-project implementation phase;
- Use of project management methodology during the pre-project implementation phase.

Several focus areas are being considered as key mechanisms for minimising risk:

- Risks of an economic and political nature in countries where foreign projects are implemented:
  - Cooperation with insurance agencies, which in addition to insurance provides additional advantages when applying for a loan in the form of a possible interest rate reduction for a contract that provides insurance for the necessary risks;
  - optimising work with customers via advance payments under a contract;
  - implementing projects as part of export loans provided by the Russian Federation.
- Possible technological risks (lack of production capacity) and human factor risks (lack of skills):
  - Implementing advanced training programmes for employees and programmes to exchange experience with global leaders in the industry as well as studying and analysing international experience in implementing major construction projects.
- Risks of competition from foreign companies that are willing to independently finance projects:
  - establishing strategic alliances and forming consortiums with design and construction industry companies for the joint implementation of major projects.