

# MANAGEMENT OF FOREIGN TRADE TRANSPORTATION IN THE TRANSPORT CORRIDORS OF EUROPE AND ASIA

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**Abstract:** *The dynamics of global container turnover in the 1990-2015 period is shown, the emphasis being placed on the countries of the Asian-Pacific. Thanks to its favorable geographical position, efficient transportation infrastructure and the busiest sea ports the Russian Federation has considerable potential for providing services in container cargo transportation. Major transportation corridors of various international organizations run through the territory of the Russian Federation. Major links and connections in the technological process of cargo transportation in the system “sea port/river port-connecting station” are introduced. Logistics centers in transportation junctions can be built on the basis of sea and river ports; their functions and services are described.*

**Key words:** *Container turnover, sea port, transportation infrastructure, transportation, cargo, transport corridor, logistic center, transportation junction, service, function.*

In recent years, the volume of container traffic has been constantly increasing. In the 1970s the growth of container traffic was impressive – 21 percent annually. In the 1980-2000 the average increase of container turnover was up to 10 percent annually.

The only exception was the year 2009 due to the global economic crises when the volume of container turnover dropped by 13 percent compared to the precious year.

These days the global market of container traffic has overcome the financial economic crisis of 2009 and reached the pre-crisis state. After 2000 the annual average growth rates of the container market are 2.5 times higher than those of the global GDP (gross domestic product). In monetary terms the volume of the global container market is almost 1 billion dollars every year.

Taking into account the interstate container turnover we can see that the absolute leader in this process is the Asian region.

Nowadays over 50 percent of the global container turnover is handled by the Asian ports (about 25 percent of the global container turnover is handled by the Chinese ports). Europe, the second largest player in this market, shows the volume of container turnover that is 4 times less. Then follow South America, Middle East, Latin America, Africa and Oceania.

There is the fantastic growth of sea container shipment between the Asian ports – it jumped from 6.7 million TEU in 2005 to 37,6 million TEU in 2015 (over 6 times during ten years!).

Other routes show the increase, too, although it may seem not so impressive:

- The route Asia-Europe: the increase by 59 percent (from 19.2 million TEU in 2005 to 26 million TEU in 2015);
- The route Asia-South America: the increase by 48 percent (from 16.4 million TEU in 2005 to 24,3 million TEU in 2015);
- The route Europe-South America: the increase by 15 percent (from 7.8 million TEU in 2005 to 9.0 million TEU in 2015).

Nowadays it is the route Asia-Europe. In 2015, this route handled 14.3 million TEU of global sea cargo; this volume is expected to double in the nearest 5 years. In monetary terms, the contemporary trade turnover between Europe and Asia is about 600 milliard dollars annually.

Thanks to its favorable geographical position and efficient transportation infrastructure the Russian Federation has considerable potential for providing services in container cargo transportation. A great number of transport corridors belonging to various international organizations can run across Russia.

These days, the share of the Russian transport system in the Asian-European trade turnover is less than 1 percent; the transit potential is 10-15 percent (over 1 million TEU annually). Most of the mutual trade volume between European countries and the Asian-Pacific region is handled by sea transport across the Suez Canal, due to technological aspects which should be taken into account when planning efficient overland transport corridors.

However, nowadays the potential of ports - both Russian and European ones - is not sufficient; some of them are reaching their absolute traffic capacity. We feel concerned about the uncertainty in the sea shipping market. Congestions in the ports cause transport bottlenecks, there are problems in the dockside and coastal waters. In some places port's waters are not deep enough to make the vessels move free; hence the disbalance between inbound and outbound loaded and empty containers. The running speeds of the vessels are decreased to solve the problem of global tonnage redundancy.

**Under current conditions it is of primary importance to find new alternative overland routes between Europe and Asia**

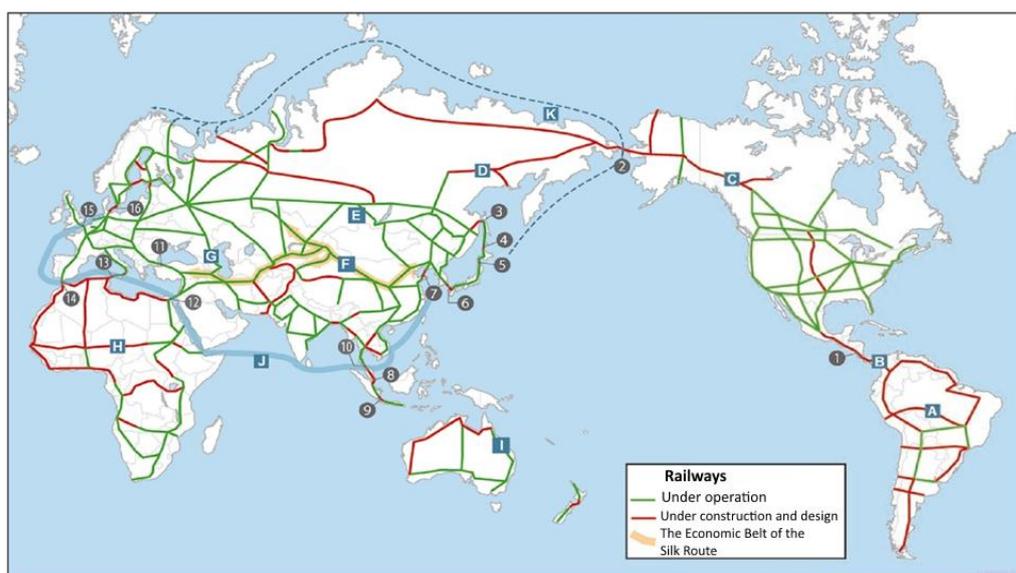
Two projects are important for the development of the infrastructure of the Eastern logistics ground of the Russian railways to provide perspective traffic volumes. The overland route for container shipment through the Khasan railway border point (RF) – the Tumangang station (North Korea) and the Rajine port (North Korea) is considered the most efficient. Some reconstructions works of railway infrastructure on the section Khasan (RF) - Tumangang (North Korea) and the port Rajine (North Korea) as well as the overhaul of tunnels have been carried out. A new cargo terminal in the Rajine port has been built. This work will provide handling up to 200 000 TEU of container shipment annually.

Another important project is the railway bridge between Isle of Sakhalin and the continent. Joining the Sakhalin railway with the Baikal-Amur Mainline will ensure the growth of export-import and transit potential of the Russian railways.

Implementation of the Khasan- Rajine project and the construction of the railway bridge between Isle of Sakhalin and the continent will give Russia two alternative entries to Asian-Pacific markets).

Of great importance for transit potential of the Russian Federation are the projects in the northern regions – Belkomur project and the project called North Latitudinal Run. The former is to optimize the European section of Transsib as well as the transport junctions of Moscow and St.Petersburg. The latter is to connect the Northern Railway with the Sverdlovsk Railway. It is to ensure the shortest transit of hydrocarbon goods westbound and the goods required for the development of gas and oil deposits eastbound.

Nowadays there are 27 major projects related to the development of the global transport system; seven projects are connected with Russia (picture 1, was published early on German in [1] and on Russian in [2]).



In the slide the digits show the routes like, for example, the connection between Isle of Sakhalin and the continent (number 3) or the underwater tunnel between Japan and South Korea (number 6).

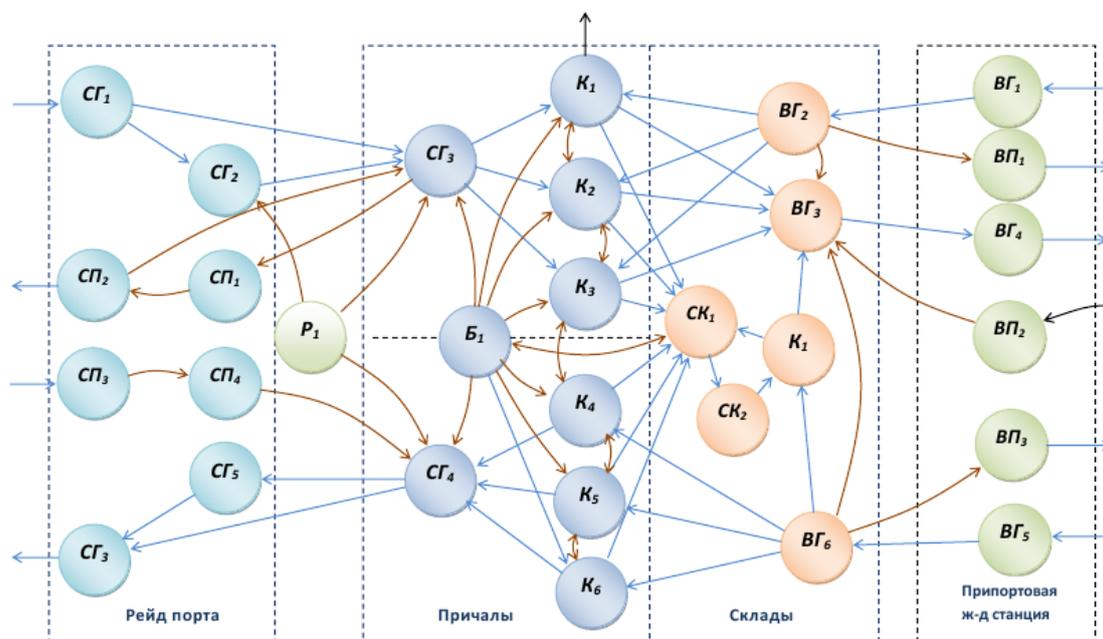
The letters show the transport corridors like, for example, the Transsiberian corridor (E), the International transport corridor North-South (G) or the North Sea Route (K).

The green lines show the railways already in operation;  
the red lines show the railways under development;  
the yellow line shows the Silk-Route Economic Belt.

**Picture 1.** The projects of the global transport network development

RZD Holding is to become one of major players in the transport market dealing with container shipment on the route Asia-Europe.

The picture 2 [2] shows the major links and connections of the complicated technological process. As you see, the picture is rather intricate and major processes are not easy to accomplish.



**Picture 2.** The graph of technological connections in the system “port – dock station”

In this slide the solid direct arrows show the links and connections of the technological process of freight movement as the material flow. Resource movement without freight is shown with the curved arrows.

Containers with import cargo running through the Finnish ports arrive at the stations of the Moscow junction two weeks earlier than if they run through the St.Petersburg sea port (both by road and by rail). This is why Helsinki, not St.Petersburg is one of the entry points to the IX Crete transport corridor.

In the Far East coal transported from the Northeast provinces of China to the Russian port is loaded from Chinese to Russian wagons at the border station Grodekovo according to the unified shipping document. What we are dealing with is direct reloading, as it was in Russia in the second half of the 19<sup>th</sup> century (before 1888). Reloading-free direct traffic has been practiced in Russia only since 1889.

We suggest establishing logistic centers in the traffic junctions on the territory of sea and river ports, such as was published in [3-15] (like coordination councils which provided operation of transport junctions based in sea and river ports according to the system of continuous operation schedule of a transport junction in the 1970-1980s). Have a look at table 1 and 2.

*Table 1. The functions of the logistics centers based in sea ports*

<i>Functions</i>	<i>Tasks</i>	<i>Responsible party</i>
Regulation	Consultancy, analyzing, planning The choice of means of transport Conclusion of the contract of affreightment Drawing up shipping documents Transportation control	Transportation broker
Transportation	Gathering and distribution of goods in freight short hauls. Organization of freight long hauls in domestic and international traffic.	Carrier, forwarder
Transshipment	Preparation and handling of transshipment	Stevedore, forwarder, carrier
Warehousing	Putting freight to/ removing it from storage Transfer goods from one warehouse to another Store management and operations	Warehousing company, forwarder, carrier
Consolidation	Consolidation of goods into colliers Preparation of aggregated shipments	Carrier forwarder,
Packaging	Consultancy and the choice of package Dispatch of packages	Stevedore, packaging, warehousing or forwarding company
Preparation	Sorting and labeling goods according to batches Servicing and pre-sale preparation of goods	Forwarder, carrier
Information dissemination	Shipping notification Monitoring and control of goods distribution	Various companies
Special	Goods-in-transit insurance Customs formalities Repair services Preservation Restoration Loan and payment services	Various companies

*Table 2. The potential volume of services provided by the logistics center based in the sea port*

Traditional services	Traditional port services and organizational services as well as the whole complex of services in freight distribution are based on modern equipment and electronic information technologies.
Industrial service of ports	Industrial and technological servicing of rolling stock (ship and container repair, etc.) is to increase efficiency and decrease technological and commercial risks when operating port technical facilities. Industrial cargo handling or providing necessary conditions for the industrial development of port areas to attract considerable volumes of freight.
Administrative and commercial services	Documentation is to be understandable, compatible with marketing and transport documentation and applicable for electronic data exchange Working out the schedule (cargo handling, its receiving, packing and dispatching is to be carried out twenty-four hours a day seven days a week) Administrative services (under the status of free zone the port may provide all necessary commercial conditions for its direct and indirect customers offering them banking, insurance, legal and communications services)
Logistics services in cargo distribution	In third generation ports (according to UNCTAD classification) all types of traditional, industrial and commercial activity are carried out according to organizational principles. Usually the ports ensure only basic conditions for cargo distribution; detailed work is assigned to specialized companies Containerization and distribution of combined traffic make ports provide a new, purely organizational service. In this case the port works like a passage for freight without imposing VAT
Warehousing services	Offering areas sufficient for storing goods near the terminals, planning and equipping the warehouse, meeting customers' requirements (including air-conditioning, stacking, computerized control systems)
Information service of ports	Information servicing for management organization, management operations, technical and administrative activity, accumulation of information about the cargo and rolling stock for port administration (customs, insurance companies, banks, ship owners, consignors, etc.) meeting requirements concerning precise location of cargo and other information about warehouses, freight and vehicles.

Logistic centers providing efficient work of transport junctions based in sea and river ports and seamless passing of freight trade cargo through the system “port-seaport station” are seen either as a noncommercial partnership or a public corporation or a close corporation. It may have some other commercial or legal status with the strictly proved stock and the charter capital of every transport market subject concerned.

Their establishment is sure to make operation of the whole transport complex more efficient and economically attractive as well as to provide sustainable development of the Russian transport system in the global transport service market.

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