



GUBKIN UNIVERSITY
National University of Oil and Gas

FERRMED Conference

Second Eurasian Connectivity and Industrial Cooperation Forum (Europe)

The business-oriented approach to EU/Eurasian Railway/Multimodal Freight Network development

Cost Effective: China-EAEU-EU Rail/Road Connections

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6 November 2019: Residence Palace / International Press Centre 155 Rue de la Loi,
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Intermodal Transport Costs, Chains

- **Loading/Unloading – Shipper and Final Client**
- **Road Transport to and from Terminals**
- **Transshipment – from one mode of transport to other or between similar units (road to road, road to rail etc.)**
- **Terminal Transfer**
- **Cargo Yard Transfer**
- **Main Transport**
- **Stocking Costs**
- **Investment Cost including Infrastructure (service speed of vehicle, waiting time between sequential trips, cargo capacity of vehicle and fullness ratio of vehicle, annual maintenance-repair time, annual idle time, interest rate etc.).**
- **Operational and Maintenance Costs (annual operation and maintenance costs, escalation rate for future operational and maintenance costs, insurance percentage, escalation rate for future insurance cost).**
- **Fuel and Lubricant Costs**
- **External Costs (cost of accidents, cost of pollution - emission, noise).**
- **$C_{\text{cargo}} = C_c + C_m + C_f + C_{\text{ex}}$ (euro/t or container)**



Specific IT Chain: China-Kazakhstan-Russia- Belorussia – Poland





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To calculate costs of transportation – to take into consideration many factors. There are some features – delivery terms:

- **accumulation of train/platforms groups with containers (only large forwarders and consignors can consolidate a consignment of cargo to form train of 50-60 wagons with containers);**
- **container reloading from 1520 mm gauge platforms to 1435 mm platforms and back;**
- **various requirements of railway administrations for the length of container trains. Downtime of cars- platforms at the border (EAEU – 71 platforms, Poland – 33, China – 55-60);**



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- **imbalance of cargo flows and, as a result, periodic surges in the deficit of empty rolling stock (railway platforms) at the border stations of Russia, Mongolia and Kazakhstan;**
- **limiting element is the system of distribution of container traffic on the border with EU countries. It is almost impossible to guarantee the fulfillment of the delivery time when traveling through European territory.**



Specific IT Chain: China-Kazakhstan- Russia-Belorussia – Poland

- **terminals belong to different owners and are managed independently each other, but there is only one way to the terminal; to group - often only a few wagons per day; train with container often stay at the border four to six days; due to delays at the indicated border crossing goods from China to EU countries arrive to the consumer on the 20th day, often on 25th day - speed railway delivery rests in "infrastructure downtime".**



Specific IT Chain: China-Kazakhstan- Russia-Belorussia – Poland

- **Synchronization of border crossing technology, tariffs, improvement of custom technologies, monitoring/control of transit traffic;**
- **Legal Interoperability CIM/SMGS;**
- **Transport-Forwarding issues;**
- **Information-Analytical activity;**
- **Tariffs.**





• **THANK YOU !**