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# **DEVELOPMENT OF END-TO-END DIGITAL SERVICES AND ELECTRONIC DOCUMENT FLOW ON THE ROUTES OF INTERNATIONAL TRANSPORT CORRIDORS WITH THE PARTICIPATION OF RZD AND LDZ**

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# INFORMATIVE: THE MOST IMPORTANT DIRECTIONS OF WORLD SHIPPING LINES AND TRAFFIC VOLUMES



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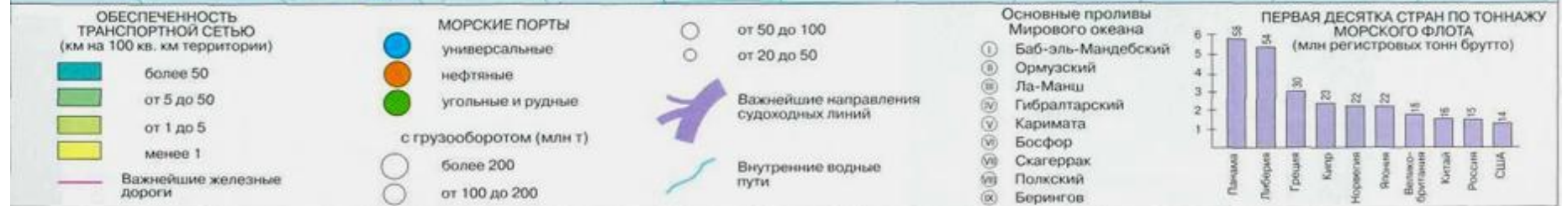
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80% of world trade is carried by sea and processed in ports around the world

About 230 million TEUs – the annual volume of global container traffic

Order 482,6 billion US \$ annual revenue container operators

The 10 largest container companies control almost 90% of the total market



# MAIN INTERNATIONAL TRANSPORT CORRIDORS

Revenue from container transit through Russia in 2018, about us \$ 760 million

It is planned to increase the volume of transit transportation of containers through the territory of Russia by 4.4 times by 2024 (1656 thousand TEUs, which is only 0.7% of the current world volume)

East-West, North-South, pan-European corridors: MTK No. 1 Helsinki - Tallinn - Riga - Kaunas and Klaipeda - Warsaw and Gdansk. Branch Riga - Kaliningrad - Gdansk MTK No. 2 Berlin-Pozan-Warsaw-Minsk-Moscow-Nizhny Novgorod (also the offer on extension of this MTK to Yekaterinburg was accepted)

MTK No. 9 Helsinki-St. Petersburg-Moscow-Gomel-Kiev-access to the black sea ports. Information taken from the website of the exchange Primorye-1, Primorye-2, Northern sea route

The planned use of the potential of TRANS-Eurasian corridors of Russia will increase the volume of revenue from transit up to 3.3 billion US dollars

Revenue from the transit of ships through the Suez canal alone reached US \$ 6 billion in 2018

Parallel to the Suez canal (DL. 193 km, depth - 24 m., W.- 205 m.) in 2015, built a new canal (72 km), the annual revenues will be about 13-15 billion U.S. dollars



- Условные обозначения**
- коридоры ОСЖД
  - сеть Трансазиатских железных дорог
  - общеевропейские транспортные коридоры
  - ... проектируемые железнодорожные коридоры
  - - - железнодорожные паромные переправы

# MAIN EXPORT CORRIDORS OF THE RUSSIAN FEDERATION

**S-N Direction: European part of Russia - Eastern, Central Europe and Scandinavia (sea)**

**Part of the Pan-European Transport Corridor No. 1: Kaliningrad - Riga, Gdansk - Sweden, Denmark**

**Part of the Pan-European Transport Corridor No. 2: Yekaterinburg - Nizhny Novgorod - Moscow - Smolensk - Brest, Minsk (Belarus) - EU**

**Part of the Pan-European Transport Corridor No. 9: Istanbul (Turkey) - Bryansk - Moscow - St. Petersburg - Vyborg - Helsinki (Finland)**

**TCM branch: Moscow - Kiev (railway, car)**

**TCM branch: Moscow - Moscow-Novorossiysk - Middle East, Africa, Asia, Europe, America (sea)**

**Direction S-N: European part of Russia - Sea of Azov - Vladikavkaz, Georgia (railway and car)**

**Direction S-N: European part of Russia - Caspian Sea - Iran (sea)**

**Branch of TSM: Moscow - Samara, Ufa, Chelyabinsk - Kazakhstan (railway)**

**TCM branch: Krasnoyarsk, Novosibirsk, Ulan-Ude - Mongolia, China (railway)**

**TCM branch: Krasnoyarsk, Khabarovsk - Vladivostok / Nakhodka - Grodekovo - Harbin (China); Posyet / Zarubino - Kraskino - Hunchun (China) (sea, railway, car)**



**Corridors passing through Russia:**

- **North-South** - Countries of Eastern, Central Europe and Scandinavia - European part of Russia - Caspian Sea - Iran - India, Pakistan, etc.
- **Transsib** - Central Europe - Moscow - Yekaterinburg - Krasnoyarsk - Khabarovsk - Vladivostok / Nakhodka. Branch system: to St. Petersburg, Kiev, Novorossiysk, Kazakhstan, Mongolia, China and Korea. Interfacing with pan-European transport corridors № 2,3, 9
- **Primorye 1**
- **Primorye 2**
- **Pan-European TC No. 1**
- **Pan-European TC No. 2**
- **Pan-European TC No. 9**
- **Foreign hubs**



# LIST OF EXPORT CORRIDORS OF THE RUSSIAN FEDERATION

No	Large corridor	Large corridor route	Export corridor	Checkpoints
1.	North-South	Countries of Eastern, Central Europe and Scandinavia - European part of the Russian Federation - Caspian Sea - Iran - India, Pakistan and others	Part of the North-South corridor: the European part of Russia - Eastern, Central Europe and Scandinavia	Ust-Luga
2.			Part of the North-South Corridor: European part of Russia - Caspian Sea - Iran	Astrakhan
3.			Part of the North-South corridor: European part of Russia - Caspian Sea - Azerbaijan, Georgia	Derbent, Upper Lars
4.			Branch of the North-South corridor: Murmansk - Arkhangelsk - EU countries, America, Africa	Murmansk (marine), Arkhangelsk
5.	Trans-Siberian Railway (East-West)	Central Europe - Moscow - Yekaterinburg - Krasnoyarsk - Khabarovsk - Vladivostok / Nakhodka. Branch system: to St. Petersburg, Kiev, Novorossiysk, Kazakhstan, Mongolia, China and Korea. Interfacing with pan-European transport corridors Nos. 2,3, 9	Trans-Siberian Part: Moscow - Baltic States - Central Europe	Posin, Skangali, Pskov Pechora
6.			Branch of the Trans-Siberian Railway: St. Petersburg - Central Europe	Ivangorod, St. Petersburg, Vysotsk
7.			Continuation of the Trans-Siberian branch: St. Petersburg - China, other Asia, America, the Middle East and Africa	St. Petersburg
8.			Transsib branch: Moscow - Kiev (Ukraine)	Suzemka, Valuyki (railway), Triple-breasted, Nekhoteevka
9.1.			Transsib branch: Moscow - Novorossiysk - Middle East and Africa	Novorossiysk, Caucasus, Taman, Tuapse, Rostov-on-Don (marine), Azov, Yeysk, Taganrog, Sevastopol
9.2.			Transsib branch: Moscow - Novorossiysk - Asia	Caucasus, Novorossiysk, Tuapse, Taman
9.3.			Transsib branch: Moscow - Novorossiysk - Europe	Novorossiysk, Tuapse, Taman, Rostov-on-Don (marine), Yeysk, the Caucasus, Azov
9.4.			Branch of the Trans-Siberian Railway: Moscow - Novorossiysk - America	Tuapse, Novorossiysk
10.			Branches of the Trans-Siberian Railway: Moscow - Samara, Ufa, Chelyabinsk - Kazakhstan; Krasnoyarsk - Novosibirsk - Kazakhstan	External (border of Kazakhstan): Saryagash, Beineu
11.			Trans-Siberian Branch: Ulan-Ude - Mongolia, China	Nayshki (railway)
12.			Trans-Siberian Railway (East-West), Primorye-1, Primorye-2	Central Europe - Moscow - Ekaterinburg - Krasnoyarsk - Khabarovsk - Vladivostok/Nakhodka, Grodekovo - Harbin; Posiet/Zarubino - Kraskino - Hunchun
13.	Pan-European Transport Corridor No. 1	Helsinki - Tallinn - Riga - Kaunas and Klaipeda - Warsaw and Gdansk. Branch Riga - Kaliningrad - Gdansk	Part of the Pan-European Transport Corridor No. 1: Kaliningrad - Riga, Gdansk - Sweden, Denmark	Kaliningrad (marine)
14.	Pan-European Transport Corridor No. 2	Berlin - Poznan - Warsaw - Brest - Minsk - Smolensk - Moscow - Nizhny Novgorod - Yekaterinburg	Part of the Pan-European Transport Corridor No. 2: Yekaterinburg - Nizhny Novgorod - Moscow - Smolensk - Brest, Minsk (Belarus) - EU	External (border of Belarus): Molodechno (transfer station), Kozlovichi, Bruzgi, Kamenny Log
15.	Pan-European Transport Corridor No. 9	Helsinki - Vyborg - St. Petersburg - Pskov - Moscow - Kaliningrad - Kiev - Lyubashevka / Rozdilna (Ukraine) - Chisinau - Bucharest - Dimitrovgrad - Alexandropolis. Branches: Helsinki - St. Petersburg - Moscow (branch A); Kaliningrad - Kiev (branch B); Kaliningrad - Vilnius - Minsk (branch B). The section of the Pan-European transport corridor No. 9, the Finnish border - St. Petersburg - Moscow, is included in the North-South corridor.	Part of the Pan-European Transport Corridor No. 9: Vyborg - Helsinki (Finland)	Buslovskaya

# EXPORT CORRIDOR MODEL AND PARAMETERS

## Export Corridor Model

involves the creation of a certain infrastructure that qualitatively meets modern requirements for the delivery of goods - rail and road, sea and river ports, airports, transport terminals, logistics centers, communication lines, information systems, service and repair points, service organizations, etc.

## Export corridor parameters:

- the availability of transport communications and logistics infrastructure,
  - transportation speed (by all means of transport),
  - ensuring quick passage of control procedures at checkpoints,
    - commercial (tariff) attractiveness,
- safety of transportation of export goods, vehicles and transport equipment,
- availability of national regulatory legal support compatible with international norms and rules.

Disadvantages of the regulatory framework - it is necessary to work out and include the following concepts in the regulatory framework of the transport industry:

**International transport corridor** is a high-tech transport system (a combination of land, water and air routes and associated logistics infrastructure), formed in international communications, which concentrates transport communications in a certain direction, providing mass transportation of goods between densely populated areas of different countries and regions of the world.

**Export corridor** is a combination of land, water and airways and associated logistics infrastructure aimed at ensuring export of concentrated cargo flows within a single technological chain, including transportation and control procedures of state bodies, built by one or more transport and technological enterprises, providing high-quality and on time delivery of export cargo.

**Export Corridor Section** – part of the combination of land, water and airways and associated logistics infrastructure on a specific export route for concentrated cargo flows.

**Export corridor capacity** – the ability of a track, transport hub (station, sea and river port, etc.), a transshipment front, terminal, warehouse, located on the geographic route of the corridor, to miss the maximum number of units of rolling stock, cargo, containers per unit time (day, year) .

# EXPORT CORRIDOR REQUIREMENTS

1. Entering the route of each export corridor in a special digital register of transport corridors with dynamic updating of information and indicating:
  - 1.1. The route (scheme) of the corridor, its length in km,
  - 1.2. Transport infrastructure facilities along the corridor route, indicating throughput and processing capacity:
    - stations and stopping points;
    - Logistic centers and transport terminals of various forms of ownership;
  - opportunities for containerization of goods along the corridor route (the presence of container stations and nodes);
    - sea and river ports;
    - airports and multimodal hubs;
  - hub stations and border crossing points in the Russian Federation and on the “other side” of the corridor.
  - 1.4. The main technical characteristics of corridor sections, throughput and bottlenecks.
  - 1.5. Performance indicators (traction and weight standards).
  - 1.6. Administrative subordination of corridor sections (subject of the Russian Federation).
2. Volumes of traffic along the export corridor, current and gravitating, in thousand tons with forecast dynamics until 2030.
3. Tariffs and prices for the transportation of goods along the export corridor, in the form of a matrix of bases for sending and receiving.
  4. The required number of rolling stock and containers.
  5. The required number of wholesale distribution centers and hubs.
6. The availability of digital logistics systems between participants in the logistics management of export corridors - “digital platforms”.
7. The presence of an integrated system for passing goods through the border of the export corridor and the implementation of all types of state control in the “single window” mode in digital electronic format.
  8. The list of logistics operators and forwarders working on a specific export corridor.

## Suggested initiatives:

- Updating the regulatory framework and creating a “green” export corridor with special conditions for the passage of goods - a simplified inspection regime, a single transport document, a single transport tariff, etc.).
  - Development of standards for the required infrastructure of export international transport corridors, taking into account the forecast of export cargo flows until 2030.

# ORC PLACEMENT DIAGRAM AND MAJOR DIRECTIONS OF AGRICULTURAL EXPORT

## Promising areas of agricultural exports:

- St. Petersburg-Moscow-Baku (Azerbaijan) - Bender-Abbas (Iran) - Mumbai (India): export + \$ 2 billion
- Novosibirsk-Krasnoyarsk-Chita-Zabaykalsk-China: export of \$ 3.4 billion
- Novosibirsk-Krasnoyarsk-Irkutsk-Naushki-Mongolia-PRC: exports +1 billion S
- St. Petersburg-Moscow-Tashkent: export +0.9 billion S
- Novosibirsk-Krasnoyarsk-Khabarovsk-Ussuriysk / Vladivostok-PRC / Japan / Korea (Busan) - other Asia-Pacific countries: export + 1 billion S

To ensure unhindered logistics of agricultural goods, it is necessary:

- Design a network of supporting ORCs, taking into account the necessary capacity, requirements for processing modes and storage of products.
- Providing state support to the initiators of the construction of the ORC on a competitive basis on the basis of the appropriate scheme and in conjunction with the map of the ORC network and existing block trains.
- The possibility of using discounts on export block trains in the implementation of large export projects.
  - Stacking of "narrow" places of transport infrastructure.



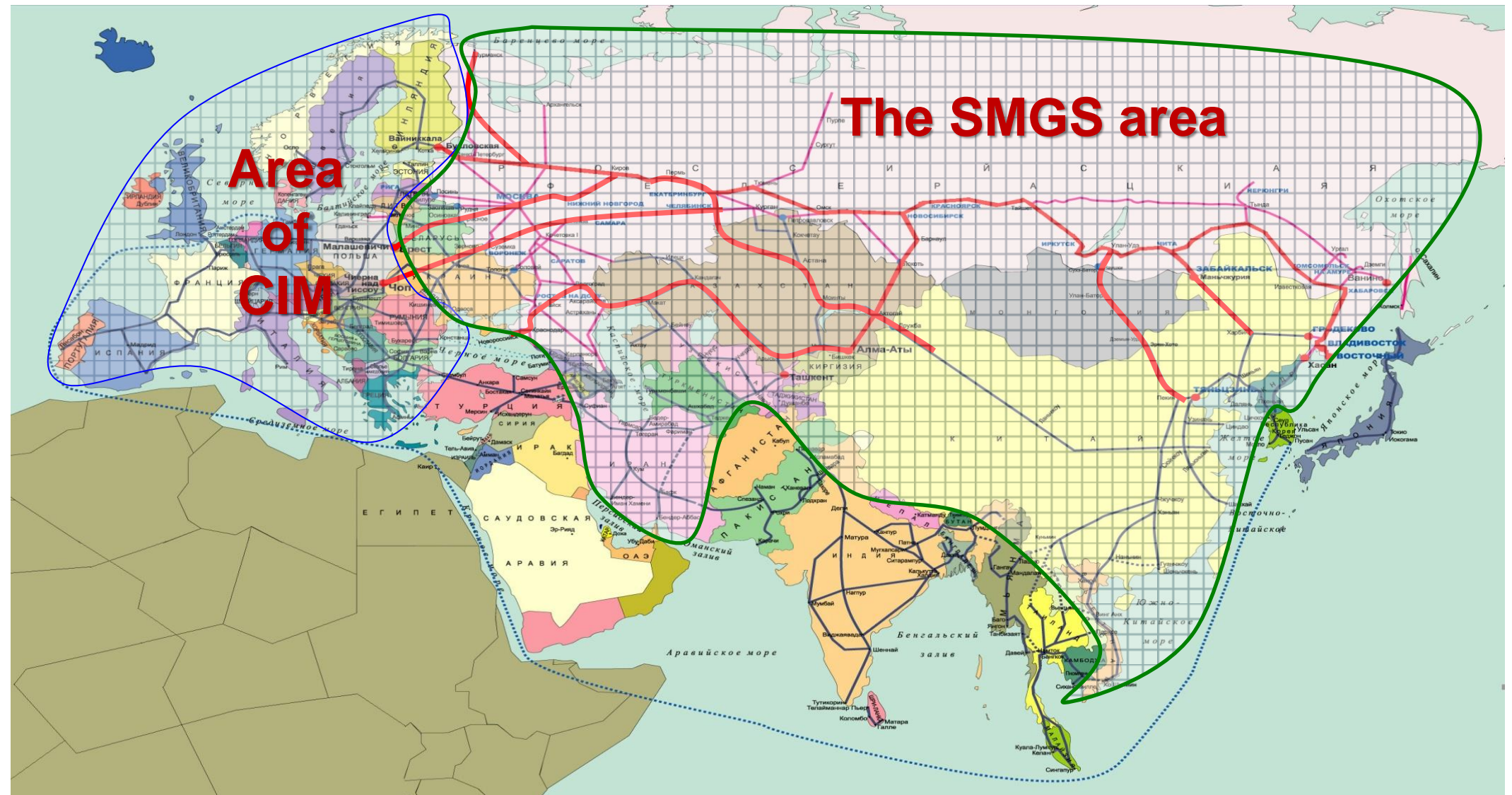


## **Preliminary list of events to attract highly profitable cargos with alternative transport**

- **Preparation and maintenance of rosters of shippers, operators and forwarders, disaggregated by amount and quantity of goods.**
  - **The provision of tariff rates, including cross-cutting with the participation of various modes of transport.**
    - **The establishment of special reduced rates on the shoulder up to 500 km.**
    - **Checkout through the "one window" with one document. Speeding up the process of order.**
- **Possibility of choosing a service in the Internet and ordering online (including the placement of "daughter" services on the websites of operating and forwarding companies, including foreign ones).**
  - **The possibility of deferring payments for transportation with guarantee letters.**
- **Agency work and the provision of comprehensive services at stations and terminals. Development of the "line" of additional services - storage, warehousing, washing, steaming, customs and insurance services.**
  - **Organization of logistics services in the 3PL - 4PL form.**
- **Permanent targeted work with cargo owners in the mode of on-site visits by our employees and monitoring the provision of local services and their quality.**
  - **Organization of permanent joint seminars with cargo owners of small and medium-sized businesses, operators and forwarders, to discuss joint actions and measures to develop transport markets and build joint services.**
    - **Digital transport and logistics platforms are needed.**

# Area of freight East-West on a single transportation document CIM / SMGS

- need an electronic invoice in the format of CIM-SMGS

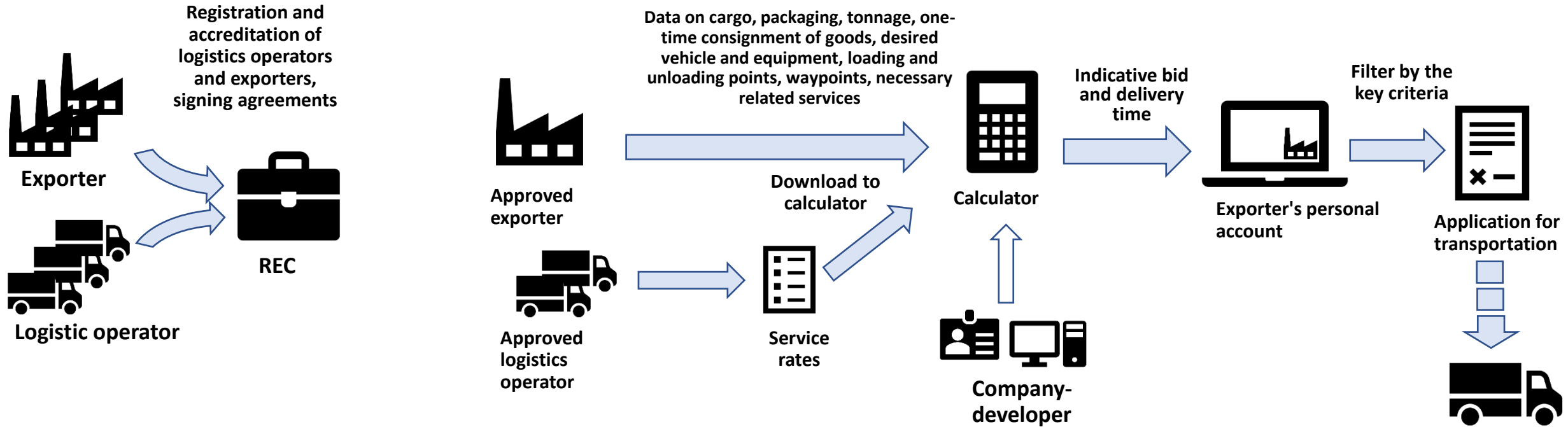


**CIM/SMGS consignment note shall be issued for carriage by Railways applying different transport law**

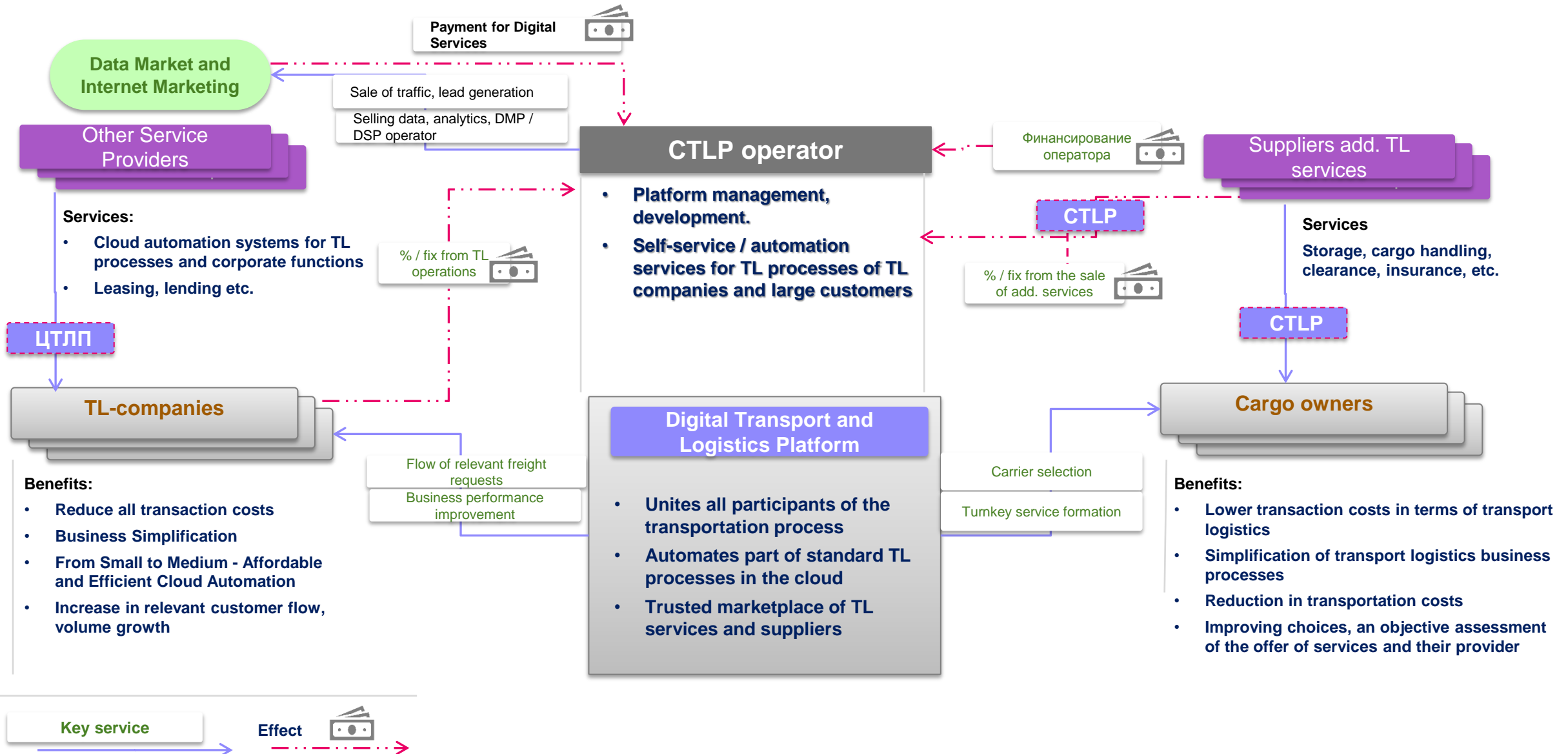
# Digital system "Logistic calculator" Platform for online applications for export logistics

The Logistic Calculator is designed to facilitate the planning of export logistics operations for Russian exporters, as well as increase the availability of transport and logistics services for medium and small exporters.

At the next stage, the system is planned to be operated in the format of the online application of the exporter.



# Digital business processes of export logistics





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**THANK YOU FOR ATTENTION!**

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