

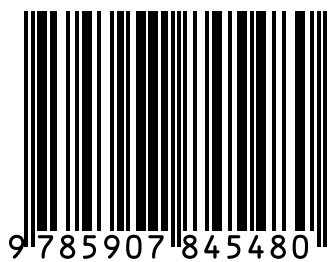


Eurasian Transport Corridors: Competition or Complementarity?

Alexei Bezbordov,
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Introduction

Today, transport corridors are widely viewed as geopolitical tools. Those who believe this to be the case tend to argue that states, either independently or in groups, develop their logistics infrastructure and create transport corridors to serve their interests while potentially threatening other countries. To an extent, this is true since the ability to control a trade corridor offers numerous advantages, from being able to access business data and influence cargo flows, to using the route for military logistics in the event of conflict.

This position is not without contradictions, however. While an *existing* corridor can serve manipulation-related purposes, political will alone is insufficient for creating a viable corridor.

Politicians who view transport projects as a means to fulfil their geopolitical ambitions often overlook a key point: only an economically viable and effective corridor can emerge as a real tool for exercising control and leverage. Large-scale infrastructure projects risk becoming roads to nowhere if they fail to consider market-based mechanisms, demand and competitiveness in the logistics sector.

This report offers an insight into the phenomenon of transport corridors, the mechanisms and drivers underpinning their creation, development and operation with a special emphasis on land-based corridors, while also providing a summary overview of sea routes to outline the general context. This study seeks to answer the following questions: Do corridors serve as geopolitical tools, and can Eurasian transport corridors pose a threat to Russia's interests?

The short answer is no. However, fears of this kind compel countries to dedicate their efforts and resources to developing transport corridors through the territories controlled by friendly or neutral governments, as well as forward-looking infrastructure projects for establishing new corridors, without giving any thought to whether they would be economically viable or effective.

The topic of Eurasian transport corridors has been a focal point for the international community over the past decade. Initially, they were regarded as nothing more than economic undertakings for promoting trade and facilitating logistics. However, China's Belt and Road Initiative (BRI) added a new strategic dimension to these initiatives. China is the largest trade and economic partner for many countries around the world. Therefore, it should not surprise anyone that any initiative, especially a major one, attracts considerable scrutiny and interest, offering fertile ground for multiple, and varying, interpretations, including conspiracy theories.

BRI's stated objective consists of bolstering infrastructure connectivity across the continent, while the interpretations and conspiracy theories which go beyond the logistics agenda can be explained by the perceived importance of the logistics infrastructure and its fundamental role. It is this understanding that underpins the vision of transport corridors as tools for influence and manipulation. Western countries responded to BRI by putting forward their own plans for creating transport routes designed to offer alternatives to Chinese and Russian options and seek to limit and constrain the influence their geopolitical opponents, i.e., Russia and China, may exercise.

But again, this is not how it works. Investing resources in building infrastructure or having all the infrastructure elements in place will never be enough to obtain the ability to influence trade flows.

Defining a transport corridor

This chapter delves into projects and initiatives to develop international transport corridors. Many of them have the word "corridor" in their names, such as the Trans-Caspian Transport Corridor, the North-South Corridor, and the Trans-Arctic Transport Corridor. At the same time, there is no single set of characteristics or parameters that could be applied to all these undertakings to define what the notion of a corridor means in this context. Some corridors have a single operator, while others do not. There may be a single route in some cases and a whole network of logistics options in others. Transport modalities may also vary, from single mode to intermodal frameworks. Therefore, a transport corridor can be defined as a notional route connecting markets rather than specific geographic destinations. A route consists of specific sections forming its physical infrastructure, and developing this infrastructure along the route offers broader development opportunities. This is how corridors evolved into multi-tiered and branched structures.

In today's world, mainlines and hubs define the way the transport and logistics sector operates. To use a tree metaphor, mainlines are the trunks connecting all the branches with their adjacent flows to create economies of scale. Hubs operate as major terminals along the mainline where various flows merge into the mainline or branch out of it. The effort to ensure that the mainlines constantly attract major flows has offered two major advantages. **First**, it has helped achieve substantially lower logistics costs. **Second**, this accelerated and streamlined logistics by enabling trade to flow in an almost uninterrupted manner.

That said, the series of logistics crises and growing geopolitical tension and conflicts forced all consumers in the logistics sector to start questioning this concentration-based model by pointing to the threat of excessive dependence on a single framework. This, in turn, compelled them to rethink their logistics strategies by seeking greater diversification. The newly created transport corridors seek to address these concerns by offering an alternative to the trunk-like mainline, to stay with the tree metaphor. While competing against each other, on the one hand, they form a single whole and can be viewed as elements in a single diversified framework, on the other hand.

Corridors tend to attract new manufacturing capabilities, which is another important aspect of their operation. In today's economy, logistics have gone far beyond delivering goods or shipping products. To put it briefly, globalisation paved the way for the emergence of distributed production chains. They form complex international networks that provide for the movement of goods, services, capital and technology, while the logistics sector manages all these flows. The term *upstream* is used for moving raw materials and enabling manufacturing. *Midstream* refers to flows within specific manufacturing processes, while *downstream* designates interactions between manufacturers and their consumers. Therefore, there is a close relationship between logistics and manufacturing, with logistics parks serving as an essential component of advanced industrial parks and clusters. Most industrial parks and economic zones offering manufacturers all kinds of benefits and preferences tend to be located near major logistics hubs. For example, DP World, a port logistics corporation, has been using this approach as a cornerstone of its strategy.

But there is another imperative for ensuring that a transport corridor is viable. Attracting stakeholders with a genuine interest in operating the corridor is equally important.

Actors and stakeholders

First come the transit countries. Attracting major cargo flows to their transport networks enables them to generate economies of scale for developing their own domestic and international flows. But there is more. As an economic sector, logistics goes far beyond transport or shipments, just as a transport corridor is not just about transporting goods. There is a reason why economic and industrial zones tend to emerge near logistics hubs. Being close to a transport mainline offers direct access to a huge market

or a plethora of diverse markets. Therefore, becoming a transit country as part of an international transport corridor enables countries to attract foreign investment not only in their transport and logistics infrastructure, but also in their manufacturing and energy sectors, which creates jobs with the resulting multiplier effect.

The countries using the corridor form the **second** group, which primarily consists of the anchors, i.e., the final destinations on both ends. They tend to focus on mitigating risks and diversifying routes to streamline their trade. Their actual trade volumes and the potential for trading with transit countries along the route, as well as their political relations with them also affect preferences within this group.

But there is also a **third** group of stakeholders who are driven by an exclusively political agenda. This is where the recent phenomenon of *friendshoring* comes into play. This term echoes the equally recent concept of *nearshoring*, which stands for shifting from globalisation with its propensity to concentrate manufacturing in places offering the cheapest, most abundant and highest-quality resources to a regional manufacturing framework that locates manufacturing closer to consumer markets. As for *friendshoring*, it describes an effort to shift manufacturing to friendly countries, i.e., by producing on the territory of a like-minded partner. This notion also includes creating trade obstacles and barriers for countries partnering with ideological opponents.

Economic and geopolitical development patterns

Present-day transport systems rely on what is called the *hub & spoke* principle, which provides for consolidating shipments in several key locations – the hubs – which are connected by mainlines – spokes. There are two imperatives when it comes to locating hubs.

First, they must be situated near major existing or future shipping routes, such as densely populated urban areas, or industrial or special economic zones offering economic and logistical advantages. In addition, connectivity with other trade routes is also a key factor. This includes various kinds of transport and logistics modes, including river, sea and road shipping lines. Therefore, transport corridors cannot be created out of nowhere. Regions with advanced manufacturing and logistics

infrastructure, or with substantial potential for developing them, tend to gain an edge over their rivals.

Geography is another objective factor affecting infrastructure projects and their associated risks, as well as service quality and, therefore, demand. For example, nature and climate are important factors, since a challenging landscape, extreme weather, or seismic activity may make construction more expensive or time-consuming. There can also be geopolitical risks associated with conflicting interests in specific locations, ethnic or religious strife, as well as having to transit through countries where government institutions are not sufficiently strong. The need to cross multiple borders can further complicate connectivity by creating administrative and customs barriers.

Why focus on container shipments?

Container shipping can be defined as a solution for transporting goods in standardised crates. Intermodal freight transport is also an important aspect of container shipping since it allows for the use of multiple modes of transportation as part of a single shipment. Containers offer a door-to-door shipping experience, taking goods from the freight forwarder to the recipient without having to unload or reload along the way. The best performance can be achieved by loading freshly manufactured goods directly into a container, storing them there, and transporting them in the same container using various modes of transport all the way to the warehouse at the destination point, from where the goods can be delivered to stores or directly to consumers.

Containers vary depending on the type of goods. For example, tank containers are used for transporting liquids and gases. There are also refrigerated containers designed for shipments requiring a specific temperature. Special solutions exist for transporting bulk cargo, including fine substances, long objects, toxic chemicals, etc. For all these applications, the size of a container remains the same and complies with a single standard. The same applies to its fittings, allowing containers of all kinds to be loaded and stored at the same terminals using the same equipment and transported together.

Therefore, containers can transport any kind of cargo. Container shipments are economically viable when a tonne of shipped goods costs \$400–\$500 or more, which covers many types of freight, except for bulk

shipments of coal, ore, or construction materials. Containerisation is gaining traction in several sectors, including in the oil and gas sector, chemical industry, metals, machine building, electronics, timber and forestry sectors and consumer goods.

This results from the advantages this solution can offer. In fact, container shipments

- 1) ensure that the corridor operates both ways;
- 2) rely on a single infrastructure network for consolidating various cargo flows.

These two factors create economies of scale and require standardised technology, which greatly reduces logistics costs. This is what sets container shipping apart and serves as a decisive factor for ensuring competitiveness for transport routes.

- 3) offer flexibility when changing routes and/or shipping modes in response to changes in the shipping environment, or the requirements of the freight forwarder or receiver, while also offering the ability to accelerate or delay shipments.

Considering the advantages container shipments provide for the effective operation of transport corridors, infrastructure becomes a major factor. Almost any kind of shipment can be containerised, but for that, the required infrastructure and services must be in place.

Infrastructure can be defined as a capital-intensive container management system which includes special transport means of all kinds, a container fleet, special loading equipment (container loaders, container trucks, cranes, special hook loaders for containers), as well as vast warehousing capacity, and transloading terminals for containers.

Container services are transport means that ensure regular operation along fixed routes, much like a city bus.

Truck shipments require the least in terms of infrastructure and services. However, trucks cover only the starting and final stages in container shipping operations, from door to terminal and from terminal to door. The logistics sector refers to these sections as the first and last miles. They are not part of the mainline and therefore remain outside the transport corridor. In this sense, transport corridors do not include truck shipments. The same applies to shipments by air. Moreover, these modes of transport

have a minimal economic effect in terms of manufacturing and logistics infrastructure within a corridor, which are essential elements in any given transport corridor.

Accordingly, the report's authors have defined a **transport corridor** as an aggregate of mainline transport routes and the means of transport serving them, terminal infrastructure on both ends and along the corridor, including on intersections with other transport routes, intermodal facilities, as well as adjacent manufacturing and logistics sites, along with distribution, marketing, administrative and IT components.

Opinions may vary in this regard. For example, EDB offers a different definition of a transport corridor compared to the one suggested above, since it includes truck shipments and highway deliveries. Meanwhile, the World Bank's analysts are closer to our perspective on this matter. When assessing the investment needs of the Trans-Caspian Route, the World Bank included projections for ports and railways without mentioning internal logistics hubs, even though they must be built considering that the route crosses several state borders and involves changing the mode of transport several times.

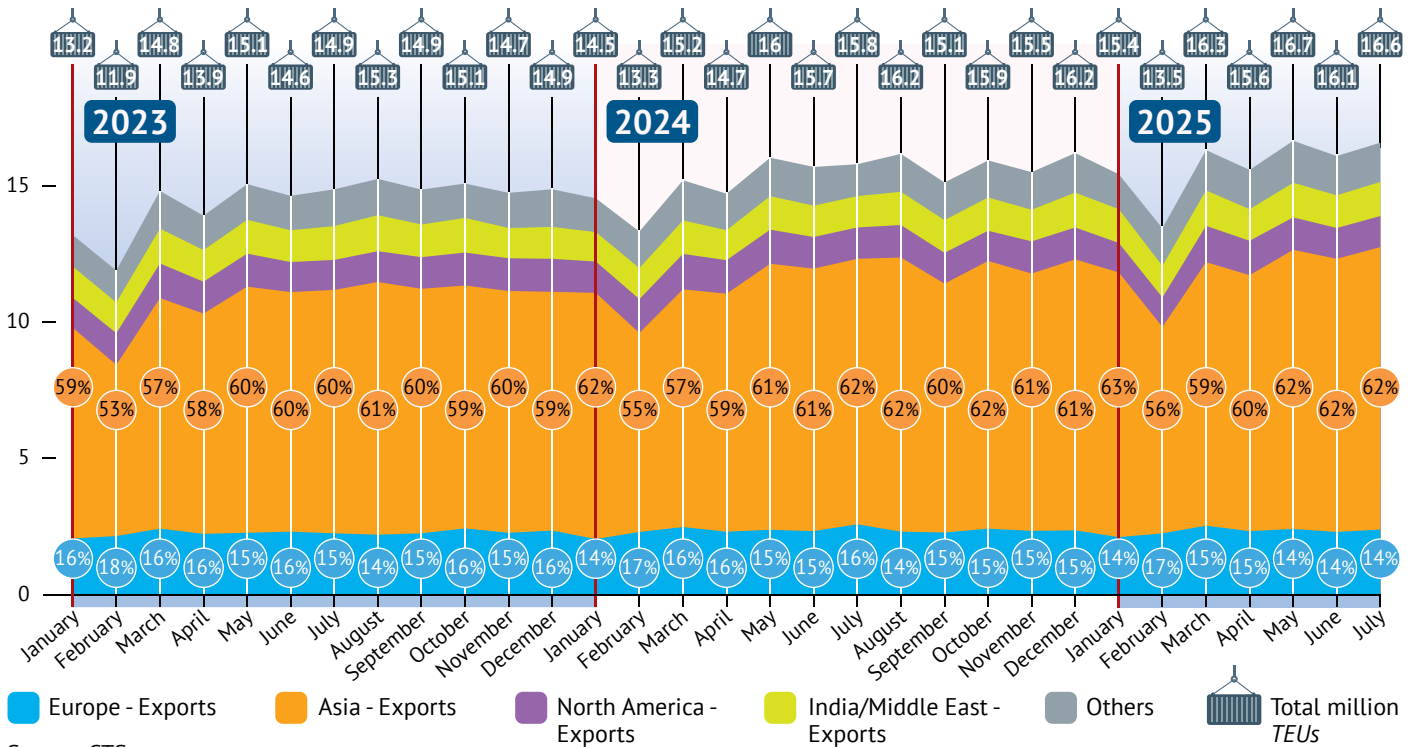
Asia-Europe trade in the global container industry

The following figures offer a telling example of the way mainlines and hubs attract and consolidate cargo flows. In 2024, container shipments for the global port industry totalled 690 million TEU, with 30 major ports accounting for 72 percent of this volume, or a little under 500 million TEU, while the top 10 ports accounted for 44 percent of shipments. It is also worth noting that there are over 900 ports around the world operating regular container shipments.

In the present-day global economy, with Asia serving as a global manufacturing hub, and the West acting as the biggest consumer market, sea transport accounts for the biggest share of freight shipments, including containers (Figure 1).

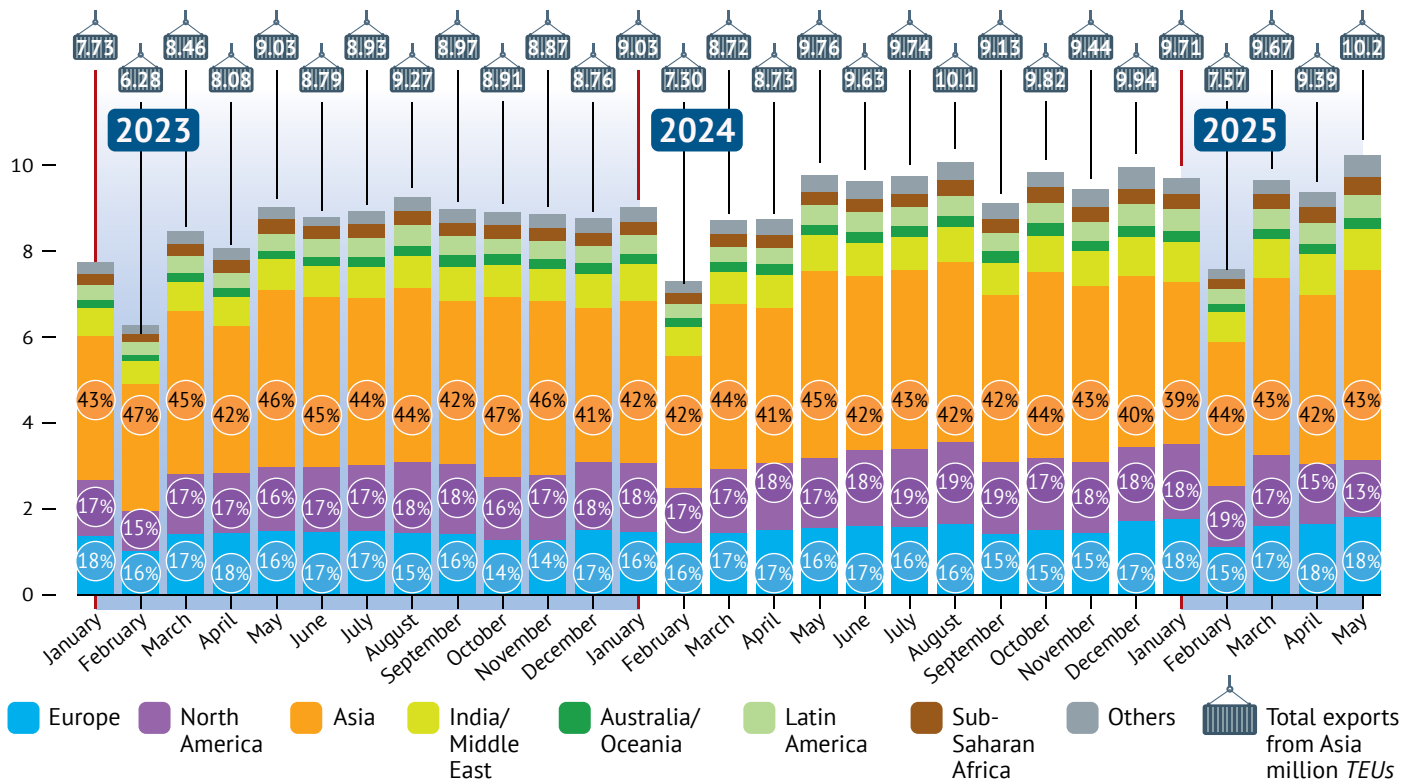
Asia accounts for over 60 percent of all loaded container shipments by sea and over one third of container imports. Figure 2 shows the way Asian

FIGURE 1. THE GLOBAL CONTAINER SHIPPING INDUSTRY BY MAJOR EXPORTING REGIONS



Source: CTS

FIGURE 2. STRUCTURE OF SEA CONTAINER EXPORTS FROM ASIA BY RECIPIENT MARKET



Source: InfaNews

container exports by sea are structured depending on the destination regions. Here too, Asia commands the largest share of the market. This is attributable, **first**, to the large trans-shipment volumes based on the *hub & spoke* model, where containers are delivered to the hub port and from there embark on a mainline ocean route, and, **second**, to Asia's diversified production chains fuelled by the effort to shift manufacturing from China to other countries within the region (partly due to the effort by the consuming countries to reduce their economic dependence on Chinese supplies).

Europe and North America are approximately at the same level in terms of container import volumes from Asia, although Europe has been increasing its share recently. Other major trends include the fact that India, the Middle East and Latin America have recently increased their respective shares of imports from Asia, having raised their container imports from Asia by a third over the past two years, while the total share of containers loaded in Asian ports reached 10 percent and 5 percent, respectively. These trends are worth noting considering their importance in terms of developing land-based transit corridors in Eurasia, as will be described later in this report.

Importantly, the global container industry operates as a single whole. Creating this framework requires a significant amount of investment, both at the outset and to support ongoing operations. Therefore, economies of scale matter: the bigger the cargo flow, the lower the cost per unit of cargo. This has major implications in the following regards:

(1) Considering the instrumental role infrastructure and services play, the availability of reliable services is critical for attracting demand, which includes offering clear and predictable timelines for shipping and receiving freight.

(2) The sector revolves around several major operators that seek to control as many sections within the intermodal delivery chain as possible. For example, seven largest global terminal holdings control 40 percent of total container shipments through terminals. It should be noted that this refers to consolidated freight traffic, which means that this figure refers not to the share these holdings have in the total container shipments through terminals, but to the share of these holdings in the share capital of terminals.¹

(3) To generate maximum economies of scale, market players engage in various partnerships so that one company often sells shipping services

¹ Global Container Terminal Operators Annual Review and Forecast 2025/26 // Drewry. July 2025. URL: <https://www.drewry.co.uk/maritime-research-products/maritime-research-products/global-container-terminal-operators-annual-review-and-forecast-202526>

while another company carries out the actual deliveries. There is a system of alliances and partnerships within the maritime shipping industry for sharing container ships.

(4) Freight standardisation and consolidation have helped drive down transport costs to a minimum, which is especially true for expensive consumer goods, electronics, hardware, apparel and footwear. These categories are even immune to peak rates, which have been trending upward in response to recent apocalyptic news reports, including the pandemic, attacks by Houthi rebels, the situation around Iran, Donald Trump's ideas and many other things. Instead of focusing exclusively on delivery costs, freight owners choose the shipping mode and route based on a complex set of criteria, including interest rates, delivery time and reliability, i.e., whether the shipment arrives on time, as well as the inventory in warehouses, seasonal factors and anticipated demand, freight safety and security, and insurance costs. Rates are factored into these projections, of course, and play quite an important role. But there is an issue with transparency in the sense that the rates usually do not follow the freight indices. A plethora of factors come into play when it comes to determining the price for a specific freight forwarder to deliver a specific container from one location to another within a specified timeframe. These factors include the ratio between the ship's carrying capacity and the current and anticipated demand for shipments, the demand for container shipments along the desired route and back, the availability of containers and demand for them, whether the freight owner operates large volumes, where the shipments are sent and how often, their importance in terms of the operator's portfolio, etc.

All these aspects must be mentioned because it is important to understand that the way cargo flows are distributed among various routes and corridors is not something fixed in stone or a given. Instead, the way these shipments operate changes constantly, depending on various considerations, both objective and momentary. Therefore, creating a corridor by establishing the required infrastructure and offering the relevant services is never enough. There is also a need to constantly support, accompany and develop its operation.

Transport corridors linking China and Europe

Analysts monitoring the global container shipping industry identify several global mainlines (known in English terminology as "trades"), which are key global trade lanes. At this level, all freight traffic between Europe and Asia

is consolidated into a single mainline. However, trade between Asia and the Middle East, as well as trade between the Middle East and Europe, is classified as distinct mainlines, despite typically² being serviced by the same corridors, which are understood as a combination of infrastructure and service.

The primary transport corridor, servicing approximately 90 percent of trade between Europe and Asia, is the maritime route. Under optimal conditions, this route runs along the southern extremity of Eurasia, through the Red Sea, the Suez Canal, the Mediterranean Sea, the Strait of Gibraltar, and along the eastern Atlantic coast into the North Sea. An alternative routing bypasses the Suez Canal, going around the Cape of Good Hope. This route has become the primary one, a shift driven by the sharply increased risks associated with Houthi attacks on commercial vessels in the Bab-el-Mandeb Strait area. However, carriers have previously utilised this routing as well.

The economics of the shipping business constitute a rather complex system. For instance, when a vessel is idle, it incurs greater losses than when it operates at a loss. The cost of a voyage can be reduced by lowering the vessel's speed or altering the route to bypass expensive transit sections, such as the Suez Canal. The toll for passage through the Canal depends on the type of vessel, its size, and other factors, but on average can be estimated at half a million US dollars. Interesting data from *Maersk's*³ 2024 financial reports illustrate this: despite the Houthi crisis forcing the carrier to reroute its vessels around the risk zone via the Cape of Good Hope route, which is 40 percent longer than the Suez route, the operational cost, excluding the difference in bunker fuel expense, increased by only 1.7 percent. The company's report notes that vessel fuel costs resulting from the extended routes, which previously transited the Suez Canal, amounted to a 14 percent increase, while terminal handling costs rose by 5.5 percent. However, these additional costs were almost entirely offset by the elimination of Suez Canal transit fees and "war risk" premiums paid to insurance companies.

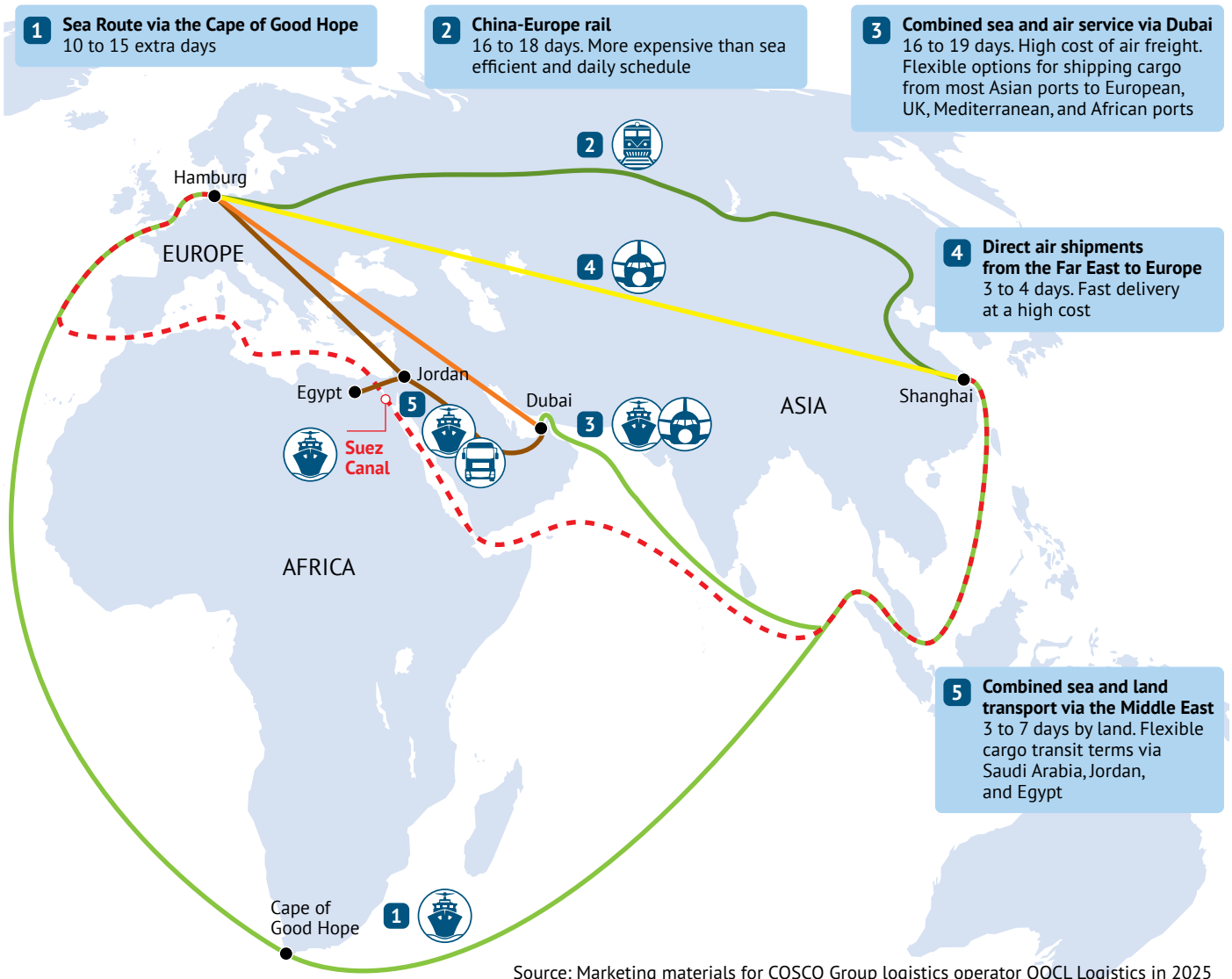
The system of services on this shipping lane is highly dynamic, owing to the complex underlying economics. Carriers and carrier alliances constantly adapt their service networks and routes. For instance, *Maersk* currently operates just seven services on the Asia-Europe lane, whereas the multimodal service from Japan, Korea, and China to Northern Europe and Scandinavia, launched in 2021 during the COVID-19 pandemic logistics crisis, which featured a rail leg from Nakhodka to St Petersburg, had the code AE-19, indicating it was the nineteenth service in the operator's network.

² Note that, in the current situation, the forced rerouting to avoid the zone of Houthi activity and the restructuring of ocean services on the Asia-Europe lane around the southern extremity of Africa have reduced the number of port calls along the continent and increased the role of transshipment.

³ Maersk Annual Report 2024. URL: <https://investor.maersk.com/static-files/31bf05a1-6f0c-4fbd-a3c7-3f58e044f668>

FIGURE 3. MAIN SHIPPING OPTIONS FROM CHINA TO EUROPE

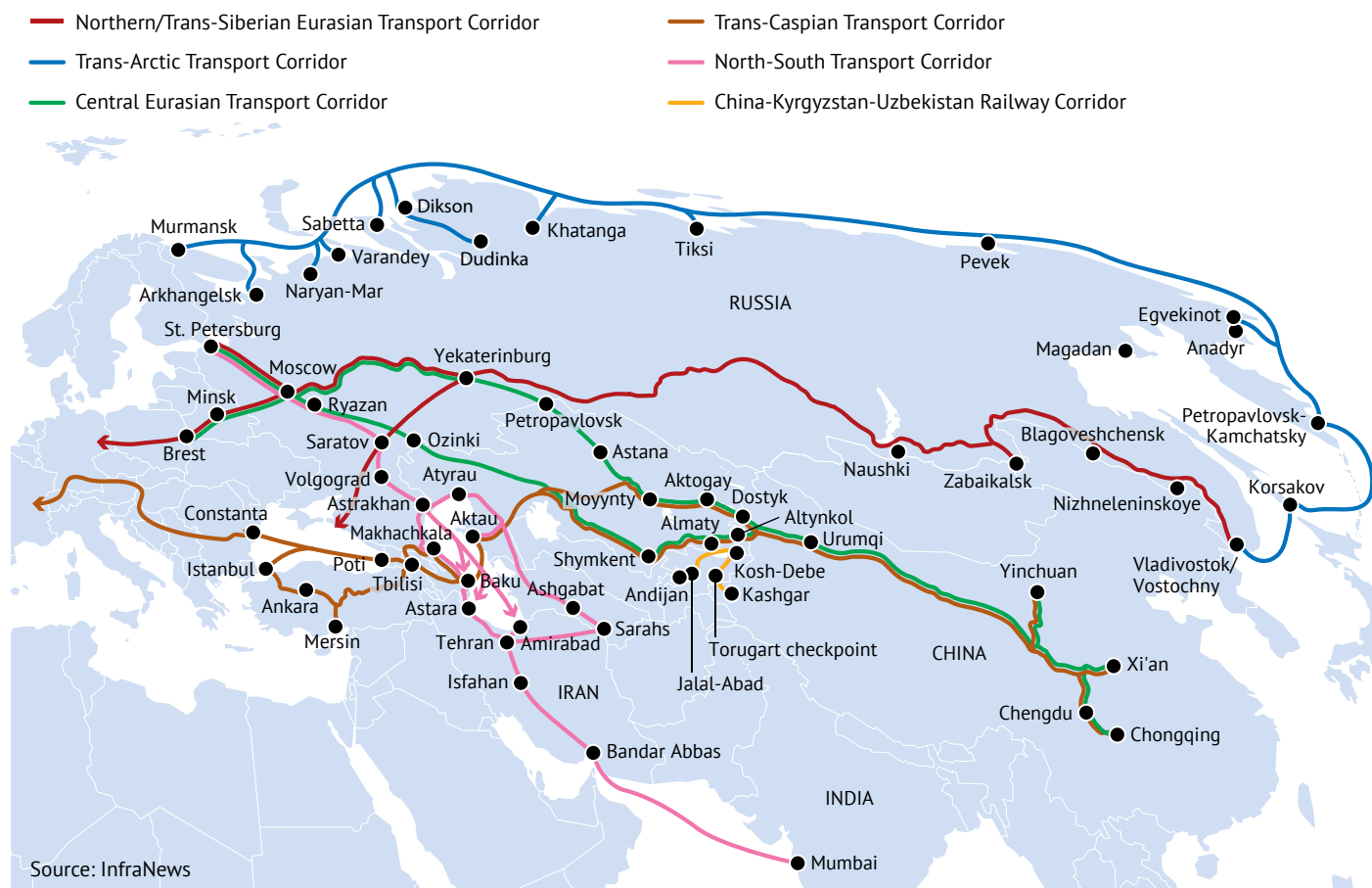
Common Alternatives



Eurasian transport corridors form a comprehensive system of linkages connecting China with the countries of Europe and Africa. The boom in overland alternatives to the maritime delivery corridor is linked to the launch of China's Belt and Road Initiative (BRI)⁴. The forms of China's participation in overland transport corridor projects will be discussed in the next section. For now, we will merely note that it was the BRI that provided a powerful impetus for their development, even though the USSR acted as a transit territory for Japan and Western Europe from 1974 to 1990: at its peak, the Trans-Siberian

⁴See: Toward the Great Ocean, or the New Globalization of Russia // Valdai Discussion Club Report. 5.07.2012. URL: https://valdaiclub.com/a/reports/toward_the_great_ocean_or_the_new_globalization_of_russia/; Toward the Great Ocean-2, or Russia's Breakthrough to Asia // Valdai Discussion Club Report. 27.02.2014. URL: https://valdaiclub.com/a/reports/toward_the_great_ocean_2_or_russia_s_breakthrough_to_asia/; Toward the Great Ocean – 3: Creating Central Eurasia // Valdai Discussion Club Report. 4.06.2015. URL: https://valdaiclub.com/a/reports/toward_the_great_ocean_3_creating_central_eurasia/

FIGURE 4. ASIA-EUROPE TRANSPORT CORRIDORS



Railway's share of their trade reached 17 percent. Furthermore, the TRACECA⁵ project, whose route largely coincides with the present-day Trans-Caspian Corridor, was conceived in the early 1990s.

The main Asia-Europe corridors are shown on the map in Figure 4:

- The two main routes of the Eurasian Corridor: the **Northern/Trans-Siberian** route, entering the Russian Federation at Far Eastern ports or at the land border with China/Mongolia, and the **Central** route, exiting China at the border with Kazakhstan.
- The **Trans-Arctic** transport corridor along the Northern Sea Route and the **Trans-Caspian** Corridor, both of which have received a powerful impetus for development due to escalating geopolitical pressure post-2022.
- The **North-South Corridor**. Although its primary positioning is trade with India, its multiple intersections with East-West axis routes justify its inclusion in this list.

⁵TRACECA – Transport Corridor Europe Caucasus Asia.

Advantages:

- High throughput capacity, owing to the availability of alternative routes that alleviate bottlenecks and minimise congestion risks.

- In the corridor's eastern section, the entry points into Russian territory are the land border crossings with China and Mongolia, whose capacity is being actively expanded, and the Primorye Territory ports of Vladivostok and Vostochny. Another promising entry point is the port of Vanino, which currently specialises in coal, but analysts have repeatedly highlighted the feasibility of developing its container handling capabilities.⁷

- The eastern part of the Northern Eurasian Corridor runs along the Baikal-Amur Mainline and the Trans-Siberian Railway system, often referred to as the Eastern Operating Domain. The presence of connecting lines between the Trans-Siberian Railway and the BAM allows them to be operated as a unified system, enabling rational load distribution. Currently, container traffic primarily uses the Trans-Siberian line, whereas the BAM is mainly used for transporting coal to the terminals of the port of Vanino, which serves as its final destination.

- Amid a capacity shortage on the Eastern Operating Domain due to the large-scale reorientation of Russian and Belarusian foreign trade towards the East, primarily China, since 2022, a multimodal delivery scheme has been actively developed, using road transport from China – where road freight is traditionally dominant – to Siberian hubs and even to Moscow.

In the corridor's western section, the main route runs through Belarus and the border with Poland (the Małaszewicze node). However, during the peak demand for corridor transit during the COVID-19 pandemic, multimodal route options via the ports of Kaliningrad and St Petersburg saw significant development.

- When an acute crisis arose in September 2025 with Poland's closure of border crossings with Belarus, Chinese operators developed and began marketing an alternative delivery route for transit to Europe via the port of St Petersburg within a matter of days.

- The main route does not require a modal shift, although it does necessitate a gauge change.

⁷ Нужно скорее расширять БАМ, чтобы разгрузить Транссиб – эксперт // РЖД. 6.02.2023. URL: <https://company.rzd.ru/ru/9401/page/78314?id=207804>

- The existence of a terminal network in transit countries for flow diversion and modal shift where necessary.
- Minimal barriers. The core of the corridor runs through the territories of Russia and Belarus without modal shifts or border crossings, with actual borders only with the PRC and the EU.
- Operator competition.
- A base load for the corridor. The significant volumes of Russia's and Belarus's own trade with China generate substantial complementary demand. The volume of container traffic from Asia to Europe is approximately three times greater than the reverse flow from Europe to Asia. In 2022, when sanctions against Russia and Belarus and an "ethical vetting" policy drastically reduced demand for the transit of European cargo via Russia,⁸ transit volumes through Russia barely fell. Under sanctions and restrictions on trade with the West, Belarus reoriented its foreign trade towards China, primarily via the Trans-Siberian Corridor, and subsequently, as they developed, towards alternative routes – via Baltic ports and the North-South Corridor.

Disadvantages and risks:

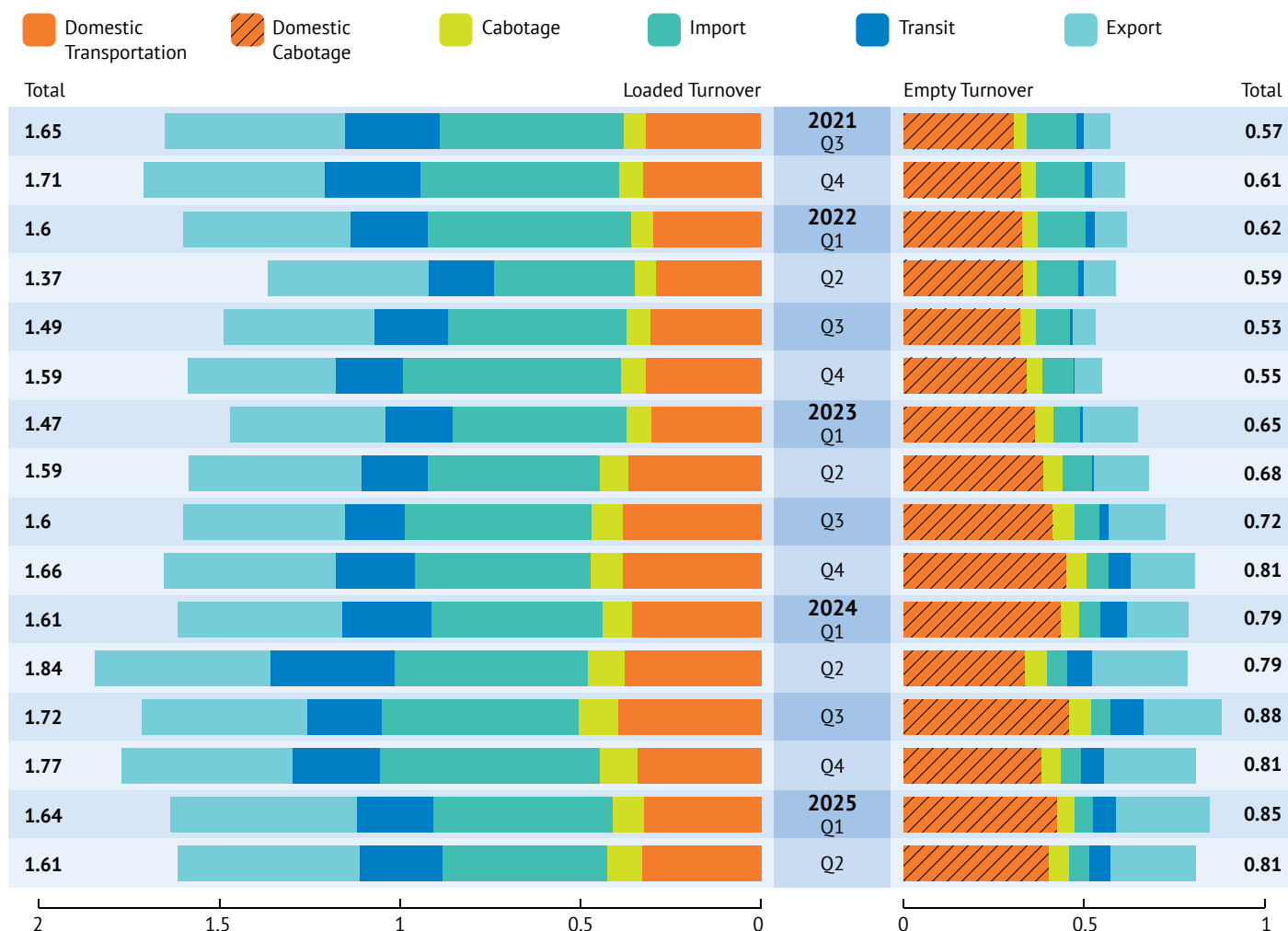
- Geopolitical risks. This refers to sanctions, as well as so-called corporate ethical self-restriction. In 2022, the most damaging factor for the Russian transport complex was not the sanctions themselves, but the voluntary departure of the majority of container carriers and the withdrawal of their container fleets. Historically, the Russian container market existed as part of the Western market: the largest operators were global container lines, and liner services were organised with transshipment via major Western hub ports. This entire system ceased to function. A new system was built, not from scratch, but it required a radical overhaul.

The diagram in Figure 6 shows that the decline in the total container fleet was very slight and short-lived, and by Q3 2022, the operational fleet already exceeded the level of Q1 2022. However, it is crucial to recognise that the operational efficiency of the fleet sharply declined.

With the trade reorientation towards the East (China), the volume of containerised transport increased. Prior to this, a significant portion of trade with Europe moved by road via land borders and on ferry services to Europe;

⁸ Meanwhile, in 2024, against the backdrop of the Houthi crisis – which drastically increased the transit times and costs of maritime delivery along the traditional Southern Maritime Corridor, whose route switched from Suez to the workaround via the Cape of Good Hope – demand partially recovered.

FIGURE 6. RUSSIAN CONTAINER MARKET DYNAMICS, MILLION TEU



Source: InfraNews

FIGURE 7. DYNAMICS OF CHANGES IN THE STRUCTURE OF THE CONTAINER FLEET OPERATING IN RUSSIA BY OWNER GROUPS DURING THE MARKET RECONSTRUCTION (THOUSANDS OF TEU)

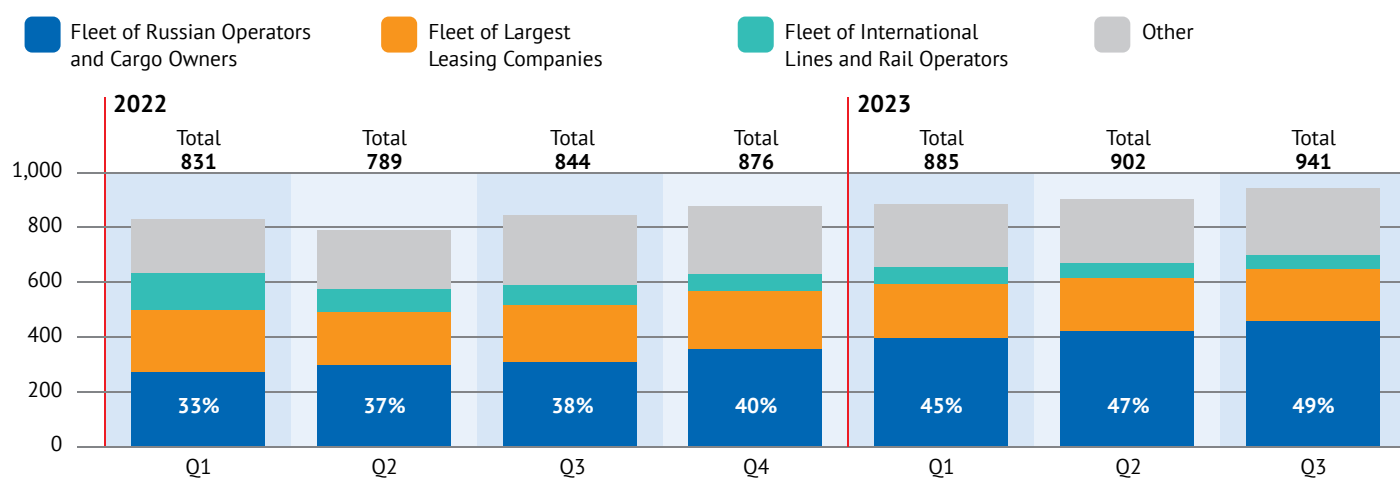
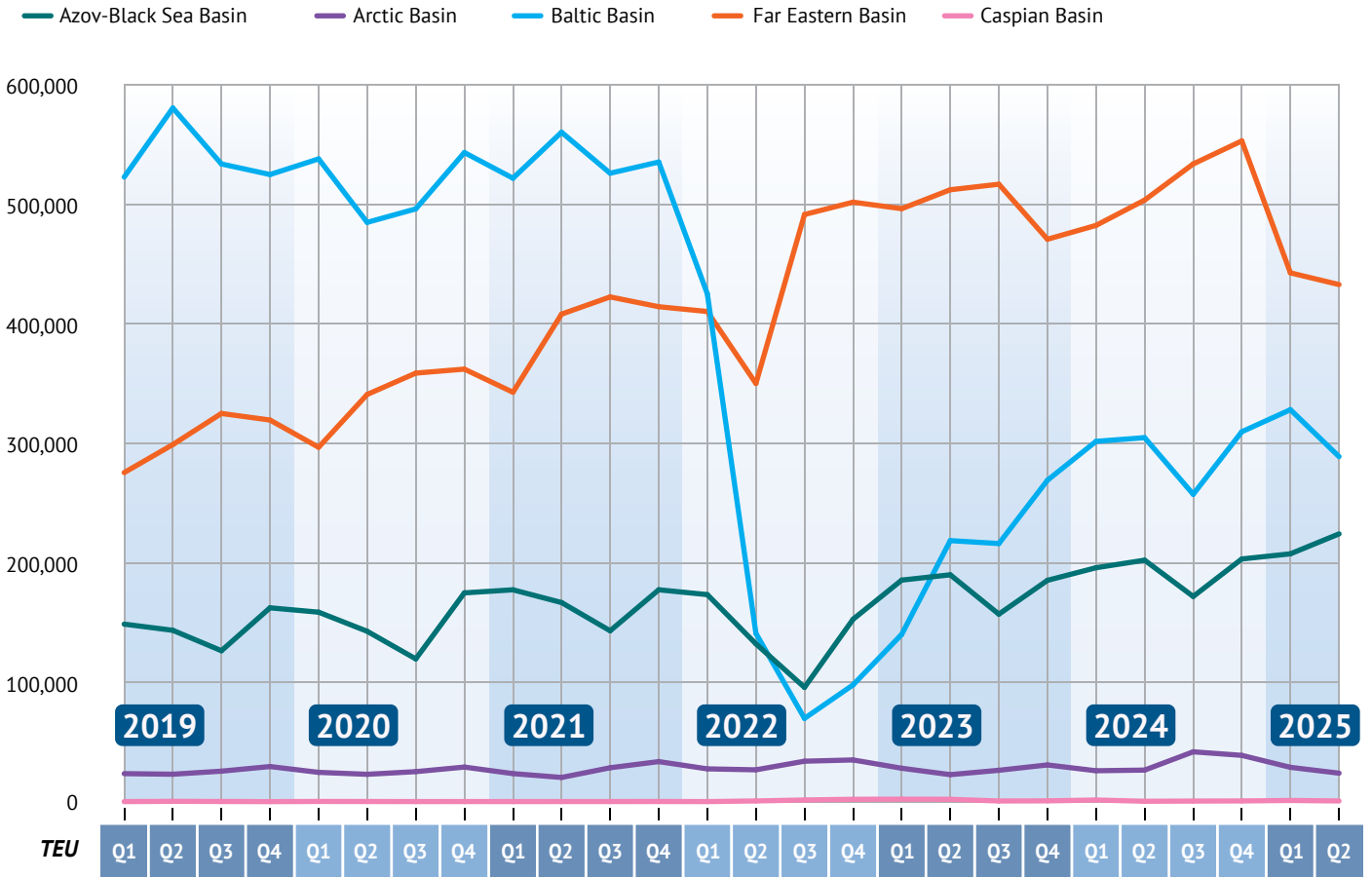


FIGURE 8. LOADED CONTAINER TURNOVER AT RUSSIAN PORTS BY BASIN



Source: InfraNews

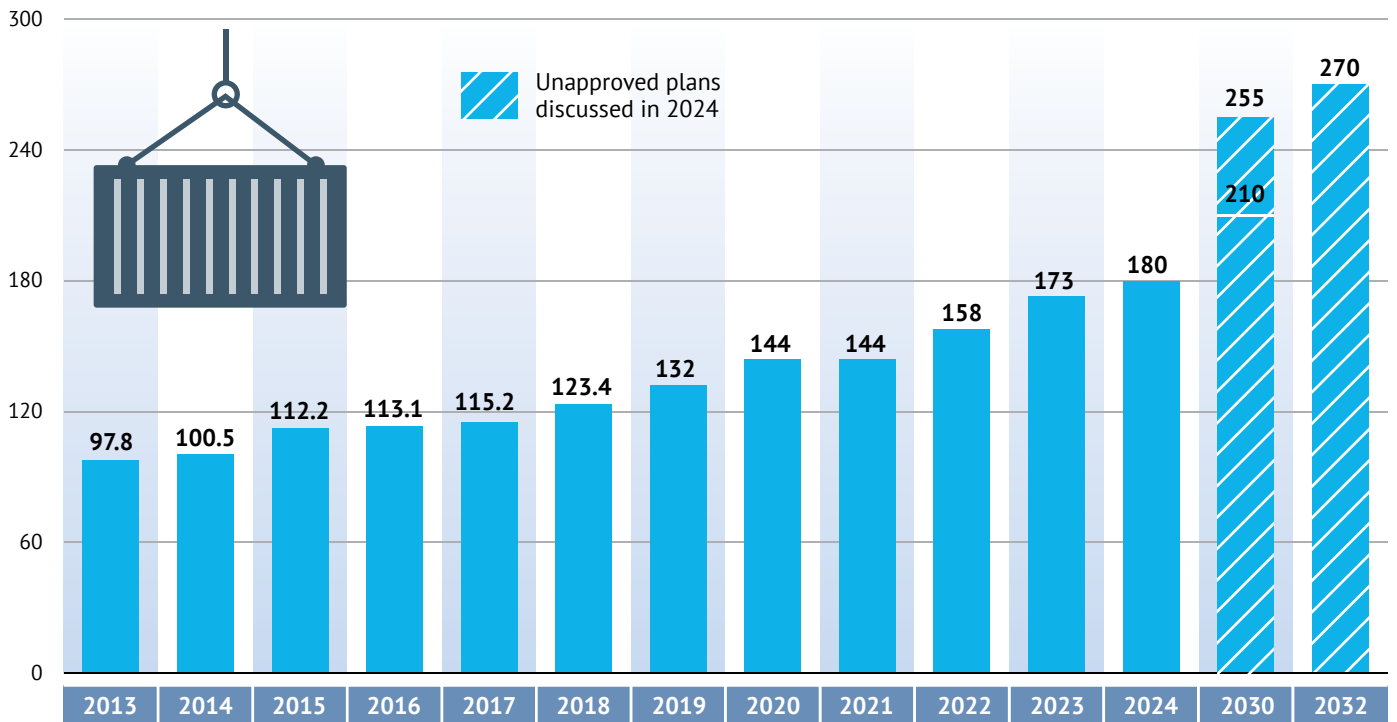
automotive imports were not containerised but moved on roll-on/roll-off ferry lines.

Delivery times and container equipment turnaround times increased sharply due to longer transport distances and the breakdown of the established service/route network.

The container fleet balancing system was disrupted, leading to an increase in empty container repositioning.

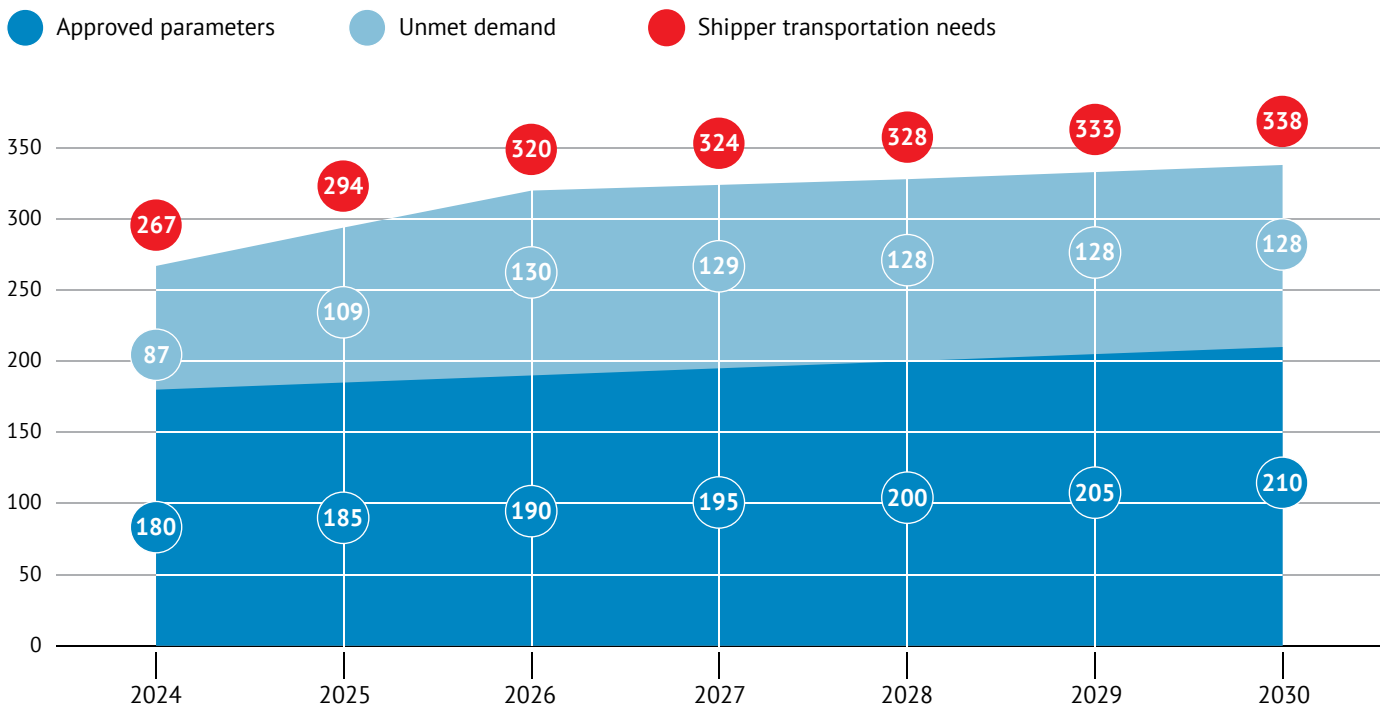
The container service via Baltic ports, primarily through the historically largest Russian container port, St Petersburg, has been gradually revived, though it has not yet fully recovered to its former capacity. Furthermore, an analysis of the structure (see the chart in Figure 10) reveals that the growth in 2023–2024 was largely driven by demand for the export of empty containers. This was due to restrictions on dispatching empty rail wagons and containers across the Russian Railways network amidst the capacity shortage in the Eastern Operating Domain, coupled with the development of coastal shipping to supply the Kaliningrad exclave.

FIGURE 9. EASTERN OPERATING DOMAIN CAPACITY, MILLION TONS



Source: According to Russian Railways and the Ministry of Transport

FIGURE 10. EASTERN OPERATING DOMAIN CAPACITY DEFICIENCY, MILLION TONS



Source: According to the government forecast from September 2024

- High congestion in the corridor with domestic foreign trade cargo has resulted in a capacity deficit. The Trans-Siberian Eurasian Corridor plays a key role in maintaining Russia's territorial connectivity and its trade with its primary partner, China. Even prior to the current crisis situation and the capacity deficit caused by the large-scale reorientation of Russian foreign trade from the West to the East and, to a lesser extent, to the South, the capacity of the Eastern Operating Domain, which includes the Trans-Siberian Railway, was recognised as insufficient. A modernisation programme has been underway since 2013, and the increase in capacity as it is implemented is illustrated in the graph in Figure 11. However, the target indicators for this expansion were determined before the pivot to the East.

The prospects for transport demand on the Eastern Operating Domain and the Trans-Siberian Railway are primarily linked to the development outlook for trade between Russia and the PRC, as well as the implementation of cross-border cooperation between the two countries. The share of the Trans-Siberian Corridor in handling China-Europe-China transit traffic, even at the peak of demand in 2021, did not exceed 20 percent. In the current conditions of capacity shortages and growing domestic trade with the PRC, the tasks of providing transit services have taken a back seat.

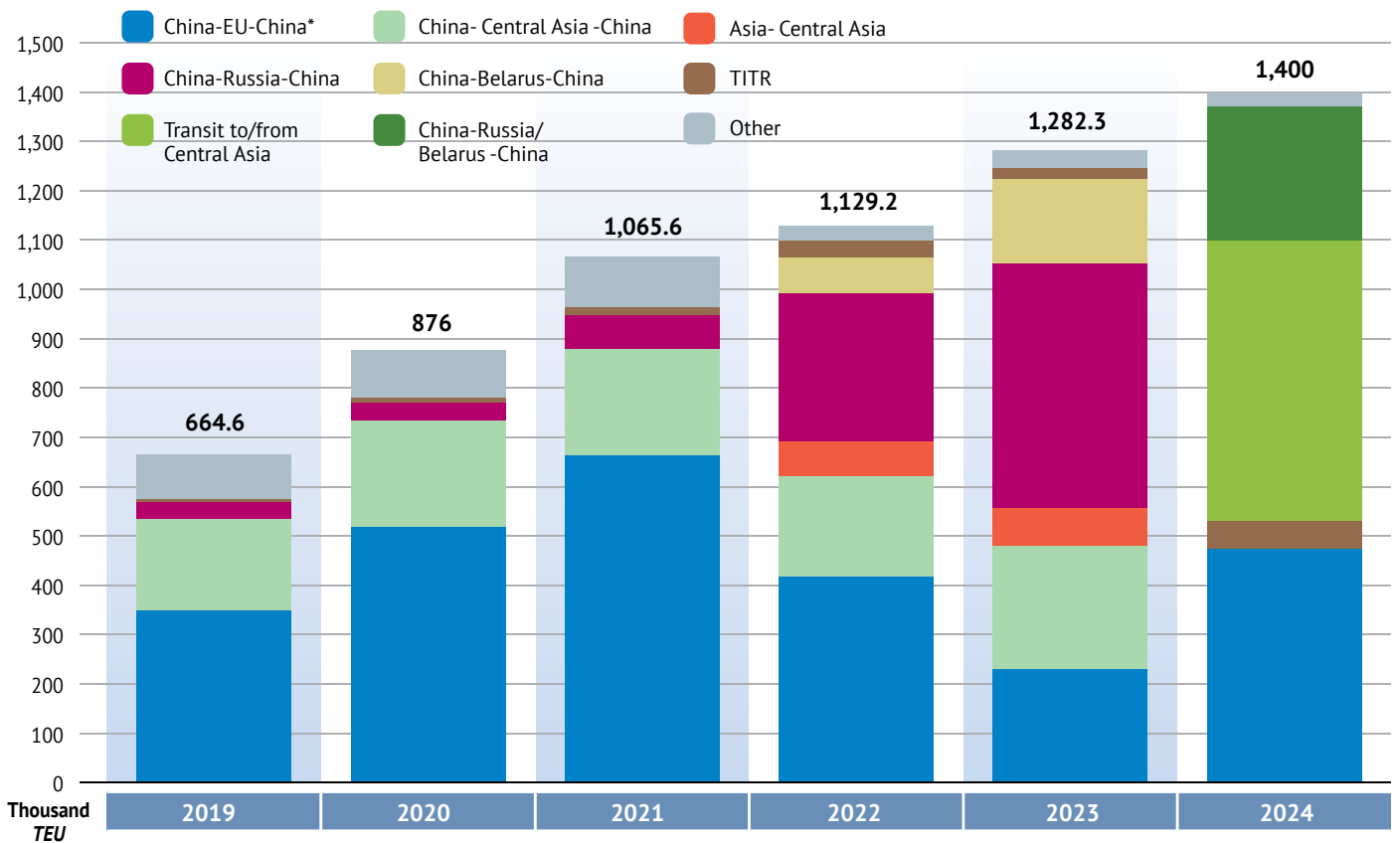
Central Eurasian Corridor

The Central Eurasian Corridor, traversing the territories of Kazakhstan, Russia, and Belarus, retains its status as the principal overland route for China-Europe traffic. Even in the peak year of 2021, when transit flows on the Russian Trans-Siberian corridor were at their maximum, the share of the Kazakhstan-Russia corridor exceeded 80 percent; it now stands at approximately 90 percent.

In the spring of 2022, the volume of rail transit between China and Europe sharply declined. Despite this, the Trans-Caspian International Transport Route (TITR), which does not cross into Russian territory but proceeds across the Caspian Sea through Azerbaijan and Georgia, or through Turkey and then across the Black Sea, failed to gain significant traction.

Figure 11 illustrates that as demand for China-Europe transit fell in 2022, the excess capacity on the Kazakh route was immediately filled by Belarusian transit to China and Russian export-import cargo, amidst the capacity shortage on the Eastern Operating Domain. In 2024, with the recovery of demand for Europe-bound transit and a capacity deficit in the rail infrastructure, transit

FIGURE 11. DYNAMICS AND STRUCTURE OF CONTAINER TRANSIT THROUGH KAZAKHSTAN



Source: InfraNews based on annual reports of KTZ, UTLC, and other market participants

to Russia and Belarus decreased – these freight flows were largely reoriented to maritime delivery via Russian Baltic ports.

The volume of transit traffic on the PRC-Europe lane operated by UTLC ERA more than doubled in 2024 compared to 2023, with westbound transit volumes nearly reaching the 2021 record. In addition to UTLC ERA, services on the China-Russia route via Kazakhstan are now offered by other Russian and Kazakh operators, including RZD Logistics, FESCO, LOGOPER, KTZ Express, RTSB RUS, the multimodal operator Refagrotrans, and others. The traffic structure in the chart in Figure 16 is an estimate.

Advantages:

- **Transit priority.** In the operational statistics of Kazakhstan’s transport sector, containers feature almost exclusively in the context of transit. The development of container transit shipments – both via the Central Eurasian Corridor and the Trans-Caspian International Transport Route, as well as transit to neighbouring

Central Asian countries – is declared a priority for the development of the nation's transport complex. It is within the context of this goal and its associated tasks that infrastructure development projects are initiated and implemented: the port complex on the Caspian Sea, railway and terminal infrastructure, as well as projects beyond the country's borders.

- A unified operator with administrative backing. To develop transit services whose routes pass through the railway networks of Kazakhstan, Russia, and Belarus, a joint venture with the participation of the railway administrations of the transit countries – UTLC ERA – was established.

- Marketing partnerships with major operators in Europe and China. The route's dominant position is the result of targeted development and marketing. Specialised companies were set up to promote the service in Europe and China, with national operators from China, Germany, Poland, Austria, and Finland among the key clients and partners.

- Minimal barriers. The three countries are members of the Customs Union; there is no border or customs control when crossing their mutual borders. The EAEU is an established international organisation that provides the regulatory framework necessary for the corridor's operation, and the institutions to refine and update it.

- Operator competition. In addition to UTLC ERA, services on the China-Russia route via Kazakhstan are now also offered by other Russian and Kazakh operators.

- Trade with Russia and Russian transit in trade with other Central Asian countries, primarily Uzbekistan, via Kazakhstan. Russia is the largest trading partner for most Central Asian countries.

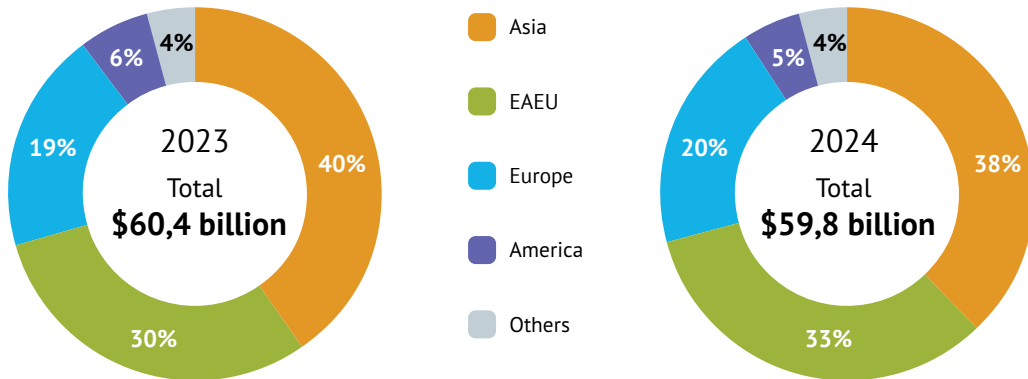
The route for this trade partially overlaps with the Central Eurasian Corridor route and can create synergies. Furthermore, this vested interest in partnership with Kazakhstan – also through the North-South Corridor – provides grounds to assume that Russia will make efforts to maintain and preserve these relationships.

Disadvantages and risks:

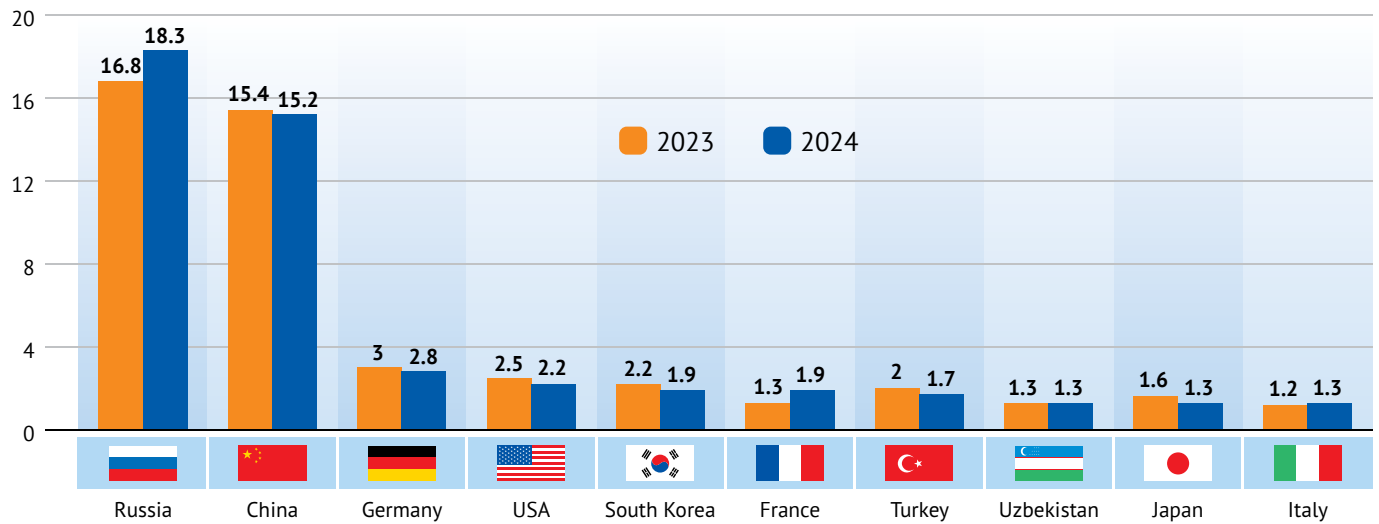
- Specifics of the national market. Monopolisation. The upcoming railway sector reform. Formally, Kazakhstan's railway sector is organised similarly to Russia's. The national state-owned railway corporation Kazakhstan Temir

FIGURE 12. KAZAKHSTAN IMPORT STRUCTURE

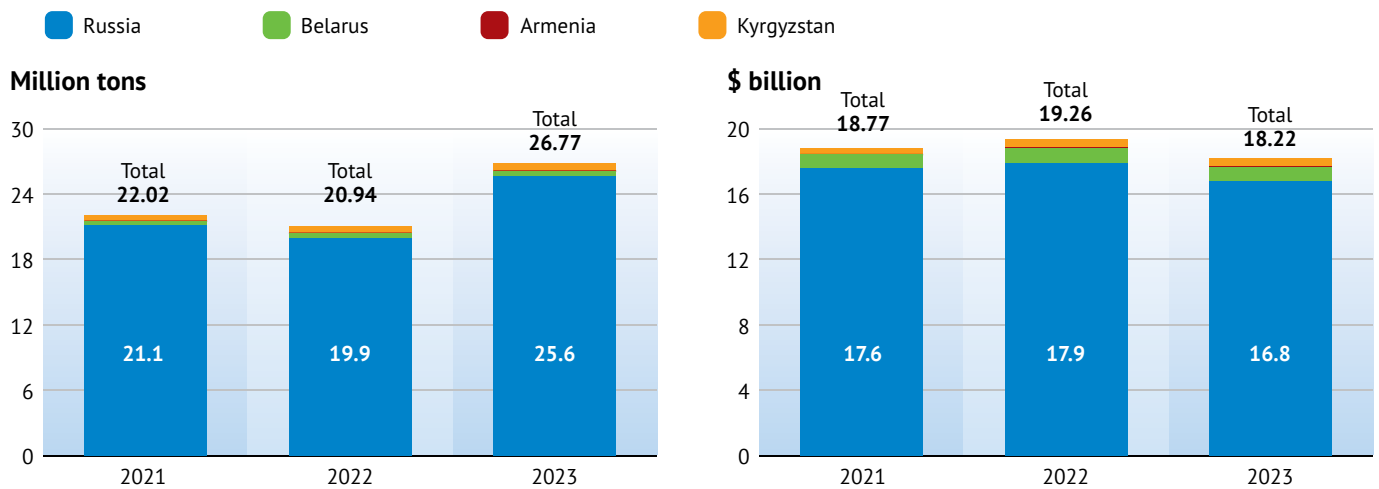
Geographical structure of imports by region



Top 10 importing countries to Kazakhstan, \$ billion



Imports to Kazakhstan from the EAEU



Source: Based on official statistics from Kazakhstan

Zholy (KTZ) combines the functions of infrastructure operator, traction service provider, and carrier. Competitive market segments include wagon fleet operations and terminal handling.

However, in reality, all development projects in the railway and related sectors are implemented with the participation of KTZ or its subsidiaries:

Kedentransservice (KDTS) was established to develop container transport on a 50/50 basis with TransContainer. It was intended to be the sole operator of container terminals and services in Kazakhstan. However, KTZ created its own subsidiary operator, **KTZ Express**, within which it began independently developing container operations. In 2020, the new owner of TransContainer, the Delo Group, sold its stake in KDTS to KTZ. This resulted in a duplication of functions between KTZ Express and KDTS.

UTLC ERA is the joint Kazakh-Russian-Belarusian operator for cross-border container transport on the China-Europe axis traversing Kazakhstan and Russia (initially only for transit services on the China-Europe lane; now, following a sharp contraction of this flow, especially eastbound, the company also operates services on the China-Russia and China-Belarus lanes). Initially, there were plans to transfer container terminals in Belarus, Kazakhstan, and Russia to the operator, but these were not realised. UTLC ERA's only assets are flatcars; of the approximately 9,000 flatcars used daily on average in its operations, about one-third are leased, one-third are rented, and one-third are sourced from the market.

In 2022, a concept for developing transport and logistics potential until 2030 was adopted, which provided for the separation of the national infrastructure operator functions from KTZ. An updated concept was adopted in July 2024, which envisages the transformation of JSC NC KTZ into a transport and logistics company. Foreign and private investment is planned to be actively raised for infrastructure development.

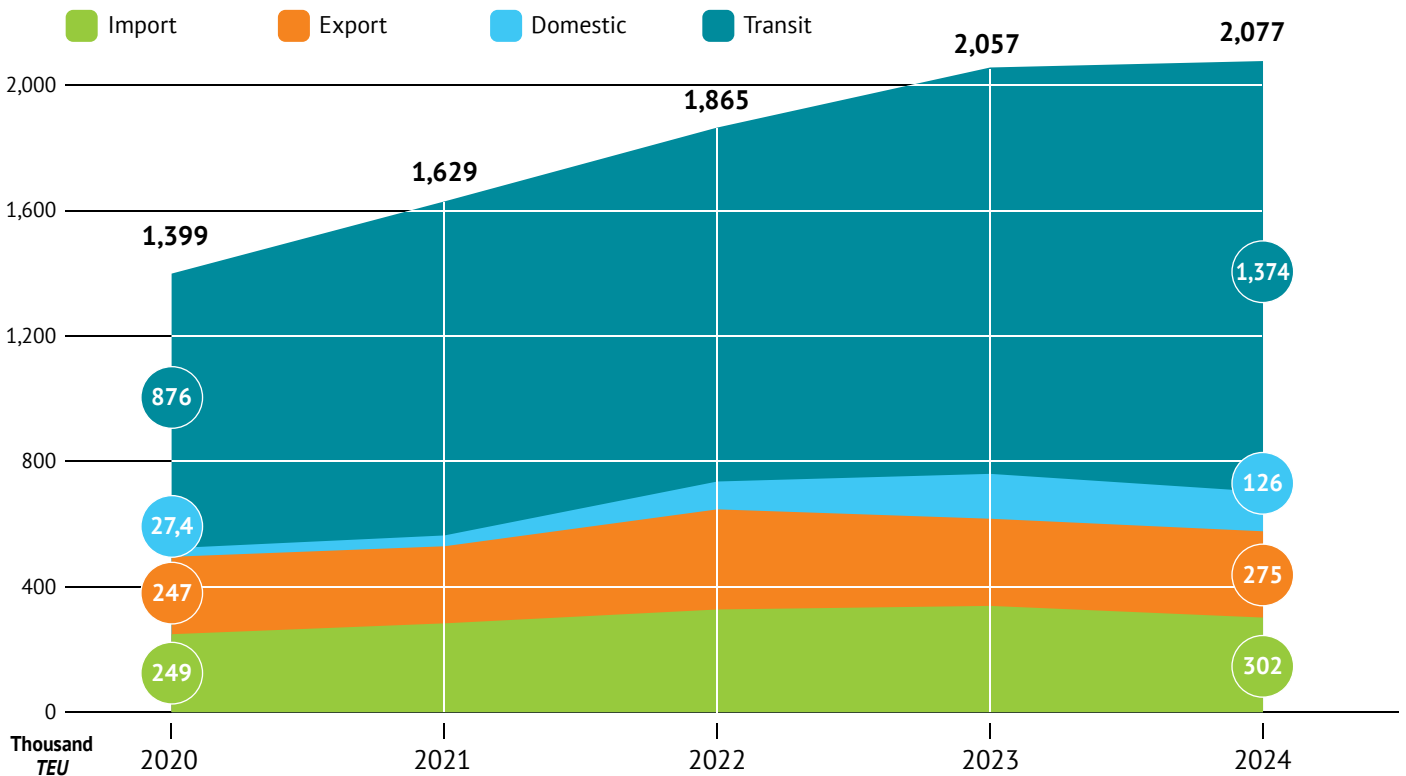
The concept states the need for a radical restructuring of the industry, suggesting a phased reform aimed at creating a competitive market by removing barriers for new carriers and establishing a national railway infrastructure operator.

Ahead of this liberalisation, and to maintain control over infrastructure on key routes – primarily the TITR and North-South Corridor – KTZ is seeking

to secure its participation in the most important railway and logistics infrastructure development projects, both within the Republic of Kazakhstan and abroad:

- Khorgos – Eastern Gate (KTZE)
- Container terminal at the port of Aktau – 250,000 TEU per year (KTZE, Port of Lianyungang, Aktau International Sea Commercial Port)
- Container terminal at the port of Alat, Azerbaijan (SK-AIH Investment Fund (Samruk-Kazyna JSC, Azerbaijan Investment Holding), KTZ, Baku International Sea Trade Port, and Xi'an Free Trade Port Construction and Operation)
- Container terminal at the port of Poti, Georgia (KTZ, PTC Holding)
- Logistics centre with a capacity of 350,000 TEU in the Almaty region (KDTs, China Xinjiang Commercial Logistics)
- Projects for joint terminals outside China
- Terminals already operational in Xi'an and Lianyungang, PRC
- In Russia (Moscow Region – Slavtrans-Service JSC, KTZ, and Xi'an Free Trade Port Construction & Operation)
- In Belarus (Svisloch – KTZE, Xi'an Free Trade Port Construction and Operation, and Unionway)
- In Hungary (Budapest – KTZ, L.A.C. Holding, and Xi'an Free Trade Port Construction and Operation Co.)
- In Romania (Constanța)
- In Uzbekistan (Tashkent)
- In the PRC (Ürümqi)
- Complex relations between Russia and Kazakhstan amid increasing pressure from the collective West on Russia's partners to enhance the efficacy of sanctions.

FIGURE 13. STRUCTURE OF CONTAINER TRANSPORTATION ON THE RAILWAY NETWORK OF THE REPUBLIC OF KAZAKHSTAN



Source: InfraNews estimates based on data from participants in the rail container transportation market in Kazakhstan

- Potential competition between routes within Kazakhstan as the TITR and other corridors via Uzbekistan develop, with the possibility of administrative tools being used to create preferences for some routes to the detriment of others. For instance, KTZ's 2024 report indicates a sharp increase in container transit volumes on the TITR route in 2024 (a 33-fold increase compared to 2023, to 35,600 TEU) attributed to the launch of a Kazakh-Chinese terminal at the Xi'an dry port in February 2024. However, the terminal is not dedicated infrastructure owned by TITR; it can serve as a starting point for any route to or from China via Kazakhstan. Thus, this wording in the report suggests that KTZ has taken some measures to create more favourable conditions for the TITR.

- Underdevelopment of the national container market and terminal infrastructure, alongside a negligible level of containerisation in Kazakhstan's trade with China and other countries in Central Asia and the South Caucasus.

The Trans-Caspian International Transport Route (TITR)

The Trans-Caspian International Transport Route (TITR), also known as the Middle Corridor, is a multimodal network connecting China and Europe via Kazakhstan, Azerbaijan, Georgia, and Turkey, with maritime segments crossing the Caspian and Black seas. The project was launched in late 2013, with technical development supported by both China and the European Union. At the International Transport and Logistics Forum “New Silk Road” in Kazakhstan, the national railway companies of Kazakhstan, Azerbaijan, and Georgia signed an agreement to establish the TITR Development Committee. The ports of Aktau, Batumi, and Baku, alongside the Azerbaijan Caspian Shipping Company, joined the initiative in 2014. The corridor has since attracted international partners for a number of its projects such as Singapore’s *PSA International* and *DP World of Dubai*.

While not originally conceived as a direct revival of the TRACECA programme, the TITR shares significant geographical and strategic overlap – at least from Europe’s strategic perspective. TRACECA stands for Transport Corridor Europe-Caucasus-Asia. However, its core objective was to link the Caucasus and Central Asia with the EU, circumventing Russia – a goal that was not explicitly stated at the time but has become a central tenet of the TITR’s positioning. Today, Europe explicitly promotes the TITR as a viable alternative to Russian land corridors, which have been rendered unusable for foreign shippers.

Advantages:

- Strong Chinese involvement. China became a founding member of the corridor’s unified operator in 2024. The February 2024 opening of the Kazakh-Chinese terminal in Xi’an’s dry port catalysed a massive influx of Chinese container cargo. According to Kazakhstan Temir Zholy (KTZ), container transit from China via the TITR surged 33-fold in 2024 compared to 2023, reaching 35,600 TEU.
- European political and commercial support. As stated above, a critical factor for any corridor’s efficiency is balanced, two-way cargo flow. Politically motivated efforts by European traders to divert freight from Russian routes to the TITR have created a consistent return load for containers carrying Chinese imports to Europe.

- A politically acceptable route for Central Asia's trade with Europe. As highlighted in the UTLC ERA/ERAI report, *Trans-Caspian International Transport Route and Other Promising Corridors in Central Asia*,⁹ the TITR has become increasingly vital for transporting strategic commodities, such as uranium, in recent years. Notably, 60 percent of Kazakhstan's uranium exports to the West now use this route, including shipments by Kazakhstan's national nuclear energy corporation, Kazatomprom, to Romania. With France (the EU's largest uranium consumer) losing access to African supplies for political reasons, European interest in secure Kazakh uranium and controlled supply routes is evident.

Disadvantages and risks:

- Geographical and modal complexity. Multiple border crossings and two sea legs, each requiring a change of transport mode.
- Underdeveloped infrastructure. Terminal infrastructure along the corridor remains insufficient.
- Immature Caspian container shipping. The Caspian Sea segment lacks a dedicated container fleet and modern container terminals.
- Limited containerised domestic and foreign trade. The transit countries, namely Kazakhstan and Azerbaijan, have export economies centred on raw materials.
- Operational fragmentation. Unlike the Central Eurasian Corridor, the TITR initially lacked a single operator. To coordinate the project, the non-profit International Association Trans-Caspian International Transport Route (IA TITR) was formed in 2017 and is headquartered in Astana. Its mandate is to attract transit and foreign-trade cargo, develop integrated logistics solutions, implement an effective tariff policy, create a seamless shipping process, and reduce customs and administrative barriers. The fact that the IA TITR charter explicitly tasks it with "ensuring the competitive advantages of the TITR" implicitly acknowledges the current superior strength of its alternatives.

IA TITR has eight permanent members: five railway companies and three seaports or carriers from five states. Each member holds decisive voting rights

⁹ Отчёт ОТЛК EPA / ERAI «Транскаспийский международный транспортный маршрут и другие перспективные коридоры в Центральной Азии». Январь, 2025. URL: https://index1520.com/upload/medialibrary/7fa/69jwc2gbyzntilvwf4nv0b55g17uu3i6/ru310125_TMTM.pdf

and can participate in the association's management. However, this structure inherently complicates negotiations and impedes swift decision-making. This recognised inefficiency led to the initiative of creating a unified commercial operator, modelled on UTLC ERA.

Consequently, in October 2023, the national railway companies of Georgia, Azerbaijan, and Kazakhstan agreed to establish a joint venture for freight transportation on the TITR. By the end of the year, *Middle Corridor Multimodal* was officially registered. Its founders are Kazakhstan Railways, Georgian Railways, and Azerbaijan Railways. The company's primary objectives are to provide "one-stop-shop" services, guarantee delivery times, and implement a coordinated policy for developing multimodal services on the China-Europe and Turkey-China routes. In a significant development in mid-2025, *China Railway Container Transport Co.*, a subsidiary of China Railway Corporation, was invited to join as a founding member. The true effectiveness of this single operator will likely only become apparent over the next several years.

- Regulatory framework and tariff policy. Drawing on its own experience, UTLC ERA has identified the following factors that are crucial for the further growth of the TITR: "The company should connect the national rail, sea and road transport operators in Kazakhstan, Azerbaijan, Georgia and Turkey. This requires the harmonisation of standards for logistics processes, including schedules, container types and documentation; the development of a common tariff policy, with uniform rates for the entire route to streamline calculations and ensure pricing stability; the organisation of integrated "end-to-end" logistics across rail, sea, and road, and port handling; the implementation of a "one-stop-shop" platform for shippers for all operations including documentation, tracking, and booking; and the comprehensive digitalisation of all procedures." Progress on all these fronts is essential for creating an entirely new logistics product.

International North-South Transport Corridor (INSTC)

In its narrowest sense, the International North-South Transport Corridor (INSTC) is a multimodal route designed to handle Russia's export-import trade with Iran, with onward connections to India, the Persian Gulf, and South Asia. Its key stakeholders and participants include Russia, Iran, India, Afghanistan,

Kazakhstan, and Azerbaijan. The corridor comprises three main branches: **eastern, western, and trans-Caspian.**

Unfortunately, comprehensive and up-to-date statistics on INSTC freight volumes are not available. Data must be pieced together from port statistics and fragmentary figures published by Russian Railways and the corridor operator, the Directorate of International Transport Corridors (a body under the Russian Ministry of Transport). According to these sources, total cargo volume across all three branches reached 14.5 million tonnes in 2022 and exceeded 17 million tonnes in 2023. However, these figures include road transport, and approximately 70 percent of the total traffic was on the western branch, primarily involving goods moving between Russia and Azerbaijan.

If we apply the stricter definition of a “corridor”¹⁰ established in the initial chapters of this report, only the eastern branch of the INSTC truly qualifies as an international transport corridor.

Eastern branch of the North-South ITC

The primary operating route of the INSTC today is the direct railway link from Russia through Kazakhstan and Turkmenistan to Iran, which connects to the Iranian railway network. To attract cargo, the national railway companies of Russia, Kazakhstan, and Turkmenistan have implemented special discounted rates. Russian Railways (RZD) offers a 20 percent discount on container transport via Russian-Kazakh border crossings and the Bolashak crossing from Kazakhstan into Turkmenistan. Kazakhstan Railways provides a 40 percent discount for most cargo, excluding grain, basic agricultural commodities, processed earth materials, and oil products. Turkmenistan offers discounts ranging from 40 to 50 percent.

A targeted promotional push starting in 2024 has driven a significant increase in volume on the eastern branch. Freight levels rose to approximately 1.8–2 million tonnes in 2024, up from 650,000 tonnes in 2023 – a threefold increase. The main growth in traffic in 2024 was driven by fertilisers, including those from Belarus.

Development efforts are ongoing. Since 2021, RZD Logistics and the Russian Export Centre have promoted a container service for agro-industrial

¹⁰A transport corridor is an integrated system comprising: mainlines and their services; terminal infrastructure at endpoints and within corridor, including key nodes, and intermodal transfer points; adjacent industrial and logistics zones; and the essential commercial, marketing, administrative, and digital components that support its operation.

products between Selyatino (Moscow) and Sergeli (Tashkent). Furthermore, the *CRK Terminal*, currently under construction at Selyatino station – a joint project of Slavtrans-Service, KTZ, and China's *Xi'an Free Trade Port Construction & Operation* – is being positioned as a key hub for the INSTC.

Most recently, a subsidy programme for Russian importers was announced at the beginning of 2025, covering up to 50 percent of transport costs for the 2025–2026 period. However, the projected volume for this subsidy remains modest, at just 13 round trips per year, or roughly one per month.

Western branch of the North-South ITC

This branch consists of a direct railway link via the Samur (Russia)-Yalama (Azerbaijan) border crossing, with onward access to the Iranian railway network through the Astarra (Azerbaijan)-Astarra (Iran) crossing, continuing to the port of Bandar Abbas. Experts note that infrastructure along the entire route requires significant development and expansion.¹¹

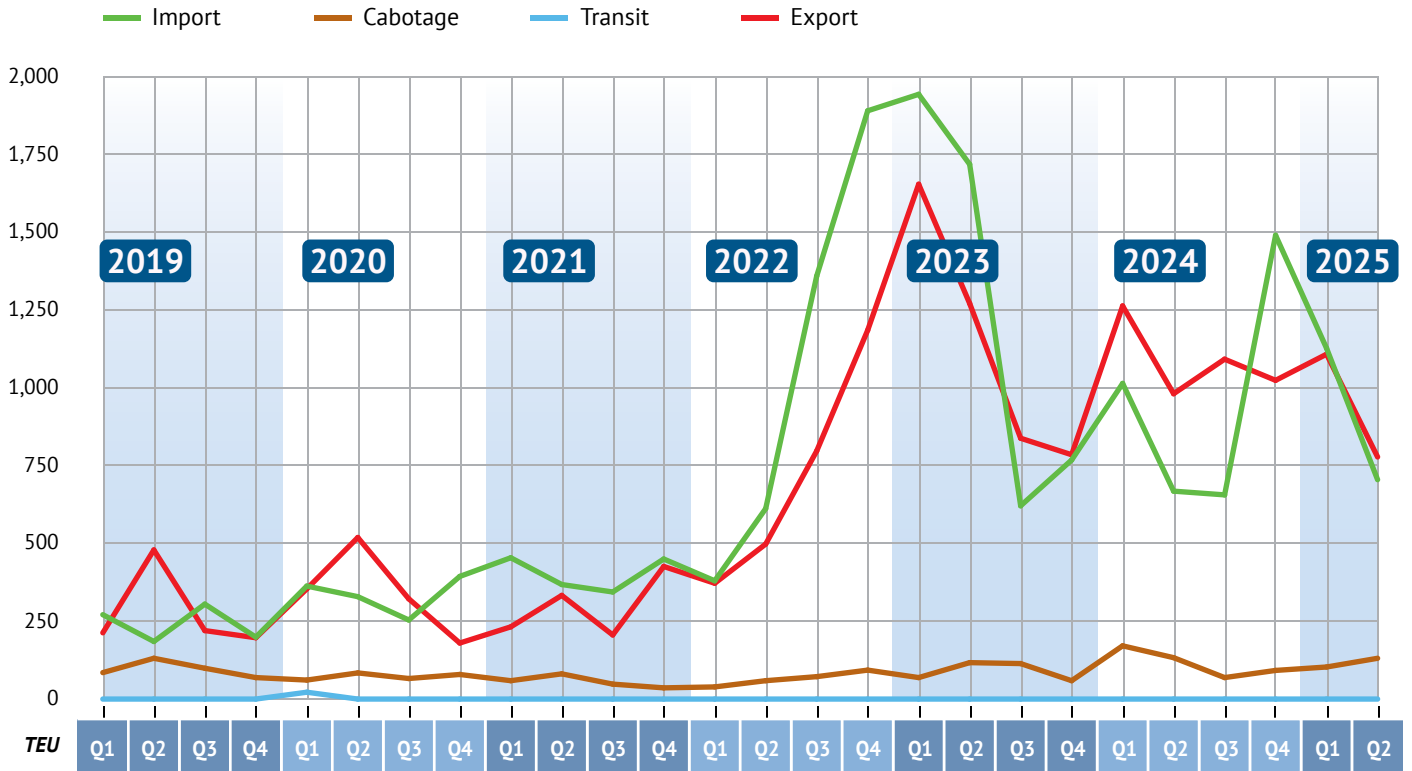
The most problematic segment is within Iran. The primary obstacle is a missing rail link between the Azerbaijani border and the city of Rasht, which prevents seamless rail transport and necessitates a road leg. Construction of this section has been delayed due to the challenging mountainous terrain, which requires 22 tunnels and 15 bridges. In May 2023, Russian and Iranian leaders signed an agreement to build the railway, and by March 2025, they had finalised the route. That September, Iran transferred the necessary land to Russia for the Rasht-Astarra section, which is expected to be completed by the end of 2027.

From Rasht, the INSTC utilises 1,650 kilometres of existing track. This section is built to the European standard gauge of 1,435 millimetres but is mostly non-electrified and single-track. Consequently, road transport remains the primary mode for this part of the route.

Initially considered the most promising branch, the western route faced uncertainty in 2025 due to a diplomatic cooling between Russia and Azerbaijan, which caused concern within the transport sector. However, this period of tension is widely viewed as a minor episode in the long-term strategic relationship between Moscow and Baku.

¹¹ Досье: Развитие транспортного коридора «Север-Юг» // Евразия Эксперт. 10.05.2024. URL: <https://eurasia.expert/dose-razvitie-transportnogo-koridora-sever-yug/>

FIGURE 14. CONTAINER TURNOVER DYNAMICS AND STRUCTURE AT RUSSIAN CASPIAN BASIN PORTS



Source: InfraNews based on MCT data

Trans-Caspian branch of the North-South ITC

This multimodal corridor utilises the Russian ports of Astrakhan, Olya, and Makhachkala, alongside the northern Iranian ports of Amirabad, Astara, Anzali, and Nowshahr. From there, cargo moves overland via road or rail through Tehran and Isfahan to the southern port of Bandar Abbas on the Strait of Hormuz.

As shown in Figure 17, container traffic through Russia’s Caspian ports increased following the start of Russia’s special military operation and the shift in trade flows from West to East and South. However, these volumes remain negligible on a national scale, accounting for just 0.15 percent of total container turnover at Russian ports in 2024–2025. Furthermore, over half of the export container movement consists of returning empty equipment.

The corridor’s expansion is primarily constrained by a lack of container terminals and a suitable vessel fleet in the Caspian Sea. In practice,

Turkmenbashi is the only fully functional container terminal in the region. Despite numerous announcements, neither Russia, Kazakhstan, nor Azerbaijan currently operates a modern, technologically equipped container terminal on the Caspian.

According to the United Shipbuilding Corporation, the INSTC requires an additional 46 vessels; however, only 25 are currently planned. The Lotos shipyard in the Astrakhan Region plans to launch four Project 00108 container ships during 2025, with the fleet expected to grow to 25 by 2030. These vessels will have a capacity of up to 531 TEU at sea and 429 TEU on rivers.

Iran's fleet is also insufficient. Its entire Caspian fleet consists of 53 vessels, which serve not only Russian ports but also other Caspian nations. A separate challenge is the shortage of Ro/Ro vessels: Russia has only 19, and Iran has none.

Advantages:

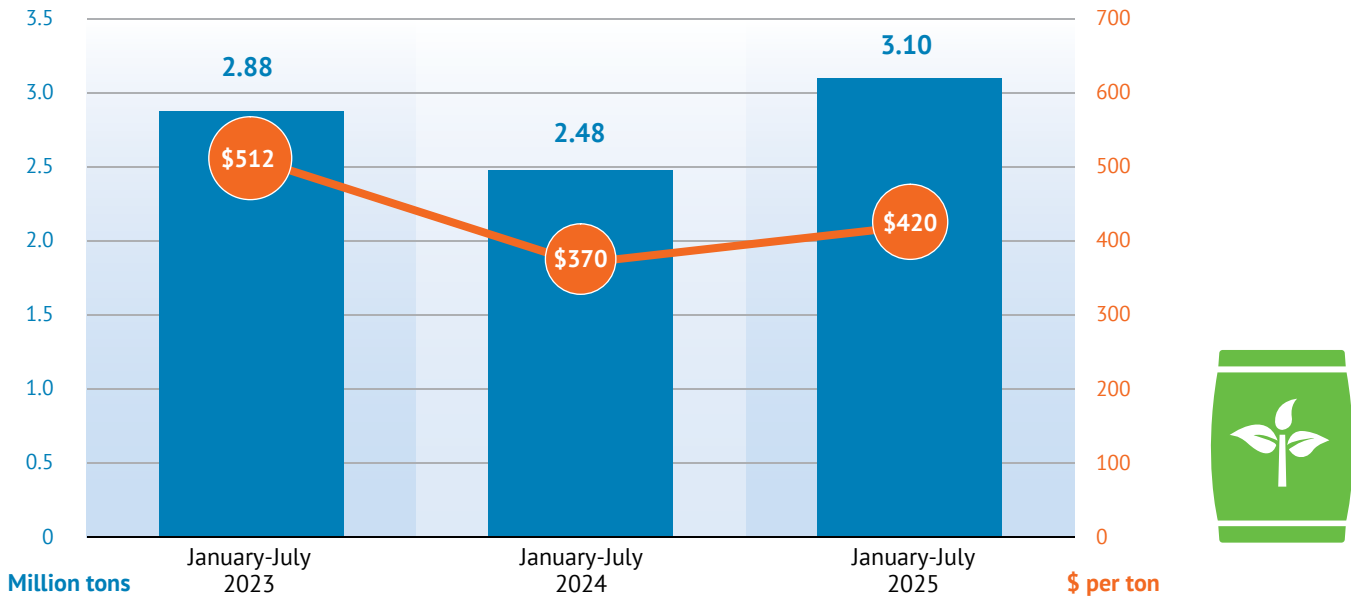
- Expanding Russia-India trade. Growing Russian and Belarusian exports to India and the Middle East now extend beyond oil to include fertilisers, grain, and metallurgical products. In return, India supplies a diverse range of containerised goods, including food products, tea, tobacco, chemicals, rubber, pharmaceuticals, machinery, and electronics.

- Fertiliser exports as a key driver. These products have become the primary cargo driving the expansion of the INSTC's eastern branch. This trend is reflected in a strong recovery of Russian fertiliser exports to India, which rebounded from a 2024 decline to exceed 2023's record levels by July 2025. According to Indian customs data, Russia supplied 3.1 million tonnes in the first seven months of 2025, compared to 2.5 million tonnes a year earlier and 2.9 million tonnes in the same period of 2023.

- A shift in global liner shipping. The re-routing of major liner services from the traditional Southern Eurasian route via the Suez Canal and Red Sea to the long-haul passage around Africa, following the Houthi crisis, has effectively created a distinct market segment for India and the Middle East. This segment operates with its own service networks and balanced pricing structures, into which overland and intermodal routes that include an overland section can be more readily integrated.

- Strategic vertical axis. The corridor's north-south orientation creates multiple intersections with major Eurasian routes. To the north, its Caspian

FIGURE 15. RUSSIAN FERTILIZER EXPORTS TO INDIA



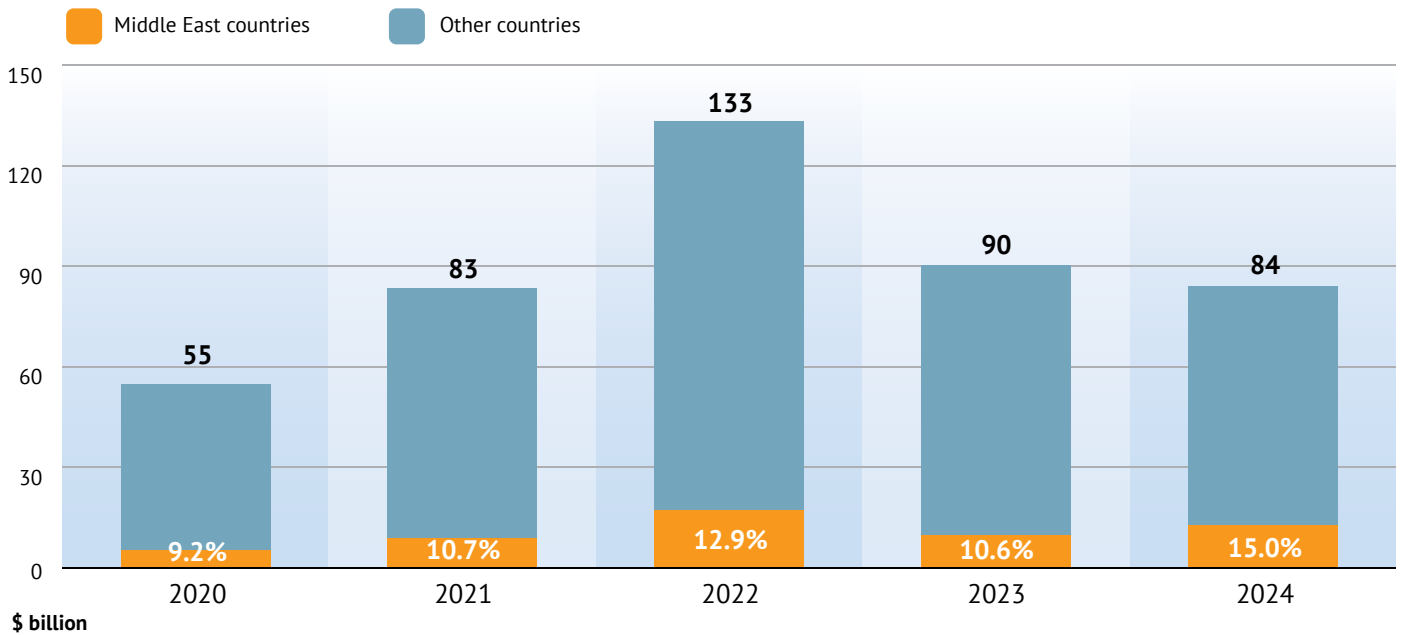
Source: India's Foreign Trade Statistics

Sea connections offer Russia alternatives to Kazakhstan transit for accessing Central Asian markets. To the south, it links Iran and the Middle East with these markets, while also providing a potential alternative route for trade with China and Europe should instability in the Persian Gulf, Strait of Hormuz, or Red Sea persist.

The energy crisis in Europe, triggered by the loss of readily available and affordable Russian pipeline gas after 2022 and compounded by stricter environmental regulations, is driving a relocation of chemical production to other regions. In particular, it is being moved to the Middle East, where low-cost energy is being augmented by favourable government policies. This strategy aims to capitalise on current market conditions to accelerate the transition from a commodity-dependent economy towards a more complex, higher-value-added, and diversified industrial base.

Inexpensive energy and resource availability are enabling Middle Eastern nations to significantly ramp up production of petrochemicals and gas

FIGURE 16. GLOBAL CHEMICAL FERTILIZER TRADE VOLUMES



Sources: UN COMTRADE and ITC statistics

chemicals, particularly fertilisers and polymers. While hydrocarbons are typically transported via dedicated infrastructure such as pipelines, tankers and bulk terminals, their derivative products – polymers and fertilisers – are among the most commonly containerised cargoes.

For ethylene polymers, the Middle East's share of global exports exceeds 20 percent in value terms. In 2024, combined exports from Saudi Arabia, the UAE, Qatar, and Iran reached nearly \$18 billion. Similarly, for propylene polymers, Saudi Arabia and the UAE are the region's largest exporters, with \$7 billion in exports in 2024 accounting for 15 percent of global trade.

Should maritime routes like the Strait of Hormuz be disrupted, Iran provides a potential land bridge. This would allow Middle Eastern trade to be reoriented along rail routes, such as the link to China via Kazakhstan, Uzbekistan, and Turkmenistan, launched in mid-2024, or the future China-Kyrgyzstan-Uzbekistan line, and to Europe via the Caspian Sea along the TITR.

Disadvantages and risks

- Limited trade potential. Countries along the INSTC outside the former Soviet Union (Iran, Iraq, Pakistan, Afghanistan, and India) currently have significantly lower trade volumes and potential for growth compared to China. As Russia's primary partner in replacing trade with unfriendly nations, China offers a far wider range of technologically advanced goods than any country in the southern corridor.
- Insufficient multilateral coordination. The corridor lacks a single operator to act as a chief negotiator and process facilitator. There is a clear deficit of political will and commitment to collaborative teamwork. For instance, negotiations concerning a dry port in Herat took six months, and the implementation of agreed-upon plans remains uncertain. The project still lacks common rules and a unified motivation.
- Insufficient investment and underdeveloped infrastructure:
 - Ports. The international seaport of Turkmenbashi in Turkmenistan is currently the only functioning port with a container terminal, handling about 3,500 TEU in 2023.¹²
 - Railways. Capacity is uncoordinated and insufficient at key junctions. Terminal infrastructure is notably lacking, especially at interchanges between networks with different rail gauges.
 - Internal infrastructure. Significant progress is unlikely without robust internal infrastructure, particularly dry ports, at the origin points of cargo flows and intermodal hubs, comparable to that of the two main Eurasian corridors. In May 2024, an agreement was reached between Afghanistan, Kazakhstan, and Turkmenistan to jointly build a dry port in Herat Province.¹³ With the INSTC's scale, any of its routes requires ten to fifteen major dry ports, not to mention numerous smaller facilities.

¹² Морской торговый флот Туркменистана перевыполняет планы по грузо- и пассажироперевозкам // News Central Asia. 15.11.2023. URL: <https://www.newscentralasia.net/2023/11/15/morskoy-torgovyy-flot-turkmenistana-perevopolnyayet-plany-po-gruzo-i-passazhiroperevozkam/>

¹³ Страны Центральной Азии хотят построить логистический хаб в Афганистане // Диалог. Таджикистан и мир. 23.05.2024. URL: <https://www.dialog.tj/news/strany-tsentralnoj-azii-khotyat-postroit-logisticheskij-khab-v-afganistane>

This underdevelopment is also evident within the Russian portion of the INSTC. There are no full-fledged container terminals southeast of Moscow. The regions in the southeast of European Russia – including the Volgograd and Astrakhan regions, Kalmykia, Dagestan, and the Stavropol Territory – are among the country's least developed in terms of modern transport and logistics. Although there are isolated pockets of container activity, the development of proper logistics is further hampered by the dominance of the road haulage industry and archaic trade logistics practices in ethnic republics within the Russian Federation, which, while appealingly low-cost and fast, lack the required quality.

Consequently, route promotion under these conditions is inherently difficult, and achieving meaningful cost reductions will require sustained, long-term effort.

China-Kyrgyzstan-Uzbekistan Railway Corridor

The China-Kyrgyzstan-Uzbekistan (CKU) Railway is planned as a potential foundation for a new transport route, serving as a direct alternative to the Trans-Caspian International Transport Route (TITR). It holds significant potential to redistribute a portion of China's freight traffic to Uzbekistan, Tajikistan, Turkmenistan, and Iran.

Advantages:

- Access to Uzbekistan. A nation of nearly 40 million people, Uzbekistan has significant potential for relocating production facilities.
- Regional economic progress. The project will contribute to the economic stabilisation of Kyrgyzstan.
- Expansion of the 1520mm gauge network. This directly benefits Russia, the dominant economic and trading partner for both Kyrgyzstan and Uzbekistan.

Disadvantages and risks:

- Complex geography. The route traverses exceptionally rugged terrain, which will make construction technically challenging and costly.

- Imbalanced cargo flows. A lack of return freight traffic to China.
- The project envisions relocating production capacity from China to Central Asia; the finished goods from these facilities will be targeted at third-country markets, primarily Russia and other Central Asian nations.

Northern Sea Route

The primary objective of the Northern Sea Route (NSR) is to provide logistical support for extraction and processing projects in the Arctic, specifically, the supply of materials and the export of products.

In August 2022, the Government of the Russian Federation approved a comprehensive plan for the development of the Northern Sea Route until 2035, which encompasses 155 measures focused on expanding the cargo base, fleet, transport infrastructure, and safety infrastructure. This NSR development plan is based on a forecast of existing and prospective cargo flows, including cargo from resource projects operated by NOVATEK, Gazprom Neft, Nornickel, Rosneft, Vostokugol, Baimsky GOK, and other companies.

The crisis in the Red Sea that began in late 2023, linked to Houthi actions, forced the majority of global shipping operators to reroute vessels around Africa, which in turn stimulated interest in container shipping via the NSR. In 2024, two Chinese operators launched seasonal services on the Northern Sea Route. Newnew Shipping/Torgmoll transported over 20,000 TEU in 2024, completing 13 direct voyages from Arkhangelsk to Shanghai as part of the Arctic Express No. 1 regular container service, organised in cooperation with Russian Railways and the Moscow Region-based terminal and logistics centre, Belyi Rast.

The operator of the Trans-Arctic Transport Corridor is a subsidiary of the state corporation Rosatom – Rusatom Arctic. Project partners include Torgmoll (China) and DP World (UAE), although the specific advantages and obligations envisaged by the partnership are not yet clear.

Torgmoll and Newnew Shipping were the first operators to organise a liner service on the route. While it is currently seasonal, the company has announced its intention to build ice-class vessels for year-round operation on the route.

In 2024, Safetrans Line (China) began operations on the route, planning to deploy six of its own vessels. Of particular interest is the fact that Safetrans' affiliated carrier, Sealegend, performed its first trial transit voyage via the NSR from China to Europe in the autumn of 2025. The vessel *Istanbul Bridge* travelled from Ningbo-Zhoushan to the UK port of Felixstowe via the NSR in twenty days, and in 2026 the operator plans to run sixteen regular Arctic voyages.

As reported by industry media, citing a statement by the company's CEO, Li Xiaobin, the arrival of the *Istanbul Bridge* in Europe was delayed¹⁴ by two days due to adverse weather conditions in the North Sea and a strike at the port of Rotterdam. The Arctic segment of the route, however, was completed without unexpected issues or delays. The vessel covered the 3,500-nautical-mile segment from the Bering Strait to the Barents Sea at an average speed of 17 knots.

The *Istanbul Bridge* has the Ice-1 ice-class. Vessels without an ice class or with a minimal ice class can operate on the NSR from July to October; thus, Sealegend plans weekly departures on its Arctic service during the 2026 navigation season. A full round trip via the Arctic, with calls at several ports in China and Europe, takes about two months. To perform sixteen voyages within the four-month navigation window, the operator will require eight vessels.

Looking ahead, as operations are equipped with ice-class vessels, the service will be able to operate on the Arctic route for eight to ten months per year. According to Li Xiaobin, in this configuration the service would have "very high" commercial demand, primarily for the delivery of high-value and time-sensitive cargo.

Advantages:

- The project's development is being driven by powerful geopolitical interests.
- Geopolitical instability and increasing pressure on Russia make the Arctic Corridor, which is fully controlled by Russia, an attractive option, creating strong incentives for its accelerated development.
- Interest from China and other countries:

¹⁴Malte Humpert. Chinese Containership 'Istanbul Bridge' Reaches UK via Arctic Route in Record 20 Days // gCaptain, 13.10.2025. URL: <https://gcaptain.com/chinese-containership-istanbul-bridge-reaches-uk-via-arctic-route-in-record-20-days/>

- Access to a transport route controlled by an ally, serving as an alternative corridor amid growing instability and a series of logistics crises, but also within the context of a potential escalation of tensions with their primary rival – the US.
- Access to the unexplored riches, secrets of the Arctic Ocean, and the discoveries they promise.
- Until now, mass navigation in the Arctic has been impossible due to ice and weather conditions. Global warming creates the potential for such opportunities to arise in the foreseeable future. Countries aspiring to leadership in the future world order are eager to secure a seat at the table before the players begin to set the rules of the game.

Disadvantages and risks:

Despite optimistic forecasts and growing interest, the development of the Northern Sea Route faces systemic constraints and strategic challenges.

- The key challenge is the dependence on climate scenarios, the forecasts for which remain extremely vague. Meteorological and glaciological models do not provide a definitive answer on the state of the ice cover in the ten-to-twenty-year perspective. This gives rise to three fundamentally different development scenarios:
 - Radical warming. Complete clearance of the water area of ice up to the North Pole. In this case, costly investments in ice-class vessels and the icebreaker fleet would lose their economic rationale, and logistics models would require a complete overhaul.
 - Sharp cooling. The return of severe ice conditions combined with high hydrocarbon prices (up to \$200 per barrel). Commercial shipping in high latitudes becomes unprofitable, which also leads to a revision of all investment programmes.
 - Moderate fluctuations (the most probable scenario). The preservation of an unstable and variable ice situation. However, even in this case, it is likely that many investments will need to be reconsidered and possibly written off.

- A fundamental problem is the absence of a detailed NSR development strategy at Rosatom. While its multitasking serves state interests well, the detailed operational work – complicated by a multitude of interdependent components and a shortage of skilled professionals – leads to delays in meeting deadlines, difficulties in utilising allocated funding, and a clear loss of well-defined benchmarks. Moreover, Russia lacks experience in independently building large-tonnage commercial ice-class vessels. The expertise accumulated in the design and construction of icebreakers has not been effectively transferred to civilian shipbuilding.

Stakeholder Activity

We have previously cited EDB estimates indicating that the largest share of investment in the development of the Eurasian Transport Framework – almost 70 percent of the total – comes from Russia and Kazakhstan, the countries through which the main Eurasian corridors pass.

This may suggest that the most active group of stakeholders in the practical development of the corridors are the transit countries themselves. In terms of core traffic, all corridor initiators operate within the context of Asia-Europe trade, as this is the largest flow of mutual trade. Asia – and above all, China – is the “world’s factory,” while Europe is a major consumer market and the second-largest macro-region by volume of container exports, although its share has declined from an average of 18 percent in 2019 to 14 percent in 2025. The volume of container exports from Asia to Europe in 2024 was approximately 18 million TEU, while the reverse flow was about three times smaller – around 6 million TEU. In total, this accounts for about 15 percent of all global container trade.

Within the structure of the Asia-Europe commodity flow, specific demand segments can be identified to create niche logistics products tailored for them and extract them from the main trunk flow. For instance, the rail corridor via Russia, Kazakhstan, and Belarus managed to capture up to 10 percent of the total flow by offering the advantages of a stable and reliable service with delivery times several times shorter than the maritime route. The higher delivery cost was offset by the benefits of reduced lead times and schedule reliability for higher-value goods.

However, the high activity of the transit countries, particularly the largest economies – Russia and Kazakhstan – within this group is largely explained by the superimposition of the status of cargo flow generator onto their status as transit territories. Each country is far more interested in developing, simplifying, and reducing the cost of logistics for its own foreign trade than in attracting transit traffic, and, no less importantly, in diversifying both that trade and its logistics.

Russia and Kazakhstan are the largest countries in the region with significant volumes of foreign trade, and investments in the development of transport networks represent investments in the development of their own socioeconomic framework and trade – both internal and external. As the largest economies among the countries of the Eurasian corridors, they demonstrate the highest absolute investment figures, which nevertheless constitute only 7–8 percent of GDP – three times less than the average for the group of countries under review. The largest relative investments (as a percentage of GDP) are demonstrated by landlocked countries: Afghanistan (86 percent), Kyrgyzstan (47 percent), Mongolia (39 percent), Tajikistan (38 percent), and Armenia (19 percent).

Russia

According to the EDB, more than half of all investment in implemented and planned transport projects across Eurasia is allocated to the development of two Russian transport corridors – the Northern Eurasian Corridor and the North-South Corridor. The former directly links Russia with its largest trading partner and principal ally amid escalating confrontation with the West, without involving third countries vulnerable to external pressure. The latter strengthens trade and economic ties with Central Asian states and likely geopolitical allies – Iran, India, and Southeast Asian nations.

However, the principal objectives that Russia addresses through the implementation of these corridor projects are the development of its own transport and logistics infrastructure and economy. Without the expansion of the Eastern Operating Domain, initially launched largely in the expectation that surplus capacity would be absorbed by transit traffic, the country would not have been able to reorient its foreign trade towards the East almost overnight.

In our view, the primary significance of the North-South Corridor project over the next decade lies in the accelerated infrastructure development in southern Russia: the ports of Makhachkala and Astrakhan, as well as rail, terminal, and warehouse infrastructure in the south-eastern part of European Russia. While logistics expansion can proceed under the aegis of the North-South International Transport Corridor, it is crucial that, alongside the growth of transport services, a supporting ecosystem and enabling infrastructure emerge to drive regional economic development. This includes fostering new production capacities, creating high-quality jobs, and reducing and stabilising logistics costs for supply chains. In turn, a logistically mature southern Russia will allow the corridor to function fully as a transport artery.

Kazakhstan

In Kazakhstan, the largest development project was the completion in September 2025 of the track-doubling on the Dostyk-Moiynty railway line. This line belongs to both the TITR and the Central Eurasian Corridor, but it also serves the country's own rail trade with China, its largest trading partner.

The West

Relations among the countries of the West, Russia, and China constitute a complex issue that lies well beyond the scope of this report. Nevertheless, their contradictory nature cannot be ignored. The West relies on China as the “world's factory,” and for many goods, no viable alternative exists. China delivered a very painful demonstration of this dependency in 2025 through its use of rare earth metals. Until very recently, Russia supplied Europe with cheap energy and critical raw materials; the curtailment of these flows triggered a sharp deterioration in Europe's economic conditions, a contraction in industrial output, and a decline in the competitiveness of European industry. On the other hand, both Russia and China – even during periods of maximum rapprochement – have been perceived by the West as rivals and latent adversaries.

Thus, the TRACECA project (as far back as the 1990s) and the Trans-Caspian Corridor were conceived not only as routes bypassing Russia and tools

for drawing the countries of the South Caucasus and Central Asia out of Russia's sphere of influence, but also as a means to enhance Europe's own energy security through supplies from resource-rich countries and to reduce its dependence on Russia. This agenda remains highly relevant today. Yet Europe and the US have still failed to provide this project, so important to them, with systematic and sufficiently large-scale support: financial, administrative, expert, and technological.

At the initial stage, Europe claimed that it funded TRACECA. However, funding volumes amounted to only around \$10 million per year, peaking at several tens of millions. This was sufficient to establish working groups, produce politicised reports, and generate "favourable" forecasts – but little more.

- The following implemented infrastructure projects were positioned within the TRACECA framework:
- Development of terminal infrastructure at the ports of Ilyichevsk, Poti, Batumi, Turkmenbashi, Baku, and Aktau.
- Rail-ferry service on the Varna-Ilyichevsk-Poti-Batumi and Baku-Aktau routes.
- The Baku-Tbilisi-Kars railway.
- Construction of the railway tunnel under the Bosphorus, linking Turkey's Asian coast to Europe.

However, all were implemented at an extremely slow pace, with no or minimal support from Western financial institutions and businesses.

In 2025, the US gained control of the Zangezur Corridor. The infrastructure planned for construction there is positioned as part of the TITR. The project entails building railway and road infrastructure, and possibly pipelines. Azerbaijan has stated its readiness to complete the section up to the Armenian border within one year. However, it is worth recalling that the Baku-Tbilisi-Kars railway, most of which runs through Azerbaijani territory, took approximately ten

years to build. Furthermore, a 45-kilometre section through Armenia requires restoration: the Soviet-era line Yeraskh-Julfa-Ordunabad-Meghri-Horadiz runs along this route. In 2021, Armenia estimated the cost of restoring this section at approximately \$200 million.¹⁵ Under current conditions, however, the cost would likely be several times higher.¹⁶

Based on the experience of recent decades, the probability of Western countries achieving dominance or even substantial control over the configuration of Eurasian transport corridors appears extremely low. The US fundamentally refrains from direct investment in infrastructure projects outside its territory. One need only recall the case of Georgia's Anaklia port: its operator, despite persistent declarations of the project's exceptional promise and full support, spent years searching for investors, and in the end, the port was acquired by China. In the case of the TITR, China's entry as a founding member of the corridor's operator in 2025 points to the likelihood of a similar outcome.

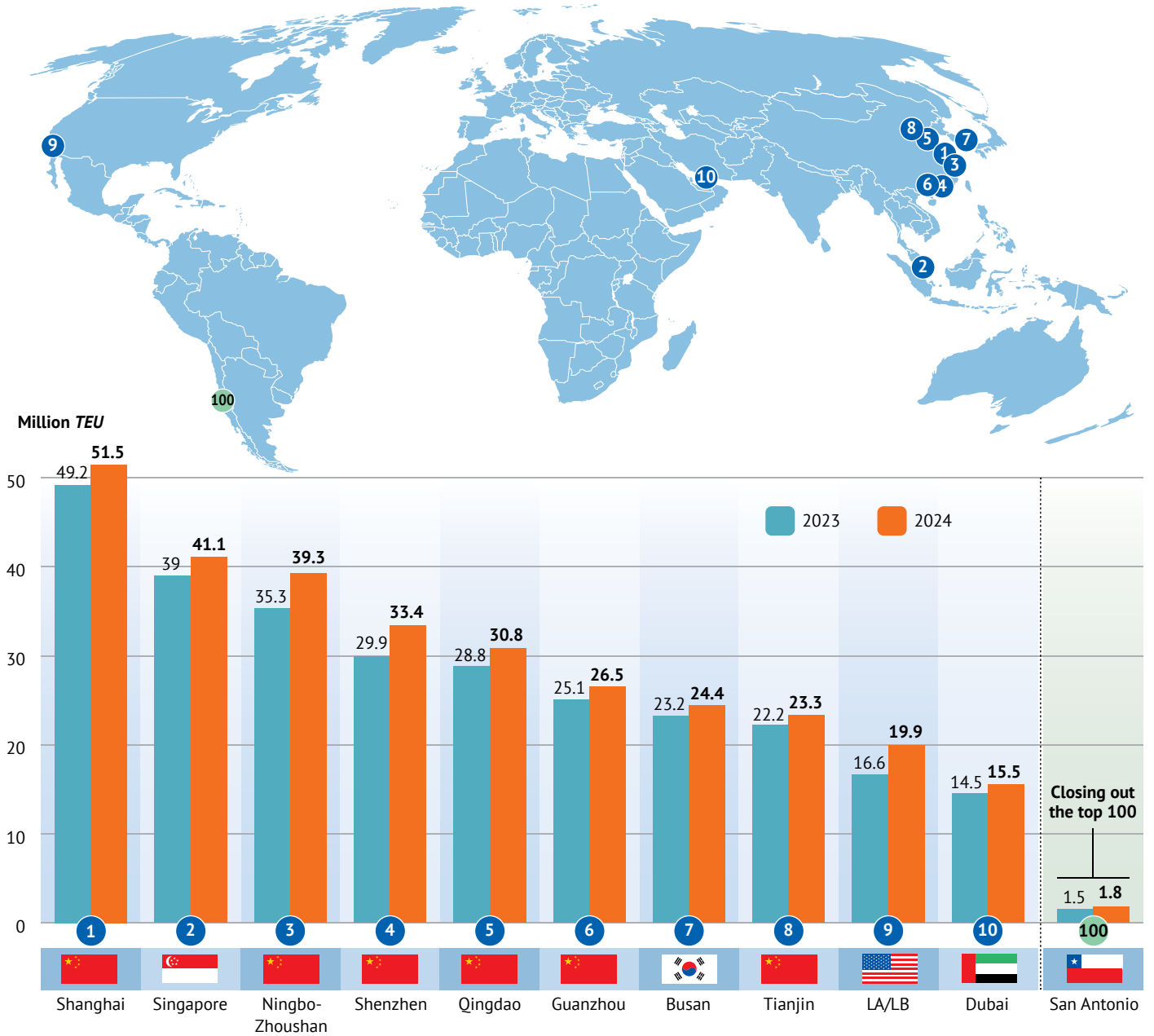
Instead, the contemporary focus of US policy is centred on implementing a reshoring strategy – returning production capacity to national jurisdiction and creating closed supply chains secured through its own resources. In this context, Eurasian transport corridors not only fail to align with Washington's priorities but also potentially contradict them, as they promote global, rather than regional, logistics connectivity.

Moreover, the US – having become the largest supplier of oil and gas to the European market – can hardly be considered interested in developing alternative transport routes capable of linking Central Asia to Europe. The creation of such corridors would grant European countries direct access to the energy and other resources of Central Asia, which could potentially undermine the market position of American exporters and intensify geo-economic competition.

¹⁵ Армения планирует восстановить 45 км отрезка железной дороги, ведущей в Азербайджан // ТАСС. 18.12.2021. URL: <https://tass.ru/mezhdunarodnaya-panorama/13238099>

¹⁶ Зангезурский коридор. Мнение эксперта // РЖД. URL: <https://1520international.com/content/2025/avgust-2025/zangezurskiy-koridor/>

FIGURE 17. TOP WORLD PORTS BY CONTAINER THROUGHPUT



Source: Alphaliner/Lloyd's List

China

Figure 17 shows the throughput of the world's ten largest container ports for 2024. Six of the top ten are located in China, with two others situated in China's immediate region: Singapore and Busan.

This is unsurprising, as intra-Asia shipping constitutes the largest segment of the global container market. Within that segment, domestic shipping within China represents the largest market. International trade

within the Asian region accounts for approximately a quarter of the entire global market.

The region is aptly termed the world's factory: the intra-Asian container market serves the upstream and intermediate industrial logistics chains of this factory, while the majority of finished products are shipped to the developed nations of the so-called West, primarily the US and Europe.

Intermediate goods and services now account for approximately 60 percent of international trade. These intermediate inputs move between countries as components within production chains. The Asian region exhibits a high degree of production fragmentation, stemming from the complexity of the manufacturing sectors in which it specialises – notably electronics manufacturing.

The creation of the “Asian factory” was greatly facilitated by reductions in import duties through bilateral and multilateral trade agreements. Within this system, raw materials, components, and semi-finished products move repeatedly between countries hosting production facilities, which is why duty reductions became a critical factor in developing competitive products.

In 1992, the AFTA agreement was signed among ASEAN member states. The agreement now has ten members: Brunei, Indonesia, Malaysia, the Philippines, Singapore, Thailand, Myanmar, Cambodia, Laos, and Vietnam. In 2008, a free trade agreement was signed between ASEAN and Japan, and in 2010 – between ASEAN and China, Korea, and India.

China is the centre of the production chain network forming the “Asian factory.” According to UN trade statistics (UNCTAD), the country receives half of all intermediate goods exported by other Asian nations and ships approximately one-third of the intermediates it imports – that is, it serves as the primary recipient and source of all resources across the region.

As production costs in China rise, and amid pressure from international importers to diversify supply chains and reduce dependence on China, Chinese manufacturers are stepping up investments in production facilities across Southeast Asian nations. At the same time, China retains control over a substantial portion of these relocated production chains and is expanding its influence and share in the most promising, technologically advanced, and expensive production segments.

Consequently, China is the largest trading and economic partner for the overwhelming majority of countries worldwide. This constitutes its principal

role: it generates the largest cargo flows. It is, however, vital to understand that China's most critical task is not to reward one or another transit country based on good behaviour, but to protect its trade by securing efficient and diversified transport routes. Cargo flows are distributed across these routes and can be flexibly redirected among them during crises, disruptions, boycotts, sanctions, and so forth. Flow regulation can indeed serve as a tool for rewarding or penalising conduct.

Logistics is a complex domain that serves business entities across all stages of their operations, not merely at the stage of delivering raw materials to production facilities or finished goods to consumers. Consequently, the Belt and Road Initiative – which is often reduced to a megaproject for establishing a system of transport corridors – extends beyond this scope. China's planning is both long-term and comprehensive: the BRI serves as an instrument of influence encompassing financial, economic, and political dimensions.

The investment activity of China and of companies and organisations acting in its interests is closely monitored by several research centres. As documented by Griffith University's Asia Institute (Australia),¹⁷ Chinese investment structures have traditionally been dominated by energy projects, alongside ventures in mineral extraction, processing, and transport infrastructure. However, post COVID-19 pandemic investment priorities have undergone significant shifts: investment in transport projects has declined; a sharp rise in technology investments has been recorded since 2022; and, since 2023, in industrial production.

The Asia Institute estimates the total volume of Chinese participation in BRI projects from 2011 to 2024 at \$1.175 trillion. Analysts separately distinguish direct investment from contract financing for participating Chinese companies, with the latter's volume significantly exceeding the former's. Thus, in 2024, direct investment stood at approximately \$51 billion, whereas contract financing to Chinese companies involved in projects – such as engineering firms, equipment manufacturers, and suppliers – amounted to \$71 billion.

The Council on Foreign Relations (CFR), an American think tank, has published an interactive map titled *Tracking China's Control of Overseas Ports*.¹⁸ According to this data, capital with Chinese ties has been invested in 129 port projects worldwide, with China holding a definitive equity stake in 17 of them.

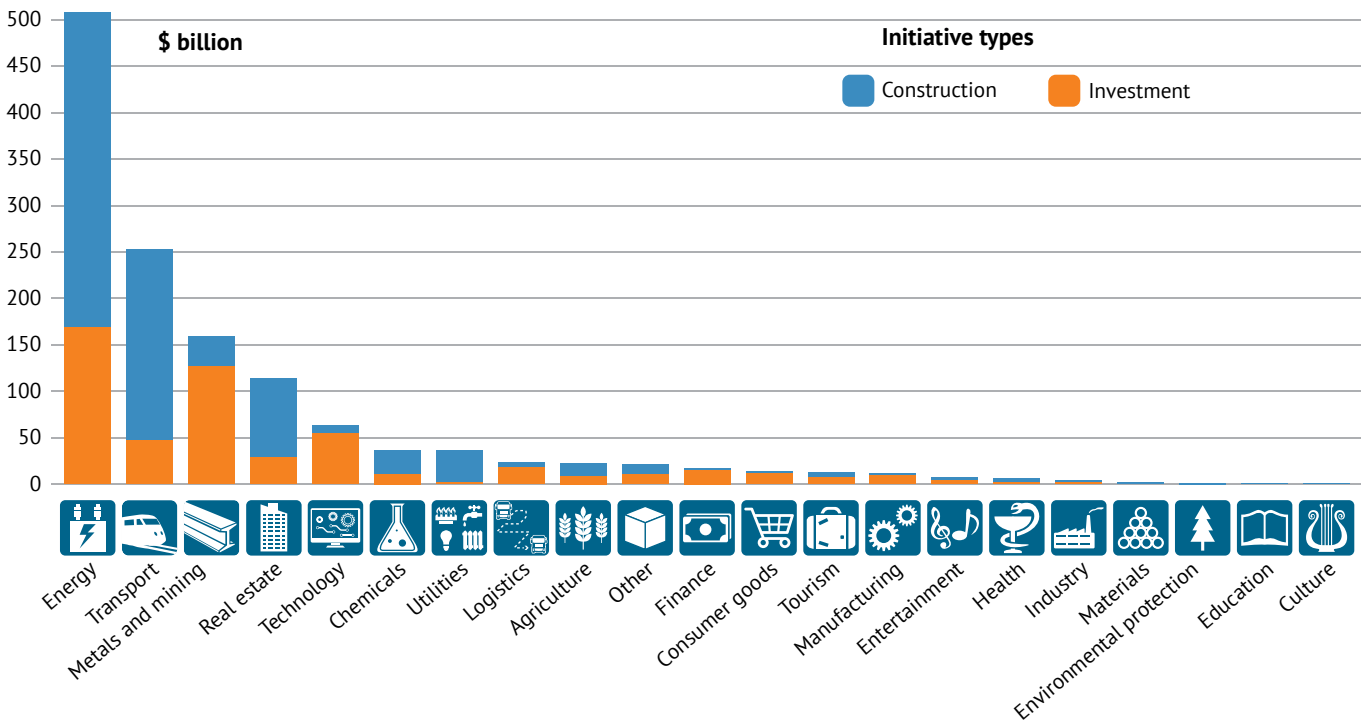
Figure 18 displays the structure of China's expenditure on engagement in BRI projects, broken down by sector and type of engagement. We observe that

¹⁷ China Belt and Road Initiative (BRI) Investment Report 2024 // Griffith University. URL: https://www.griffith.edu.au/__data/assets/pdf_file/0017/2093102/China-Belt-and-Road-Initiative-BRI-Investment-Report-2024.pdf

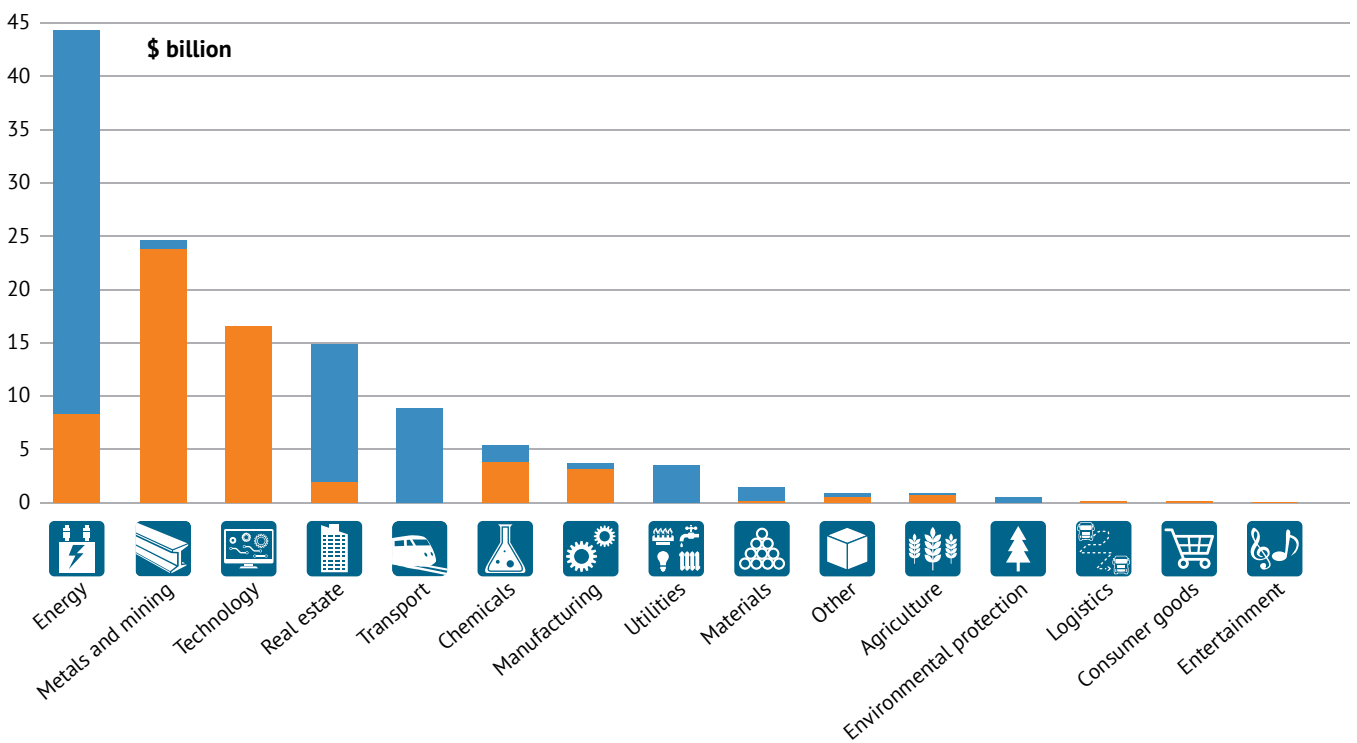
¹⁸ Tracking China's Control of Overseas Ports // Council on Foreign Relations. 26.08.2024. URL: <https://www.cfr.org/tracker/china-overseas-ports>

FIGURE 18. CHINA'S PARTICIPATION IN BPI PROJECTS

Chinese BPI initiatives by industry since 2013



Chinese BPI initiatives by industry in the first half of 2025



Source: Griffith Institute

engagement in transport projects consists almost exclusively of construction, meaning Chinese companies secure construction contracts backed by Chinese financial institutions. Thus, China not only finances projects but also secures contracts for its companies: for construction, equipment supply, maintenance, and related services.

In summary, China assumes two principal roles in transport corridor projects: that of a cargo generator and a recipient of construction and project provisioning contracts.

China's most critical role in implementing Eurasian transport corridor projects lies in securing cargo flows. This constitutes a deliberate and systematic effort to diversify trade routes, pursued within the BRI framework since the mid-2010s. In 2016, China's State Council National Development and Reform Commission approved a five-year plan for developing rail freight traffic between China and Europe, which included state subsidies on container transport along this route. Initially, 50 percent of the delivery cost was subsidised; from 2019, subsidies began to be reduced, falling to 30 percent by 2020. The federal programme concluded in 2022 and was replaced by provincial-level subsidies for major export hubs – namely Chongqing, Xi'an, Chengdu, Wuhan, Zhengzhou, Yingkou, Qingdao, Changsha, Guangzhou, and Yiwu.

China participates in transport corridor projects in a highly restricted and selective manner. For instance, it engages in projects directly tied to managing cargo flows. As previously noted, Chinese businesses are involved in terminal development projects – key hubs at origin and intersection points of routes: Belyi Rast and Selyatino (Moscow Region), Belyi Kamen and Svisloch (Belarus), Khorgos – Eastern Gate, Lianyungang and Xi'an (China), the ports of Alat (Azerbaijan) and Aktau (Kazakhstan), and the terminal in Budapest (Hungary).

China's railway construction activities have been primarily concentrated in Southeast Asia and Africa. Noteworthy major railway projects with Chinese participation in the countries featured in this report include the project in Iran and the under-construction China-Kyrgyzstan-Uzbekistan railway; these advancements highlight that without China's active engagement, these projects could not have proceeded.

For the same reason, Chinese companies are active on maritime shipping routes: as previously noted, Newnew Shipping and Safetrans were the first operators of liner services on the Northern Sea Route and remain among the most active. Typically, these are small, niche entities or even companies established specifically for the Russian market that operate new container services to Russian ports. This is attributable to specific circumstances in the maritime transport industry, where a large proportion of vessels are owned by Chinese entities, while the operation of vessels linked to Russia is hindered by sanctions and restrictions.

Route competition

Eurasian transport corridors are in a state of natural and healthy competition for transit cargo and foreign investment, a dynamic that serves as an engine for development and progress.

While the interests of Russia, China, and Europe may potentially conflict, other external factors can enhance the competitiveness of certain routes. A key example was the surge in transit along both Eurasian corridors amid severe disruptions and delays in maritime shipping during the COVID-19 pandemic. For Central Asia, the situation is further complicated by a volatile political landscape, including tensions between India and Pakistan, India and China, Iran and Israel, and Armenia and Azerbaijan, compounded by sanctions pressure. However, while these factors weaken individual routes, they do not destroy their viability. The market – shippers and consumers alike – has a vested interest in maintaining multiple routes to safeguard the system against crises.

Maritime shipping remains the primary corridor between Asia and Europe, and thus the strongest competitor to overland routes. In 2022, after a peak the previous year, demand for China-Europe-China rail transit via Kazakhstan and Russia declined sharply. This was due to both tightening sanctions against Russia and the return of cargo to previous sea routes as services stabilised and freight rates normalised post-pandemic.

This inverse correlation remained evident in 2023: as sea freight rates fell to pre-crisis levels, China-Europe cargo flows on the land corridor diminished. In 2024, during the Red Sea crisis, shipping rates increased, and cargo returned to the Eurasian land bridge. In 2025, with sea rates declining again and carrier reliability improving, UTLC ERA reported a corresponding 22 percent decline in container transit volumes between China and Europe for the first half of the year.

All routes and services exist in a state of perpetual competition. Cargo flows are dynamically shifted to the pathway where, under specific circumstances and considering a shipper's or recipient's unique needs along with external factors, the conditions are closest to optimal.

Reduced delivery times are traditionally cited as the key advantage of transit routes through Central Asia. This factor remains highly relevant, particularly given high credit costs and a volatile geopolitical landscape. However, other factors are equally critical: the reliability of service with predictable schedules, traceability, the ability to manage and adjust the process – including rerouting or pausing shipments in transit – and guaranteed cargo safety.

The system of transport corridors operates like interconnected vessels, with cargo continuously shifted between alternative routes. Consequently, terminal infrastructure at the intersections and contact points between corridors is essential, as it enables the flexible rerouting of cargo in response to changing conditions. In effect, all alternative corridors comprise a single, integrated system with multiple routing options.

A prime example of this deep integration is Kazakhstan, where various transit routes are closely intertwined with each other and with the country's own domestic and international logistics networks. The largest segment of container transit on its railway network is, in fact, cargo to and from other Central Asian nations. While Kazakhstan's main transit development projects are planned as part of corridors along the China-Europe axis, they functionally serve as hubs at the origin and diversion points of cargo flows, designed to channel and redistribute goods.

From this perspective, all existing and future routes should be viewed as components of an integrated system within a single Eurasian land corridor. This system, with its multiple routes and forks, provides a flexible mechanism

for managing, rerouting, and optimising deliveries to meet diverse requirements under changing conditions. This is confirmed by the active interest of major logistics operators with Asian and Middle Eastern roots, such as *PSA International* and *DP World*. Their participation in projects across various sites, countries, and corridor segments indicates that they view the entire network as a single, diversified logistics “portfolio.”

Conclusions

Based on the preceding analysis, the following conclusions can be drawn:

- A transport corridor is a trade lane connecting markets, not merely a line between points on a map. While it comprises specific sections of physical infrastructure, it is fundamentally a multiple-path, flexible system.
- Transport corridor projects involve three distinct stakeholder groups. The involvement of the first two – transit countries and cargo owners – is essential. The third group – “political” stakeholders – is optional, and its influence is typically limited in both strength and duration.
- The competitiveness of a corridor is determined by a set of objective factors that confer distinct advantages or disadvantages, which must be accounted for.
- Infrastructure and service are paramount. Cargo will flow through a corridor only when a competitive, integrated package of infrastructure and service is established and consistently maintained.
- The Eurasian transport network operates as a single, unified system with multiple routing options. The inherent competition between its constituent corridors creates a high degree of flexibility, which is a prerequisite for the system’s stability and sustainability.
- The development of transport and logistics corridors through Central Asian countries is strategically aligned with Russia’s interests:

First, the region's railway networks historically use the Russian 1520 mm gauge standard. The construction of new railways expands this common-gauge network, thereby deepening the economic and logistical integration of participating countries with Russia.

Second, the deployment of Chinese manufacturing and infrastructure in Central Asia generates local employment, which in turn helps curb labour migration. Furthermore, while this transport and logistics development stimulates regional economic and industrial growth, Russia remains the primary export market for the resulting goods due to its geographic proximity and significant consumption capacity.

Third, the multiple alternative routes, designed to cater to diverse interest groups, create a structural oversupply of transport capacity. Consequently, each new corridor is likely to operate below its intended capacity – a level that will fluctuate with market conditions and competition with maritime shipping. This chronic underutilisation drives up unit costs, diminishing the competitiveness of these new routes compared to corridors traversing Russian territory, which are primarily sustained by domestic trade flows.

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СОВЕТ ПО ВНЕШНЕЙ
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