



Eurasian Development Bank

International North–South Transport Corridor: Investments and Soft Infrastructure

Reports and Working Papers 22/2



Almaty, Moscow — 2022

International North–South Transport Corridor: Investments and Soft Infrastructure

FACTS AND FIGURES

“NEW LOGISTICS”

The INSTC is the key element of the Eurasian Transport Network:

- ▶ links to most of the **latitudinal transport corridors**
- ▶ **shortest land/multimodal transport routes** between the EAEU member states and the countries of South Asia, East Africa, and the Middle East, including Russia–Turkey and China–Iran connections
- ▶ **Western, Trans-Caspian, and Eastern routes to choose from**

PHYSICAL INFRASTRUCTURE

“Bankable” projects will increase the involvement of the private sector and multilateral development banks in the INSTC financing

102 Corridor infrastructure projects already executed or scheduled for a total amount of **\$38.2 billion**.

69% of total funding to be allocated **to the Western Route of the corridor, with the Eastern Route and the Trans-Caspian Route getting 11.1% and 19.2% of total funding**, respectively.

\$13,2^{bn}

of total value of ongoing and scheduled infrastructure development projects in Russia, with projects in Iran, Kazakhstan, and the other countries valued at \$12.87 billion, \$6.32 billion, and \$6.7 billion, respectively

57%

of total investment to expand the road network along the corridor (59 out of 102 projects).

Key Soft Infrastructure Improvement Measures to Ensure Effective INSTC Operationalisation

SOFT INFRASTRUCTURE

▶ More than 40 barriers are hindering the development of the corridor. Administrative barriers have the largest impact on freight transport and border crossing procedures

1 Harmonisation of border crossing procedures, including customs formalities

2 Through rates and coordination of tariff policies

3 Improvement of payment, mutual settlement and insurance mechanisms

4 Digitalisation of shipping documents and procedures

5 Coordination mechanism for corridor management

6 A marketing policy designed to attract new traffic



Vinokurov, E. (Editor), Ahunbaev, A., Usmanov, N., Zaboev, A. (2022) *International North–South Transport Corridor: Investments and Soft Infrastructure*. Reports and Working Papers 22/2. Almaty, Moscow: Eurasian Development Bank.

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The International North–South Transport Corridor (INSTC) is the key element of the Eurasian Transport Network. It is linked to most latitudinal Eurasian transport corridors. The INSTC is now becoming more relevant due to new logistics; however, various infrastructural and non-physical (tariff and non-tariff) barriers hinder its development. Certain routes of the corridor need investment to fill in missing links (unfinished Rasht–Astara section) and eliminate infrastructure bottlenecks. The report contains a database listing infrastructure development investment projects for the three INSTC routes which are either ongoing or in the pipeline in the seven countries of the region. The authors review administrative and other non-physical barriers and discuss potential elimination measures, including coordination of tariff policies, consistent border crossing procedures, transition to digital procedures and shipping documents, and creation of a corridor management mechanism.

Keywords: INSTC, international transport corridors, transport infrastructure, Eurasian Transport Network, international trade, EAEU, Caspian region, Central Asia.

JEL: F15, F17, L92, O19, R11, R41.

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Summary

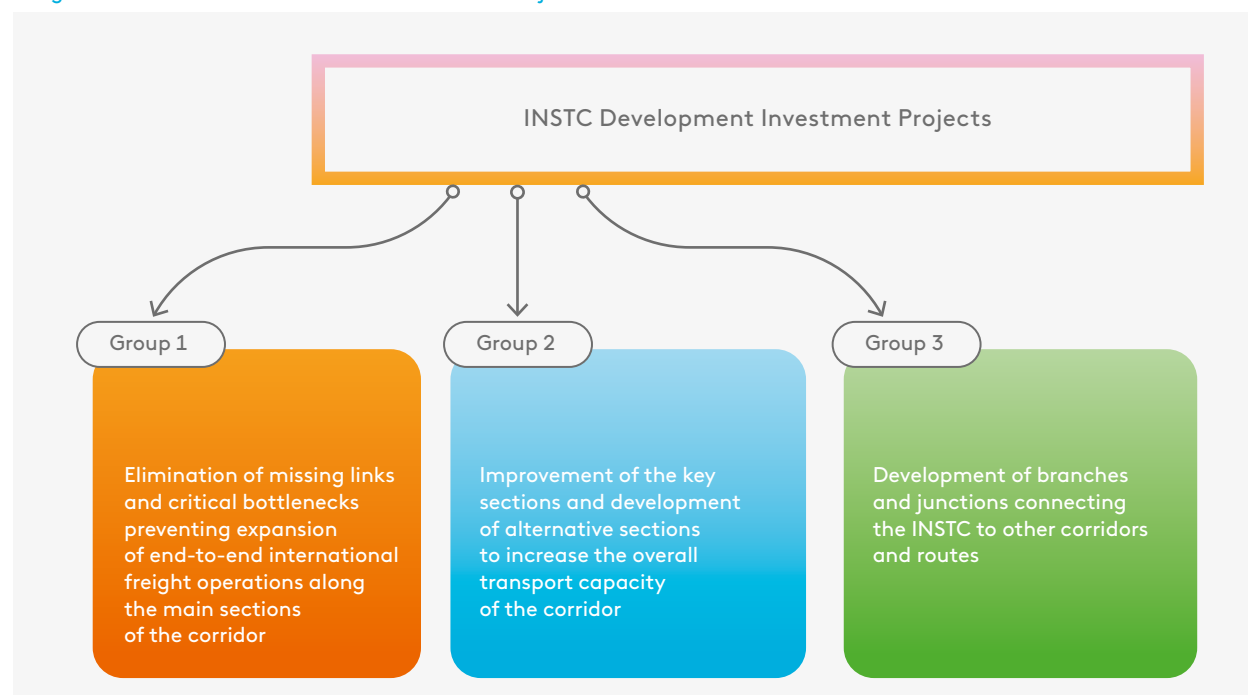
The International North–South Transport Corridor (INSTC) is the key element of the Eurasian Transport Network. It is linked to most of the latitudinal transport corridors used for international freight transport across Eurasia. The INSTC is becoming more relevant due to new logistics and supply chains restored following the COVID-19 pandemic. It provides the shortest freight transport distances between the EAEU member states on the one hand and South Asia, East Africa, and the Far East on the other, and offers three delivery routes, each with certain transport capacity reserves.

As a new logistics element, the INSTC is believed to have great potential for further development. For example, R. Meredov, Foreign Minister of Turkmenistan, announced in his speech at the Ministerial Transport Conference of Landlocked Developing Countries (15–16 August, 2022, Turkmenbashi, Turkmenistan) that his country would join the INSTC Agreement ([Business Turkmenistan, 2022](#)). On 22 August 2022, the heads of customs authorities of Azerbaijan, Iran, and Russia signed the Tripartite MoU on simplification of cargo transit ([FCS, 2022](#)). The Russian Federation is considering financing INSTC infrastructure development projects in Iran ([Potaeva, Ilyushenkov, 2022](#)). July 2022 saw the successful launch of a new Russia–India container service through Kazakhstan, Turkmenistan, and Iran using the corridor’s Eastern Route ([PortNews, 2022a](#)). Iran created a dedicated large-tonnage container fleet to support INSTC freight traffic ([PortNews, 2022b](#)).

However, various **physical and soft infrastructure barriers** stand in the way of the INSTC successful development. We have identified and grouped more than 40 infrastructural, tariff, administrative, and financial barriers. That being said, development of the corridor is most affected by missing links and bottlenecks in the transport and logistics infrastructure, lack of a coordinated through rate and effective corridor management mechanism, and red tape related to border crossing.

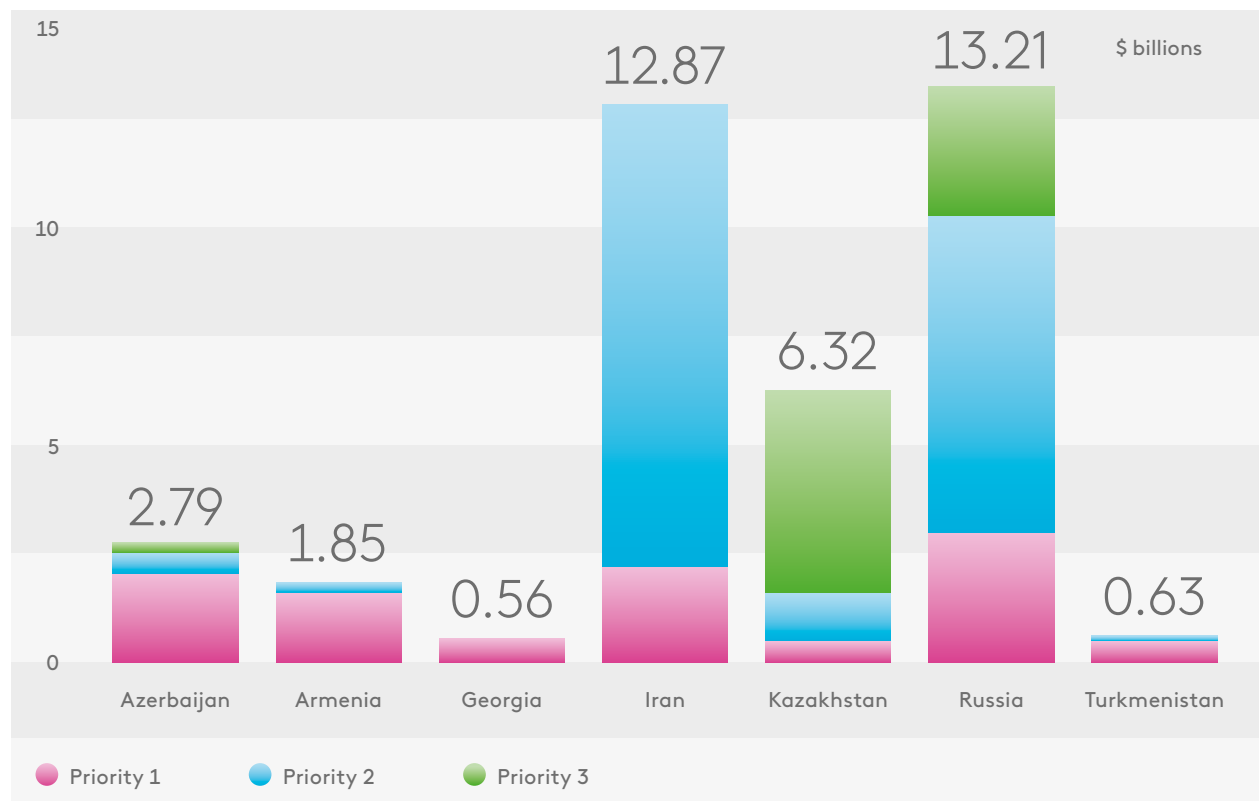
There are some ongoing and scheduled projects envisaged to eliminate any barriers by constructing, reconstructing, and modernising internationally significant transport infrastructure facilities at all three routes of the corridor. During our research, we developed a **database listing more than 100 INSTC infrastructure investment projects**. Those projects are divided into three groups based on their priority (see Figure A).

↓ Figure A. Prioritisation of the INSTC Investment Projects



Source: EDB

↓ Figure B. Geographic Structure of INSTC Infrastructure Investment Projects Ranked by Priority



Source: EDB

Total investment in all ongoing or scheduled infrastructure projects amounts to \$38.2 billion; one quarter (\$10.7 billion) will be used to finance projects assigned to Group 1.

Improvement of the INSTC transport infrastructure in **Russia and Iran** will require the largest investment capital (35 and 34% respectively). **Kazakhstan** accounts for 16.5% of the total value of INSTC development projects (see Figure B).

The database includes 59 projects for roads, 20 projects for railways, 8 projects for sea ports, 7 projects for border crossing points and related infrastructure, 4 projects for inland waterways and 4 projects for shipbuilding, totalling 102 projects. Investment capital is also required for financing modernisation of the rolling stock, handling and other equipment. This will improve shipping performance and the quality of transport and logistics services, and reduce the negative impact on the environment and climate.

The **Western Route** of the INSTC is supposed to receive the bulk of investments (69%), with the Eastern Route and the Trans-Caspian Route getting 11% and 19%, respectively. The Eastern and Trans-Caspian Routes will require fewer capital expenditures to reach their full potential compared to the Western Route.

Group 1 of projects will be critical for the successful development of the Western Route, where the unfinished section of the **Rasht–Astara** railway in **Iran** remains the main missing link and infrastructural barrier. Double transshipment from railway cars to trucks in this section raises costs and delivery times to a point where delivery of cargoes becomes nearly economically unviable. The list of priority projects also includes projects aimed to eliminate critical bottlenecks, including the construction of bypass roads around Vladikavkaz, Astrakhan, Makhachkala, Derbent, and Khasavyurt on the Caucasus Motorway (R-217) and the Astrakhan–Makhachkala Motorway (R-215); modernisation of the Alat–Astara and Sumgait–Yalama railway lines; construction of a section of the Baku–Russian Border express motorway in Azerbaijan, several sections of the North–South Road Corridor in Armenia, and the Sirjan–Bandar Abbas section of the Natanz–Sirjan–Bandar Abbas

express motorway in Iran; and reconstruction of railway and road border crossing points, such as Yarag-Kazmalyar, Derbent, and Verkhniy Lars.

Priority projects related to the development of the **Eastern Route** of the INSTC include the reconstruction of the Russian Border–Aktobe–Atyrau and Aktau–Beyneu roads in Kazakhstan; reconstruction of the Karaozek International Road Border Crossing Point (IRBCP) at the **Russia–Kazakhstan** border; reconstruction of the Trubnaya–Verkhniy Baskunchak–Aksarayskaya railway section and railway bridges across the Volga in the Aksarayskaya–Astrakhan railway section; construction of the Turkmenbashi–Garabogaz–Kazakhstan Border road and a new bridge across the Garabogazköl Bay in Turkmenistan; modernisation and development of the Ak-Yayla/Incheh Borun Railway Border Crossing Point (RBCP) at the Turkmenistan–Iran border; and modernisation of the Garmsar–Incheh Borun railway line in Iran.

Priority projects related to the development of the Trans-Caspian Route of the INSTC include the development and modernisation of railway approaches to the ports of Astrakhan and Olya in the Aksarayskaya–Saratov section; construction of a multifunctional port logistics complex in the port economic zone in Astrakhan Region (port of Olya); and construction of universal combined river-sea navigation bulk carriers/container ships of the Volga-Don Max class.

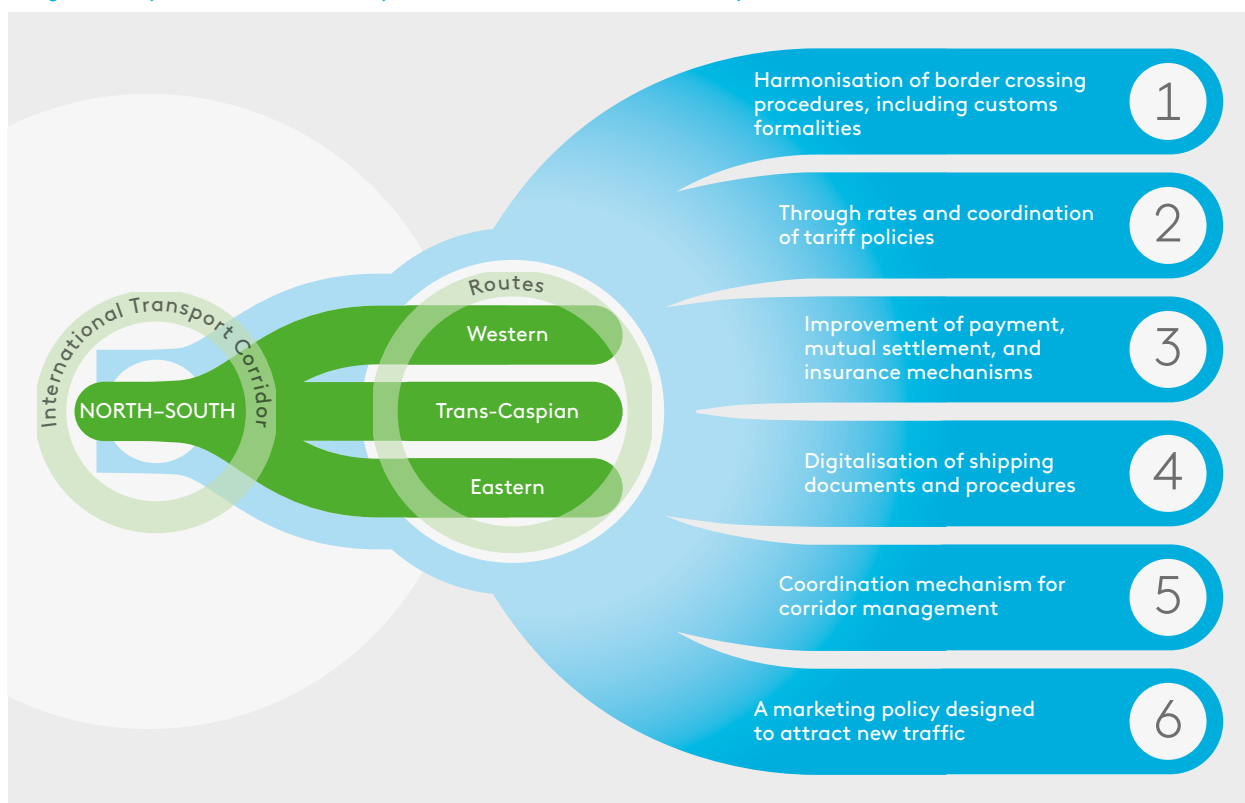
Projects that will appeal to international development banks and private investors ([World Bank, Sum4All, 2019](#)) will help attract investment in the improvement of the INSTC transport infrastructure, in particular, public-private partnership (PPP) projects. State budgets are the sole source of financing for two thirds of the database projects. Very few projects rely on cash flows generated from the subsequent operation of the facilities, such as toll roads, bridges, etc. Only two out of the 58 road projects included in the database involve a road fee: the section of the Moscow–Saint Petersburg express motorway (M-11 Neva) from the 149th to the 208th kilometre (bypass road around the city of Tver), and the interchange leading to Pulkovo Airport on the M-11 express motorway. However, there are some **“bankable”** projects for the development of various auxiliary infrastructure facilities, such as logistics centres, dry ports, container terminals, etc. The higher freight traffic along the corridor’s routes will increase the number and capacity of required auxiliary transport infrastructure facilities, historically placed in the vicinity of ports and border crossing points.

Existing barriers along the corridor cause **long delays, particularly at land crossing points and sea ports**. According to UNESCAP, border crossings take up to 50% of total transit time. Delays at the border crossing points double the transport time between Moscow and the port of Bandar Abbas to 10–13 days, a trip that usually takes six days along the Western Route. Road transport along the Eastern Route involves even longer delays; for example, instead of four days, a trip from Chelyabinsk to Tehran takes 10–12 days, or even longer if drivers have no visas or required permits.

Improved soft infrastructure and developed physical infrastructure might yield the same results. In particular, digitalised vehicle/cargo border control processes may be just as effective as additional check lanes and examination areas. Countries can refer to the success of container traffic boosted along the Northern Eurasian Corridor (China–Kazakhstan–Russia–Belarus–Europe) and the Trans-Caspian International Transport Route (TITR). Promoting the INSTC and developing end-to-end rail, road, and multimodal freight traffic along all of its three routes will require similar measures (see [Figure C](#)).

Investment projects, once implemented, and enhanced INSTC soft infrastructure are likely to boost freight traffic, reduce cargo delivery times, ensure more effective transport infrastructure comprising the Eurasian Transport Network, expand the market for transport and logistics services, improve the quality of logistics and container services, assure road safety and security of freight and transport operations in the Caspian region, and foster communication among the countries involved in transport and New Logistics.

↓ Figure C. Key Soft Infrastructure Improvement Measures for Effective Operation of the INSTC



Source: EDB

Introduction

The International North–South Transport Corridor (INSTC) is the key element of the Eurasian Transport Network. It is linked to most of the latitudinal transport corridors connecting Europe, the South Caucasus, Central Asia, and China, and used for international freight transport across Eurasia.

The INSTC is becoming more relevant due to trade and geopolitical changes in 2022, and the restoration of international transport and logistics chains following the COVID-19 pandemic in 2020–2021. The corridor has every reason to claim the role of the new logistics southern trajectory.

The UN General Assembly adopted Resolution 75/313 “Strengthening the Links Between All Modes of Transport to Ensure Stable and Reliable International Transport for Sustainable Development During and After the Coronavirus Disease (COVID-19) Pandemic” at its 75th Session on 29 July 2021. Sustainable transport infrastructure is crucial today, the resolution reads, and so are its financing and digitalising.

In particular, Resolution 75/313 called upon Member States to continue strengthening the transport system and transport infrastructure by enabling the domestic environment and adequate domestic financing for the transport sector. This will ensure stable and reliable domestic and international transport (paragraph 5). The Resolution also referred to the promotion of regional and interregional economic integration and cooperation; it proposed improving transportation infrastructure planning (paragraph 6). The Resolution mentioned electronic unified transport documents with digital-based data transmission. According to the document, they could minimise human involvement in transport and border crossing processes and enhance the resilience of transport and logistics chains (paragraph 11). The Resolution focusses on resilience improvement further at the end, stating that transport systems should be able to function normally in the face of disasters. It names mobilising resources, leveraging partnerships, and assigning technical resources among possible resilience enhancement measures (UN, 2021).

A survey conducted by the Eurasian Development Bank (EDB) in 2021 noted that the corridor had a huge unrealised potential. It could easily develop meridional transport links between North-East Europe and South Asia and create new transport and logistics chains along the interconnected Eurasian international transport corridors, in particular, between Russia and Turkey through Azerbaijan and between China and Iran through Kazakhstan and Turkmenistan. The survey suggests incorporating transport lines of the countries of the region into the international transport network because it will expand transport and economic ties within Eurasia. It could work especially well with the landlocked countries, for which the Eurasian Transport Network is the key that grants them access to global markets. Accordingly, the INSTC can be an element of both intercontinental and intracontinental trading, economic, and transport connectivity within Eurasia (Vinokurov et al., 2021).

The INSTC is successfully functioning both in certain international sections, such as Russia–Azerbaijan and Kazakhstan–Turkmenistan–Iran, and within those countries. However, there are infrastructural, tariff, and non-tariff barriers from the Baltic region to the Indian Ocean, so it has got transcontinental potential yet unreached.

Some routes of the corridor have unfinished railway sections as well as land, port, and logistical infrastructure bottlenecks that prevent an increase in freight traffic, both in quantity and quality.

Administrative barriers diminish transport effectiveness, slow down the movement of trucks and cargoes along the routes, and inflict financial losses on carriers and forwarders.

Further development of the corridor will require both investment projects designed to enhance and modernise the transport infrastructure, and soft infrastructure improvements. It involves eliminating barriers and encouraging international freight operations and national border crossings.

Investment potential is inherent, to varying degrees, in all three INSTC routes and in all modes of transport, including trunk and auxiliary infrastructure, sea-going and river vessels, motor vehicles, rolling stock, and containers.

The purpose of this report, prepared by the EDB Research Department, is to review ongoing and scheduled INSTC transport infrastructure investment projects, select priority projects ensuring effective operationalisation of all three routes of the corridor, examine the existing barriers, and develop recommendations as to their elimination.

[Chapter 1](#) offers an assessment of INSTC opportunities and risks in a geopolitical environment that emerged in 2022, and an evaluation of the corridor's ability to become the new channel for the creation of new logistics in Eurasia. [Chapter 2](#) reviews infrastructural, administrative, tariff, non-tariff, and other barriers, and examines their potential elimination. [Chapter 3](#) analyses investment projects for the development of infrastructure along the three INSTC routes in Azerbaijan, Armenia, Georgia, Iran, Kazakhstan, Russia, and Turkmenistan. The projects are ranked by their priority, with a focus on critical projects required to operationalise the corridor and increase the throughput capacity of its individual routes. Finally, [Chapter 4](#) deals with the steps to eliminate barriers and foster the development of international freight transport.

1

INSTC Opportunities and Risks in New Logistics

In 2022, the traditional transport and logistics chains posed tough challenges for the Republic of Belarus, the Russian Federation, and other EAEU member states. It became rather difficult to continue using the “western” direction, with cargoes transported through international road border crossing points to Europe and to the Baltic sea ports; together, they largely comprised international trade with the countries of Europe, North and Latin America, and Asia. To ensure trade and economic connectivity, freight owners and logistics companies began to look for new export and import delivery routes, alternative sea ports, and border crossing points ([see Box 1](#)).

There were three apparent consequences of “western” logistics chain disruption:

1. Reduction of imports to Russia from Europe and a significant increase in transport and logistics costs.
2. Search for transport and logistics opportunities for exporting Russian goods to new markets (primarily to India, China, and the countries of South Asia, South-East Asia, and the Persian Gulf).
3. Contraction of trade in the EAEU member states, as delivery of goods to/from the EAEU required the infrastructure of Baltic sea ports and western land border crossing points to the EU countries.

To ensure stability of foreign trade and uninterrupted delivery of exports and imports, the EAEU member states and their business communities need to reconfigure transport and logistics routes. In this changed environment, freight owners, forwarders, and transport companies will seek to switch from western and northern routes to eastern and southern routes, and each route has its own special features, advantages, and limitations ([see Table 1](#)).

Box 1. Drivers behind the Reconfiguration of EAEU Transport Routes

- Export bans against Russia and the Republic of Belarus targeted at a broad string of goods (primarily various machines, equipment, and components) and at the acquisition of certain types of goods from Russian and Belarusian companies (e.g., metals, timber).
- Voluntary refusal of companies from the EU member states, the UK, the US, Canada, and other countries to purchase Belarusian and Russian products and to supply a broad string of goods to Belarus and Russia, which radically changed logistical arrangements for their delivery.
- Ban on international road transport of cargoes by trucking companies from Belarus and Russia to/from the EU member states, and on transit through the EU member states.
- Ban on trucks registered in the EU member states transporting goods to Russia and Belarus or transit through their territories to third countries (i.e., a ban on road transport by European carriers to all EAEU member states).
- Ban on Russian-controlled vessels entering ports of the EU member states, the US, the UK, and Canada.
- Voluntary refusal of container shipping lines (Maersk, CMA CGM, Hapag Lloyd, etc.) and Baltic feeder carriers (X-Press Feeders, Samskip, etc.) to work with Russian cargoes and Russian sea ports.
- Ban on Russian and Belarusian aircraft using European, Canadian, and American airspace.
- Withdrawal of international express freight carriers (DHL, FedEx, etc.) from the Russian market; effective termination of international cargo and mail deliveries by Russian airlines.
- Elevated insurance rates on vehicles and cargoes transported to Russia.
- Strong congestion of the RZD Eastern Polygon with commodity cargoes (primarily coal) being delivered to the Asian markets and of approaches to the Azov Sea and Black Sea ports during the summer season due to the higher passenger traffic to resorts along the Black Sea coast of Russia.

↓ Table 1. Opportunities and Limitations of Alternative Transport and Logistics Solutions for Delivery of EAEU Cargoes

Alternative Transport Directions	Advantages and Opportunities	Limitations
<p>“Northern” direction using the sea port of Murmansk and sections of the Northern Sea Route (NSR)</p>	<ul style="list-style-type: none"> • Single transshipment (at the port of Murmansk) • Ice-free deep-water port, no icebreaker support required • Sufficient throughput capacity of railways and motorways leading to the port of Murmansk • Vessels under third-country flags and owned by third-country owners can transport unsanctioned goods to/from Europe and North America 	<ul style="list-style-type: none"> • The port of Murmansk lacking sufficient capacity to handle large-tonnage containers (the container terminal at the new port of Lavna in the vicinity of Murmansk is currently at the design stage, and expected to be operationalised in 2024) • Limited NSR navigation period in the direction of the Bering Strait and the countries of Asia and Pacific, required icebreaker support, insufficient number and tonnage of ice class vessels for eastward deliveries along the NSR • Restriction on Russian-controlled merchant vessels entering European ports for bunkering along the route from Murmansk towards the Atlantic Ocean
<p>“Eastern” route (a) with land exits to China through Kazakhstan</p>	<ul style="list-style-type: none"> • Shortest route to China • Sufficient throughput capacity of Europe–Western China railways and motorways (in Kazakhstan and the PRC) (Vinokurov et al., 2022) • Established logistics offered by the United Transport and Logistics Company—Eurasian Rail Alliance (UTLC ERA) • Long-standing experience of freight deliveries to China by EAEU trucking companies 	<ul style="list-style-type: none"> • Considerably longer distance to destinations in South Asia, Africa, the Middle East, and Latin America • Tight restrictions imposed by the PRC under the zero-COVID policy

Alternative Transport Directions	Advantages and Opportunities	Limitations
<p>“Eastern” route (b) through the sea ports of the Far East basin (Nakhodka, Vladivostok, etc.), and land border crossing points in the Far East of Russia</p>	<ul style="list-style-type: none"> • Ice-free deep-water ports open to international shipping companies • Single transshipment (from land to maritime transport, or at the railway crossing points at the Russia–China and Russia–Mongolia borders) 	<ul style="list-style-type: none"> • Limited RZD Eastern Polygon throughput capacity due to the large volume of coal transported along the Trans-Siberian Railway and the Baikal–Amur Mainline • Considerably longer distance to destinations in South Asia, Africa, the Middle East, and Latin America • No modal shift from railway to road transport for coal and bulk oil cargoes
<p>“Southern” route using the INSTC infrastructure with access to Iran, the South Caucasus, and Turkey</p>	<ul style="list-style-type: none"> • Shortest distance to destinations in South Asia, East Africa, and the Middle East • Multimodal corridor enabling road, railway, and maritime transport, and combined river-sea navigation vessels • Spare throughput capacity • Reloading-free trucking to Europe through the South Caucasus and Turkey • Successful track record of pilot container deliveries, including between Turkey and Russia in 2021 	<ul style="list-style-type: none"> • Unfinished Rasht–Astara railway section in Iran • Required development of road and railway border crossing points (BCPs), including at the border with Iran, a single-window system, the Authorised Economic Operator (AEO), and electronic shipping documents • Lack of a railway through rate for INSTC freight transport • No end-to-end logistical operator and INSTC management system

Source: EDB

INSTC Role in New Logistics

In the context of the reconfiguration of transport and economic ties in Eurasia, the development of the INSTC is the key “southern” vector of the New Logistics. Until 2022, this corridor did not fully reach its potential, despite the following advantages and opportunities:

- the shortest distance to destinations in South Asia, East Africa, and the Middle East;
- the multimodal nature of the corridor enabling road, railway, and maritime transport, and combined river-sea navigation vessels;
- spare throughput capacity;
- reloading-free truck carriage to Europe through the South Caucasus and Turkey;
- successful track record of pilot container deliveries, including between Turkey and Russia in 2021 and between Russia, China, and Iran (along the Eastern Route of the corridor) in 2022.

Freight owners and forwarders used to opt for the routes going through the ports of the Baltic, Azov, and Black Sea basins. It reduced delivery times and costs and ensured consistency at all logistics chains.

In the new reality, the INSTC infrastructure will facilitate the geographic expansion of transport operations, in particular, in the following directions:

- to the countries historically gravitating to the corridor (India, Pakistan, and the Persian Gulf countries), as those countries will become the new foreign trade destinations for Russia and Belarus in the changed geopolitical context;
- from Europe through Turkey and Azerbaijan to Russia using the link between the INSTC and the TRACECA; despite longer distances and higher costs, this (road and railway) route is fully functional and capable of supporting uninterrupted and rhythmical delivery of exports and imports;
- from/to Africa and Latin America through Turkish ports (a substitute for the shipping lines to Baltic ports);
- from/to APAC through Iranian ports in the Persian Gulf (a substitute for the shipping lines to Baltic ports).

A report prepared by the EDB in 2021 stressed that, depending on the scenario, the aggregate potential INSTC container freight traffic could be as high as 325,000–662,000 TEU (5.9–11.9 million tonnes) by 2030, including all three main routes and all modes of transport. If the INSTC connects with the Eurasian east-west latitudinal transport corridors, the impact might be equivalent to 127,000–246,000 TEU (2.3–4.4 million tonnes), or about 40% of total potential container freight traffic. The north-south freight traffic is more likely to increase due to the current geographical and commodity structure of foreign trade flows among the countries favouring the corridor. By 2030, total railway container traffic may range between 9 and 18 pairs of container trains per day ([Vinokurov et al., 2021](#)).

Due to the ongoing changes in trade geography, additional freight flows that may be attracted to the INSTC may include Russian metal and petroleum products, and Belarusian fertilisers and timber. The freight volume may increase by 2–4 million tonnes in the short term and by 5–7 million tonnes over the next three years ([Vinokurov et al., 2022](#)).

↓ Figure 1. Role of the INSTC in the Eurasian Transport Network



Source: EDB

The land border between Belarus, Russia, and the EU member states has restrictions currently in place, affecting the additional flow of imports delivered to Russia, the Republic of Belarus, and the Republic of Kazakhstan from the EU member states and America (machines and equipment, components, consumer goods, and, to a certain extent, food products). They may be estimated at 1–3 million tonnes in the short term and at 2–7 million tonnes over the next three years. Those cargoes can be brought from Turkey through Georgia to Azerbaijan, and then along the INSTC to the final destination countries.

All routes and modes of transport can be used to increase INSTC freight traffic:

- In the Western Route of the INSTC, road transport ensures the fastest delivery of cargoes, as there is no need to transship or complete any additional formalities while the goods are en route. Well-developed road infrastructure along the corridor in Russia, Azerbaijan, and Iran also speeds up the delivery.

- With railway transport along the Western Route, countries can rapidly organise container services between Belarus/Russia and Turkey using the unified CIM/SMGS electronic waybills. Once complete, the Rasht–Astara section will open the door to organising container traffic to the Iranian port of Bandar Abbas, with transshipment of containers or bogie exchange at the Astara station.
- The Eastern Railway Route provides a unique opportunity to organise the delivery of cargoes from West Siberia and the Urals through Kazakhstan and Turkmenistan to the port of Bandar Abbas. The Eastern Route can also be used to deliver cargoes from Central Russia, as proven in 2022 during the pilot run where RZD Logistics transported containers from Chekhov (Moscow Region) to India through Kazakhstan, Turkmenistan, and Iran. Also a pilot transportation of fifty FEU loaded with automotive components from China to Iran along the Eastern route was completed in September 2022
- Waterway transport may be used to carry certain cargoes (metal, timber, mineral fertilisers, grain, container cargoes) along the Trans-Caspian Route. That will enable carriage by combined river-sea navigation vessels from Central Russia to the Iranian Caspian ports, with subsequent delivery by road or railway transport to the Persian Gulf ports.

Road transport will play a more important role in the New Logistics. Trucks deliver cargoes from the EU member states through Turkey, Georgia, and Azerbaijan, accessing the INSTC either through the Dariali/Verkhniy Lars IRBCP or through the IRBCPs at the border between Russia and Azerbaijan. The traditional Western Route of the INSTC will have trucks deliver cargoes through Iran — fully or partially — pending the commissioning of the last unfinished segment of the Rasht–Astara railway and the elimination of the remaining bottlenecks in the other segments.

Road transport will largely develop the INSTC potential if there is a substantial increase in freight volumes, as certain break-of-gauge railway border crossing points have limited throughput capacity. Due to inherent limitations, the road route from Turkey to Russia through the Dariali/Verkhniy Lars IRBCP could not become an alternative to the Western Route of the INSTC passing through Baku and the IRBCPs at the border between Russia and Azerbaijan, namely, Yarag-Kazmalyar and Tagirkent-Kazmalyar (the latter was opened for traffic on 29 April 2022; design throughput capacity: 0.7 million tonnes per year).

2

Barriers to the INSTC Development

Infrastructural and non-physical (tariff and non-tariff) barriers hinder the successful development of the INSTC. Infrastructural barriers include missing links and bottlenecks in transport and auxiliary infrastructure. Non-physical barriers are soft infrastructure barriers related to market access, tariffs, terms, and administrative procedures governing the conduct of international transport operations and the border crossing procedures (see [Figure 2](#)).

The expert community and international organisations have examined thoroughly the barriers hindering the development of international freight carriage along transport corridors. In particular, the UN Economic Commission for Europe reviewed them in its Euro-Asian Transport Linkages project ([UNECE, 2020](#)). The barriers affecting the INSTC (and, to a large extent, the possible solutions) depend on the individual specifics of the countries along the corridor.

The infrastructural barriers to the INSTC development include differences in railway standards; road sections with limited throughput capacity and high traffic density; border crossing points; natural shipping conditions in the Caspian Sea; and the specific inland deep-water waterway system of the Russian Federation (see [Table 2](#)).

Infrastructural barriers along the INSTC emerge between the countries which have different track gauges ([CAREC, 2022](#)) and rolling stock dimensions (Iran/CIS countries in the 1,520 mm gauge area). The missing Rasht–Astara railway section in Iran is the main infrastructural barrier (see [Box 2](#)).

The infrastructural barriers affecting inland waterways include sections limiting the throughput of the Unified Deep Water System and curb freight traffic along the INSTC multimodal route using combined river-sea navigation vessels.

Road transport limitations are caused by excessive traffic on the roads, especially two-lane roads, at approaches to residential areas, as well as underdeveloped roadside services — safety parking lots for trucks, motels, rest areas along highways.

Capacity constraints on road and rail approaches to sea ports (this is the challenge mostly for the ports of the Azov–Black Sea basin during the summer season) can limit ports in handling cargo ([UNESCAP, 2022](#)).

↓ Table 2. Infrastructural Barriers Affecting INSTC Sections

Mode of Transport	Barrier Location	Barrier Elimination Measures
Railways	<p>Unfinished section of the Rasht–Astara railway (<i>Western Route</i>)</p> <p>Throughput capacity of Iran’s one-track non-electrified railway lines (<i>all routes</i>)</p>	<p>Short-term: transshipment and carriage of cargoes through the unfinished section by road transport</p> <p>Mid-term: completed construction of the missing section between Rasht and Astara</p> <p>Iranian railway electrifications; secondary main track construction; rolling stock upgrade</p>
Roads	<p>Limited throughput capacity of two-lane road sections at large city approaches; traffic-controlled road passage through residential areas (<i>all routes</i>)</p>	<p>Modernisation of the existing roads (more lanes, technical category upgrade)</p> <p>Construction of bypass roads around residential areas</p>
Sea ports and canals	<p>Sediment accumulation at the bottom of the Volga–Caspian Sea Shipping Canal</p> <p>No modern container and general cargo terminals, outdated equipment for transshipment operations</p> <p>No modern feeder fleet of bulkers and Ro-Ro vessels (<i>Trans-Caspian Route</i>)</p>	<p>Construction of an auxiliary fleet of dredging vessels</p> <p>Modernisation of terminals and handling equipment in ports</p> <p>Construction of a commercial fleet, including container ships and Ro-Ro vessels</p>

Mode of Transport	Barrier Location	Barrier Elimination Measures
Inland waterways	Limited throughput capacity of sections of the Unified Deep Water System and navigational hydraulic facilities (<i>Trans-Caspian Route</i>)	<p>Ensuring guaranteed depths. Adoption of regulations governing the operation of inland waterways and navigational hydraulic facilities</p> <p>Construction of a low-head hydropower installation in Nizhny Novgorod</p>
Logistics infrastructure	Subject to the growth of freight traffic, insufficient capacity of transport and logistics centres, container terminals, and dry ports (<i>all routes</i>)	Construction of nodal multimodal freight transport and logistics centres, container terminals, and dry ports
Border crossing points	Too few receiving and departure tracks, examination platforms, truck processing lanes, container transshipment and temporary cargo storage sites at the RBCPs between Turkmenistan and Iran, Kazakhstan and Turkmenistan, and at the IRBCPs between Azerbaijan and Iran, Turkmenistan and Iran (<i>Western and Eastern Routes</i>)	Modernisation of the RBCPs and IRBCPs in line with best international practices (construction of new lanes, receiving and departure tracks; installation of modern equipment, including truck, railcar, and container scanners)

Source: EDB

Box 2. Unfinished Rasht–Astara Section of the Qazvin–Astara Railway Line

The Qazvin–Rasht–Anzali–Astara railway construction agreement was signed by Azerbaijan, Iran, and Russia in 2005.

The total length of the line is 360 km in Iran and 8.5 km in Azerbaijan. The project was estimated at \$2 billion, and the construction started in 2006.

By 2022, the following sections were built and commissioned: Qazvin–Rasht (205 km), including several tunnels and Iran’s longest railway bridge, and Astara (Iran)–Astara (Azerbaijan).

Commissioning of the Rasht–Port of Anzali section is scheduled for 2023. July 2022 saw the completed construction of 11 km out of the total section length of 35 km (Zdmira, 2022).

Azerbaijan, Iran, and Russia repeatedly discussed the construction of the 165-km Rasht–Astara section during bilateral and multilateral negotiations. In 2018, Azerbaijan extended to Iran a \$0.5 billion concessional loan. However, these funds could not be spent due to sanctions imposed on Iran.

The Russian Federation is also considering an extension of a \$1.5 billion export loan to Iran to finance the completion of railway construction works, among other things.

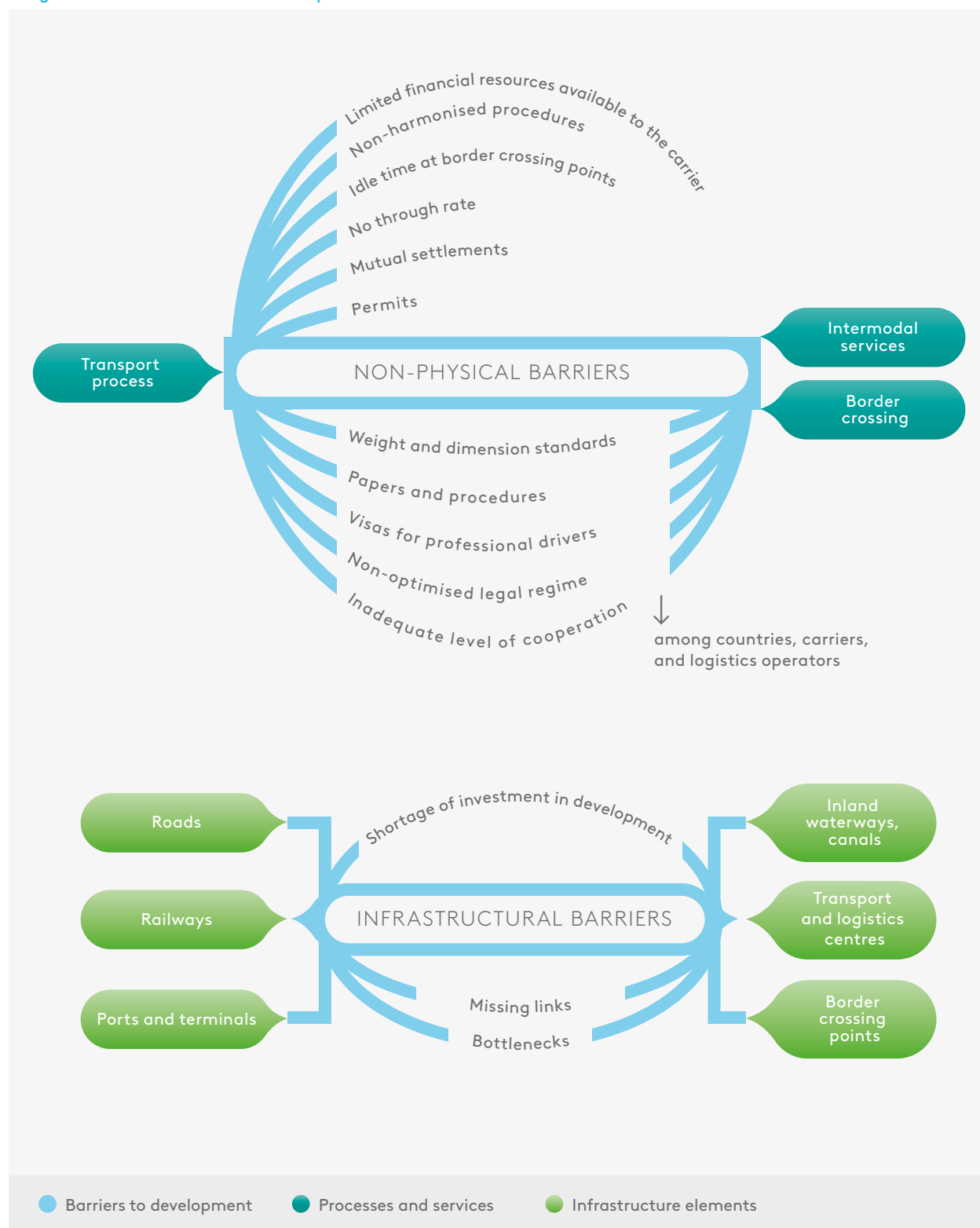
One of the key challenges associated with the construction of the Rasht–Astara section is the nature of the terrain where the new railway is to be laid. Land plots along the Caspian Sea coast from Anzali to Astara are privately owned. Because of their recreational potential, those plots are rather expensive, and their acquisition will require substantial funding.

The feasibility study for the construction of the Rasht–Astara section is due in 2022, with an RZD subsidiary expected to take on the works.



Source: EDB

↓ Figure 2. Barriers to the INSTC Development



Source: EDB

Box 3. Bottlenecks in the North–South Road Corridor Section Linking Russia, Georgia, and Armenia through the Dariali/Verkhniy Lars IRBCP

The Dariali/Verkhniy Lars IRBCP is located on the Georgian Military Road joining Vladikavkaz and Tbilisi through the Main Caucasian Range.

The road vastly supports international road transport of cargoes between Russia, Georgia, and Armenia. For the Republic of Armenia, that route was the only land corridor connecting it to Russia and the other EAEU member states.

The road was closed for international freight traffic and Russia–Georgia border crossing from July 2006 to March 2010.

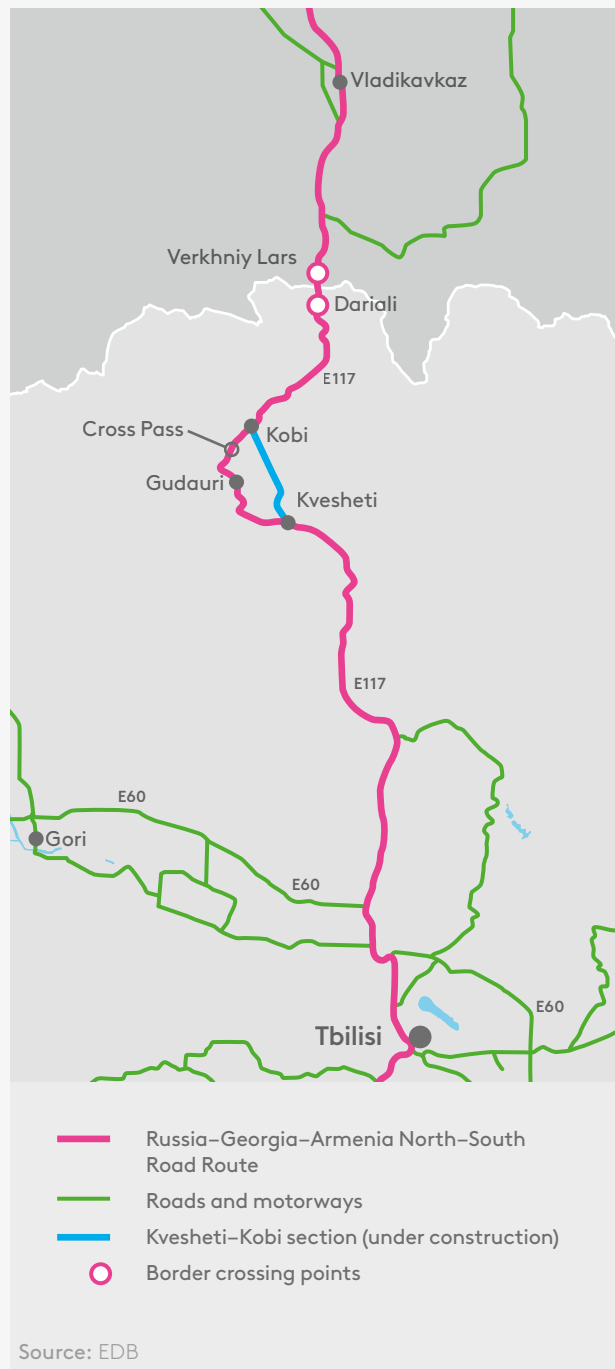
On 1 March 2010, the Dariali/Verkhniy Lars (until 2006, Kazbegi/Verkhniy Lars) border crossing point was reopened for international passenger and freight traffic. Almost from the start, there were protracted delays in crossing the border between Russia and Georgia, due to both low throughput capacity of the IRBCP and avalanche risk at the Cross Pass in Georgia.

There were several attempts to modernise the IRBCP to increase its throughput capacity. In 2018, they increased the number of lanes in the neutral zone between the Russian and Georgian checkpoints from two to seven.

In 2021–2022, there was a large-scale reconstruction of the IRBCP on the Russian side. In July 2022, 12 exit lanes from Russia were opened for passenger car traffic. Once the reconstruction is completed in 2023, there are plans to open 39 new truck, passenger car, and bus lanes for traffic. That will allow 2,500 vehicles per day, with the potential of 4,000 vehicles per day.

Another bottleneck is the Kvesheti–Kobi section, where the Cross Pass is located. Heavy snowfalls and the avalanche risk make the section unpassable for about 100 days per year.

Construction of a new 22.7-km bypass section with six bridges and five tunnels began in 2021, financed by the Georgian government, and the proceeds of the EBRD and ADB (Asian Development Bank) loans. China Railway Tunnel Group Co, Ltd (CRTG), a Chinese company, is building the longest tunnel in the Caucasus (9 km). Once completed in 2024, the project will reduce travel time from Tbilisi to Dariali to 1.5 hours, and the road will become passable all year round. The project is valued at \$585 million, of which \$385 million will be spent on the construction of the longest tunnel in the Caucasus.



Many of the RBCPs and IRBCPs along the INSTC routes were designed and built to support considerably smaller freight traffic. In most cases, those facilities have not been upgraded since they were put into operation, and now they are not capable of handling the growing trade and the much larger number of individual vehicles crossing the border. The throughput capacity of the RBCPs is limited by the length of arrival / departure tracks and platforms for customs and other types of control, and by the shortage of container handling equipment at the break-of-gauge RBCPs (1,520 mm / 1,435 mm).

The few lanes for border, customs, and other control of the trucks create long queues, limiting the throughput capacity of the IRBCPs. Up until recently, that problem was particularly severe at the Yarag-Kazmalyar IRBCP (at the border between Russia and Azerbaijan) and the Dariali/Verkhniy Lars IRBCP (at the border between Russia and Georgia) (see Box 3), which serve trucks to Azerbaijan, Iran, Armenia, Georgia, and Turkey. In April 2022, a new modern IRBCP was opened in Tagirkent-Kazmalyar; it eliminated the bottleneck in the Western Route of the INSTC at the border between Russia and Azerbaijan.

Conversely, the EU sanctions imposed on the Russian and Belarusian road transport sector cause more traffic congestion on the Georgian side of the Dariali/Verkhniy Lars IRBCP due to the spike in cargoes carried from Turkey and Europe to Russia. In addition, several border crossing points along the INSTC lack non-intrusive control equipment, such as X-ray scanners for trucks, railcars, and containers.

Other INSTC infrastructural barriers include:

- Shortage of modern railcars and locomotives (the fleet of container fitting platforms is used at various container services along the existing east-west corridors and routes where the freight volume has been rapidly growing in recent years) (Vinokurov et al., 2018);
- Shortage of containers, including refrigerator containers. It became worse after the global companies (Maersk, Hapag Lloyd, etc.) left the Russian market in the spring of 2022 and withdrew a lot of containers.
- Outdated and inefficient infrastructure and technology relative to international quality standards (route travel times, etc.).
- Inadequate auxiliary infrastructure and roadside service facilities (rest areas, motels, gas stations, guarded parking areas for overnight truck stops), meaning higher costs to trucking companies and lower road safety.
- Insufficient development of container terminals and logistical infrastructure facilities for cargo processing, consolidation, and deconsolidation along the corridor routes, particularly at the junctions between the INSTC and other latitudinal corridors and international routes.

**Barrier
Elimination
Mechanism**

Attraction of investments in construction, reconstruction, modernisation, and development of transport infrastructure, and in rolling stock upgrades. Projects with the highest potential to attract cargoes to the INSTC should be identified and given priority.

Expansion of the TEU and FEU fleet, including refrigerator containers, and their manufacture in Russia and in the Republic of Kazakhstan (when the EAEU member states face a shortage of containers, they could make lease agreements with corridor partner-states, e.g., containers to be used for freight traffic to/from India could be leased from the Container Shipping Lines Association).

Expansion of the fleet of mainline electric locomotives and freight cars, including modern container flatbeds. These are especially relevant for the corridor countries where railway container traffic is expected to increase (e.g., in Russia, Kazakhstan, Turkmenistan, and Iran).

Acquisition (as needed) of a fleet of multipurpose bulk carriers, including grain carriers, container ships (Caspian Sea), as well as Ro-Pax vessels and combined river-sea navigation vessels.

Expansion of transshipment facilities at the RBCPs between Iran, Azerbaijan, and Turkmenistan (transshipment of containers, transshipment and storage of other cargoes).

Non-Physical Barriers

Tariff, administrative, financial, technical, and cross-border barriers prevent the expansion of freight traffic along the INSTC. Those barriers are of different origin, are not always exclusively related to the transport sector, and may have deeper macroeconomic or institutional roots.

Each group of barriers affects the transport services market and international freight traffic along the INSTC in its own way. However, they all tend to restrict access to the market, inflate costs, increase delivery times, limit transport effectiveness, and, ultimately, reduce the competitiveness of exports and national carriers on the foreign markets. This hikes up trade costs for landlocked developing countries (Arvis et al., 2010). It also has negative implications for both the freight owner and the end consumer: they have to pay more for freight services and transported goods. Eventually, it may prompt the stakeholders to discontinue the INSTC land and multimodal freight delivery routes in favour of the traditional Suez Canal route.

Tariff barriers are traditionally defined as customs duties imposed on both imports and exports, which impedes international trade. With respect to the INSTC, tariff barriers constrain imports from one country to another along the corridor. Trade facilitation measures will eliminate tariff barriers to expand the scope of export and import operations and, consequently, boost international freight traffic (Vinokurov and Libman, 2012).

Disparity in freight rates is a tariff barrier specific to the transport sector. The tariffs are set independently by the railway administrations of the countries traversed by the INSTC.

Some countries do coordinate their tariffs, for example, Russia and Azerbaijan or Russia and Kazakhstan, in particular, as part of the Council for Rail Transport of the CIS Member States. But so far, there is no effective tariff mechanism in relations with Iran and Turkmenistan. Nor have they approved any through rates for railway carriage along the entire length of the INSTC from point-to-point (e.g., Moscow–port of Bandar Abbas).

Similarly, there is no coordinated marketing policy.

**Barrier
Elimination
Mechanism**

An agreement on mutual trade facilitation; actions taken towards establishment of free trade areas. Railway administrations should conduct multilateral negotiations to set through freight rates for the INSTC routes.

Financial barriers preventing expansion of freight traffic along the corridor include the following:

- Restricted access of forwarders and carriers to conversion of national currencies when making payments under the existing agreements and purchasing services from local operators (subject to the difference between the market and official exchange rates in Iran and Turkmenistan).
- Difficulties in obtaining bank letters of credit when dispatching export cargoes (for example, until 2022, many Russian banks refused to finance logistical arrangements through Iran).

**Barrier
Elimination
Mechanism**

A dedicated Russian–Iranian bank to service providers of transport and forwarding services along the INSTC routes.

National currencies for mutual settlements between Iranian carriers and forwarders and carriers from other countries delivering cargoes along the Iranian sections of the INSTC.

Administrative barriers emerge when the access of suppliers to providing services is restricted by law (regulations). International road transport of cargoes along the INSTC faces a lot of such barriers. They include the permit system; allocation of transport quotas; differences in the procedures governing the issuance of permits, especially for transportation of large and heavy cargoes; licencing criteria; various duties, etc.

Administrative barriers exist along all INSTC routes and affect all modes of transport, but are especially widely — for the international road transport sector ([UNECE, 2012](#)).

They include, in particular, restrictions related to semi-trailers registered in third countries; requirements related to vessel flag; national affiliation and/or crew registration; rules granting vessels sailing under national flags priority status in the Caspian ports; mandatory insurance by national insurance companies; bans or restrictions on the operation of certain types of vehicles; complicated procedures controlling, prohibiting, or restricting the hire of key employees based on citizenship, etc. by the freight transport companies using the INSTC.

Bilateral intergovernmental road transport agreements use different legal regimes to regulate freight delivery between individual pairs of countries. That relates both to tax preferences and the nature of the existing permit systems.

The required set of permits will involve multiple negotiation rounds; the lack of such permits forces carriers to keep their trucks idle for extended periods of time before they can start the trip or cross the border. Allocation of permits often involves corruption and discrimination of certain carriers. The quota system, where the parties mutually agree to restrict the number of permits issued, is also a trade barrier ([UNECE, 2020](#)).

Another major market entry barrier is restricting freight traffic to third countries by using quotas or imposing bans. For example, a Belarusian trucking company may transport cargoes between Russia and Iran only if it has a “to/from third countries” permit, limited by the applicable quota.

Barrier Elimination Mechanism	<p>Wider use of permit-free transport systems with the key trading partners in the corridor (currently effective by Belarus and Russia, Belarus and Kazakhstan, and Russia and Kazakhstan).</p> <p>Bilateral road transport agreements need to include vehicle weight and dimension requirements, recognition of third-party semi-trailers, etc.</p>
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Other INSTC administrative barriers include:

- Various duties imposed on carriers for fiscal purposes and related to national customs and tax policies. If imposed on foreign trucking companies to generate additional national budget revenues, sometimes those duties reduce the competitiveness of the affected route (for example, duties charged at the border between Turkmenistan and Iran). There are also differences in the rates of city entry fees, environmental duties, and local duties charged in certain transit countries.
- Long customs clearance times at the border crossing points, hence significant vehicle (rolling stock) idle time.
- Surprise en route inspections, often with carriers forced to unseal transit containers.
- Lack of harmonisation of transit tariffs in the countries of Eurasia: despite the signed international treaties, tariffs in various countries passed by transit train are often significantly different.
- Challenges with insurance of goods and vehicles.
- Lack of policy-level coordination with respect to issuing visas to professional drivers. Truck drivers may stay for different periods of time in various countries; there are differences in the cost and procedures for the issue of entry and transit visas (see Box 4).

Barrier Elimination Mechanism	<p>An agreement to simplify visa issue procedures for transport personnel of all modes of transport.</p> <p>Cancellation of all duties which are not envisaged by bilateral international road transport agreements and are not consistent with the approved cost of vehicle/cargo border inspection services.</p>
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Several administrative barriers are related to restrictions and delays that occur when crossing national borders. According to various surveys (UNESCAP, 2017; UNESCAP 2019b; UNECE, 2020), carriers lose a lot of time at the INSTC border crossing points. Surveys conducted in Central Asia showed that stop times exceed those recommended by the UNECE (60 minutes for international shuttle trains and 30 minutes for combined services).

Delays at the BCPs substantially increase the total cargo delivery time along the INSTC. Route analysis by the UNESCAP revealed that border crossings take up to 50% of total transit time (UNESCAP, 2017). Delays cause the duration of trips between Moscow and Bandar Abbas to double and reach 10–13 days, as opposed to the usual six days if the Western Route is used.

Using road transport along the Eastern Route involves even longer delays; for example, instead of four days, a trip from Chelyabinsk to Tehran takes 10–12 days.

Delays at the border crossing points can be attributed not only to infrastructure bottlenecks but also to the non-harmonised border crossing procedures.

The most substantial delays occur if the mode of transport is changed at the border. For example, at the Iranian port of Bandar Abbas, containers may wait for several days before loading onto vessel. The schedule of the arrival of container trains and departure of vessels to Indian ports remains inconsistent because of the small current freight traffic along the INSTC.

Non-harmonised customs formalities in transit countries are one of the most important administrative barriers for freight carriers:

- Customs requirements and procedures differ in transit countries. However, all countries along the INSTC acceded to the Kyoto Customs Convention revised in 1999, and most transit countries acceded to the International Convention on the Harmonisation of Frontier Controls of Goods (1982).
- Customs authorities of transit countries use different information systems that are sometimes obsolescent, which prevents advance receipt of information about cargoes and vehicles along the entire route.
- Customs checkpoints have inadequate equipment, which results in delays at the borders.
- There is no joint customs control (with “Single Window”) or coordination between the customs authorities of neighbouring countries.
- Some transit countries limit the amount of fuel in the tanks of trucks upon entry.
- Changes in customs regulations are not promptly communicated to all participants in the international freight transport market.
- Inconsistent weight control systems in transit countries; non-compliance with International Vehicle Weight Certificates prescribed by the International Convention on the Harmonisation of Frontier Controls of Goods (1982).
- Inconsistent procedures and penalties for exceeding vehicle weight and dimension limitations used in international road freight along the INSTC.

Box 4. Issue of Visas to Freight Transport Operators Along the INSTC: Barriers and Challenges

- Some corridor countries do not issue long-term multiple-entry visas, forcing truck drivers to file a new visa application for each trip.
- Visas are not issued at the BCP; as a result, drivers are forced to file visa applications with the embassies in their home countries and suspend their trips accordingly.
- Long processing times for visa applications and high consular fees. For example, the driver may have to wait for a Turkmenistan visa for up to two weeks; such visa, when received, may be valid for up to 10 days, and if it expires before the truck leaves the country, the driver may be expelled and banned from getting new entry visas.
- Visa procedures differ between corridor countries, resulting in different lists of documents required or fee/processing times.
- High cost of visas (Russia, Turkmenistan).

Freight transport along the INSTC crosses borders twice (with the exception of the EAEU member states). At the IRBCP, carriers have to comply with customs, border, sanitary, and other formalities twice. First, they deal with exit point authorities, and then with entry point authorities, and both points are in different countries. Neighbouring countries hardly ever follow joint control procedures involving close cooperation between the customs, border, and other authorities.

The INSTC has no Single Window system, and this is a serious issue for all carriers. At many border crossing points, numerous inspection and border authorities act independently from each other and inspect the same cargo multiple times, usually uncoordinated. Each authority requires its own set of documents separate from any other documents, hence the redundant procedures. In many cases, the problem is with bureaucratic customs procedures. There is no overlap between them: each one is established independently, with no regard to the other procedures. As a solution to this bureaucracy, countries could optimise their procedures and facilitate paperwork at border crossings. One of the viable steps is to conduct joint inspections and exchange data and information. Today, however, the procedures are still extremely burdensome for transport operators.

In addition, customs authorities physically inspect vehicles, cargoes, and containers at the RBCPs and IRBCPs, driven by their distrust of official documents issued in the neighbouring corridor countries. They check for compliance with the documents by examining the cargo, up to the point of counting all items.

The customs clearance issues listed increase border idle time significantly (up to 40% of total travel time), hike vehicle freight rates (by up to 30%), and have other adverse consequences.

Non-harmonised procedures mean working with hard copies of shipping, customs, and other supporting documents. There are still no electronic railway and truck waybills or electronic bills of lading at the INSTC routes, except for Russia and Kazakhstan with their electronic customs transit system. Only a few border crossing points have installed integrated information systems and systems used for the exchange of data among customs and other authorities. That said, Turkmenistan's joining the Automated System for Customs Data (ASYCUDA) World electronic system did accelerate electronic predeclaration of cargoes.

Almost no border crossing points are using e-queue systems for trucks along the Western and Eastern Routes of the INSTC and in Caspian Sea ports.

Barrier Elimination Mechanism	<p>Expansion of cooperation among the customs authorities of the countries using the INSTC (e.g., a permanent task force).</p> <p>Best practices in line with the recommendations of the World Customs Organisation (WCO).</p> <p>Digitalisation of customs formalities: electronic predeclaration and transit declarations, digital customs transit tools, etc.</p>
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The INSTC still does not have a corridor management system, and there are no transport/forwarding coordination mechanisms that would attract freight traffic, remove barriers, and coordinate development of the corridor's routes with the government bodies of stakeholder countries.

The INSTC Coordination Council headquartered in Tehran meets irregularly, which stands in the way of attractive freight terms and the simplification of border crossing procedures.

**Barrier
Elimination
Mechanism**

A coordination mechanism using a mixed public-private format.

The INSTC Coordination Council will manage the governmental component by meeting at least once a year and creating special task forces, including a customs cooperation task force.

The private component could be in the form of an association modelled on the existing TIR and CCTT experience, where railway carriers could work on through rates, and road carriers could design measures to simplify international road freight along the INSTC, etc

Corruption is a distinct barrier to international road freight along the INSTC. Petty forms of customs corruption include extortion and the imposition of unofficial fees along the corridor's routes, but especially at the border crossing points. In particular, the ADB, the International Road Transport Union, UNECE, and others refer to collusion between the representatives of government bodies responsible for customs, border, sanitary, veterinary, and phytosanitary control (NEA, 2009). Carriers pay bribes to speed up border crossings and clear non-compliant vehicles (incorrect documents, excessive weight and dimensions).

Finally, carriers complain about other deterrents, including the following:

- TIR operation limited in some countries due to a small number of border crossing points.
- No digital shipping documents or vehicle/cargo border crossing procedures (CMR waybills and TIR carnets).
- Lack of transparency in vehicle escort requirements imposed by the customs authorities, with trucks being escorted even if the cargo is sealed securely in standard containers.

All stakeholder countries have acceded to the Organisation for Cooperation between Railways and its Freight Wagons Usage Rules. That said, the lack of free circulation of railway cars poses a challenge for the INSTC between Iran and other countries: carriers have to re-load cargos at break-of-gauge points (1,520 mm/1,435 mm) instead of doing a simple bogie exchange. The lack of replacement railway cars at the border can also cause delays.

The differences in customs, shipping documents, certificates, and national safety requirements lead to various inspections at the border crossing points, which takes up a lot of time and causes delays (technical inspection of rolling stock, examination of documents and cargoes for compliance with waybills, replacement of engines and engine crews, etc.).

At the Trans-Caspian Route, insufficiently developed multimodal and intermodal transport technologies prevent the transport of railway cars, trucks, semi-trailers, and containers between the Caspian Sea ports along the INSTC. For example, the Caspian Sea ferries pose challenges for international road freight operations due to:

- irregular operation of the ferries and feeder container ships;
- unscheduled vessel calls;
- small number of truck spaces on the ferries.

There is no railway ferry service between the ports of Russia, Kazakhstan, and Iran because of the differences in track gauge and rolling stock dimensions.

The main issues with the Caspian Sea ferry system are as follows:

- low fuel efficiency of the vessels;
- obsolescence of the existing fleet resulting in additional maintenance, repair, and operation costs, and low travel speeds;
- ferries are loaded only when a sufficient number of railway cars and trucks arrive at the port, leading to substantial land transport idle time;
- trucks are loaded last (2–5 units per trip), and are ferried in substantial numbers only if there are no railway cars;
- high and non-transparent costing of Caspian port calls, which automatically increases ferry service costs;
- current port infrastructure is incapable of supporting regular ferry service at many Caspian ports (especially passenger infrastructure, given the increasing use of Ro-Pax vessels);
- unbookable car spaces and passenger cabins, including online;
- long time required to complete customs and other formalities at sea ports because of the insufficient and inadequate infrastructure of border crossing points;
- lack of substantial north–south freight traffic (compared to east–west traffic); the planned Astrakhan–Turkmenbashi Ro-Pax service was discontinued after several pilot runs in 2015 for lack of demand.

**Barrier
Elimination
Mechanism**

The INSTC Coordination Council may create special task forces charged with the development of maritime and multimodal transport and digitalisation of shipping and supporting documents.

Assignment of an end-to-end logistics operator to each INSTC route (it could be one of the large logistics operators from the EAEU member states, or a joint venture of Iranian and Indian business entities).

Negotiations of railway companies (KTZ, RZD, Railways Agency of Turkmenistan (Demiryollary), Islamic Republic of Iran Railways) and logistics operators (KTZ Express, etc.) to design new logistics services for cargo delivery to the Iranian ports in the Persian Gulf and create a favourable tariff environment. The TITR international association model will help come up with end-to-end logistics solutions.

Establishment of regular container services, primarily Turkey–Azerbaijan–Russia/Belarus–Kazakhstan–Turkmenistan–Iran (Persian Gulf ports).

Approval and publication of through railway tariffs (Eastern and Western Routes and the route to Turkey through Azerbaijan).



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Approval and publication of through railway tariffs (Eastern and Western Routes and the route to Turkey through Azerbaijan).

Long-term infrastructural and non-physical barriers in the INSTC boost freight costs, cause long delays at the border crossing points and sea ports, and arrest services. It all deters any potential freight operators from using the corridor. This creates a vicious circle, where lack of freight traffic disincentivises development of infrastructure, expansion of the fleet, and deployment of modern logistics services along the corridor.

Political will could break that vicious circle and help the corridor countries and relevant business stakeholders enter into bilateral and multilateral agreements to switch to a dynamic development model. There have been successful rollouts of transport corridors, including complex multimodal corridors (Vinokurov, 2020), across the world, including trans-Siberian container services, UTLC ERA China–Europe–China services, the TITR, the Viking Container Train, etc. We recommend that countries embrace international best practices to create an efficient corridor management system and eliminate the existing barriers. They will therefore enjoy regular container and non-container services and proceed to the freight traffic growth stage at all three INSTC routes.

3

INSTC Development Investment Projects

Development of the INSTC will complete the construction of “missing links” and eliminate transport infrastructure “bottlenecks” preventing the growth of international freight operations. The improvement of the transport infrastructure should go hand in hand with the upgrade of the rolling stock, handling, and other equipment to ensure that cargoes are transported safely and effectively, customers receive top-quality transport and logistics services, and adverse environmental impact is curbed.

According to the UNECE Methodology (UNECE, 2009), a “missing link” is a place in the transport network where the deviation from the possible straight route is a substantial proportion of the journey, and/or where construction of a straightening section will substantially reduce the vehicle travel time.

The EDB analysis shows that there is only one missing link in the INSTC, namely, the unfinished railway section between Rasht and Astara in Iran. The unfinished section makes it impossible to build an end-to-end railway route from Central and North-Western Russia, Belarus, and Europe to the trade sea ports along the coast of the Persian Gulf, in particular, the port of Bandar Abbas.

The INSTC “bottlenecks” are defined as transport infrastructure facilities and road/railway sections that have exhausted their processing/throughput capacity (or operate at near-extreme levels), which leads to congestion, reduces travel speeds, impairs the quality of transport services, and deters any potential freight traffic increase (CAREC, 2021).

The most critical bottlenecks are the railway border crossing points (RBCPs) and the international road border crossing points (IRBCPs), especially in Iran, where track gauge changes from 1,520 mm to 1,435 mm. The Trans-Caspian Route of the INSTC has non-expandable freight operations due to the draft limitations of the Volga-Caspian Sea Shipping Canal, the shortage of specialised container transshipment facilities at ports, and scarce feeder vessels for universal cargoes.

Poor road network conditions may reduce travel speeds, increase the risk of accidents, and create congestion, especially at approaches to residential areas (in this case, the lack of bypass roads around large cities is the problem).

One-lane, non-electrified railways have a considerably lower throughput capacity compared to two-lane electrified railways. Almost all the lines comprising the Eastern Route of the INSTC in Turkmenistan and most of the railway lines in Iran use diesel locomotives.

In addition, the throughput capacity of railways is affected by the passenger traffic, especially at approaches to large cities and transport nodes. Accordingly, electrification of railways

and construction of secondary main tracks minimise bottlenecks and increase operating and schedule travel speeds of freight trains along the corridor.

All large-scale INSTC development projects can be grouped by the type of works:

- construction of new infrastructure facilities,
- reconstruction of existing infrastructure facilities, or
- modernisation of existing infrastructure facilities.

Investment projects related to the development of the INSTC infrastructure are often financed from national budgets or from the budgets of large state-owned infrastructure companies. They involve the construction of toll-free public railways and roads and border crossing points that tend to have longer payback periods. At the same time, more and more private investors or multilateral development banks are funding transport infrastructure facilities in the INSTC areas they favour to help build, reconstruct, or modernise them.

The [Annex](#) contains a list of 102 projects to develop the three INSTC routes, including the following:

- 20 — railway transport,
- 59 — roads,
- 7 — border crossing points with related infrastructure;
- 8 — sea ports,
- 4 — inland waterways,
- 4 — shipbuilding.

There are 8 projects in Azerbaijan, 5 in Armenia, 1 in Georgia, 11 in Iran, 22 in Kazakhstan, 52 in Russia, and 3 in Turkmenistan.

67 projects are to be financed from national state budgets; 35 might receive funding from third-party investors.

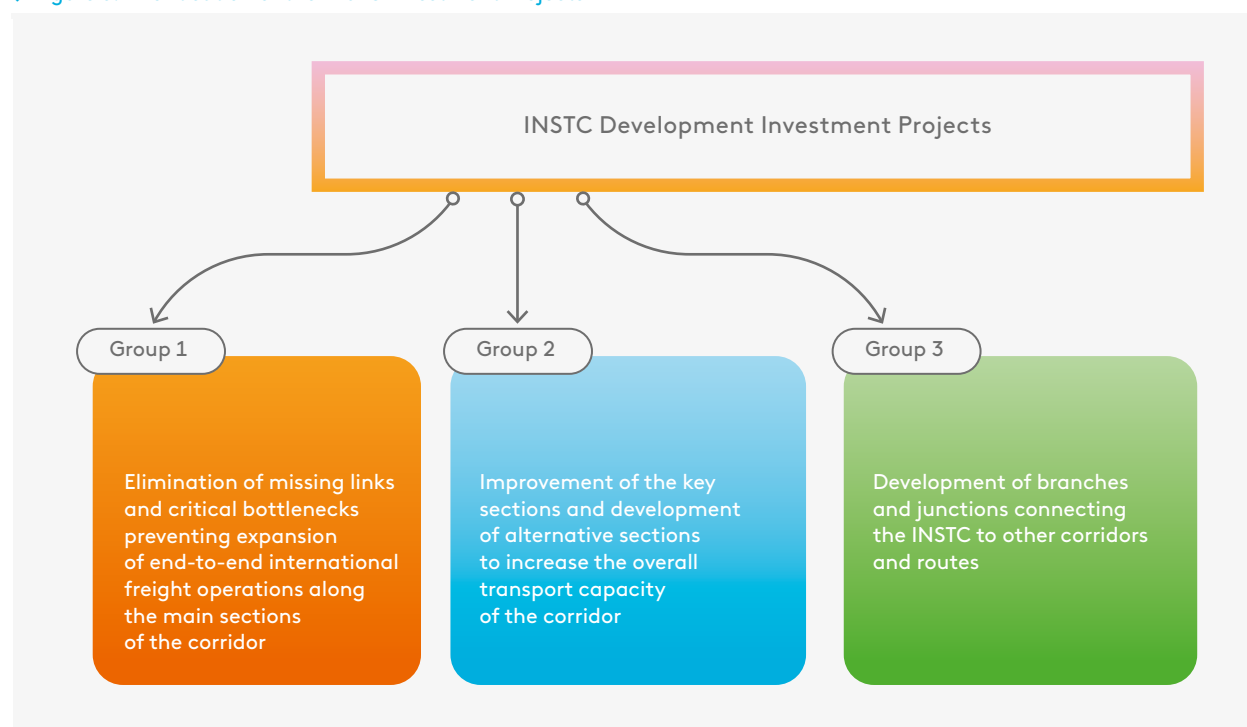
Prioritising the projects will ensure prompt operationalisation of all INSTC routes.

Group 1 includes the top-priority projects eliminating missing links and critical bottlenecks that prevent the immediate expansion of end-to-end international freight and transit operations. These projects apply to the transport infrastructure of all key INSTC routes ([see Figure 3](#)).

Group 2 is represented by the projects improving infrastructure quality along the main routes of the corridor and developing alternative elements of the transport infrastructure. Alternative sections of roads and railways and the like that are constructed, reconstructed, or modernised, release in part the throughput capacity in the main sections of the INSTC routes. These projects, once completed, will increase vehicle travel speeds and reduce cargo delivery times.

Group 3 includes construction, reconstruction, modernisation, and development projects for junctions and branches along the main routes of the INSTC, connecting it to other international transport corridors and routes. These projects are an indirect boon to the logistical potential of the INSTC and will attract additional freight traffic.

↓ Figure 3. Prioritisation of the INSTC Investment Projects



Source: EDB

The database includes investment projects that Armenia and Georgia are undertaking to develop the North–South Motorway connecting Russia and Armenia and incorporating sections of the Georgian Military Road and the Verkhniy Lars international road border crossing point, as well as sections of the new express motorway under construction in Armenia. That motorway has been historically associated with the INSTC, especially because Armenia is a member of the INSTC Agreement, although it is geographically separate from the Western Road Route of the corridor.

Therefore, the countries involved in the development of the INSTC routes intend to invest \$38.2 billion in the improvement of their transport infrastructure, including \$10.7 billion to finance the top-priority projects assigned to Group 1 (see Figure 4).

Improvement of the INSTC transport infrastructure in Russia and Iran will require the largest investment capital (\$13.21 billion and \$12.87 billion, respectively). Russia will use the bulk of the investments to build and upgrade roads; Iran will finance Group 2 projects to construct straightening railways and express motorways. This will boost the throughput capacity of the primary network and release the INSTC routes to handle additional freight traffic. Kazakhstan accounts for 16% of the total value of INSTC development projects.

Projects accounting for 57% of the total INSTC investment capital will require non-governmental funding. Projects in Armenia and Iran may have almost 100% external funding. Azerbaijan, Kazakhstan, and Russia will use their budgets to finance most of the projects to build and reconstruct roads, railways, and border crossing points (see Figure 6).

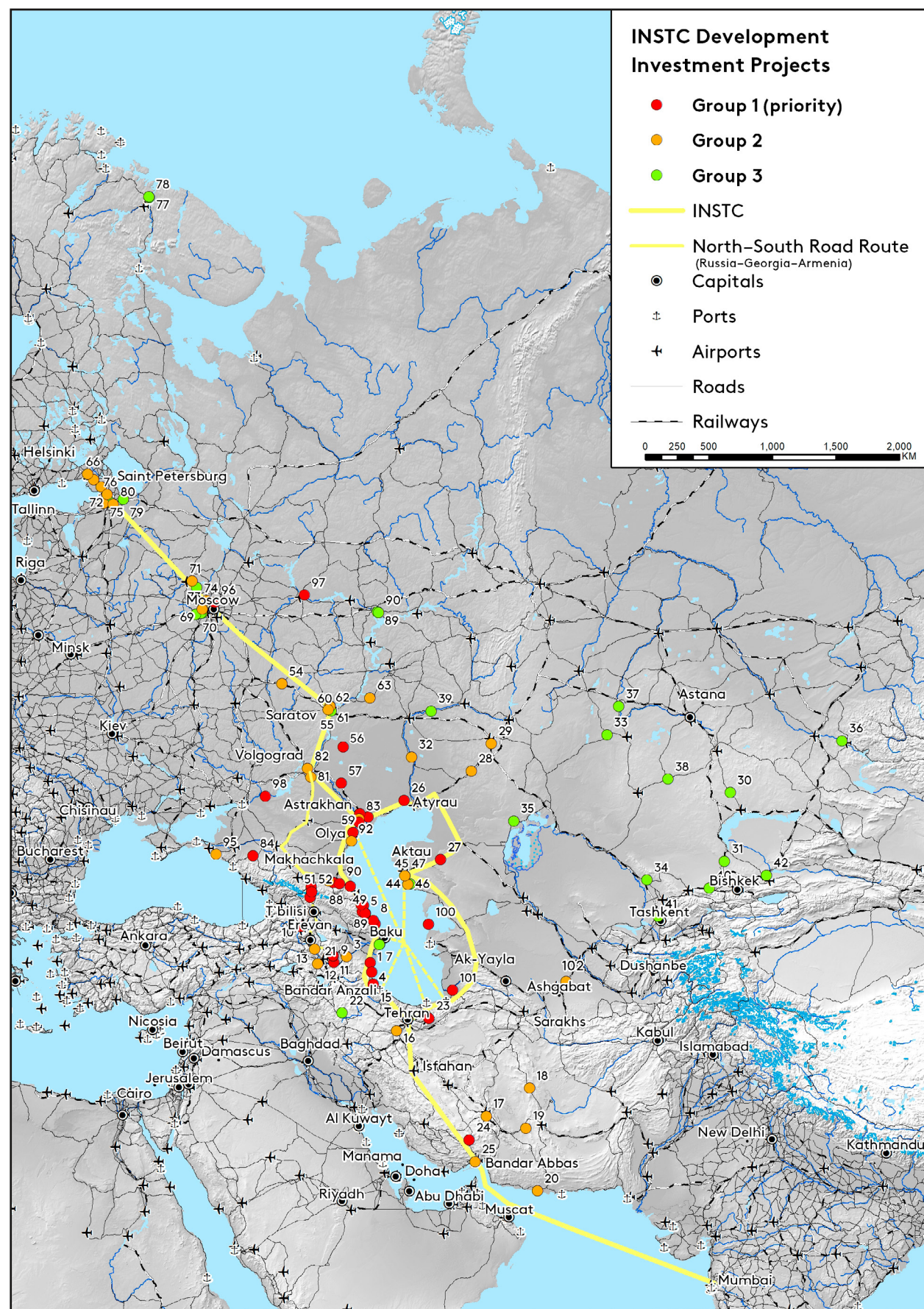
See Figure 7 for projects broken down by transport.

The bulk of the funding will go to expand the INSTC road routes (\$21.6 billion). Top-priority projects (Group 1 projects) will require \$4.81 billion. Investment in railway routes is estimated at \$11.6 billion, including \$3.64 billion to finance Group 1 projects. Development of inland waterways of the Unified Deep-Water System will require \$1.4 billion (Group 1 projects: \$0.56 billion). Upgrading border crossing points, sea terminals, and fleet vessels will involve smaller investments (\$0.41 billion, \$0.06 billion, and \$0.40 billion, respectively).

↓ Table 3. Investment Requirements for INSTC Infrastructure Development Projects, \$ millions

Infrastructure Facilities	Project Groups by Priority					
	Group 1		Group 2		Group 3	
	Total	Including Potential Non-Public Funding	Total	Including Potential Non-Public Funding	Total	Including Potential Non-Public Funding
Azerbaijan						
Roads	706	-	-	-	-	-
Railways	1,390	-	400	400	-	-
Border Crossing Points	135	-	-	-	-	-
Sea Ports	-	-	-	-	155	155
Total	2,231	0	400	400	155	155
Armenia						
Roads	1,619	1,619	-	-	-	-
Railways	-	-	230	230	-	-
Total	1,619	1,619	230	230	-	-
Georgia						
Roads	558.6	558.6	-	-	-	-
Total	558.6	558.6	0	0	0	0
Iran						
Roads	47.4	47.4	6100	6100	-	-
Railways	2,200	2,200	3,175	3,175	-	-
Sea Ports	-	-	1,350	1,350	-	-
Total	2,247.4	2,247.4	10,625	10,625	0	0
Kazakhstan						
Roads	543	193	780	733	2,095	-
Railways	-	-	-	-	2,590	-
Sea Ports	-	-	178	178	-	-
Maritime Transport	-	-	119	119	-	-
Shipbuilding	-	-	-	-	18	18
Total	543	193	1,077	1,030	4,703	18
Russia						
Roads	881.2	-	4,858.8	2,312.8	2,963.8	13.5
Railways	52.6	-	1,444	-	-	-
Border Crossing Points	198.7	-	-	-	-	-
Sea Ports	56.6	56.6	376.9	376.9	-	-
Maritime Transport	400.0	400.0	-	-	-	-
Inland Waterways	1,395.0	-	578.8	-	-	-
Total	2,984.1	456.6	7,258.5	2,689.7	2,963.8	13.5
Turkmenistan						
Roads	450	450	-	-	-	-
Railways	-	-	100	100	-	-
Border Crossing Points	75	75	-	-	-	-
Total	525	525	100	100	0	0
TOTAL	10,708.1	5,599.6	19,690.5	15,074.7	7,821.8	186.5

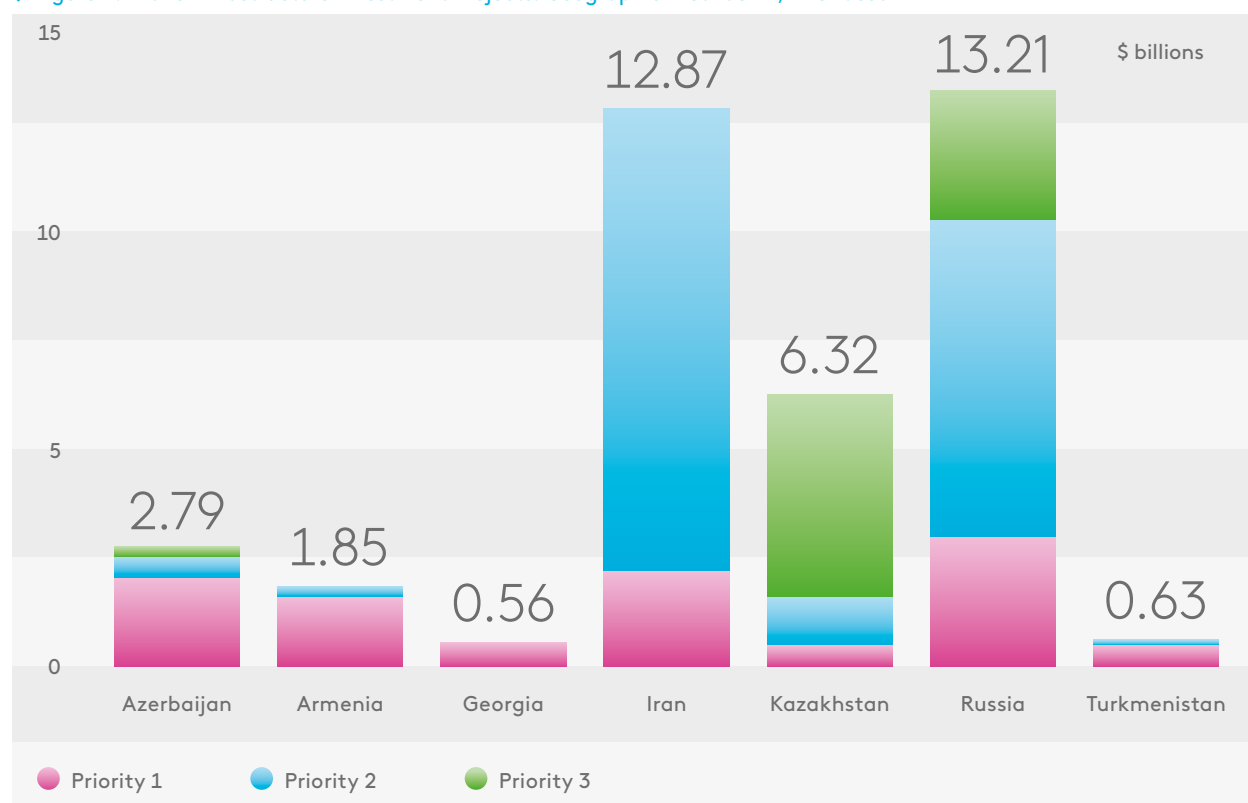
Source: EDB



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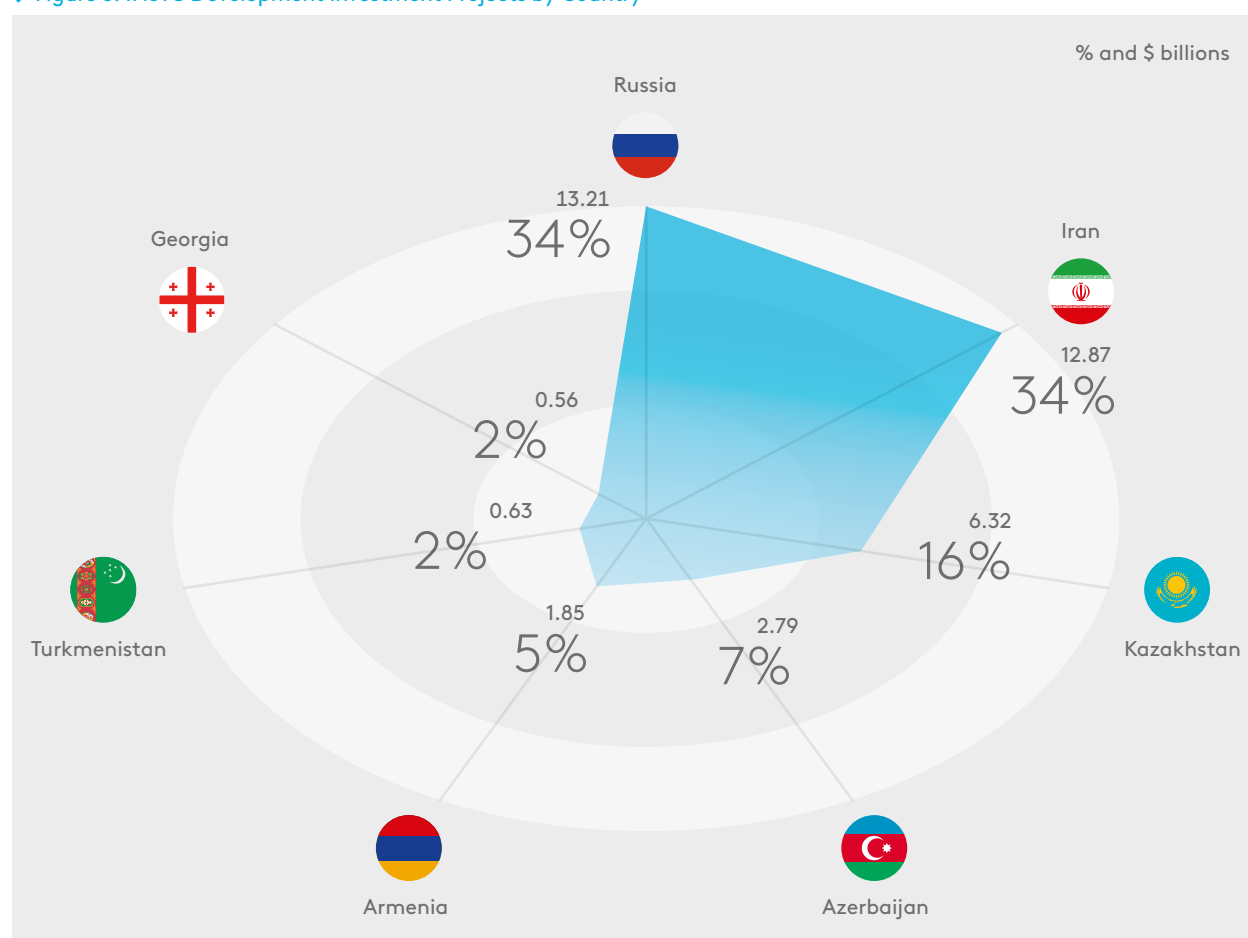
Republic of Azerbaijan		
1. Modernisation of the Alat-Astara railway section	1	
2. Modernisation of the Sumgait-Yalama railway section	1	
3. Construction of the Horadiz-Aghbend railway section	2	
4. Modernisation of the Astara RBCP	1	
5. Modernisation of the Samur RBCP	1	
6. Construction of a bulk cargo terminal at the new sea port of Baku (Alat)	3	
7. Stage 3 of construction of the new sea port of Baku (Alat)	3	
8. Construction of the Baku-Russian Border motorway sections	1	
Republic of Armenia		
9. Construction of the Kajaran-Agarak road section to the Iranian border	1	
10. Construction of the Gyumri-Bavra road section	1	
11. Construction of the Karajan Tunnel	1	
12. Construction of the Bargushat Tunnel in a section of the Sisian-Kajaran road	1	
13. Construction of an Armenian section of the Yeraskh-Meghri-Horadiz railway	2	
Georgia		
14. Construction of the Kvesheti-Kobi road section	1	
Islamic Republic of Iran		
15. Construction of the missing Rasht-Astara railway section	1	
16. Construction of the Qazvin-Qom railway section	2	
17. Modernisation of the Qom-Bafq, Bafq-Kerman, Kerman-Zahedan railway sections	2	
18. Construction and modernisation of the Zahedan-Birjand railway section	2	
19. Construction of the Chabahar-Faraj-Bam railway section	2	
20. Construction of the new port of Chabahar	2	
21. Construction of the Tabriz-Marand-Bazargan motorway	2	
22. Construction of the Bazargan-Port of Bandar-e Emam Khomeyni motorway	3	
23. Modernisation of the Garmsar-Incheh Borun railway	1	
24. Construction of the Sirjan-Bandar Abbas road	1	
25. New Bulk Cargo Terminal at the port of Shahid Rajaei	2	
Republic of Kazakhstan		
26. Reconstruction of the Russian Border-Aktobe-Atyrau-Russian Border road	1	
27. Reconstruction of the Aktau-Beyneu road	1	
28. Modernisation of the Aktobe-Makat road	2	
29. Modernisation of the Aktobe-Kandyagash road	2	
30. Reconstruction of the Astana-Karaganda-Balkhash-Kapshagay road	3	
31. Reconstruction of the Merki-Burylb-aytal road	3	
32. Reconstruction of the Uralsk-Atyrau road	2	
33. Reconstruction of the Astana-Arkalyk-Kandyagash road	3	
34. Reconstruction of the Turkistan-Kentau road	3	
35. Construction of the Shalkar-Bozoy-Uzbekistan Border road	3	
36. Reconstruction of the Semey-Ust-Kamenogorsk road	3	
37. Reconstruction of the Zhezqazghan-Arkalyk-Petropavlovsk road	3	
38. Reconstruction of the Kyzylorda-Zhezqazghan-Karaganda road	3	
39. Reconstruction of the Uralsk-Russian Border road (to Orenburg)	3	
40. Modernisation of the Dostyk-Moyn-ty railway section	3	
41. Construction of the Darbaza-Mak-taarl railway line	3	
42. Construction of a railway bypass of the Almaty Node	3	
43. Construction of a shipbuilding yard in the vicinity of the port of Quryq	3	
44. Construction of a universal terminal in the sea port of Quryq	2	
45. Expansion of terminal capacity in the sea ports of Aktau and Quryq	2	
46. Construction of two universal ferries	2	
47. Construction of four feeder vessels (container ships)	2	
Russian Federation		
48. Reconstruction of the bridge across the Volga on the M-10 motorway	3	
49. Reconstruction of the Yarag-Kazmalyar IRBCP	1	
50. Reconstruction of the Karaozek IRBCP	1	
51. Reconstruction of the Verkhniy Lars IRBCP (Stage 2)	1	
52. Construction of logistics centre near the Verkhniy Lars IRBCP	1	
53. Construction of the Samur-II border stations and the Derbent RBCP	1	
54. Electrification of the Rtishchevo-Kochetovka railway section	2	
55. Construction of the western bypass of the Saratov Node	2	
56. Development and modernisation of the Aksarayskaya-Saratov railway section	1	
57. Reconstruction of the Trubnaya-Verkhniy Baskunchak-Aksarayskaya section	1	
58. Reconstruction of railway bridges across the Volga at the Aksarayskaya-As-trakhan section	1	
59. Construction of logistics complex in the Olya port	1	
60. Construction of a bridge across the Volga on the Saratov bypass road A298	3	
61. Reconstruction of the Syzran-Volgograd road (R-228) at the section 291-325 km (Stages 3 and 4)	2	
62. Reconstruction of the Syzran-Volgograd road (R-228) at the section 291-325 km (Stages 5 and 6)	2	
63. Construction of the Samara-Pugach-yov-Volgograd road (R-229) at the by-pass around the city of Pugachyov	2	
64. Reconstruction of the Saint Peters-burg-Finland Border motorway (A-181) at the section 65-100 km	2	
65. Reconstruction of the Saint Peters-burg-Finland Border motorway (A-181) at the section 100-134 km	2	
66. Reconstruction of the Saint Peters-burg-Finland Border motorway (A-181) at the section 134-160 km	2	
67. Reconstruction of the "Belarus" Mo-torway (M-1) at the section from the 45th to the 66th km	3	
68. Reconstruction of the "Belarus" Mo-torway (M-1) at the section from the 66th to the 84th km	3	
69. Construction of an interchange at the 59th kilometre of the "Belarus" Motorway (M-1)	3	
70. Construction of an interchange at the 86th kilometre of the "Belarus" Motorway (M-1)	3	
71. Construction of the Moscow-Saint Petersburg Motorway (M-11) at the section 149-208 km	2	
72. Construction of the interchange leading to Pulkovo Airport on the M-11 Motorway	3	
73. Elimination of bottlenecks along the main transport corridors of the Mos-cow Region (Stage 1)	2	
74. Elimination of bottlenecks along the main transport corridors of the Mos-cow Region (Stage 2)	2	
75. New express bypass around the city of Saint Petersburg (KAD-2), Stage 1	2	
76. Reconstruction of the Ring Road around the city of Saint Petersburg at the section from the Gorskaya Station to the Priozvorskoe Highway, Stage 3	2	
77. Reconstruction of the Saint Peters-burg-Murmansk-Norway Border road (R-21 "Kola"), approach to Murmansk at the section 14-19 km	3	
78. Reconstruction of the Saint Peters-burg-Murmansk-Norway Border road (R-21 "Kola"), interchange at the 19th kilometre	3	
79. Reconstruction of the Saint Peters-burg-Murmansk-Norway Border road (R-21 "Kola"), approach to Murmansk at the section 51-68 km	3	
80. Construction of a crossover at the 672 km of the Moscow-Saint Petersburg Motorway (M-10)	2	
81. Construction of the bypass around the city of Volgograd on the R-22 road "Caspian", Stage 1	2	
82. Construction, Stage 2	2	
83. Construction of the bypass around the city of Astrakhan on the road R-22 "Caspian"	2	
84. Reconstruction of the road bridge across the Fars River (approach to the city of Maykop)	1	
85. Construction of the bypass road around the city of Gudermes (R-217 road "Caucasus")	1	
86. Construction of the bypass road around the city of Vladikavkaz (R-217 road "Caucasus")	1	
87. Construction of the western bypass road around the city of Grozny (R-215 road)	2	
88. Construction of the northern bypass road around the city of Makhachkala (R-217 road)	1	
89. Construction of the bypass road around the city of Derbent (R-217 road "Caucasus")	1	
90. Construction of the bypass road around the city of Khasavyurt (R-217 road "Caucasus")	1	
91. Reconstruction of the road approach to the Kazan Airport (R-239 road)	3	
92. Reconstruction of the Kazan-Oren-burg-Kazakhstan Border road (R-239) at the section 20-43 km.	3	
93. Construction of universal combined river-sea navigation bulk carriers/con-tainer ships of the Volga-Don Max class	1	
94. Construction of the new sea port of Lagan at the Caspian Sea (Republic of Kalmykia)	2	
95. Construction of the Tsemolchina-Portovaya Street (Novorossiysk) express motorway	2	
96. Comprehensive reconstruction of the Moscow Canal infrastructure	1	
97. Construction of a low-head hydrosys-tem in Nizhny Novgorod	1	
98. Construction of the Bagaevsky hy-drosystem on the river of Don	2	
99. Support of normative maintenance of inland waterways and navigational hydraulic facilities	1	
Turkmenistan		
100. Construction of the Turkmenbashi-Garabogaz-Kazakhstan Border road and a new bridge across the Garabogazköl Bay	1	
101. Modernisation and upgrade of the Ak-Yayla/Incheh Borun railway border crossing point at the border be-tween Turkmenistan and Iran	1	
102. Electrification and modernisation of the Turkmenabat-Mary railway	2	

↓ Figure 4. INSTC Infrastructure Investment Projects: Geographic Breakdown, Prioritised



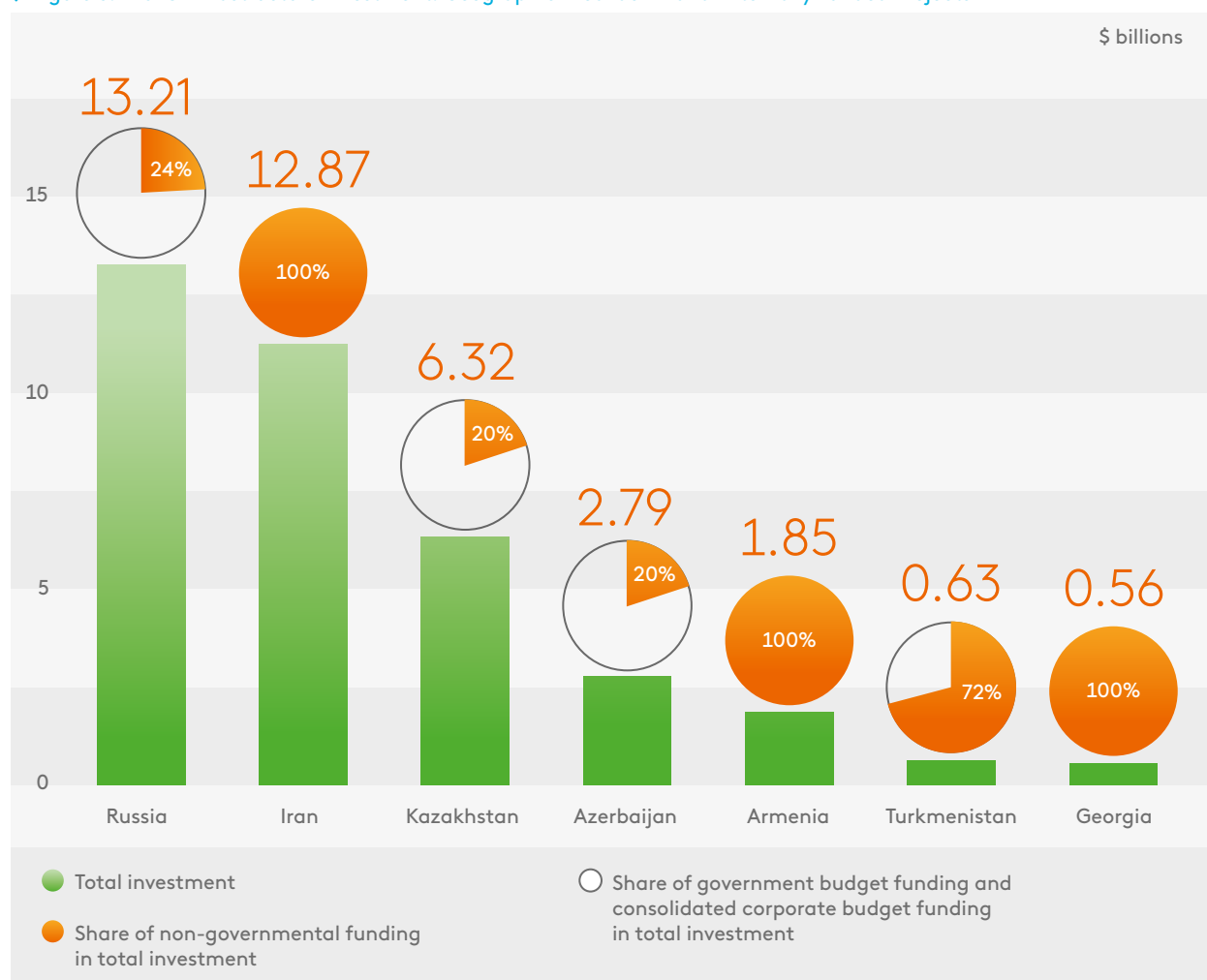
Source: EDB

↓ Figure 5. INSTC Development Investment Projects by Country



Source: EDB

↓ Figure 6. INSTC Infrastructure Investment: Geographic Breakdown and Externally Funded Projects



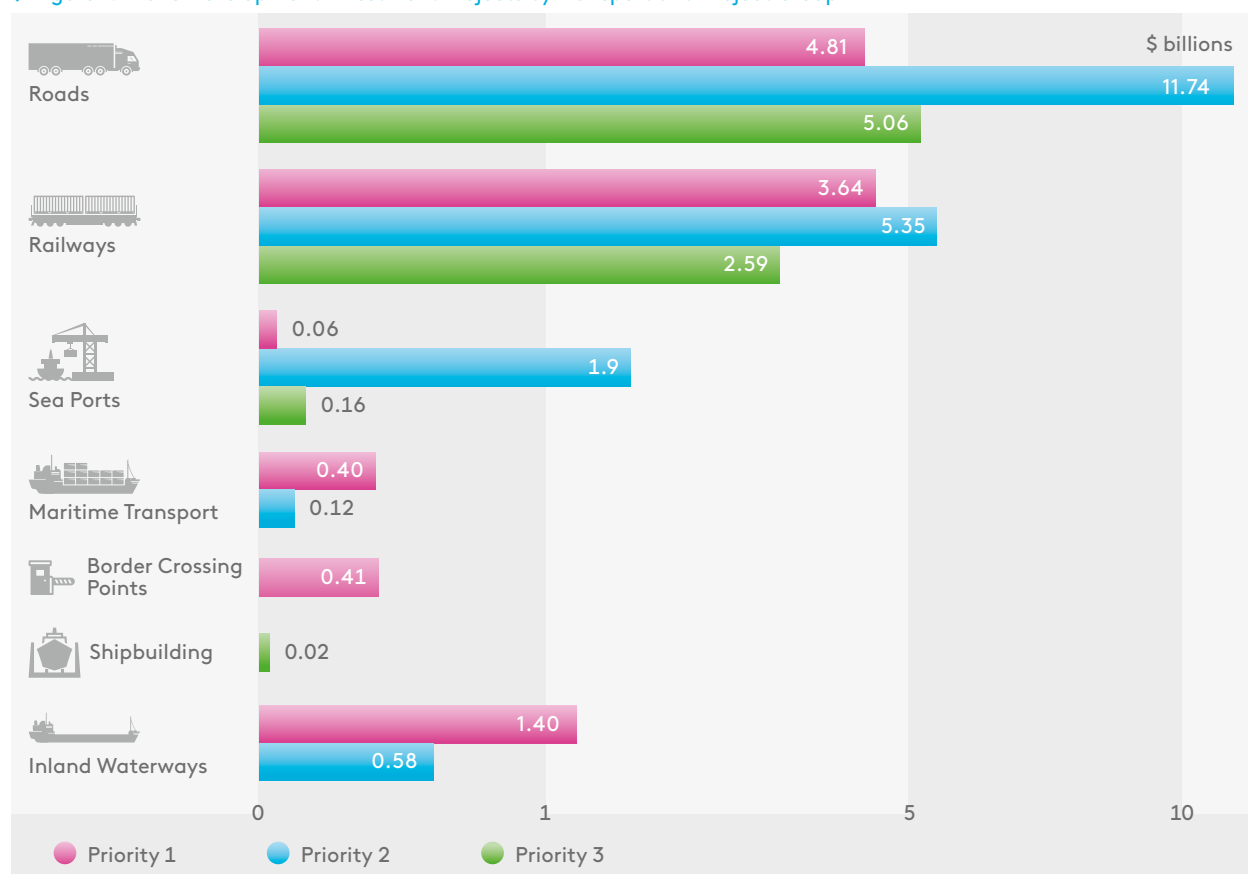
Source: EDB

There are plans to fund the development of the Western Route of the INSTC using 69.1% of the top-priority (Group 1) project budget. The Trans-Caspian Route and the Eastern Route account for 19.1% and 11.8% of total top-priority investment projects, respectively (see Figure 8).

The development of the Western Route of the INSTC involves the following top-priority (Group 1) projects:

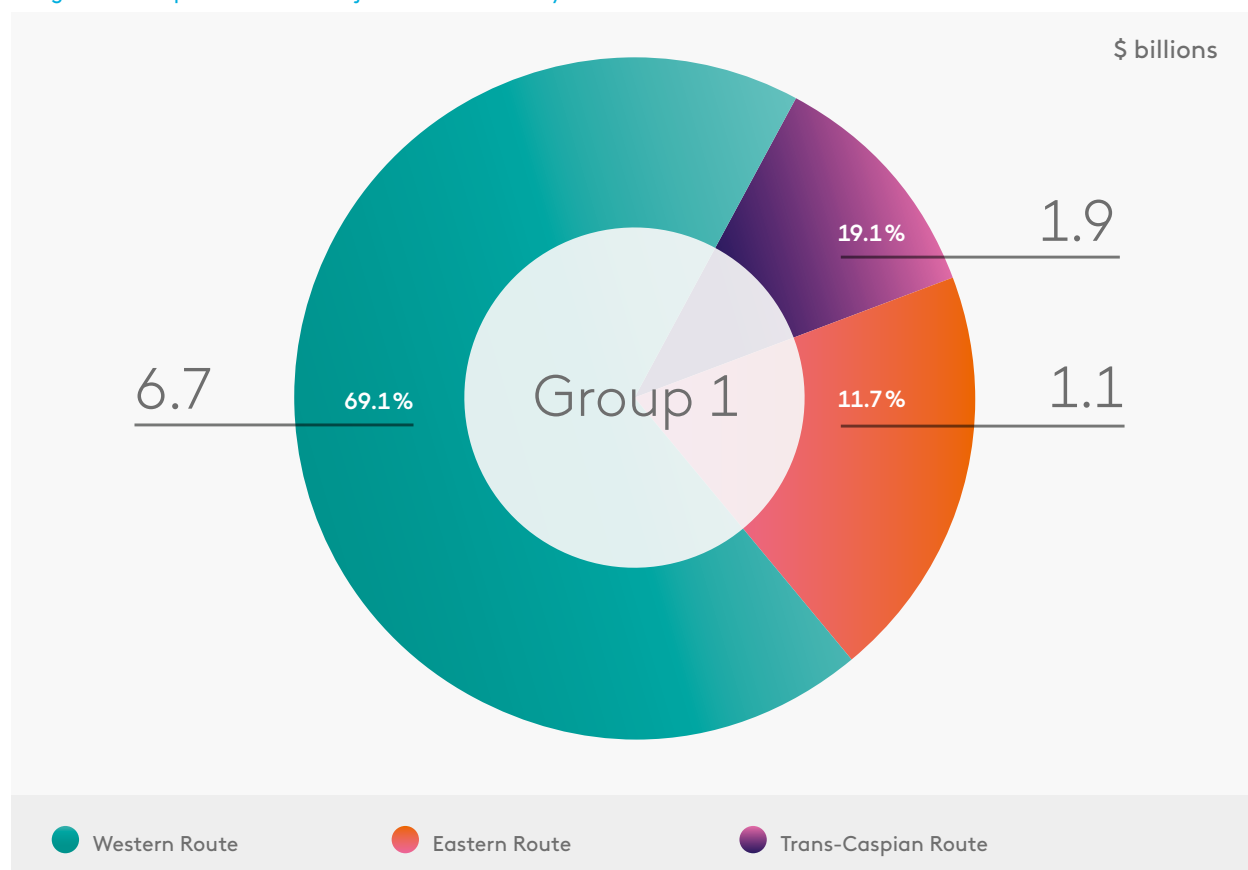
- Construction of the Rasht–Astara railway line in Iran.
- Modernisation of the Alat–Astara and Sumgait–Yalama railway lines in Azerbaijan.
- Modernisation of the Verkhniy Lars and Yarag–Kazmalyar road border crossing points.
- Modernisation of the Samur and Astara railway border crossing points in Azerbaijan, and of the Derbent railway border crossing point in Russia.
- Construction of a section of the Baku–Russian Border express motorway.
- Construction of multiple sections of the North–South Road Corridor in Armenia.
- Construction of the Sirjan–Bandar Abbas section of the Natanz–Sirjan–Bandar Abbas express motorway in Iran.

↓ Figure 7. INSTC Development Investment Projects by Transport and Project Group



Source: EDB

↓ Figure 8. Group 1 Investment Projects: Distribution by INSTC Route



Source: EDB

- Construction of bypass roads around the cities of Vladikavkaz, Grozny, Gudermes, Derbent, and Khasavyurt on the Vladikavkaz–Makhachkala–Azerbaijan Border motorway (Caucasus Motorway, R-217).
- Construction of bypass road around the city of Makhachkala on the Astrakhan–Makhachkala motorway (R-215).

The development of the Eastern Route of the INSTC involves the following top-priority (Group 1) projects:

- Reconstruction of the Russian Border–Aktobe–Atyrau–Russian Border road and the Aktau–Beyneu road in Kazakhstan.
- Reconstruction of the Karaozek IRBCP at the border between Russia and Kazakhstan.
- Reconstruction of the Trubnaya–Verkhniy Baskunchak–Aksarayaskaya railway section (construction of the secondary main track and electrification).
- Reconstruction of railway bridges across the Volga at the Aksarayaskaya–Astrakhan section.
- Construction of the Turkmenbashi–Garabogaz–Kazakhstan Border road and a new bridge across the Garabogazköl Bay in Turkmenistan.
- Modernisation and upgrade of the Ak-Yayla/Incheh Borun railway border crossing point at the border between Turkmenistan and Iran.
- Modernisation of the Garmsar–Incheh Borun railway line in Iran.

The development of the Trans-Caspian Route of the INSTC involves the following top-priority (Group 1) projects:

- Development and modernisation of infrastructure facilities at the Aksarayaskaya–Saratov railway section (railway approaches to the ports of Astrakhan and Olya).
- Comprehensive reconstruction of the Moscow Canal infrastructure.
- Construction of a low-head hydropower installation in Nizhny Novgorod.
- Adoption of regulations to manage inland waterways and navigational hydraulic facilities.
- Construction of a multifunctional port logistics complex in the port economic zone in Astrakhan Region.
- Construction of combined universal river-sea navigation bulk carriers / container ships of the Volga-Don Max class.

Having reviewed the INSTC development investment projects, we reached the following conclusions.

1. Non-EAEU member states account for 23 projects out of 102 (Azerbaijan, Georgia, Iran, and Turkmenistan). It is 44% of the total investment, or \$16.8 billion out of \$38.2 billion.
2. Most critical transport infrastructure facilities are situated in Iran or near the border with Iran. These are projects that will facilitate operationalisation of the corridor, namely completion of the Rasht–Astara railway section, electrification, and increase in the throughput capacity of the Garmsar–Incheh Borun railway line, crossing points at the border between Turkmenistan

and Iran and between Azerbaijan and Iran. The Iranian infrastructure accounts for 34% of the total investment required for continued development of the INSTC.

3. There are 79 projects in the pipeline in Armenia, Kazakhstan, and Russia (5 in Armenia, 22 in Kazakhstan, and 52 in Russia) totalling \$21.8 billion (53% of total investment). Most of these (76% of total investment in Russia and 80% of total investment in Kazakhstan) rely on public funding sources and large state-owned companies. That said, some transport infrastructure projects received both state budget and MDB funding: for example, Russia added AIIB funding to the original federal budget funding for the Kola Motorway section reconstruction project.
4. International financial institutions and private investors might have lost interest in investing in the development of the INSTC infrastructure. It can stem from low profitability, meaning they can only expect cash generation from toll roads, bridges, and tunnels. Of all road projects, only three involve toll road sections:
 - section of the Moscow–Saint Petersburg express motorway (M-11 Neva) from the 149th to the 208th kilometre (bypass road around the city of Tver);
 - interchange leading to Pulkovo Airport on the M-11 express motorway; and
 - new express Ring Road around Saint Petersburg (KAD-2).
5. The sanctions imposed on the transport companies in Belarus, Iran, and Russia curb attraction of investment capital. Non-state funding options are therefore limited.
6. The Western Route of the INSTC has the highest capital intensity and is expected to receive 69% of total investment. The Eastern Route (already in operation) requires 12% of total investment. The effectiveness of investments in this case can be assessed in the medium term by the ratio of the volume of invested funds to the volume of additionally attracted cargo traffic.
7. Construction of the North–South Road Route in Armenia also falls within the INSTC development projects, as Armenia is a full-fledged member of the INSTC Agreement. The project will generate freight traffic through Armenia and in other directions, in particular, along the TRACECA corridor towards the Georgian sea ports.
8. We recommend taking a closer look at the following INSTC infrastructure investment projects to be funded by the MDBs and private investors because they can potentially generate cash flows:
 - Construction of a multifunctional port logistics complex in the port economic zone in Astrakhan Region (assigned to Group 1);
 - Construction of combined universal river-sea navigation bulk carriers / container ships of the Volga-Don Max class (Group 1);
 - Construction of the Moscow–Saint Petersburg express motorway (M-11 Neva) section from the 149th to the 208th kilometre (bypass road around the city of Tver) (Group 2);
 - construction of the interchange leading to Pulkovo Airport on the M-11 express motorway (Group 3); and
 - Construction of a new Ring Road (KAD-2) around the city of Saint Petersburg (Group 2).

Each of the above projects warrants further review. Focussing on the multifunctional port and logistics complex at the port of Olya is likely to amplify Russian-controlled commercial vessel traffic in the Caspian Sea (and vice versa).

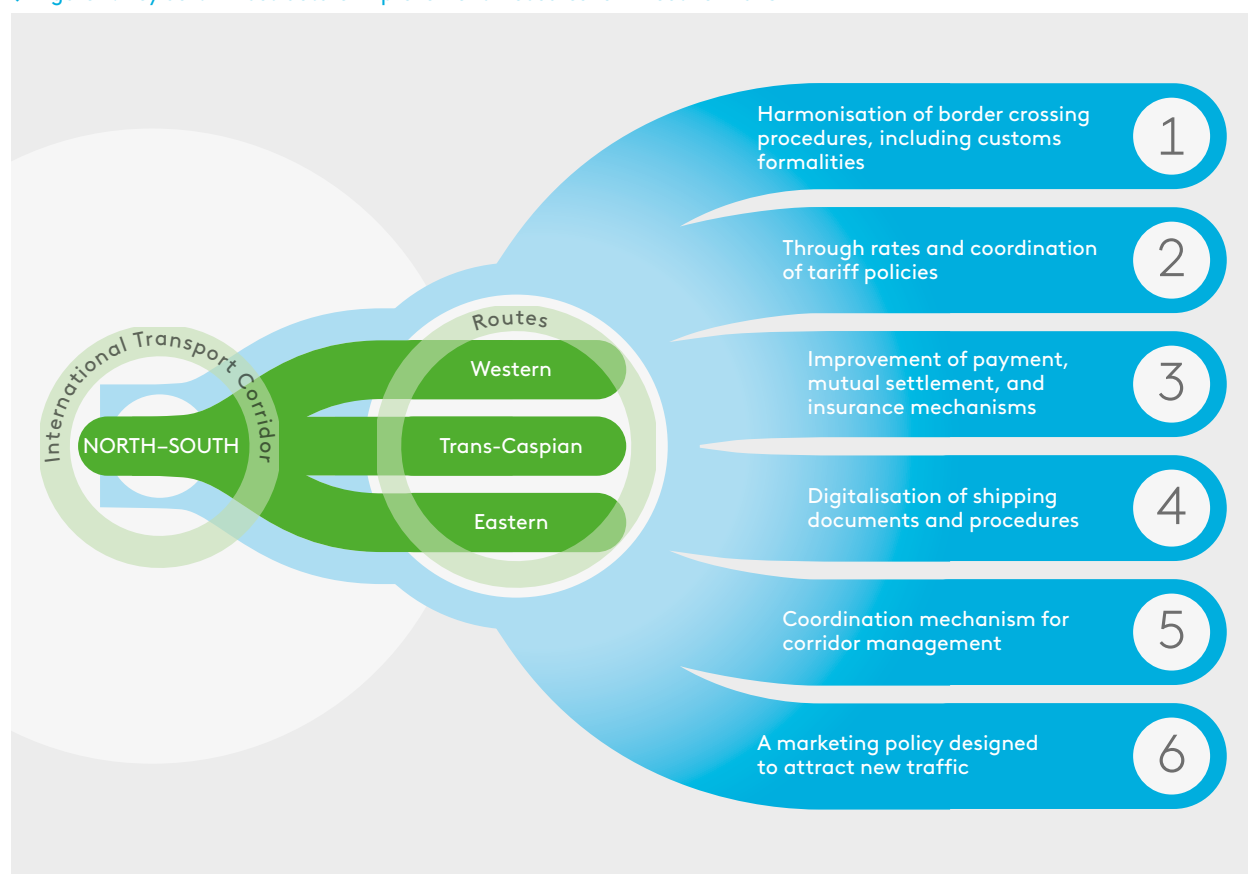
4

Proposals on the Soft Infrastructure Improvement

We developed six key groups of measures to fully operationalise the INSTC and boost end-to-end railway, road, and multimodal freight traffic along all of its three routes (see [Figure 9](#)). As an insight, we used the success of increasing container traffic along the Northern Corridor (Trans-Siberian Railway, China–Kazakhstan–Russia–Belarus–Europe) and the TITR.

1. Legal harmonisation of customs formalities, information exchange, and Single Window border crossing procedures; switch to Authorised Economic Operators (AEOs) in the corridor countries;
2. A coordinated tariff policy for all INSTC sections, and through rates competitive with alternative routes;
3. A clearing-based mechanism to support payments and mutual settlements among foreign trade players, as well as insurance mechanism for cargoes and rolling stock;
4. Digitalisation of shipping documents and procedures for international freight operations along the corridor;
5. A coordination mechanism to manage the INSTC and engage transport and forwarding companies for regular logistics services and container lines along the routes of the corridor;
6. Marketing for attraction of new cargo flows to the corridor.

↓ Figure 9. Key Soft Infrastructure Improvement Measures for Effective INSTC



Source: EDB

Effective stakeholder interaction and state-of-the-art information tools are key to the successful harmonisation of customs formalities and Single Window border crossing procedures. Once optimised, the procedure can accelerate cargo delivery decision-making, ensure compliance with border crossing procedures, and help provide the INSTC carriers, freight owners, and forwarders with integrated information services comprising three elements:

- A single information ecosystem incorporating all available data on transport market activities (real-time freight traffic data, loading / unloading status data, loading requests data, etc.). The INSTC information ecosystem should support the mutual exchange of data on transport units and cargoes being transported through all participating countries and ensure compatibility of all information systems used by the transport, customs, and border authorities of such countries.
- Single legal ecosystem for transport operations (standard shipping documents, consistent interaction rules for transport nodes). Standard shipping and supporting documents should be based on SMGS and/or CIM/SMGS waybills (for traffic towards Turkey) for railway transport, CMR waybills for road transport, marine bills of lading for maritime transport, FIATA multimodal bills of lading, railcar inventories and packing lists, veterinary and phytosanitary certificates, etc.
- Single legal ecosystem for interaction between customs services: the WCO Data Model and the ASYCUDA to automate customs procedures and reduce customs clearance times.

Recommendation No. 33 sets out basic principles for establishing a Single Window ("Recommendation and Guidelines on Establishing a Single Window to Enhance the Efficient Exchange of Information between Trade and Government"). It was developed by the UNECE and the United Nations Centre for Trade Facilitation and Electronic Business.

The Single Window in international freight operations along the entire length of the INSTC will be beneficial for both government bodies and transport companies, as well as freight owners, and forwarders. Russia, Kazakhstan, and Azerbaijan use it extensively in their interactions; there are plans to introduce it to Turkmenistan, Iran, etc. for more effective delivery of cargoes.

The Single Window will improve the management of customs and other risks and increase safety and incomes while ensuring better compliance with all applicable requirements by foreign trade and transit players.

Business players (carriers, freight owners, forwarders, and logistics providers) will benefit from the transparent interpretation and application of rules and requirements, and from the more efficient use of human and financial resources. This will also improve productivity and competitiveness (Vinokurov et al., 2009).

The success of the Single Window hinges on the governments and relevant government bodies (un)willing to reform the system, and on the comprehensive support and commitment of the business community.

Interaction between the customs services of the participating countries should cover the following key elements, as recommended by the [World Customs Organisation \(2017\)](#):

- 1) Exchange of information among customs authorities;
- 2) The guarantee system;
- 3) Coordinated simplification of formalities;
- 4) The risk management system;
- 5) AEO programme;
- 6) Electronic navigation seals;
- 7) Coordinated border management;
- 8) Transparency of requirements and anti-corruption measures.

The WCO standards will ensure efficient exchange of data among the government bodies involved at each INSTC route, namely, the WCO Data Model and Globally Networked Customs.

A single guarantee system will ensure customs security of the delivery along the corridor. The guarantee system has two important functions. First, it ensures payment of the customs duties and taxes, which are suspended during a transit operation if the goods are not presented to the customs office of destination. Second, it is the only meaningful solution to make sure the goods in transit will not disappear en route and will be presented to customs for clearance at the office of destination. The TIR system is already successfully used in the INSTC international road freight operations. That said, there are various national guarantee systems in place for railway freight operations, including container operations, so railway and multimodal freight traffic might require a new regional customs guarantee mechanism.

To simplify the formalities, the customs authorities of the corridor countries may agree to uniformly accept waybills, e.g., SMGS railway waybills, as transit declarations for the purposes of the INSTC railway freight operations. The Single Window and the WCO Data Model, a supporting tool, will standardise requirements for the exchange of data that are key for the functioning Single Window.

The customs authorities of the corridor countries can agree to exchange risk management information, in particular, on goods, carriers, or “high-risk” transit operations.

Three customs services will be able to track transit goods concurrently if they use and recognise electronic navigation seals compatible with GPS or GLONASS/GPS and installed on trucks, railcars, and containers. They will also prevent unauthorised access or respond promptly (e.g. by contacting the police) if such unauthorised access does occur.

When cooperating, the bodies of a country/customs territory and government bodies of two neighbouring countries can coordinate border management and control risks, reducing customs clearance times. Another option is joint control of goods and vehicles transported along the INSTC. Such control could be exercised in accordance with the WCO security standards.

The border authorities of the corridor countries could also agree to simplify visa procedures, for instance, by signing a separate multilateral agreement to:

- Issue visas to vehicle crews at the border or at the port;
- Harmonise the list of required documents (corporate licence, driving licence, vehicle data, etc.), costs, and timeframes to process visas for vehicle crew members;
- Grant multiple entry visas to vehicle crew members.

Under such agreement, border authorities of stakeholder countries could exchange information about the visas issued to vehicle crew members, as well as about good-faith participants in international freight operations and visa violators.

Negotiations between Kazakhstan, Russia, Turkmenistan, Azerbaijan, and Iran will resolve regular container and ferry services-related issues along the Trans-Caspian Route of the INSTC. Countries should be represented by port administrations, shipping companies, and maritime transport agencies ([UNESCAP, 2019a](#)).

An agreement to organise a regular (scheduled) ferry line will require an advance vehicle space booking service and an e-queue for the trucks arriving at the port. Trucking companies will use those to schedule their own arrival and departure times.

The digitalisation of international freight operations along the INSTC includes:

- Electronic exchange of data among the customs services of the countries involved in the development of the INSTC and other transport corridors linked to the INSTC;
- Mutual recognition of digital signatures by the customs services;
- Electronic exchange of data among the border services of the countries involved in the development of the INSTC;
- Electronic pre-declaration of goods along the INSTC;
- Electronic international road transport permits;
- SMGS and CIM/SMGS electronic railway waybills;
- CMR electronic road waybills;
- The eTIR electronic customs guarantee system and other electronic guarantee tools for multimodal freight operations;

- Electronic bills of lading for shipping among the Caspian ports;
- Electronic navigation seals to be installed on trucks, railcars, and containers to ensure their traceability along the entire length of the INSTC;
- Electronic truck queues at border crossing points and commercial Caspian ports;
- A web-based booking system for trucks boarding ferries at the Caspian ports.

Railway companies involved coordinate the tariff policy along the entire INSTC cargo route.

RZD, Azerbaijan Railways, and Iran Railways are the responsible parties at the Western Route; RZD, railway companies in Kazakhstan, Turkmenistan, and Iran are in charge of the Eastern Route.

In the Trans-Caspian Route, shipping companies and Caspian ports should be involved in through rate negotiations in addition to railway companies.

The through rate seeks to substantially decrease sequential transit carriage charges per one TEU / FEU (for container cargoes) or per one tonne / standard railcar (for general cargoes).

Negotiations between railway carriers and other stakeholders will help determine the pro rata distribution of the through rate.

Information about through rates should be published at the newly created official INSTC web portal or the like.

A mechanism for support of inter-governmental payments and mutual settlements among foreign trade participants (e.g., a clearing mechanism) can reduce currency conversion risks and risks associated with moving cargoes in or through sanctioned countries. Such mechanism can be based on the mutual settlement system used within the OSJD.

Effective INSTC development management requires a mechanism to coordinate all transport process participants, including government bodies (transport, customs, border, veterinary, sanitary, phytosanitary bodies, etc.), infrastructure owners, operators (carriers, forwarders, providers of logistics services), other interested businesses, and experts from international stakeholder organisations.

The INSTC development coordination will create the best conditions for international freight operations and border crossings along the corridor.

Such coordination should cover national infrastructure development plans and projects, coordinated tariff policies, unified transport technologies and border crossing procedures (including their digitalisation), harmonisation of laws and regulations, customs guarantee system, security, marketing policy, etc.

The INSTC development can also involve new ad hoc or permanent task forces, commissions, steering (coordination) committees, associations, project offices, etc. The TITR and CCTT experience shows that an association is an effective public-private mechanism that can stimulate development of the corridor. In line with its statutory purposes, the association will represent the interests not only of countries, but also of businesses (railway, forwarding, shipping, trucking, sea port companies, etc.) engaged in the development of freight operations along the corridor. The association can develop through tariffs, coordinate maritime and railway transport, facilitate border crossing procedures, and organise regular (scheduled) services, such as container block trains at the Western and Eastern Routes of the INSTC, or a feeder container or ferry line between the Caspian sea ports.

Promoting the INSTC worldwide will attract freight flows and investment for its infrastructure facilities. We recommend updating the international community, including freight owners, and logistics companies from the Persian Gulf and South Asia, on the steps taken to foster the favourable traffic environment along the corridor.

International support for the development of the corridor could involve:

- Creation of an INSTC web portal to list freight terms, tariffs, and useful contact details.
- Participation in the operations of the UN, its regional commissions, and specialised international organisations (UNECE, UNESCAP, UNOHRLLS, etc.).
- Promotion of the corridor among regional and industrial international organisations, such as OSJD, ECO, SPECA, the Caspian Five, etc.
- Multilateral and bilateral agreements and memorandums on the INSTC development.
- Cooperation with the MDBs to attract investment.
- Demonstration runs for trains, truck caravans, Caspian Sea container ships and ferries with Iran and India/Pakistan goods.
- Promotion of the INSTC at international conferences and publications on the corridor in printed media and online.

Elimination of barriers to the INSTC development is supposed to result in:

- Increased operational efficiency of the transport complexes of each country involved.
- More efficient international transport infrastructure facilities comprising the Eurasian Transport Network and supporting mutual and transit freight traffic; consequently, an increased amount of charges collected.
- Developed transport services market and improved logistics and container services.
- Enhanced traffic in the Caspian region along the routes between Europe, Asia, and the Middle East (effective linkage of north–south and west–east corridors and routes).
- Transport and logistics innovations and best practices.
- Improved Road Safety ([World Bank, 2021](#)) and transport security in the Caspian region.
- An effective format developed for the multilateral dialogue on the INSTC-related issues.
- Growth in sustainable mobility along the corridor, international passenger traffic, following freight traffic ([World Bank, SuM4All, 2022](#)).

To coordinate the INSTC development and eliminate non-physical barriers, we recommend taking the following steps:

- introduce inter-governmental programmes and action plans to develop the transport and logistics infrastructure of the corridor ([ADB Institute, 2015](#));
- arrange regular meetings of transport ministers of the corridor countries and meetings of representatives of the business community and members of transport associations;

- engage private investors, international organisations, and development banks in the regional INSTC projects;
- be encouraged to use multilateral legal tools stipulated by international transport treaties and UN transport conventions;
- improve the bilateral and multilateral legal and contractual cooperation among the Caspian region countries, in particular, approve amendments and additions to the existing bilateral inter-governmental agreements and execute new multilateral agreements, e.g., the multilateral agreement on international commercial shipping in the Caspian Sea.

Annex. List of the INSTC Development Investment Projects

① ② ③ Project groups by priority

 Projects that may be co-financed by third-party investors, including the MDBs

 State-budget funded projects

Project values in US dollars converted from the relevant national currencies at the exchange rates in effect on 1 January 2022.
Values of projects marked with an asterisk (*) are expert estimates^b

Project	Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome	
				Total	Including Third-Party Financing				
Republic of Azerbaijan									
①	1. Modernisation of the Alat–Astara railway section	Western	Railways	Construction of the secondary main track and electrification of the entire section	1,190		2019–2027	ADY (Azerbaijan Railways)/N/A	Increased throughput capacity of INSTC sections in Azerbaijan
①	2. Modernisation of the Sumgait–Yalama railway section	Western	Railways	Reconstruction of a 166.5-km railway section, bridges and aqueducts; repair of pedestrian crossings	200		2019–2023	ADY/AsDB	Increased throughput capacity of INSTC sections in Azerbaijan and improved train traffic safety
②	3. Construction of multiple sections of the Horadiz–Aghbend railway	Western	Railways	Construction of a two-lane railway and other required infrastructure in the Nakhichevan Autonomous Republic. Line length: 110 km; 50% completed as of June 2022.	400*)		2023	ADY	Restoration of railway service with Iran through the Nakhchivan area of Azerbaijan and the Julfa RBCP; incorporation of RA into INSTC railway traffic

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
1	4. Modernisation of the Astara RBCP (Azerbaijan)	Western	BCP	Increased number of arrival and departure tracks, expansion of cargo transshipment platforms and temporary storage warehouses, installation of additional handling equipment	60*)		2025–2030	ADY	Increased throughput capacity of the Astara RBCP will become relevant following the launch of the Rasht–Astara section, and will reduce container, etc. transshipment times at the border between Azerbaijan and Iran
1	5. Modernisation of the Samur RBCP	Western	BCP	Modernisation of the Samur–Derbent railway border crossing point in the main direction of the Western Route of the INSTC. Increased throughput capacity of the Samur RBCP is designed to be synced with the reconstruction of the neighbouring Derbent RBCP in Dagestan	75*)		2025–2030	ADY	Less time required for the cargoes carried along the INSTC to cross the border between Azerbaijan and Russia
3	6. Construction of a bulk cargo terminal at the new sea port of Baku (Alat)	Trans-Caspian	Sea Port	Construction of a bulk cargo terminal which can be used, among other things, to tranship fertilisers; capacity: up to 2.5–3 mln tonnes per year. Stage 2 development of the commercial sea port of Baku (Alat). Construction of the terminal is included in the list of OBOR projects	5*)		2023	Commercial sea port of Baku	Increased throughput capacity of container terminals and the Ro-Ro terminal in the port of Alat will boost container and multi-modal traffic among the Caspian Sea ports
3	7. Stage 3 of construction of the new sea port of Baku (Alat)	Trans-Caspian	Sea Port	Construction of new berths, expansion of the container terminal and Ro-Ro terminal. Port turnover at Stage 3 of the port construction project to be increased to 21–25 mln tonnes, including 1 mln TEU. Stage 3 of the port construction project is included in the list of OBOR projects	150*)		2025	Commercial Sea Port of Baku	Increased throughput capacity of container terminals and the Ro-Ro terminal in the port of Alat will boost container and multi-modal traffic among the Caspian Sea ports

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
1	8. Construction of multiple sections of the Baku–Border of the Russian Federation express motorway	Western	Roads	Construction of the 150-km new express motorway will reduce the distance from Baku to the border with Russia by 16 km. Construction will proceed concurrently in in 5 sections in stages. The motorway will be a toll road	706		2023	Azerbaijan State Roads Agency	Increased throughput capacity and travel speeds, improved traffic safety, and reduced cargo delivery times
Republic of Armenia									
1	9. Construction of the Kajaran–Agarak road section to the border with Iran	Western	Roads	Part of the southern North–South Express Motorway in Armenia with a total length of 566 km. The 32-km road section under reconstruction will be upgraded to Category 2 with a design speed of 80 km/h. The road section will include 18 bridges, 3 tunnels (length of the longest tunnel: 7.5 km). Heavy trucks will have a dedicated lane, facilitating freight carriage	249*)		2028*)	Government of the Republic of Armenia, EFSD	A new direct road connection to the network of Iranian motorways and to the Iranian ports of the Persian Gulf, offering an alternative to Armenian foreign trade players
1	10. Construction of a section of the Gyumri–Bavra road	Western	Roads	The 45-km road is a part of the Norther Section V of the North–South express motorway with a total length of 566 km	200*)		2028*)	Government of the Republic of Armenia/N/A	A new direct road connection to the network of Iranian motorways, and to the Iranian ports of the Persian Gulf, offering an alternative to Armenian foreign trade players
1	11. Construction of the Karajan Tunnel in a section of the Sisian–Kajaran road	Western	Roads	The tunnel to become an element of the Northern Section IV of the North–South Express Motorway in Armenia with a total length of 566 km	920*)		2028*)	Government of the Republic of Armenia/N/A	A new direct road connection to the network of Iranian motorways, and to the Iranian ports of the Persian Gulf, offering an alternative to Armenian foreign trade players

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
1	12. Construction of the Bargushat Tunnel in a section of the Sisian–Kajaran road	Western	Roads	The 7-km tunnel to become an element of the Northern Section IV of the North–South Express Motorway in Armenia with a total length of 566 km	250*)		2028*)	Government of the Republic of Armenia/N/A	A new direct road connection to the network of Iranian motorways, and to the Iranian ports of the Persian Gulf, offering an alternative to Armenian foreign trade players
2	13. Construction of Armenian section of the Yeraskh–Sadarak–Julfa–Ordubad–Meghri–Horadiz railway	Western	Railways	Construction of a two-lane railway and other necessary infrastructure connecting Armenia to the Julfa RBCP in Azerbaijan’s Nakhchivan Autonomous Republic. Field works commenced in March 2022	230		N/A	South-Caucasian Railway	Restoration of railway service between Armenia and Iran through the Nakhchivan area of Azerbaijan and the Julfa RBCP, incorporation of RA into INSTC railway traffic
Georgia									
1	14. Construction of the Kvesheti–Kobi straightening road section	Western	Roads	The 22.7-km Kvesheti–Kobi straightening section of the Georgian Military Road will include 6 bridges and 5 tunnels (longest tunnel: 9 km). The tunnel and the straightening section will redirect freight traffic from the Cross Pass, which is closed for about 100 days per year due to heavy snowfalls and avalanche risk.	558.6	475.0 (EBRD — 405.0,ADB—60.0)	2024	Government of Georgia, ADB, EBRD	Throughput capacity of the Dariali/Verkhniy Lars IRBCP to increase by a factor of 6.5 by 2025 vs. 2021. Minimised vehicle idle time, improved traffic safety, and reduced times of cargo delivery between Belarus/Russia, Georgia, Armenia, and Turkey

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
Islamic Republic of Iran									
①	15. Construction of the missing Rasht–Astara (Iran) railway section	Western	Railways	The only unfinished section of the Western Route of the INSTC (180 km) runs along the Caspian Sea coast, complicates works, and inflates the cost of land acquisition for construction	1,000*)		2022–2024	Government of Iran, RAI (Islamic Republic of Iran Railways)	New favourable conditions for the launch of end-to-end container lines to the port of Bandar Abbas from Russia, Belarus, and Azerbaijan. Reduced cost and increased delivery times for cargoes along the INSTC
②	16. Construction of the Qazvin–Qom straightening railway section	Western, Trans-Caspian	Railways	Construction of a new railway section will create spare throughput capacity to support additional railway freight traffic along the INSTC	500*)		N/A	Government of Iran, RAI	Increased throughput capacity of Iranian railways, reduced INSTC cargo delivery times in Iran
②	17. Modernisation of the Qom–Bafq, Bafq–Kerman, Kerman–Zahedan railway sections	Western, Eastern, Trans-Caspian	Railways	Construction of secondary tracks and electrification of certain sections of the key railway lines in Iran to support combined freight and passenger traffic	400*)		N/A	Government of Iran, RAI	Increased throughput capacity of Iranian railways, reduced INSTC cargo delivery times in Iran
②	18. Construction and modernisation of the Zahedan–Birjand railway section	Eastern	Railways	The 460-km Zahedan–Birjand section is an element of the future Chabahar–Zahedan–Mashhad main railway line (total length: 1,528 km) from the new port of Chabahar towards the major transport nodes of the country. Construction started in June 2020	775		2022 (first section)	Government of Iran, RAI	A new straightening railway corridor which will join the lines connecting Iran to Afghanistan and Turkmenistan. Upon completion of the new sections, the new port of Chabahar will receive railway approaches (today, only roads are being used), which will make it a full-fledged INSTC element

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
②	19. Construction of the Chabahar–Faraj–Bam straightening railway section	Western, Eastern, Trans-Caspian	Railways	Construction of a 600-km straightening line from the new port of Chabahar and its connection to the existing Zahedan–Kerman railway line	1,500*)		N/A	Government of Iran, RAI	Increased throughput capacity of the line, with freight trains capable of accelerating up to 120 km/h
②	20. Construction of the new port of Chabahar	Western, Eastern, Trans-Caspian	Sea Port	Construction of several berths, a container terminal, and a general cargo terminal at the new sea port on the coast of the Persian Gulf	150		2024	Government of Iran, Port of Chabahar	A new powerful India-oriented commercial port (India is one of the investors in the port expansion project) that could become an alternative to the port of Bandar Abbas
②	21. Construction of the Tabriz–Marand–Bazargan	Western	Roads	The 223-km express motorway is the key element of the Iran–Turkey road corridor. It will link the North–South Motorway (currently under construction in Armenia) and the Tabriz–Zanjan–Qazvin–Tehran motorway	2,000		2025	Construction and Development of Transportation Infrastructures Company (Iranian state-owned company) /Bergiz Construction (Turkish company)	Increased travel speeds, improved traffic safety, and reduced times of cargo delivery between Armenia and Iran, Iran and Turkey
③	22. Construction of the Bazargan–Port of Bandar-e Emam Khomeyni	Western	Roads	The 1,025-km express motorway should link one of the largest crossing points at the border between Iran and Turkey with the commercial sea port of Bandar-e Emam Khomeyni on the coast of the Persian Gulf	4,100		N/A	Government of Iran and ANAS signed the project agreement	Once commissioned, the motorway will provide the shortest route from Armenia along the North–South motorway to a sea port on the coast of the Persian Gulf

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
①	23. Modernisation of the Garmsar–Incheh Borun railway line	Eastern	Railways	Electrification of the railway line from the border with Turkmenistan (Incheh Borun RBCP, Golestan) to the railway node of Garmsar (Semnan). Electrification standard: 25 kV, 50 Hz. In addition, the project will modernise the line to increase train travel speeds, as well as supply and maintenance of electric locomotives. RZD International, an RZD subsidiary, launched the project in July 2018, but in April 2020 it withdrew to avoid secondary sanctions. A Russian export loan is planned for 2022 to complete the project	1,200		N/A	Government of Iran	Higher freight train travel speeds and increased throughput capacity of both the railway line and the entire Eastern Route of the INSTC
①	24. Construction of the Sirjan–Bandar Abbas road	Western, Trans-Caspian	Roads	Construction of the first 60-km section of the future Natanz–Sirjan–Bandar Abbas express motorway (700 km) jointly by the Government of Iran and private business	47.4		N/A	Government of Iran/Construction and Development of Transportation Infrastructures Company	A new express motorway to the port of Bandar Abbas will reduce cargo delivery times and costs. As the entire Natanz–Sirjan–Bandar Abbas motorway is put into operation, more than 50% of the total INSTC Road Route length in Iran will be bypassing large cities through express motorways with high throughput capacity
②	25. Mechanised Bulk Cargo Terminal at the port of Shahid Rajaei	Western, Trans-Caspian, Eastern	Sea Port	Construction of a new mechanised terminal for the transshipment of mineral fertilisers, construction and other non-commodity bulk cargoes. The terminal is 15 km from the main terminals of the port of Bandar Abbas. A private contractor will undertake the project in three stages	1,200		N/A	Ports and Maritime Organisation of Iran	Expanded processing capacity used to transship non-commodity bulk cargoes and mineral fertilisers through the Iranian ports of the Persian Gulf. A new alternative route to export mineral fertilisers from the EAEU member states

Project	Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome	
				Total	Including Third-Party Financing				
Republic of Kazakhstan									
1	26. Reconstruction of the Russian Border–Aktobe–Atyrau–Russian Border road	Eastern	Roads	The road, a part of the Eastern Road Route of the INSTC, will connect the port of Aktau with the future Aktau–Turkmenbashi express motorway. The reconstruction will significantly improve the state of the road along its entire length (277 km)	350		2025	MIID (Ministry of Industry and Infrastructural Development), KazAvtoZhol	Increased travel speeds and, concurrently, improved traffic safety. Attraction of the freight traffic for trade between Russia and Kazakhstan. Improved accessibility of the international ports of Aktau and Quryq. New conditions to encourage international freight traffic along the Eastern Route of the INSTC
1	27. Reconstruction of the Aktau–Beyneu road	Eastern	Roads	The 460-km road provides access to the sea ports of Aktau/Quryq. The reconstruction will improve road conditions	193		N/A	KazAvtoZhol	Improved road quality will promote further development of international multimodal (road/maritime) freight traffic, including traffic between Kazakhstan and Iran along the Eastern Route of the INSTC
2	28. Modernisation of the Aktobe–Makat road	Eastern	Roads	The road connects CAREC Corridors 1, 6 and provides the shortest way to the Eastern Road Route of the INSTC from Orenburg Region of Russia	566		N/A	KazAvtoZhol/Asian Development Bank	Improved road quality at the sections connecting the South Ural region in Russia with the Caspian Sea region in Kazakhstan will encourage further development of international road freight traffic between Russia and Iran along the Eastern Route of the INSTC

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
②	29. Modernisation of the Aktobe–Kandyagash road	Eastern	Roads	The road is a part of the alternative Aktobe–Makat route to channel freight traffic from the South Ural region in Russia to the Eastern Route of the INSTC	167		N/A	KazAvtoZhol	Improved road quality at the sections connecting the South Ural region in Russia with the Caspian Sea region in Kazakhstan will promote further development of international road freight traffic between Russia and Iran along the Eastern Route of the INSTC
③	30. Reconstruction of the Nur-Sultan–Karaganda–Balkhash–Burylbaytal–Kurdy–Kapshagay road	Eastern	Roads	The project will facilitate the development of transport connections between China and Iran along the intersections between the East–West and North–South corridors	600		2022	MIID, KazAvtoZhol	Increased travel speeds, improved traffic safety. Reduced cargo delivery times
③	31. Reconstruction of the Merki–Burylbaytal road	Eastern	Roads	The project will facilitate development of transport connections between China and Iran along the intersections between the East–West and North–South corridors	80		2020–2025	MIID, KazAvtoZhol	Increased travel speeds, improved traffic safety. Reduced cargo delivery times
②	32. Reconstruction of the Uralsk–Atyrau road	Eastern	Roads	The project will facilitate development of transport connections along the intersections between the East–West and North–South corridors	47		2020–2025	MIID, KazAvtoZhol	Increased travel speeds, improved traffic safety. Reduced cargo delivery times
③	33. Reconstruction of the Astana–Arkalyk–Turgay–Yrgyz–Shalkar–Kandyagash road	Eastern	Roads	The project will facilitate development of transport connections along the intersections between the East–West and North–South corridors	725		2020–2025	MIID, KazAvtoZhol	Increased travel speeds, improved traffic safety. Reduced cargo delivery times
③	34. Reconstruction of the Turkistan–Kantau road	Eastern	Roads	The project will facilitate development of transport connections along the intersections between the East–West and North–South corridors	20		2023	MIID, KazAvtoZhol	Increased travel speeds, improved traffic safety. Reduced cargo delivery times

Project	Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
				Total	Including Third-Party Financing			
35. Construction of the Shalkar–Bozoy–Uzbekistan Border road	Eastern	Roads	The project will facilitate development of transport connections along the intersections between the East–West and North–South corridors	230		2023–2025	MIID, KazAvtoZhol	Increased travel speeds, improved traffic safety. Reduced cargo delivery times
36. Reconstruction of the Semey–Ust-Kamenogorsk road	Eastern	Roads	The project will facilitate development of transport connections along the intersections between the East–West and North–South corridors	150		2023–2025	MIID, KazAvtoZhol	Increased travel speeds, improved traffic safety. Reduced cargo delivery times
37. Reconstruction of the Zhezqazghan–Arkalyk–Petrovavlovsk road	Eastern	Roads	The project will facilitate development of transport connections along the intersections between the East–West and North–South corridors	75		2023–2025	MIID, KazAvtoZhol	Increased travel speeds, improved traffic safety. Reduced cargo delivery times
38. Reconstruction of the Kyzylorda–Zhezqazghan–Karaganda road	Eastern	Roads	The project will facilitate development of transport connections between China and Iran along the intersections between the East–West and North–South corridors	177		2023–2025	MIID, KazAvtoZhol	Increased travel speeds, improved traffic safety. Reduced cargo delivery times
39. Reconstruction of the Uralsk–Russian Border road (to Orenburg)	Eastern	Roads	The project will facilitate development of transport connections along the intersections between the East–West and North–South corridors	38		2023–2025	MIID, KazAvtoZhol	Increased travel speeds, improved traffic safety. Reduced cargo delivery times
40. Modernisation of the Dostyk–Moyynty railway section	Eastern	Railways	Construction of secondary main tracks, modernisation and reconstruction of station tracks, modernisation of artificial structures. Total length of the line: 830 km	2,000		2022–2025	MIID, KTZ	Facilitated expansion of the international freight traffic between China and Iran using the intersections between the East–West and North–South international transport corridors. Container train travel speeds increased to up to 1,500 km/day. Fivefold throughput capacity of the section

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
③	41. Construction of the Darbaza–Maktaaral railway line	Eastern	Railways	Construction of the line will facilitate access for freight traffic from Kazakhstan to Uzbekistan and then on to Turkmenistan and Iran. Length of the section: 115 km	340		2024–2025	MIID, KTZ	Reduced transit distance between the Central Asian countries; with a new exit route from Kazakhstan to Uzbekistan through an existing crossing point.
③	42. Construction of a railway bypass of the Almaty Node	Eastern	Railways	Relocation of transit traffic, including container trains, outside the railway node. Length of the line: 73 km	250		2023–2024	MIID, KTZ	Decrease in the load on the Almaty Node by 30%; reduced cargo delivery times to 24 hours. Growth in freight traffic from China towards Iran
③	43. Construction of a shipbuilding yard in the vicinity of the port of Quryq	Eastern	Shipbuilding	The shipbuilding yard will be used to build vessels for the offshore area of the Caspian Sea	18*)		N/A	Eni/Royal Haskoning DHV and Witteveen+Bos	Construction of the support fleet will maintain guaranteed depths and shipping conditions in the Kazakhstan’s sector of the Caspian Sea
②	44. Construction of a universal terminal in the sea port of Quryq	Eastern	Sea Port	The terminal will tranship 3 mln tonnes of various cargoes, including containers, general and bulk cargoes (including grain cargoes)	154		2022	Quryq Port/ Daryn Partners	Increased throughput capacity of the port for transshipment of containers and general cargoes and grain
②	45. Expansion of terminal capacity in the sea ports of Aktau and Quryq	Eastern	Sea Port	Expansion of terminal capacity for transshipment of containers, grain, and general cargoes will create a logistics hub in the vicinity of the ports of Aktau and Quryq, increase the number of port calls and freight, including containers, transported among the Caspian ports	24		2025	Quryq Port	Increased throughput capacity of the port for transshipment of containers and general cargoes and grain

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
2	46. Construction of two universal ferries	Trans-Caspian	Maritime Transport	The ferries will be assigned to the sea lines connecting the ports of Aktau and Quryq with the other Caspian ports	66	66	2023	National Marine Shipping Company "Kazmorflot" LLP (project initiator)	Increased frequency of ferry voyages will improve the throughput capacity of the multi-modal road-maritime lines of the Caspian Sea. The vessels may be assigned, in particular, to the lines connecting the ports of Kazakhstan and Iran, although Aktau-Baku should be regarded as the main route
2	47. Construction of four feeder vessels (container ships)	Trans-Caspian	Maritime Transport	The feeder vessels will be assigned to the sea lines connecting the ports of Aktau and Quryq with the other Caspian ports	53		2023	National Marine Shipping Company "Kazmorflot" LLP (project initiator)	Increased frequency of feeder vessel voyages will improve the throughput capacity of the container lines of the Caspian Sea. The vessels may be assigned, in particular, to the lines connecting the ports of Kazakhstan and Iran, although Aktau/Quryq-Baku/Alat should be regarded as the main route

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
Russian Federation									
③	48. Reconstruction of the road bridge across the Volga (M-10 motorway, Tver Region)	Western, Trans-Caspian	Roads	Reconstruction of the bridge will eliminate bottlenecks at the main road routes of the INSTC (Tver bypass section)	149	0	2024	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
①	49. Reconstruction of the Yarag-Kazmalyar IRBCP	Western	BCP	The Yarag-Kazmalyar IRBCP is the main crossing point along the Western Road Route of the INSTC at the border between Russia and Azerbaijan. When commissioned in 2022, Tagirkent-Kazmalyar IRBCP was able to redirect some of the road traffic that had previously passed through the Yarag-Kazmalyar IRBCP and reduce queues and border crossing times. Upon completion of the reconstruction, the crossing point's throughput capacity should increase from 500 to 1,400 vehicles per day, while freight traffic will increase to 2.3–2.9 mln tonnes, up to 3.5–4.0 mln tonnes further	40*)	0	2023	Federal budget	Reduced border crossing and cargo delivery times. Attraction of Russia-Azerbaijan trade flows and transit freight traffic to/from Iran. Facilitated expansion of the international freight traffic along the Western Route of the INSTC

Project	Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
				Total	Including Third-Party Financing			
1	50. Reconstruction of the Karaozek IRBCP	Eastern	BCP	38.7	0	2022	Federal budget	Reduced border crossing and cargo delivery times. Attraction of the freight traffic associated with the trade between Russia and Kazakhstan. Facilitated expansion of the international freight traffic along the Eastern Route of the INSTC
1	51. Reconstruction of the Verkhniy Lars IRBCP (Stage 2)	Western	BCP	25*)	0	2023	Federal budget	Significantly reduced border crossing and cargo delivery times. Facilitated expansion of the international freight traffic between Armenia, the EAEU member states, and third countries. Crossing point's increased throughput capacity will also help expand the freight traffic along the following directions: Russia/Belarus–Georgia, and Russia/Belarus–Turkey

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
1	52. Construction of road infrastructure facilities and a transport and logistics centre near the Verkhniy Lars IRBCP	Western	Roads, BCP	The road infrastructure facilities and the TLC will be located on the Russian side of the Verkhniy Lars IRBCP. There are plans to construct open and closed temporary storage warehouses, including warehouses for perishable goods, area (site) for deployment of a mobile inspection facility, a hotel for drivers, open parking lots, etc., and an e-queue system	20*)	20*)	2024	N/A	Facilitated trans-shipment, storage, and customs clearance of the cargoes carried along the North-South Road Route between Russia, Belarus, Georgia, Armenia, Turkey, and Iran
1	53. Construction of the Samur-II border stations and the Derbent IRBCP	Western	Railways	Construction of the new border station and transfer of the RBCP to that station from the city of Derbent to increase the freight traffic to 15 mln tonnes by 2025 (i.e. +7.1 mln tonnes), and potentially to 20 mln tonnes further; required land plot reserved until 2030	75*)	0	2025–2030	Federal budget	Increased throughput capacity of the crossing point and of the INSTC railway section between Russia and Azerbaijan, reduced time of train passage through the Derbent RBCP
2	54. Electrification of the Rtishchevo–Kochetovka section	Trans-Caspian, Western	Railways	The project will include four stages. Design documentation has been developed; works will be completed over 2022–2023. The project is included in the Comprehensive Trunk Infrastructure Modernisation and Expansion Plan until 2024	684		2024	Federal budget, RZD investment programme	Increased throughput capacity of the main INSTC railway route from Moscow to Astrakhan. Reduced cargo delivery times due to higher travel speeds

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
2	55. Construction of the western bypass of the Saratov Node + strengthening of the Lipovsky–Kurdyum section	Trans-Caspian, Western	Railways	Construction of the new Kurdyum–Ivanovsky electrified railway line (52.2 km) and electrified connecting tracks from the Tatishchevo and Burkin Stations. Construction of the second Lipovsky–Kurdyum electrified track (26.6 km). Construction and reconstruction of interchanges are envisaged at places where rail tracks intersect with roads. The maximum travel speeds at the new sections will reach up to 90 km/h for freight trains and up to 120 km/h for piggyback and refrigerator trains. The project is included in the Comprehensive Trunk Infrastructure Modernisation and Expansion Plan until 2024	760		2025	Federal budget, RZD investment programme	Increased throughput capacity of the main INSTC railway route from Moscow to Astrakhan. Reduced cargo delivery times due to higher travel speeds
1	56. Development and modernisation of infrastructure at the Aksarayskaya–Saratov section	Trans-Caspian, Eastern, Western	Railways	Construction of secondary main tracks, upgrade of power supply equipment, enhancement of existing stations	13.5		2025	RZD investment programme	Increased throughput capacity of approaches to the ports of Astrakhan and Olya, and reduced cargo delivery times
1	57. Reconstruction of the Trubnaya–Verkhniy Baskunchak–Aksarayskaya section with construction of the secondary main track and electrification	Eastern	Railways	Construction of supplementary main tracks at the Trubnaya–Akhtuba section with creation and reconstruction of the signalling, interlocking, and blocking system and the communication system and lengthening of arrival and departure tracks, and construction of a railway bridge across the Akhtuba	25.6*)	0	2023	RZD investment programme	Increased throughput capacity of the line (from 26 to 50 pairs of trains per day), attraction of additional freight traffic to the Eastern Route of the INSTC
1	58. Reconstruction of railway bridges across the Volga at the Aksarayskaya–Astrakhan section	Eastern	Railways	The reconstruction of the bridges will potentially increase travel speeds and weights of the trains using the bridges and ensure carriage of oversized cargoes	13.5*)	0	2025	RZD investment programme	Increased throughput capacity of the section due to higher bridge crossing speed (up to 100 km/h), attraction of additional freight traffic to the Eastern Route of the INSTC

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
1	59. Construction of a multifunctional port logistics complex in the port economic zone in Astrakhan Region	Trans-Caspian	Sea Port	Construction of a sea terminal for transshipment of containers, general cargoes, oil and grain in the special economic zone of Astrakhan Region adjacent to Berths 8 and 9 of the existing sea port of Olya (total design capacity: 2.5 mln tonnes per year). The Comprehensive Trunk Infrastructure Modernisation and Expansion Plan until 2024 includes the capacity of the Russian Caspian ports increasing to 1 mln tonnes by 2024	56.6		2024	Government of Astrakhan Region; Port Logistics Company "Kaspiy"/N/A	Increased processing capacity of the port of Olya, increased freight traffic between the port of Olya and the ports of Turkmenistan and Iran
3	60. Construction of a bridge across the Volga on the Saratov–Ozinki–Kazakhstan Border road (A298)	Western, Trans-Caspian, Eastern	Roads	Construction of the bridge crossing will potentially create a southern bypass around the city of Saratov at the junction of the Saratov–Ozinki–Kazakhstan Border motorway (A298) and the Syzran–Saratov–Volgograd motorway (A228)	1,807.8		2027	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
2	61. Reconstruction of the Syzran–Saratov–Volgograd road (R-228) at the section from the 291st to the 325th kilometre (Stages 3 and 4)	Western, Trans-Caspian	Roads	Reconstruction of multiple sections of the road in Saratov Region	56.5		2023	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
2	62. Reconstruction of the Syzran–Saratov–Volgograd road (R-228) at the section from the 291st to the 325th kilometre (Stages 5 and 6)	Western, Trans-Caspian	Roads	Reconstruction of multiple sections of the road in Saratov Region	47.1		2023	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
2	63. Construction of the Samara–Pugachyov–Engels–Volgograd road (R-229) at the bypass around the city of Pugachyov	Western, Trans-Caspian	Roads	Reconstruction of multiple sections of the road in Saratov Region	111.7		2027	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
②	64. Reconstruction of the Saint Petersburg–Finland Border motorway (A-181) at the section from the 65th to the 100th kilometre	Western	Roads	The project envisages construction and modernisation of the section from the 65th to the 100th kilometre of the “Scandinavia” Motorway (A 181), the main direction of the INSTC and Pan-European Transport Corridor No. 9	71.3		2023	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
②	65. Reconstruction of the Saint Petersburg–Finland Border motorway (A-181) at the section from the 100th to the 134th kilometre	Western	Roads	The project envisages construction and modernisation of the section from the 100th to the 134th kilometre of the “Scandinavia” Motorway (A 181), the main direction of the INSTC and Pan-European Transport Corridor No. 9	205.9		2024	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
②	66. Reconstruction of the Saint Petersburg–Finland Border motorway (A-181) at the section from the 134th to the 160th kilometre	Western	Roads	The project envisages construction and modernisation of the section from the 134th to the 160th kilometre of the “Scandinavia” Motorway (A 181), the main direction of the INSTC and Pan-European Transport Corridor No. 9	605.7		2023–2028	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
③	67. Reconstruction of the “Belarus” Motorway (M-1) at the section from the 45th to the 66th kilometre	Western	Roads	The section is located at the branch of the INSTC leading towards Belarus, Baltic states, Poland, and Germany	20.2		2024	Federal budget of the Russian Federation	Increased throughput capacity and higher travel speeds will potentially reduce cargo delivery times at the INSTC branch leading to Belarus and the countries of Europe
③	68. Reconstruction of the “Belarus” Motorway (M-1) at the section from the 66th to the 84th kilometre	Western	Roads	The section is located at the branch of the INSTC leading towards Belarus, Baltic states, Poland, and Germany	460.4	40.5	2027	RUB31.15 billion of federal budget; RUB 3.06 billion of extra-budgetary sources	Increased throughput capacity and higher travel speeds will potentially reduce cargo delivery times at the INSTC branch leading to Belarus and the countries of Europe

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
③	69. Construction of an interchange at the 59th kilometre of the “Belarus” Motorway (M-1)	Western	Roads	The section is located at the branch of the INSTC leading towards Belarus, Baltic states, Poland, and Germany	28.3		2023	Federal budget	Increased throughput capacity and higher travel speeds will potentially reduce cargo delivery times at the INSTC branch leading to Belarus and the countries of Europe
③	70. Construction of an interchange at the 86th kilometre of the “Belarus” Motorway (M-1)	Western	Roads	The section is located at the branch of the INSTC leading towards Belarus, Baltic states, Poland, and Germany	67.3		2025	Federal budget	Increased throughput capacity and higher travel speeds will potentially reduce cargo delivery times at the INSTC branch leading to Belarus and the countries of Europe
②	71. Construction of the Moscow–Saint Petersburg Motorway (M-11) at the section from the 149th to the 208th kilometre, Stage 3	Western	Roads	The Tver bypass is the last unfinished section at the Express Toll Motorway M-11	824.5	83.5	2024	Federal budget, National Wealth Fund/extra-budgetary sources	Reduced Saint Petersburg–Moscow en route freight time, lower load on the M-10 Motorway load which also supports the INSTC freight traffic
③	72. Construction of the interchange leading to Pulkovo Airport on the M-11 Motorway	Western	Roads	Direct connection between Pulkovo Airport and the M-11 Motorway/INSTC	13.5	13.5	2023	Extra-budgetary sources	Expanded logistics opportunities for delivery of air cargoes to Pulkovo Airport. Reduced INSTC cargo delivery times
②	73. Elimination of bottlenecks along the main transport corridors in the Moscow Region (Stage 1)	Western	Roads	Reconstruction and development of infrastructure facilities where traffic, including freight traffic, is occasionally delayed as it runs along transport corridors, including the INSTC	119.8	0	2027	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
2	74. Elimination of bottlenecks along the main transport corridors in the Moscow Region (Stage 2)	Western	Roads	Reconstruction and development of infrastructure facilities where traffic, including freight traffic, is occasionally delayed as it runs along transport corridors, including the INSTC	20.2	0	2027	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
2	75. New express bypass around the city of Saint Petersburg (KAD-2), Stage 1	Western	Roads	Development, design, and commencement of construction of the second contour of the Ring Road around the city of Saint Petersburg	242.3	N/A	2027	Federal budget, extra-budgetary sources	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
2	76. Reconstruction of the Ring Road around the city of Saint Petersburg at the section from the Gorskaya Station to the Priozyorskoe Highway, Stage 3	Western	Roads	Reconstruction of the existing Ring Road section with expansion of traffic lanes and reconstruction of interchanges	192.5	0	2026	Federal Budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
3	77. Reconstruction of the Saint Petersburg–Murmansk–Pechenga–Norway Border road (R-21 Kola), approach to Murmansk at the section from the 14th to the 19th kilometre	Western	Roads	The section of the Kola Motorway from Saint Petersburg to Murmansk is a branch of the INSTC leading towards the port of Murmansk and Norway. Reconstruction of the roadbed	8.1	0	2023	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
3	78. Reconstruction of the Saint Petersburg–Murmansk–Pechenga–Norway Border road (R-21 Kola), interchange at the 19th kilometre	Western	Roads	The section of the Kola Motorway from Saint Petersburg to Murmansk is a branch of the INSTC leading towards the port of Murmansk and Norway. Reconstruction of an interchange	68.6	0	2025	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
③	79. Reconstruction of the Saint Petersburg–Murmansk–Pechenga–Norway Border road (R-21 Kola), approach to Murmansk at the section from the 51st to the 68th kilometre	Western	Roads	The section of the Kola Motorway from Saint Petersburg to Murmansk is a branch of the INSTC leading towards the port of Murmansk and Norway. Reconstruction of the roadbed	26.9	0	2023	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
②	80. Construction of a crossover with directed exits at the 672nd kilometre of the Moscow–Saint Petersburg Motorway (M-10 Russia)	Western	Roads	The motorway is a part of the main road route of the INSTC. The crossover will be built in Leningrad Region at a section with heavy traffic (672nd kilometre)	37.7	0	2023	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
②	81. Construction of the Tambov–Volgograd–Astrakhan road (R-22 Caspian) at the bypass around the city of Volgograd, Stage 1	Western, Trans-Caspian	Roads	Elimination of a bottleneck by rerouting traffic around Volgograd	135.3	0	2024	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
②	82. Construction of the Tambov–Volgograd–Astrakhan road (R-22 Caspian) at the bypass around the city of Volgograd, Stage 2	Western, Trans-Caspian	Roads	Elimination of a bottleneck by rerouting traffic around Volgograd	219.4	0	2024	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
②	83. Construction of the Tambov–Volgograd–Astrakhan road (R-22 Caspian) at the northern bypass around the city of Astrakhan	Western, Trans-Caspian	Roads	Elimination of a bottleneck by rerouting traffic around Astrakhan	141.3	0	2027	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
①	84. Reconstruction of the road bridge across the Fars (approach to the city of Maykop)	Western	Roads	The bridge is located at the 72nd kilometre of the motorway (R-217 “Caucasus”) which is key to road freight traffic along the Western Route of the INSTC	1.2	0	2023	Federal budget	Increased travel speeds and improved traffic safety. Reduced INSTC cargo delivery times

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
1	85. Construction of the bypass road around the city of Gudermes	Western	Roads	Construction of the section from the 27th to the 34th kilometre of the Vladikavkaz–Makhachkala–Azerbaijan Border motorway (R-217 “Caucasus”) (Stages 1, 2, and 3) which is key to road freight traffic along the Western Route of the INSTC. The project will potentially reroute transit traffic from the street network of the city of Gudermes	55.2	0	2024	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
1	86. Construction of the bypass road around the city of Vladikavkaz	Western	Roads	The new section (from the 10th to the 25th kilometre) (Stages 2 and 3) is located at the Vladikavkaz–Makhachkala–Azerbaijan Border motorway (R-217 Caucasus) which is key to road freight traffic along the Western Route of the INSTC. The approach to the city of Vladikavkaz is a bottleneck both for the entire Western Route of the INSTC, and for the Russia–Georgia–Armenia road route through the Verkhniy Lars IRBCP	154.8	0	2024	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times. Increased throughput capacity of the Russia–Georgia–Armenia route through the Verkhniy Lars IRBCP
2	87. Construction of the western bypass road around the city of Grozny	Western	Roads	The new section is located at the R-217 (“Caucasus”) motorway which is key road freight traffic along the Western Route of the INSTC	164.2	0	2027	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
1	88. Construction of the northern bypass road around the city of Makhachkala	Western	Roads	The new section is located at the Astrakhan–Makhachkala road (R-215) which connects the “Caspian” Motorway (R-22) and the “Caucasus” Motorway (R-217), and is key to road freight traffic along the Western Route of the INSTC. The Comprehensive Trunk Infrastructure Modernisation and Expansion Plan until 2024 envisages reconstruction of federal motorways at approaches to sea ports, with an increase of the throughput capacity of such sections to 20,000 vehicles per day by 2024	417.3	0	2027	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
1	89. Construction of the bypass road around the city of Derbent	Western	Roads	Construction of a new 32-km section at the Vladikavkaz–Makhachkala–Azerbaijan Border motorway (R-217 “Caucasus”) to reroute transit traffic around the city of Derbent will potentially reduce travel times, fuel consumption rates, and GHG emissions along the Western Route of the INSTC	400*)	0	2025	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
1	90. Construction of the bypass road around the city of Khasavyurt	Western	Roads	The new 21-km section is located at the Vladikavkaz–Makhachkala–Azerbaijan Border motorway (R-217 “Caucasus”). Its commissioning will potentially reroute transit traffic around the city of Khasavyurt and reduce travel times, fuel consumption rates, and GHG emissions along the Western Route of the INSTC	270*)	0	2025	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
3	91. Reconstruction of the road approach to the Kazan Airport	Eastern	Roads	The section is located from the 0th to the 6th kilometre of the Kazan–Orenburg–Kazakhstan Border road (R-239). The road is a part of the Orenburg Highway connecting Russia and Kazakhstan	22.9	0	2023	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times

	Project	Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
3	92. Reconstruction of the Kazan–Orenburg–Kazakhstan Border road (R-239) at the approach to the settlement of Sokury (section from the 20th to the 43rd kilometre).	Eastern	Roads	Reconstruction of the approach to the Kazan Airport along the Orenburg Highway connecting Russia and Kazakhstan	290.8		2023	Federal budget	Increased throughput capacity and travel speeds, improved traffic safety. Reduced INSTC cargo delivery times
1	93. Construction of universal combined river-sea navigation bulk carriers/container ships of the Volga-Don Max class	Trans-Caspian	Maritime Transport	Construction of combined river-sea navigation vessels to transport containers and general cargoes. Vessel capacity is supposed to be 429 TEU for river navigation, and 531 TEU for sea navigation. There were no firm construction orders as of mid-July 2022; the value of one vessel is estimated by experts at \$20 million. Vessels required to establish lines from the Russian Caspian ports: about 20	400*)		N/A	N/A	Expansion of container traffic from the Russian ports of Astrakhan and Olya and from the Volga ports towards Iranian ports, including regular services with scheduled port calls
2	94. Construction of the new sea port of Lagan at the Caspian Sea (Republic of Kalmykia)	Trans-Caspian	Sea Port	Port construction planning started in 2020; the port is supposed to have 32 transshipment terminals, elevators with an aggregate storage capacity of 300,000 tonnes for concurrent storage of grain, and a liquid cargo terminal with a capacity of 500,000 tonnes. Total processing capacity of the port: 12.5 mln tonnes, including 5 mln tonnes of containers	376.9		N/A	Federal budget/ extra-budgetary sources	Lifted draft limitations typical for the ports of Olya and Astrakhan due to accumulation of sediment at the bottom of the Volga-Caspian Sea Shipping Canal; potential increase in the container freight traffic along the Trans-Caspian Route
2	95. Construction of the Tsem dolina–Portovaya Street (Novorossiysk) express motorway	Western	Road	The new 13-km express motorway is supposed to reroute transit traffic from the city street network and connect the M-4 Don Motorway and the Novorossiysk–Kerch Motorway. The project is to be launched under a concession agreement	1,246.0	1,246.0	N/A	Extra-budgetary sources	Increased passenger car and truck travel speeds. Increased throughput capacity of road approaches to the ports of the Azov/ Black Sea basin

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
1	96. Comprehensive reconstruction of the Moscow Canal infrastructure	Trans-Caspian	Inland Waterways	There are plans to redesign and upgrade facilities at hydro-power installations Nos. 2, 3, 4, and 9 at Pererva, Severka, Sofyino, and Rybinsk, and Substation Iksha-2. The project is included in the Comprehensive Trunk Infrastructure Modernisation and Expansion Plan until 2024	269.2	-	2024	Federal budget	Throughput capacity of the canal increased to up to 25 mln tonnes per year. Improved shipping safety
1	97. Construction of a low-head hydropower installation in Nizhny Novgorod	Trans-Caspian	Inland Waterways	Restoration of navigation at the 40-km section between Nizhny Novgorod and Gorodets. Steps to ensure engineering protection and reduce the level of subsurface waters in the area of the proposed reservoir. The project is included in the Comprehensive Trunk Infrastructure Modernisation and Expansion Plan until 2024	296.1	-	2024	Federal budget	Throughput capacity of inland waterways increased by 36 mln tonnes. Length of inland waterway sections with limited throughput capacity reduced by 2,700 km
2	98. Construction of the Bagaevsky Hydropower Installation on the river of Don	Trans-Caspian	Inland waterways	Joining the ports of the Azov/Black Sea basin and the Caspian Sea basin, assuring reliability and safety of large-tonnage navigation along the Lower Don. The project is included in the Comprehensive Trunk Infrastructure Modernisation and Expansion Plan until 2024	578.8	-	2024	Federal budget	Throughput capacity of inland waterways increased by 19 mln tonnes. Length of inland waterway sections with limited throughput capacity reduced by 600 km
1	99. Adoption of regulations governing inland waterways and navigational hydraulic facilities	Trans-Caspian	Inland waterways	Elimination of infrastructural barriers. Enforcement of a uniform depth of 4 metres in the inland waterways comprising the Unified Deep-Water System for efficient large-tonnage vessels	829.7	-	2024	Federal budget	Throughput capacity of inland waterways increased by 14.3 mln tonnes. Length of inland waterway sections with limited throughput capacity reduced by 8,000 km

Project		Corridor Route	Transport	Project Description, Role in the INSTC Development	Project Value, \$ millions		Time-frame, years	Project Initiator/ Participants	Anticipated Outcome
					Total	Including Third-Party Financing			
Turkmenistan									
1	100. Construction of the Turkmenbashi–Garabogaz–Kazakhstan Border road and a new bridge across the Garabogazköl Bay	Eastern	Roads	The proposed motorway (225 km) should comply with Category INSURANCE standard, and have four lanes [each way]. The width of the earth roadbed will more than double to 22.5 m, while the width of the surfaced portion will increase to 15 m. In addition, a new bridge is to be built across the Garabogazköl Bay; the length of the bridge will be over 350 m	450		2029	Government of Turkmenistan/ N/A	Increased throughput capacity and higher speeds along the Eastern Road Route of the INSTC
1	101. Modernisation and upgrade of the Ak-Yayla/Incheh Borun railway border crossing point at the border between Turkmenistan and Iran	Eastern	BCP	The Ak-Yayla/Incheh Borun RBCP is the key element of the Eastern Railway Route of the INSTC, as the break-of-gauge point (1,435 mm/1,520 mm) and the place for transshipment of cargoes, including grain. The project anticipates an increase in arrival and departure tracks; the expansion of cargo transshipment platforms and temporary storage warehouses; and additional handling equipment	75*)		2029	Government of Turkmenistan/ N/A	Increased throughput capacity of the border crossings; higher freight traffic along the Eastern Railway Route of the INSTC
2	102. Electrification and modernisation of the Turkmenabat–Mary railway line	Eastern	Railways	The 250-km Turkmenabat–Mary railway line is a branch of the INSTC connecting Iran and Uzbekistan through Turkmenistan. Electrification and modernisation of the Turkmenabat–Mary line is Stage 1; Stages 2 and 3 envisage modernisation of the Mary–Ashgabat and Ashgabat–Turkmenbashi sections, respectively	100		N/A	Government of Turkmenistan/ AsDB — preparation of the feasibility study (\$750,000)	Higher travel speeds and increased throughput capacity, improvement of environmental operating metrics of the line

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Acronyms and Abbreviations

ADB — Asian Development Bank	UNESCAP — United Nations Economic and Social Commission for Asia and the Pacific
ADY — Azerbaijan Railways	UNOHRLLC — United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States
AEO — Authorised Economic Operators	UTLC ERA — United Transport and Logistics Company — Eurasian Rail Alliance
AIIB — Asian Infrastructure Investment Bank	WCO — World Customs Organisation
APAC — Asia-Pacific Region	\$ — United States dollar
ASYCUDA — Automated System for Customs Data	% — percent
BCP — border crossing point	km — kilometre
CAREC — Central Asia Regional Economic Cooperation	N/A — Not available
CCTT — International Coordinating Council on Trans-Eurasian Transportation	
CIM/SMGS — unified rail consignment note in accordance with Annex B to the Convention on International Carriage by Rail (COTIF) and the Agreement on International Railway Freight Transportation	
CIS — Commonwealth of Independent States	
CMR — Convention on the Contract for the International Carriage of Goods by Road	
COVID-19 — coronavirus infection 2019	
EAEU — Eurasian Economic Union	
EBRD — European Bank for Reconstruction and Development	
ECO — Economic Cooperation Organisation	
EDB — Eurasian Development Bank	
EFSD — Eurasian Fund for Stabilisation and Development	
EU — European Union	
FCS — Federal Customs Service of the Russian Federation	
FEU — forty-foot equivalent unit	
INSTC — International North-South Transport Corridor	
IRBCP — international road border crossing point	
ITC — international transport corridor	
KTZ — Kazakhstan Railways (Kazakhstan Temir Zholy)	
MDB — multilateral development bank	
MIID — Ministry of Industry and Infrastructural Development of the Republic of Kazakhstan	
NSR — Northern Sea Route	
OBOR — “One Belt, One Road” Initiative	
PRC — People’s Republic of China	
RAI — Islamic Republic of Iran Railways	
RBCP — railway border crossing point	
RZD — Russian Railways	
SPECA — Special Programme for the Economies of Central Asia (UN)	
TEU — twenty-foot equivalent unit	
TITR — Trans-Caspian International Transport Route	
TLC — Transport and Logistics Center	
TRACECA — Transport Corridor Europe-Caucasus-Asia	
UN — United Nations Organisation	
UNECE — United Nations Economic Commission for Europe	



Macroeconomic Review (RU)

A regular EDB publication, which provides an overview of the current macroeconomic conditions in the EDB member states and estimates their development in the short-term perspective.



Macroeconomic Outlook (RU/EN)

The Region's Economies in the New Reality

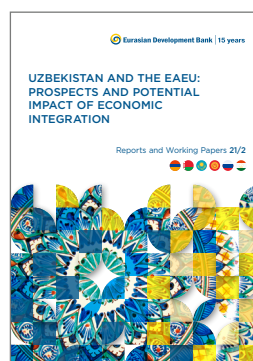
The analysis summarises economic developments in the Bank's member states in 2022 and provides key macroeconomic projections for the region's countries for 2022–2024.



Report 21/1 (RU)

Promoting the Role of the EAEU Currencies in Global Transactions

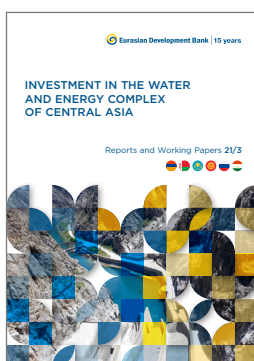
EAEU currencies service around 2% of global trade. As for the EAEU countries, payments in their currencies have notably increased over the past seven years — their share in trade flows jumped from 63% in 2013 to 74% in 2019.



Report 21/2 (RU/EN)

Uzbekistan and the EAEU: Prospects and Potential Impact of Economic Integration

The report estimates the potential effects of Uzbekistan's integration with the EAEU and outlines promising areas for cooperation between the current Union member states and Uzbekistan.



Report 21/3 (RU/EN)

Investment in the Water and Energy Complex of Central Asia

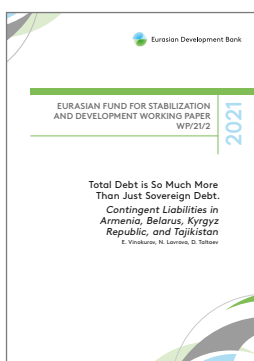
The report analyses Central Asia's water and energy complex after 30 years of independence of the five Central Asian countries (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan) and assesses their cooperation in the water and energy complex.



Working Paper WP/21/1 (RU/EN)

Evolution of Tools and Approaches within the Enlarged Global Financial Safety Net in Response to the COVID-19 Crisis

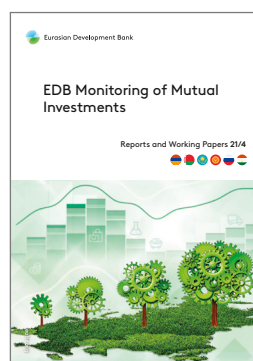
This working paper provides the analysis how the GFSN responded to pandemic on global level and on regional level (in the EFSD countries).



Working Paper WP/21/2 (RU/EN)

Total Debt is So Much More Than Just Sovereign Debt. Contingent Liabilities in Armenia, Belarus, Kyrgyz Republic, and Tajikistan

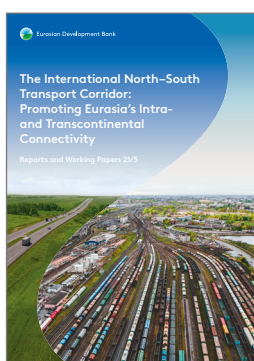
This study aims to contribute to understanding the potential risks and impacts of both explicit and implicit contingent liability shocks on government fiscal and debt positions in the EFSD recipient countries.



Report 21/4 (RU/EN)

EDB Monitoring of Mutual Investments

Mutual investments in Eurasia, calculated using a new methodology, reach US \$46 billion. FDI has been growing steadily since 2016.



Report 21/5 (RU/EN)

The International North–South Transport Corridor: Promoting Eurasia's Intra- and Transcontinental Connectivity

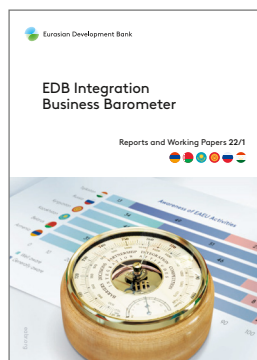
Linking up the INSTC with Eurasian latitudinal corridors could ensure around 40% of container traffic.



Joint report by the Eurasian Development Bank and the Global Energy Association (RU/EN)

Green Technologies for Eurasia's Sustainable Future

The report is prepared by the key international industry experts and young scholars. It contains the results of technical research aimed at solving today's energy challenges and helping to reduce the carbon footprint in Eurasia.



Report 22/1 (RU/EN)

EDB Integration Business Barometer

About 73% of companies feel positive about the EAEU and say it makes doing business easier.



Eurasian Development Bank

**RESEARCH DEPARTMENT
EURASIAN DEVELOPMENT BANK**

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