Valdai Discussion Club Report

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Eurasia's Iron Frame: Achievements, Problems and Prospects for Continental Connectivity

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Introduction

Historically, transport links have played the most important role in consolidating geopolitical spaces, nation states, and groups of states. The oldest examples of statehood arose along rivers, so rivers almost never served as natural boundaries. As humankind evolved, it enhanced the natural capabilities for interconnection between regions by building roads, and in the 19th century, rail, and then air services in the 20th century.

The decline of large states and wider unions was accompanied by the degradation of their internal transport systems. The best-known example of this is the Great Silk Road going unused for several centuries, a link that had connected Eurasia but dried up amid conflicts between states and the development of alternatives for global commerce. For several centuries, land routes in Eurasia were replaced by maritime shipping routes, which supported the overwhelming military domination of Europe and then America.

That is why the myth of Central Eurasia's "continental curse" is one of the most persistent and why these countries became adamant about gaining access to the sea. They needed to become part of globalisation one way or another. Russia, as the largest Eurasian power, spent a significant part of its imperial energy on vying for the seas, often to the detriment of development in other areas. This centuries-old pattern continues to convince land-locked states of their inferiority and inevitable dependence on countries with access to trade routes via the sea. Access to sea trade routes is often viewed as a panacea and a guarantee of participation in international economic affairs with all the benefits they provide.

However, in reality, access to the sea per se is not that critical for joining international economic affairs or being shut out of them. Sea trade routes are not open to everyone and can be unsafe. They can make users dependent on powers with military capability to control maritime expanses. However, such powers strongly rely on their ability to control the sea rather than on creating conditions for peace on land, and are therefore far less likely to consider others' interests. So all a country needs is the widest possible choice of routes and access to potential trade partners.

The development of trade routes overland is up to countries that are neighbours and therefore have more reason to agree. The main conditions for this are an objective economic context, political circumstances and the decision by governments striving to unlock the potential of their economies through cooperation with their neighbours. There is no country in today's Eurasia that could and would try to establish a unified order across the continent and control it. This means countries need to negotiate, given the increasingly obvious benefits of surface-based trade routes between Asia, Central

Asia, Russia and Europe. The agreements reached between them cannot be isolated from a more global system of economic ties either.

In the past few years, the economic feasibility of such cooperation has manifested itself in the consistent expansion of through traffic, or transiting, which has promoted the development of related infrastructure and industries. So far, Russia, as the largest geopolitically and technologically advanced player, is seeing most of the benefits from the exponential growth of surface transport. However, one of Russia's most important interests is strengthening its neighbours' sovereignty and economic viability. The countries in Central Asia, small and medium-sized states, apprehensive of remaining in the peripheral shadow of Russia, which has objective advantages, are trying, at least symbolically, to diversify their foreign economic relations and their transport and logistics capabilities to promote the above relations. This means Russia is interested in the development of the neighbouring economies and needs to facilitate the Central Asian countries' connectivity to its own railway system, and also help them develop their own systems, which would make the railway network the most important connectivity factor in Greater Eurasia with a resilience against global challenges.

Here are some of the most important factors that support the feasibility of developing Eurasia's rail-based transport and logistics systems. **First**, the region has been politically stable for some time. The only conflict zones are in its peripheral regions – Ukraine, the Middle East, South Asia and Afghanistan. **Second**, China continues to pursue an export-oriented and resource-importing policy, which formed the basis for the Belt and Road concept Beijing launched in 2013. **Third**, Eurasia's new economic integration has significantly simplified the regulation of land trade. **Fourth**, new technological opportunities are available for land trade based on rail transport.

Central Asia on the Eurasian logistics map

A long period of relative political stability in the central part of Eurasia (not a single serious military clash between states in the 30 years since the end of the Cold War and the USSR) and a shift in international trade routes have supported the region's integration into the global and macro-regional transport and logistics system. This is still relatively new expansion. Relative, because in Central Asia, railway corridors began to develop and function quite effectively during the period these countries were part of the USSR. The common Soviet heritage, the transport system that started with the Turkestan-Siberian railway, is still in service. Built

from 1927 to 1930, the Turksib was one of the central construction projects in the first Soviet five-year plan and aimed to tie Soviet territory together in the same way the Trans-Siberian Railway consolidated Russia at the end of the 19th century.

However, until recently, Central Asia lacked the opportunity or the need to use its transiting potential outside the region or its ties with Russia. After the Soviet Union, its transport and logistics potential was limited by the difficulties of the transition period and the impossibility of full integration into a global economy dominated by sea trade routes and major coastal players – the United States, Europe, and later also China. Naturally, immediately after gaining independence, the region's countries began to look for ways out of the unnatural stagnation imposed on them by geographical and historical realities. But it was only recently that global transport and logistics processes encouraged them to realise these aspirations.

This might sound aggressive, but in recent years, we have seen something we might call the onset of a Eurasian railway revolution. Due to objective trends in global markets, in a few years, Central Asia will improve connectivity between East and West through the highly efficient China – Central Asia – Russia – Europe railway route, and will also become a transit hub for new transport routes running in all four cardinal directions.

The Central Asian governments are noticeably upping their efforts to turn the region into a crossroads of transport corridors that connect East with West, North with South, and to link their strategic future through common regional efforts and actions. To accomplish this, they are increasing their transit capabilities to international significance. The total length of the railway lines in the Central Asian countries exceeds 22,000 kilometres. Kazakhstan has the largest and most comprehensively operated railway system accounting for 66 percent of the region's total railway route-kilometres and it handles 84 percent of all freight traffic. About 18 percent of regional railways cross Uzbekistan, accounting for about 11 percent of all traffic. Turkmenistan has approximately 12 percent of the region's railways and 4 percent of all traffic[1].

If the ambitious projects in this area are successfully implemented, the prospects for turning Central Asia into a fast-growing region will

[1] Central Asia in the system of international transport corridors: A view from Uzbekistan // CIS portal. 11.08.2018. URL: https://e-cis.info/news/566/62962/?sphrase_id=22646

become more realistic. This should also benefit Russia, which controls the main surface trade routes in Eurasia. Since Moscow is not seeking to increase its responsibility for its neighbours' survival, it should be interested in promoting opportunities for their independent development.

Driving the railway boom in Eurasia

The explosive development of rail traffic from China to Europe began in 2011 when customs procedures at the borders of Russia, Kazakhstan and Belarus were integrated as part of the Customs Union between them. This cut the costs of document management and logistics, and significantly decreased shipping times between China and Europe. As a result, in 2020, the volume of rail traffic between China and Europe through Kazakhstan and Russia set a new record[2].

According to *China Railway Express,* the Chinese state-owned railway operator, 12,400 trains travelled this route last year, up 50 percent from a year earlier[3]. They transported 1.13 million 20-foot equivalent units (TEU), up 56 percent from a year earlier. Of that amount, 800,000 TEU went directly to the European market, and the remaining 313,000 TEU, to the Middle East, including Afghanistan and Pakistan. Transcontinental trains heading west leave almost every hour, and eastbound trains to China, every two hours.

Rail container traffic along the China – Russia – Central Asia – Europe route was not affected by the coronavirus pandemic. According to Chinese shipping industry reports, over 33,000 container trains have travelled between China and Europe in ten years, 53 percent of them through the Dostyk-Alashankou and Altynkol-Khorgos border checkpoints[4].

In May 2021, container traffic on the China – Russia – Central Asia – Europe route totalled 131,000 TEU (up 40 percent from the same period

[2] Russian Railways records an increase in New Silk Road traffic // Eurasian Rail Alliance UTLC official website. 29.03.2021. URL: https://utlc.com/smi/rekordnyy-tranzit/?PAGEN_2=5

[3] 中欧班列 [China Railway Express] // Zhuanlan 03.03.2021. URL: https://zhuanlan.zhihu.com/p/354338082

[4] Rail transportation China – Europe // SeaNews. 07.07.2021. URL: https://seanews.ru/2021/07/07/zheleznodorozhnye-perevozki-kitaj-evropa/

THE VOLUME OF CONTAINER TRAFFIC ON THE CHINA–EUROPE–CHINA, 2016–2020

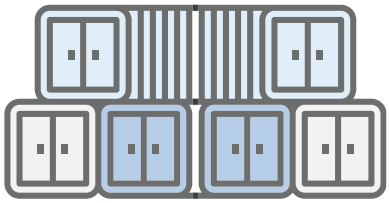
≈7.9 times

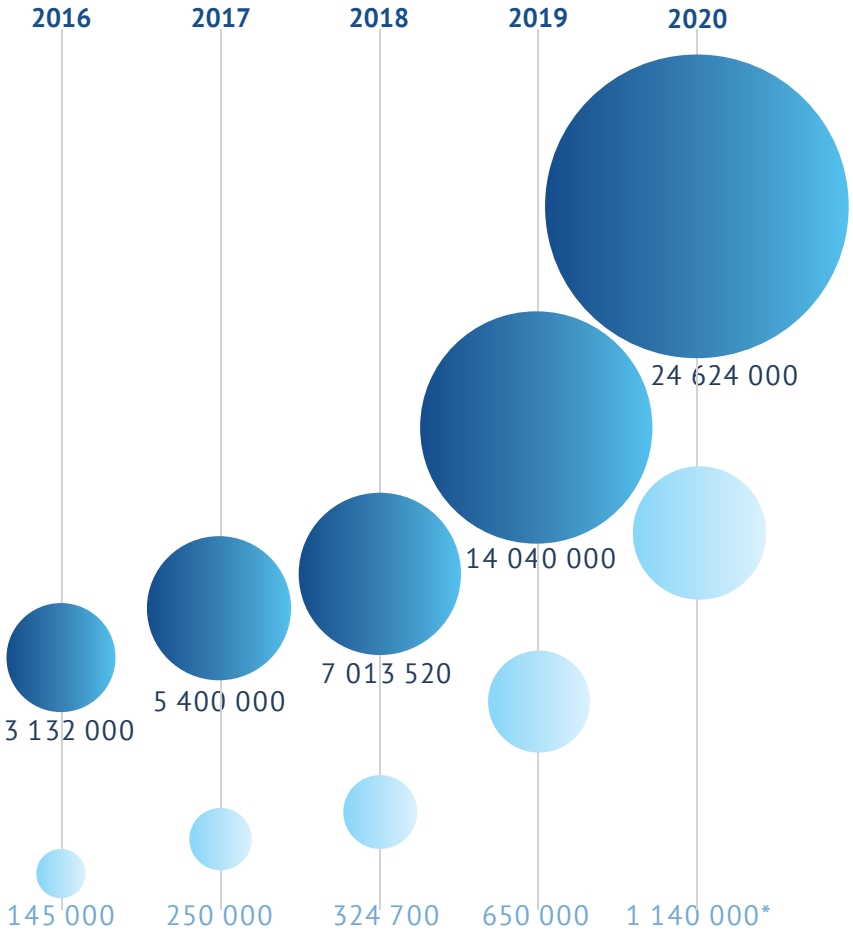
GROWTH

in container traffic volumes along the China–Europe–China route, 2016–2020 (in tonnes)

TONS
(based on 1 TEU = 21.6 tons)

TEU





Source: scio.gov.cn

*This figure includes all Chinese shipments across the western and northern borders, including China's trade with Central Asian countries, Iran and Afghanistan.

in 2020). There are 61 railway routes in the Europe to China direction, and 84[5] from China to Europe. The goods shipped from China to Europe by rail are sent to more than 160 cities in 22 countries.

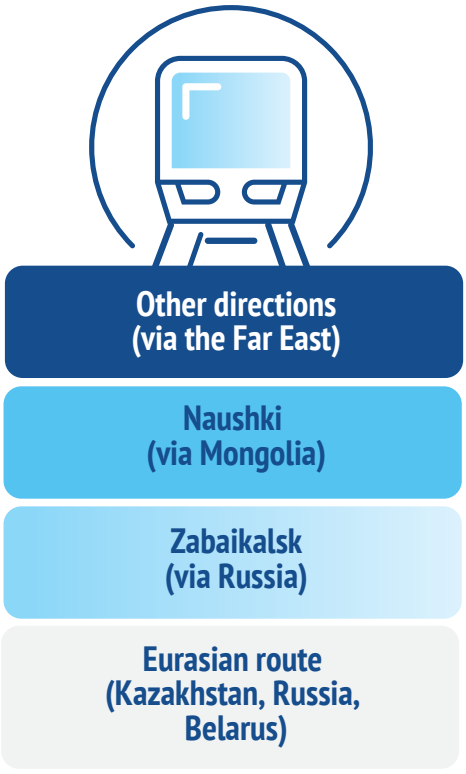
Rail freight traffic set records because it is much cheaper than airfreight and much faster than shipping by sea. The cost of rail transport from China to Europe is about 80 percent less than by air and 75 percent faster than by sea. The use of rail transport for high-value goods that do not require ultra-fast delivery is especially attractive. These goods are heavily insured and require a certain quality of transport, while sea transport requires freezing working capital for a longer time, resulting in additional costs to consumers.

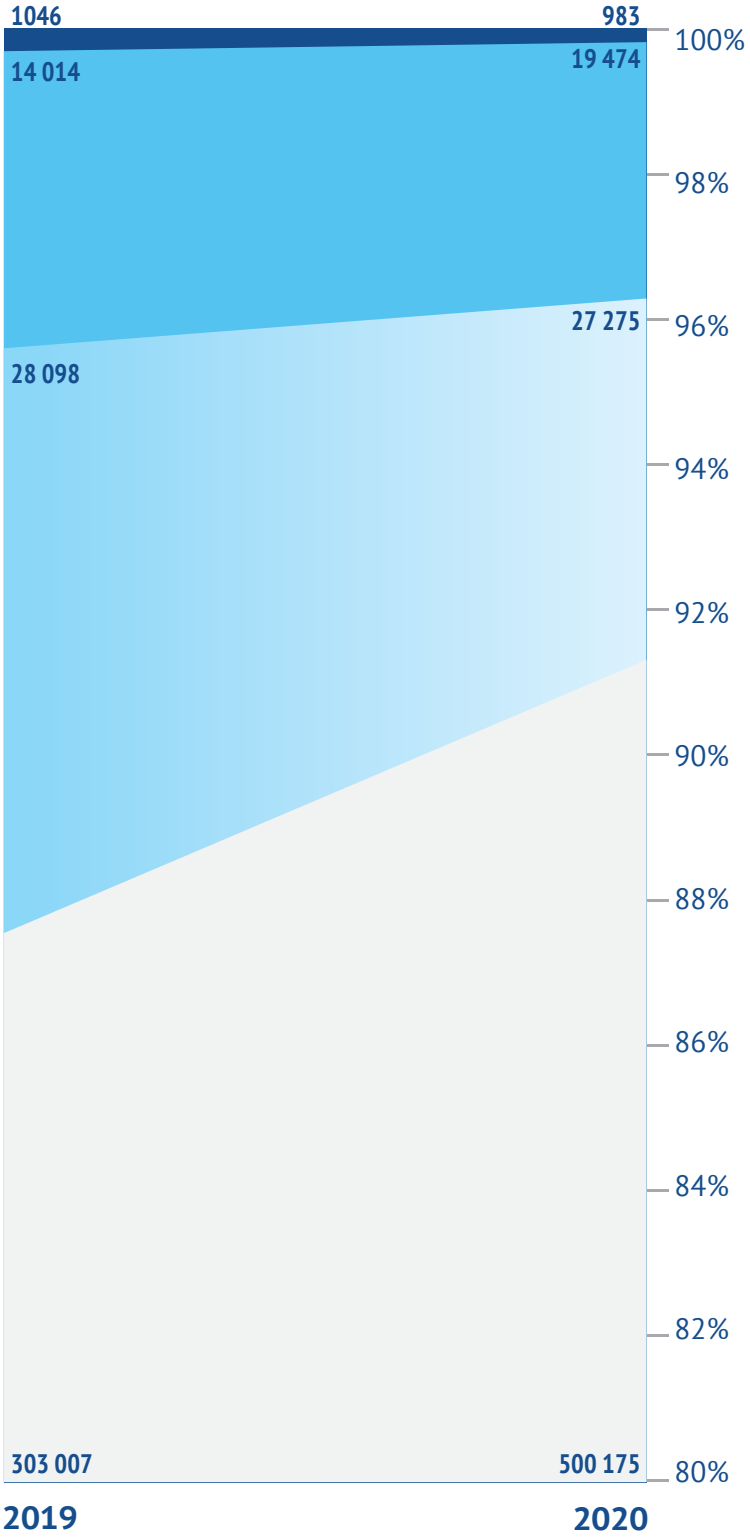
[5] Problems and Prospects of Container Transportation // Morskiye Vesti Rossii 02.11.2020. URL: http://www.morvesti.ru/analitika/1685/86587/

GROWTH IN POPULARITY OF THE EURASIAN ROUTE, 2019–2020

Growth in popularity
of the EURASIAN route –
more than
1.5 times

THE SHARE
of the main routes
of transit rail transportation,
China–Europe–China

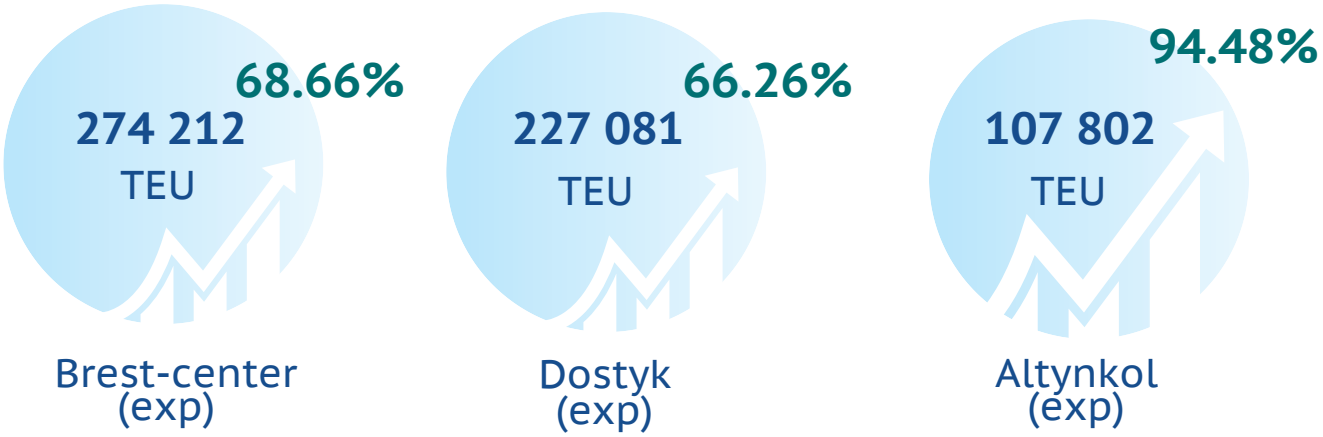




Source: https://index1520.com/upload/medialibrary/04f/ERAI-Jan-ru-2.pdf

THE TOTAL VOLUME OF EXPORTED AND IMPORTED CONTAINERS ALONG THE CHINA–EUROPE–CHINA (MAIN POINTS)

January–December 2020



Source: https://index1520.com/upload/medialibrary/04f/ERAI-Jan-ru-2.pdf

In addition to cost, surface transport, and railway transport in particular, have a natural advantage over the sea. Sea air and high oceanic humidity have a negative impact on most high-value goods (electronics and food), which can be avoided by using overland routes from China to Europe via Kazakhstan and Russia. Trains emit significantly less carbon dioxide than aircraft. For example, according to *Fujitsu* and *Siemens*, their green trains produce 95 percent less carbon dioxide, non-methane hydrocarbons and nitrogen oxide emissions than air transport. This means that, taking into consideration the new EU carbon tax, the cost of air travel will soar even higher in the near future.

Until recently, about 98 percent of all shipping between China and the EU was by sea, with air and rail accounting for only 1.5–2 percent and 0.5–1 percent, respectively[6]. However, the exponential growth in rail traffic in the last decade, as it doubled every two years, has completely revised the generally accepted standards. Considering that the annual traffic between China and Europe is about 20 million

[6] UTLC ERA reports over 100 percent increase in first-half volumes // Eurasian Rail Alliance UTLC official website. 05.04.2021. URL: https://www.utlc.com/news/obem-perevozok-otlk-era-v-i-kvartale-2021-goda-vyros-bolee-chem-v-2-raza-/

TEU, the current share of rail traffic is already 6-8 percent of the total[7]. These figures seemed incredible in the mid-2010s when the Eurasian Economic Union countries decided to merge the EAEU and China's Belt and Road Initiative.

Development of new transport routes

East – Northwest

About half of the high volume cargo traffic along the China – Central Asia – Russia – Europe route has been using railways across Kazakhstan, which were built quite recently, due to their high connectivity with Russian railways. According to the national railway company, Kazakhstan Temir Zholy (KTZ), freight traffic through the border checkpoints between China and Kazakhstan increased almost 50 percent and exceeded 20 million tons last year[8]. The volume of transported goods reached almost 500,000 TEU. On average, 30 trains or about 2,000 railcars cross through the border stations between Kazakhstan and China every day.

In 2021, we can well expect the same or even higher volume. According to the Chinese customs report, Alataw Pass, a major rail port in northwest China's Xinjiang Uygur Autonomous Region, processed 2,388 freight trains as of May 29, 2021, up 46.9 percent from last year[9]. China-Europe trains have already transported over 1 million tonnes of goods, up 67.3 percent over the same period in 2020.

[7] Chart: Transportation volume, thousand TEU // Eurasian Rail Alliance UTLC official website. 01.08.2021. URL: https://www.utlc.com

[8] Mezhdu Kazakhstanom i Kitaem za 11 mesyatsev pochti vdvoe vyros obyem gruzovykh zh/d perevozok [Rail freight traffic between Kazakhstan and China almost doubled in 11 months]. Centre for Transport Strategies, 11.12.2020. URL: https://cfts.org.ua/news/2020/12/11/mezhdu_kazakhstanom_i_kitaem_za_11_mesyatsev_pochti_vdvoe_vyros_obyem_gruzovykh_zh_d_perevozok_62372

[9] Pereval Alatau v Sin'tszyane propustil na 47% bol'she poezdov Kitay-Evropa [47 percent more trains passed through Alataw Pass in Xinjiang] // Regnum. 31.05.2021. URL: https://regnum.ru/news/3283359.html

As many as 22 destination routes cross Kazakhstan now, connecting 13 countries including Germany, Poland, Belgium and Russia. Vehicles and auto components, household appliances and consumer goods are mainly exported through Kazakhstan, while imports include cars and auto parts, cotton yarn and timber.

This booming growth in traffic has quickly used up the operational capacity of the border checkpoints between China and Kazakhstan, Dostyk-Alashankou and Altynkol-Khorgos. On March 1, 2021, Kazakhstan had to suspend traffic at the border with China in order to free up capacity for China-Europe trains. KTZ released a special statement reporting that "the number of empty trains at the ports is increasing and it impacts the operational capacity of Kazakhstan's rail network negatively."[10]

Uzbekistan is also showing an increasing interest in becoming a regional transport hub. In February 2021, an agreement was signed on the construction of the Mazar-i-Sharif – Kabul – Peshawar railway. The new route, 295 kilometres shorter than alternative routes through the border points of Khorgos and Dostyk in Kazakhstan, is expected to drastically cut travel times. With an estimated cost of $5 billion, the success of such projects depends entirely on funding from external sources.

Given that the number of trains between China and Europe has begun to exceed the capacity of Kazakhstan's railway system, Russia might theoretically face the same congestion problem; this suggests that interested states should make additional efforts to develop railway infrastructure connecting China and Europe through Central Asia *and* through Russia.

East – Southwest

Thanks to special support and significant investments from Kazakhstan and Turkmenistan, new railway routes have been developed from Central Asia, running through Iran and near the Caspian Sea to the South Caucasus and on to the Black and Mediterranean seas, Turkey and Europe. Two new routes from Central Asia to western seaports are

[10] Kazakhstan snyal zapret na eksport gruzov v Kitay [Kazakhstan lifts ban on cargo exports to China]// Kapital: tsentr delovoy informatsii. 15.03.2021. URL: https://kapital.kz/economic/94081/kazakhstan-snyal-zapret-na-eksport-gruzov-v-kitay.html

being used, albeit with restrictions – via Azerbaijan and Georgia to the Black Sea, as well as via Iran and Turkey to the Mediterranean and Black seas. But the traffic there is yet incomparable to the main northern route.

In the late 1990s, the Turkmen and Iranian railways were linked. This allowed the Central Asian countries to transport goods through the Iranian port of Bandar Abbas. Furthermore, the cutting-edge Kazakhstan – Turkmenistan – Iran line was completed and opened for service in 2014. Known as the North-South Transnational Corridor, the 677 kilometre railway line connected Central Asia with Iran (except for the southern part of the country, which still does not have rail service). The project is estimated at $620 million and is to be jointly financed by Kazakhstan, Turkmenistan and Iran.

At the same time, the Central Asian countries have also invested in the development of the South Caucasus transport corridor. The new Baku-Tbilisi-Kars (BTK) railway officially opened in October 2017. The total length is 826 kilometres, and the line is to carry 1 million passengers and over 15 million tonnes of cargo annually. The volume of freight shipped has been growing ever since the new line began operating. At the beginning of 2021, 21,260 TEU have already been transported on the line[11]; in 2020, it was 10,779 TEU. The project is part of a broader plan to link Central Asian railway systems to the South Caucasus and Europe via Turkey. Due to access through Iran, it was connected to the Turkish railway network with further access to the Mediterranean and Black seas.

Furthermore, the Uzbekistan – Turkmenistan – Iran – Oman route could offer Central Asia another option to access the Indian Ocean. This corridor could connect Central Asia with Iranian ports in the Persian and Oman gulfs. This transport route was later extended to Kazakhstan and India, which joined the project.

In turn, Uzbekistan is interested in launching a China – Kyrgyzstan – Uzbekistan railway which could become an important link as part of the East-West and North-South corridors. It would open new markets for

[11] Po zheleznoy doroge Baku – Tbilisi – Kars perevezen 15-tysyachnyy konteyner [Baku-Tbilisi-Kars railway carries the 15,000th container]. Azerbaijan State News Agency, 14.12.2020. URL: https://azertag.az/ru/xeber/Po_zheleznoi_doroge_Baku_Tbilisi_Kars_perevezen_15_tysyachnyi_konteiner-1665537

manufacturers from three countries, would transport goods from China to Eastern Europe and the Middle East via Kyrgyzstan and Uzbekistan, and would provide the landlocked states in Central Asia with access to international seaports.

Uzbekistan considers cooperation with the Caspian states one of its strategic priorities and is interested in a new impetus to multilateral relations. Tashkent included joining the BTK in its comprehensive programme to improve the country's infrastructure and diversify foreign trade routes for the transport of goods for 2018–2022. A Navoi – Turkmenbashi – Baku – Tbilisi – Kars railway corridor would connect the railway systems in Uzbekistan, Turkmenistan, Azerbaijan and Georgia with that of Turkey, and would help Uzbek goods reach the Mediterranean coast. This route could also be used for shipping between China and Europe. Since it is shorter than the northern routes, analysts say the delivery times from China to southern Europe could be reduced to 12-15 days[12].

Considering the possibility of reaching Central Asia and China, Turkey has shown great interest in using this route. The Marmaray railway tunnel beneath the Bosporus strait in Istanbul, designed to connect Asia with Europe, has already been built and is operational. It provides a direct link between the Asian part of the country and the European rail network.

The first container train from Xi'an, China to Prague via BTK and Istanbul's Marmaray Tunnel, arrived in Prague on November 6, 2019, running at an average of 40 km/h. According to China Railway Express, the train reached the Prague from central China in 18 days. The number of containers sent from China on this route reached 2,343 TEU in January-October 2020, which is 35 percent more than in 2019. However, almost all goods were moving in one direction, from China to Europe. On December 4, 2020, however, the first container train departed in the opposite direction, from Istanbul to China[13]. The total length of this route is 8,693 kilometres, and the train covered it in just twelve days.

[12] Do zaversheniya rabot v ramkakh BTK ostalos' 2 mesyatsa – ministr [Two months to completion of BTK line – minister]. Anadolu Agency, 22.01.2017. URL: https://www.aa.com.tr/ru/ru/заголовки-дня/до-завершения-работ-в-рамках-бтк-осталось-2-месяца-министр/732303

[13] Zheleznaya doroga Baku-Tbilisi-Kars nachala rabotat' v dvustoronnem rezhime [Baku-Tbilisi-Kars railway begins to operate in two ways]. Interfax-Azerbaijan, 09.12.2020. URL: http://interfax.az/view/821745

The main problem with this route is the cost. Today, shipping one container across the Caspian Sea costs at least $2,000. However, logistics companies believe that with higher traffic, the cost of ferry shipments in the Caspian Sea will decrease. In general, building up the transport and transit capabilities of the BTK corridor will help develop trade and economic cooperation between Central Asia and the Caspian region, on the one hand, and will accelerate the Central Asian states' integration into international transport corridors, on the other.

North – South

Afghanistan is one of the most problematic areas for implementing large infrastructure projects as part of the North-South corridor, in terms of both geography and the political situation. At the same time, it should be noted that some countries have already proposed initiatives to develop transport and logistics routes in the region. These projects include the aforementioned Uzbek initiative called the Kabul corridor – the Termez (Uzbekistan) – Mazar-i-Sharif – Kabul – Peshawar (Pakistan) line with an annual transit potential of up to 20 million tonnes of freight. Construction was to begin in September 2021.

The Termez – Mazar-i-Sharif line, built by Uzbekistan, opened several years ago. The further 573-kilometre stretch to Peshawar will have to cross Hindu Kush with mountain passes as high as 3,500 metres and more. The implementation of the first phase of the Mazar-i-Sharif – Kabul project, at about $5 billion, would require support from international financial institutions. At the end of last year, Uzbekistan, Afghanistan and Pakistan sent a joint request to donor agencies asking them to support the project. Russia, China, the United States and a number of international organisations, in particular the World Bank, the Asian Development Bank, the European Bank for Reconstruction and Development, the European Investment Bank, the Islamic Development Bank and the Asian Infrastructure Investment Bank, agreed to join the project. However, it is not quite clear now how the August 2021 military-political developments in Afghanistan will affect the future of this initiative and which countries and international development institutions will remain part of the project in the end.

According to preliminary estimates, the new route would reduce the cost of transporting one TEU by almost two-thirds. If the Mazar-i-Sharif – Kabul – Peshawar line is actually built, cargo volume could reach 10 million tonnes even in the first years of operation.

Expectations were high, because if Afghanistan stabilised and the new government there was willing to cooperate, the ancient city of Mazar-i-Sharif could become a major regional transport hub[14] – mainly due to the possibility of extending the railway to Herat on the border with Iran. The Iranian side has already built and opened a railway from the Khaf border checkpoint to Herat. Those plans are, of course, conditional on a stable and independent new government in Kabul. Stabilisation in Afghanistan is a condition that will determine the future of large infrastructure projects and the chances for achieving infrastructure connectivity on the southern branch of the Eurasian railway system.

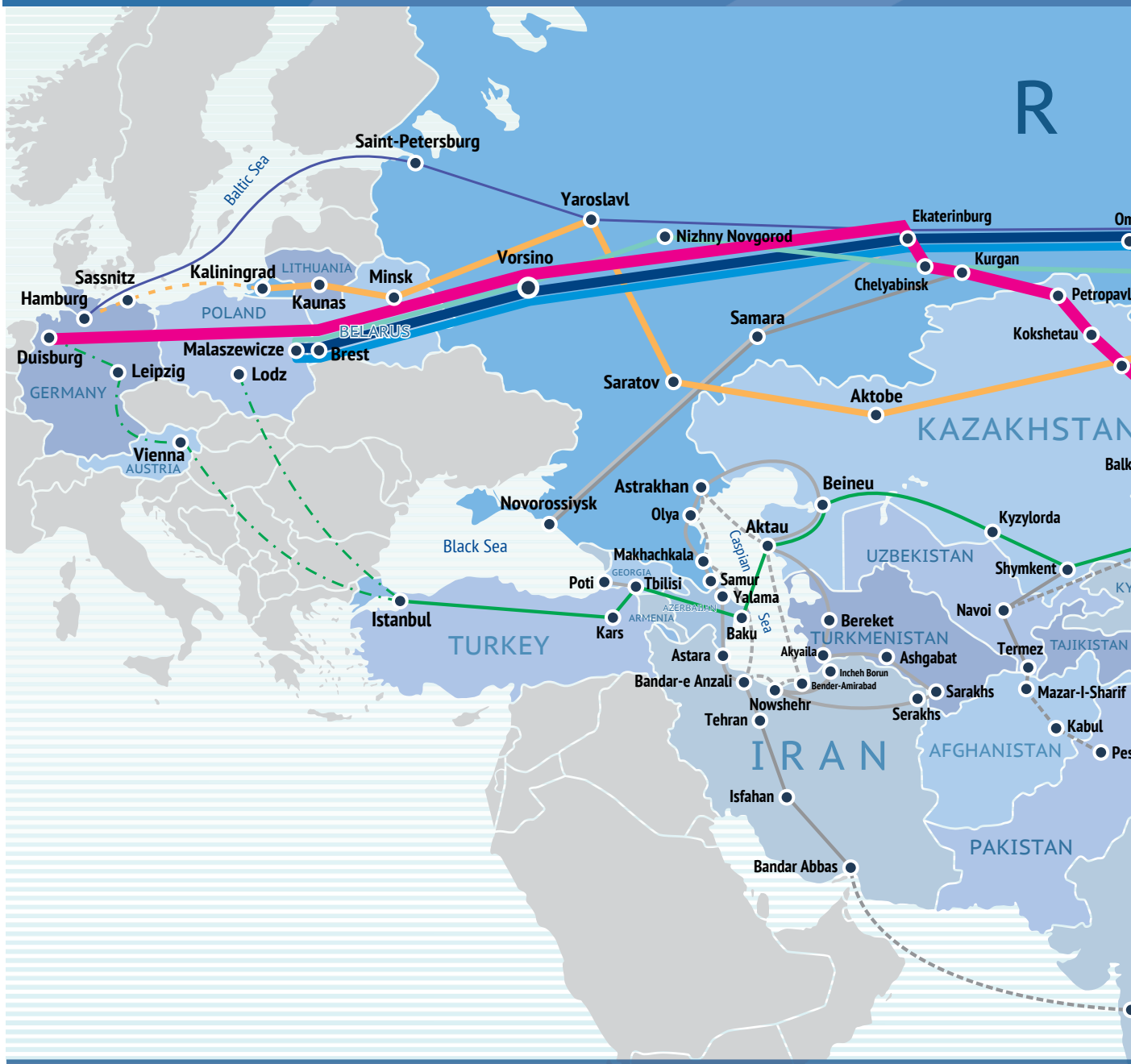
The Iranian government, realising the development opportunities for the country's transit potential, began the construction of a double-track line from Khaf to the port of Chabahar, which is a promising outlet to the Indian Ocean in Iran. India is showing interest in the port's development. Indian businesses consider it a perfect trans-shipment hub for the overland transit of goods from India to the Central Asian countries, to Russia and further to Europe. Back in 2002, India and Iran signed an agreement on the integrated use of Chabahar as a joint deep-water port.

Chabahar also looks attractive because ships do not have to pass through the dangerous Strait of Hormuz, and this dramatically reduces transit costs. The current shipments to world markets from Bandar Abbas, which now accounts for 85 percent of Iran's maritime trade, require significant insurance premiums due to the risks. Another 730 kilometres of track between Mazar-i-Sharif and Herat should complete the corridor from Central Asia to Chabahar.

The China-Pakistan Economic Corridor (CPEC) stretches from Xinjiang to the Pakistani port of Gwadar and incorporates several major infrastructure projects implemented by the Chinese government. Pakistan predicts the CPEC will create over 2.3 million jobs between 2015 and 2030, adding 2 to 2.5 percent to the country's annual economic growth. The Central Asian countries will also be able to access Pakistani ports through this route. The shortest access to this new transport infrastructure would be to build an additional railway section between Uzbekistan and China across Kyrgyzstan. The project holds as much promise as the already operational highway, Kashgar – Irkeshtam – Osh – Andijan – Tashkent, the first route that enabled Central Asian carriers to reach China.

[14] Razvitie transportnykh koridorov v TSentral'noy Azii i effekt initsiativy «Poyasa i puti»[Development of transport corridors in Central Asia and the Belt and Road Initiative effect]. Pace Nexus Foundation, URL: https://peacenexus.org/wp-content/uploads/2020/01/%D0%9E%D1%82%D1%87%D1%91%D1%82_DSC_PN_2019.pdf

MAP OF THE KEY RAILWAY CORRIDORS IN EURASIA



Route to Duisburg via Dostyk
(350 thousand TEU in 2020)*

Route to Poland via Zabaikalsk
(150 thousand TEU in 2020)*

Route to Poland via Naushki
(100 thousand TEU in 2020)*

Route to Kaliningrad via Dostyk
(50 thousand TEU in 2020)*

Route to Poland via Primorsky Krai
(30 thousand TEU in 2020)*

Route to the Caspian region via Altynkol and then to Turkey
(20 thousand TEU in 2020)*

Route to Hamburg via Primorsky Krai
(10 thousand TEU in 2020)*

Automobile routes

Railway transportation routes

Planned routes

* Rounded data is indicated

Source: CCEIS NRU HSE

The role of major regional institutions and players

Russia and the EAEU

The countries in the Eurasian Economic Union (EAEU), mainly Russia and China, are actively supporting existing transit capabilities, and are investing in the modernisation of existing railway systems and the construction of new ones on their own territory and in the bordering states. The Eurasian Economic Union is implementing systematic measures to create a common transport infrastructure. The union is carrying out a well-coordinated transport policy with this work, and it aims to facilitate economic integration through competition, openness, security, safety, reliability, accessibility and affordability. The process of creating an integral transport infrastructure in the Eurasian Economic Union is to be completed by 2025 when all obstacles that delay shipping by all transport systems will be eliminated.

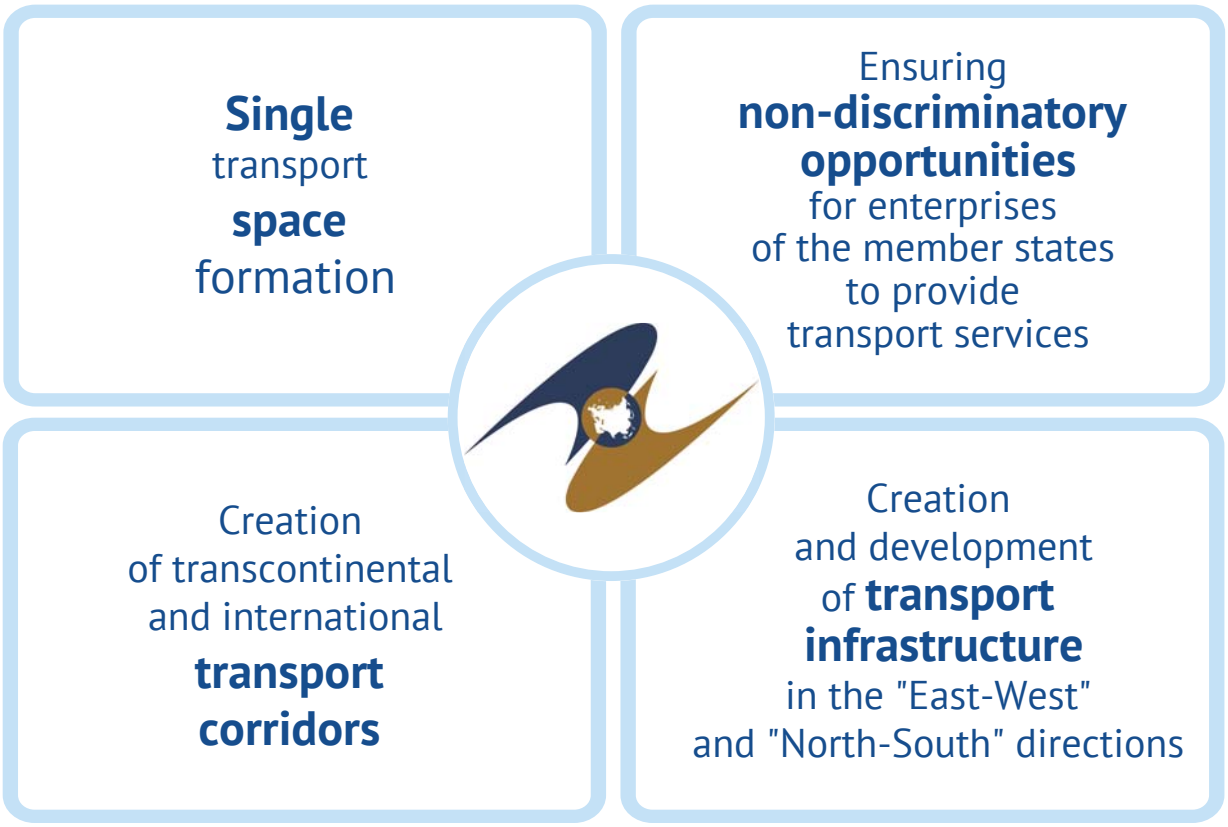
The Eurasian Economic Union has a ramified transport network that can provide direct transcontinental connections across the continent. Cooperation with the EAEU will expand transit volumes and will also help boost trade between all states on the Eurasian continent. Eighty percent of foreign-trade shipments, including from Uzbekistan, are delivered via the EAEU's member countries, especially Russia, Kazakhstan and Kyrgyzstan[15]. Transport now accounts for a major part of Uzbekistan's export costs.

Through cost-effective cooperation, Uzbekistan can reduce its costs to $220 million in freight transit via the Eurasian Economic Union's member countries' railway systems. Moreover, it is possible to expand Uzbekistan's transit potential from the current 7 million tonnes to 16 million tonnes[16] through simplified customs clearance procedures, transparent tariffs, prices and rates, and by opening new routes.

[15] U. Khasanov Uzbek expert: Uzbekistan hopes to expand industrial co-production arrangements in the Eurasian Economic Union // Eurasia, Expert, 04.01.2021. URL: https://eurasia.expert/uzbekistan-rasschityvaet-na-uglublenie-promkooperatsii-v-eaes/

[16] A. Neymatov Detal'no izuchit', prezhde chem prinyat' «pravila igry» [Detailed study needed before accepting rules of the game] // Narodnoye Slovo, 19.03.2020. URL: https://xs.uz/ru/post/detalno-izuchit-prezhde-chem-prinyat-pravila-igry

EAEU PLANS FOR THE DEVELOPMENT OF TRANSPORT AND INFRASTRUCTURE BY 2025



Source: http://www.eurasiancommission.org/ru/act/finpol/dobd/strategy-2025/Pages/default.aspx

However, while international cooperation and transport ties in Greater Eurasia are being developed, they do face various challenges. As mentioned, integration within the EAEU's framework has played a substantial role in expanding Eurasian transport and logistics systems. But the EAEU now faces growth problems that, if resolved, would strengthen regional connectivity.

Our strategic long-term goal is to turn the Eurasian Economic Union's region into a zone of collaborative development, rather than a transport corridor. This is only possible by implementing large infrastructure projects that will link macro-regions and facilitate connectivity between resources, production facilities and markets. The plan to merge the EAEU with China's Belt and Road Initiative is a very important economic incentive for the comprehensive development of the union's infrastructure. The modernisation of the EAEU's railway network, more substantial container traffic in the Eurasian region, and the creation of incentives for investing in Central Asian infrastructure projects will help unlock transport and infrastructure potential.

When building a long-term strategy of cooperation with Russia's partners, it is fundamentally important to promote the trans-Eurasian land transport corridors.

The modernisation of the inter-regional railway network and the maximum complementarity of the Russian and Kazakhstani infrastructures and their development is a key to expanding these routes. This includes the programme for developing the Baikal-Amur and Trans-Siberian mainlines to eliminate bottlenecks and upgrade railway sections. In addition, railway traffic towards Orenburg via Kazakhstan, or the Western Europe – Western China route, is also competitive.

The Eurasian Economic Commission's role is to gather ideas and suggest them for discussion and approval at the Supreme Eurasian Economic Council where the heads of state will be able to determine specific guidelines and the high-priority aspects of the EAEU's common approach in merging with the Belt and Road Initiative, as well as potential cooperation with China.

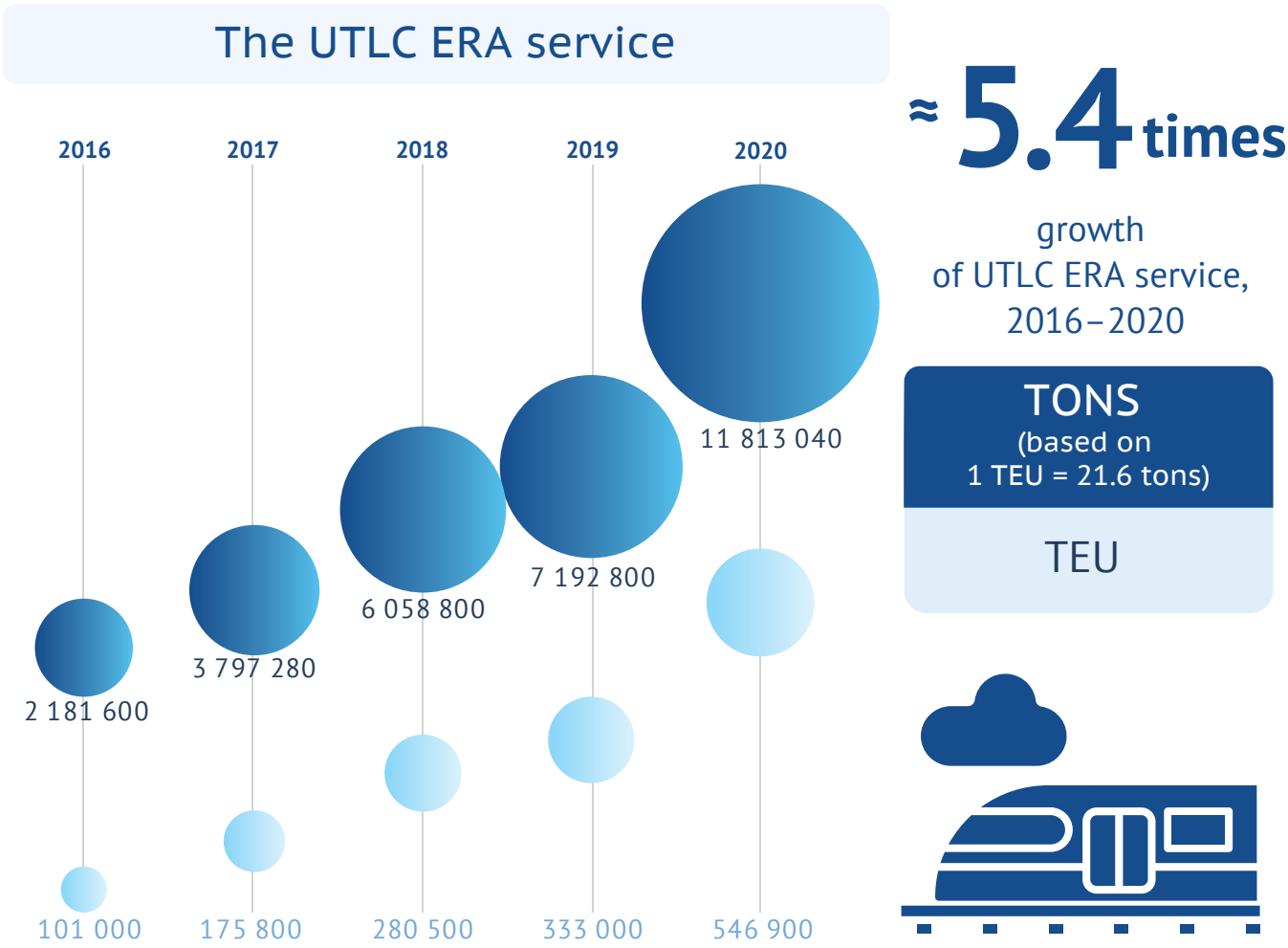
Expanded container traffic volumes, mostly by rail, are an important element in expanding the EAEU's transport and infrastructure potential. Expanding container traffic volumes mostly depends on increasing transit and container exports and domestic traffic. The United Transport and Logistics Company – Eurasian Railway Alliance (UTLC ERA), a major player in this market, currently provides services in container shipping by rail on the China-Europe route via Russia, Kazakhstan and Belarus.

But the fact is, the EAEU's member countries basically lack container trade. According to various estimates, the EAEU countries need over 1.5 million 20 foot equivalent units (TEUs) to justify expanded transiting. About 60 million tones, or 4 million TEUs[17] are needed for comprehensive containerisation of EAEU trade. It is important to develop more container technology and capacity in Russia's regions and in the EAEU in general to eliminate many of the current deficiencies. This would make it possible to convert the freight volume of up to 3 or 4 million TEUs into containers.

More specialised containers, including refrigerated containers, are also needed to expand of the container handling infrastructure, as are

[17] Official website of the United Transport and Logistics Company Eurasian Railway Alliance. 01.08.2021. URL: http://www.eurasiancommission.org/ru/nae/news/Pages/19-02-2021-4.aspx

THE VOLUME OF CONTAINER TRAFFIC ON THE CHINA–EUROPE–CHINA ROUTE BY THE UTLC ERA SERVICE, 2016–2020



Source: www.utlc.com

the introduction of digital management, and upgrading the container traffic tariff system.

The simplification and synchronisation of the so-called "soft infrastructure" is critical for establishing a common transport infrastructure. This includes the creation of common standardised shipping documents and agreements on common railway technical requirements. It is necessary to pursue the standardisation of railway traffic requirements under the provisions of the Convention on International Carriage by Rail (COTIF). The EAEU member states understand the need for these changes because a plan for implementing the EAEU's transport policy in 2021-2023 was approved

in February 2021[18]. The document stipulates the coordination of the regulations in the EAEU states to expand mixed and container traffic and to ensure the comprehensive development of Eurasian transport corridors, including transport and logistics centres.

And finally, it is necessary to create incentives for joint investment in infrastructure projects, even during the pandemic and a global economic slump, and to emphasise the significance of transit routes via Central Asia. In the context of regional development, the implementation of specific projects that can boost the region's transport value must be insured. This is why the development of relations between the EAEU and Uzbekistan are a key factor in 2021-2022. At a meeting of the Supreme Eurasian Economic Council, President of Uzbekistan Shavkat Mirziyoyev said Uzbekistan needs to obtain the "benefits" of EAEU membership through its observer status[19]. The prioritising of the transport component may indicate that Tashkent is ready for rapprochement if the EAEU approves its requests for investing in projects that Uzbekistan cannot implement on its own.

It is important for the Eurasian Economic Union to present a unified position while reviewing promising China's or EU infrastructure projects and investment proposals. The standardisation of railway traffic requirements and conditions will have positive long-term consequences if the EAEU's "internal" capabilities are different from those outside it. Promoting the above measures and their coordination will increase the EAEU's integration value and its role in Eurasia's transport and infrastructure systems.

The combining of the COVID-19 response effort with the implementation of the EAEU development Strategy 2025 was a difficult challenge. What is the connection between them? The development strategy is a new document that should turn the union, a promising integration bloc with an assortment of tactical and often chaotic manoeuvres, into a mature association with a clear action plan and a clear understanding of how to achieve its objectives.

The global pandemic, the most powerful socio-economic crisis in the history of Eurasian integration, has taken national economies by surprise.

[18] Road map for implementing the 2021-2023 transport policy coordinated // Eurasian Economic Commission. 19.02.2021. URL: http://www.eurasiancommission.org/ru/nae/news/Pages/19-02-2021-4.aspx

[19] U. Hashimova Mirziyoyev Asks EAEU for Benefits Up Front // Diplomat Media Inc. 07.06.2021. URL: https://thediplomat.com/2021/06/mirziyoyev-asks-eaeu-for-benefits-up-front/

The problems of synchronising the actions of national governments can be seen in the EAEU countries' actions for both scenarios, such as failure to meet specific deadlines while advancing the strategy, failure to approve the document in May 2020 with the wording "approved on the whole," and the eventual approval of the truncated Strategy in December 2020. Moreover, the approved Strategy was mostly drafted prior to the lockdowns and does not fully reflect the realities of the COVID-19 crisis. This includes the labour and services market, the development of the transport and logistics infrastructure and other important integration components.

The COVID-19 crisis also exposed a number of new practical problems in cooperation between the EAEU member countries. For example, the Eurasian Five have failed to reach an agreement on establishing a common "green corridor" for transporting goods internationally, and the uncoordinated actions of the union's participants led to the creation of new trade barriers. At the same time, the quality of inter-governmental dialogue so far remains the main asset of Eurasian integration, and its basic resources, including the four freedoms, the national bodies and flagship initiatives, which are a derivative of this dialogue.

Domestic upheaval in the EAEU member countries was another alarming trend for the union during COVID. Russia and Kazakhstan faced dire consequences as a result of the pandemic, and their real economies were hit hard. Kyrgyzstan experienced a revolution and a regime change. Belarus went through a domestic political crisis, and Armenia experienced the consequences of a painful defeat following the armed conflict with Azerbaijan in the autumn of 2021.

Although these things are not necessarily related, they have distracted and continue to distract the union's attention and resources from solutions to topical integration problems. The EAEU has ambitious short-term plans. Indicatively, during the pandemic officials called for launching the Eurasian import substitution policy in all key sectors, promoting the digital agenda, achieving greater financial independence, strengthening anti-crisis mechanisms at the EAEU level and making the association more stress-resistant.

Domestic political unrest does not add credibility to the Eurasian integration project; nor does it make the EAEU more attractive, especially for the union's Western partners. Since the first days of approving the Strategy, the union has been forced to implement a new integration model in apparently unfavourable conditions, specifically, greater

mistrust between member countries, long-term domestic policy shocks and a protracted global socio-political crises.

Obviously, these problems and challenges might prevent the Eurasian Economic Union from implementing its initial plans. At this point there is more expectation for clear-cut priorities in promoting integration and in understanding the current opportunities and restrictions. This includes expanding the Eurasian transport and infrastructure system as a key aspect of overall development of the EAEU and the Eurasian states in the next five to ten years.

China

The Chinese policy of advancing towards the north prioritises the relocation of production capacities deep inside the continent. Compared to coastal areas, inland provinces spend less on the workforce and on materials. More enterprises are relocating to the country's landlocked inland provinces. These companies decided that by promoting direct railway traffic to Europe they would receive additional opportunities for expediting shipping and reducing logistics expenses. Shipping by sea requires moving goods to port, reloading the goods to a ship to eventually be received at a European port, after which a similar process is required before the end user sees them. All this increases freight delivery costs and shipping times. The pandemic seriously disrupted air and sea shipping so the railways received an extra opportunity for expanding their market share. We are now seeing this process.

To encourage freight deliveries to Europe, most of China's landlocked provinces subsidise domestic railway rates. The Chinese authorities realise that this situation cannot last long. The sustainable development of ties with Europe should hinge solely on market mechanisms, and the subsidies will gradually end. Chinese media outlets report that state subsidies for railway traffic to Europe totalled about 50 percent of shipping costs in 2018 and dropped to 40 and 30 percent in 2019 and 2020[20] respectively. According to current expectations, all subsidies should be abolished by 2022. Experts believe that this will happen when annual railway traffic volumes reach approximately 1.5 million TEUs.

[20] R. V. Fedorenko. Problems regarding the development of the customs and logistics infrastructure of the international transport corridor East-West // Bulletin of the People's Friendship University of Russia. Series: The Economy. 2020. Volume 28, # 3, Page 499

This strategy appears feasible with declining shipping costs and a substantial increase in traffic volumes. Most logistics management companies estimate that the cost of delivering one 40-foot container from terminal to terminal by rail from China to Europe was about $9,000-$10,000 in 2018, and that this cost had dropped by almost half in 2021 to about $4,500-$5,500[21].

No official data on the number or monetary amounts of the subsidies is published. We estimate that total railway subsidies since early 2021 from the various Chinese provinces was about $800 million. However, this substantial sum is negligible compared to the $100 billion that China annually spends on its railway development projects.

Regarding the development of railway transiting routes, China has several long-term and ambitious projects underway.

The latest Chinese priorities for developing international railways under the Belt and Road Initiative deserve special mention. Chinese engineers have developed special trains with variable-gauge wheel-sets. They are starting to be used, allowing Chinese trains to run with minimal delay into Russia, Mongolia or Kazakhstan with their wider track gauge compared to China's standard gauge (1,435-mm track). It is also important to develop automated gauge-changing wheel-sets for trains going to India and Pakistan via Myanmar and Bangladesh. This technology needs to operate in hostile climates, with temperatures ranging between minus 50 and plus 50 degrees Celsius, unlike similar equipment in Spain, for example.

Europe

Despite expanding trade volumes between China and the Central Eurasian countries, as well as Russia, the European Union market continues to receive the bulk of all Chinese freight transits. Europe's huge consumer market is the main objective in expanding Eurasian transport and logistics systems. China contributes its export potential, and the EAEU is working to create a convenient regulatory framework. The EU countries are the second-largest importer of Chinese goods after the United States, and they are the most attractive partner in this respect despite the forecasts.

[21] Eurasian Railway Breakthrough // Valdai Discussion Club. 05.11.2020. URL: https://valdaiclub.com/a/highlights/eurasian-railway-breakthrough/

So far, Europe has not contributed a lot to the development of the transport and logistics system per se. Today, almost all rail traffic in this direction passes through the Brest-Małaszewicze border point on the Belarusian-Polish border.

The lack of reliable railway traffic between Russia and Ukraine, due to the political situation since 2014, is a problem. But for now we cannot expect the number of EU points handling incoming cargo to increase anytime soon. The use of Russian trans-shipment seaports for delivering railway consignments to major Western European ports is a viable alternative.

The EU countries saw the greatest freight-handling problems, including rail capacity, after freight traffic volumes started increasing in the mid-2010s. It turned out that the European railway network was somewhat obsolete, and that its capacity had some inherent limitations. This is linked with the outlying status of Poland and other Eastern European countries with regard to the main international trade centres in the European Union, including major ports in Germany, the Netherlands and on France's Atlantic coast. Hamburg and Rotterdam handled the bulk of Asian goods for the European market, and the EU's "old" members are not interested in encouraging competition from the former socialist bloc countries.

Consequently, logistics restrictions at Poland's Małaszewicze on the border with Belarus are the main bottleneck along the entire route between China and Europe. This border crossing point is now being upgraded with EU support, and its capacity is expected to increase. The facility now handles 14 pairs of trains daily, and this number is to reach 55 pairs following a large overhaul. The expenses, to be financed by the Polish and EU governments, are estimated at 700 million euros. The new Małaszewicze transit hub, covering an area of 30 square kilometres, will be completely upgraded. The project will rebuild the transit hub's railway infrastructure; this will increase train times considerably, and the tracks will be upgraded to handle greater loads.

Regulations on the maximum length of container trains on European railways are another restriction on freight traffic volumes and delivery times and entail high operational costs. The average container train can consist of 71 standard carriages in Russia and 57-65 carriages in Belarus while EU regulations limit train lengths to

43 carriages. Thus, trains entering Europe via Małaszewicze can have just 43 carriages with 86 TEUs. A container train arriving on the Polish border needs to be divided in half: A 43-carriage train is built when the containers are reloaded in Brest, and the remaining carriages have to wait for the next train.

Bureaucratic hurdles, including the harmonisation of customs standards, efforts to minimise and simplify administrative freight clearance proceedings on the borders and others things, such as border proceedings that need to be streamlined by signing international agreements, have great significance in the context of shipping times. The lack of dialogue between the European Union and the EAEU on these matters also hampers expanded transits. Some EU authorities believe that surface routes will not offer long-term competition, and that it is therefore pointless to invest in upgrading the eastern EU railway system.

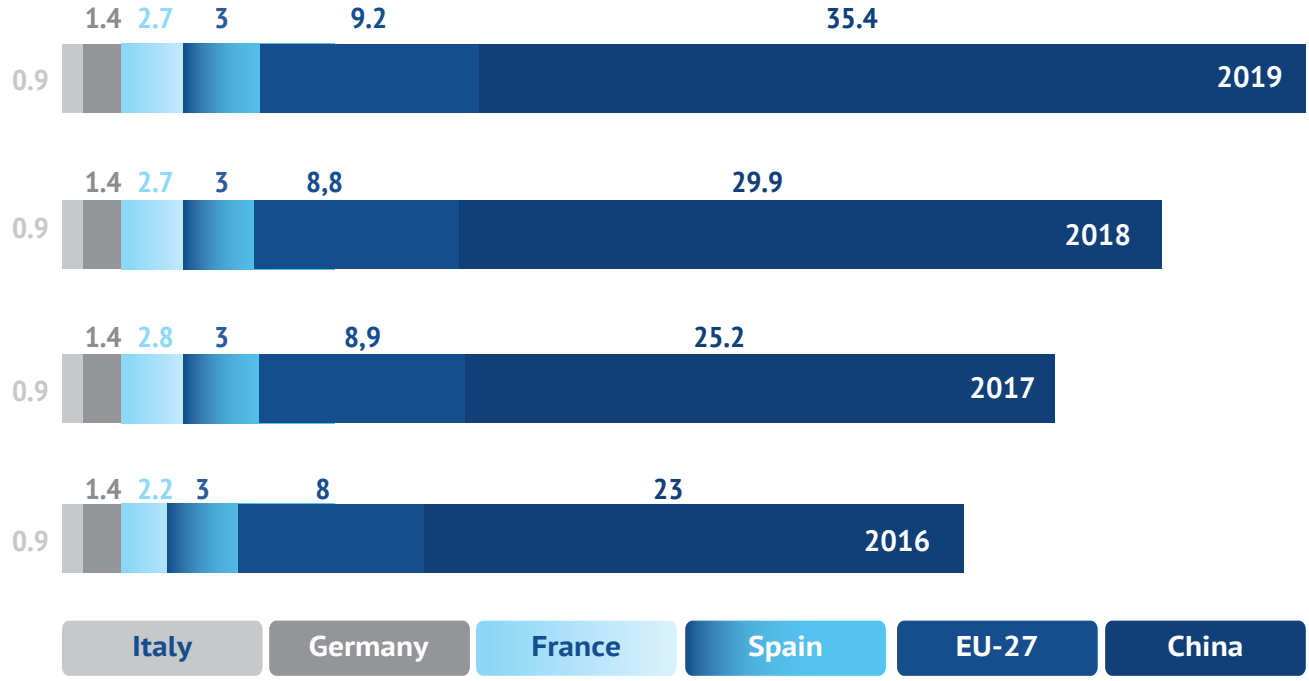
High-speed railways

The Chinese are focusing on the development of high-speed rail (HSR) and this could make an additional contribution to expanding the Eurasian railway network. This new technological factor could play a major role in the future. This is related to a greater Chinese-US rivalry that has become irreversible in the past few years. On May 27, 2021, the US Senate approved a large package of bills aiming to boost the country's competitiveness relative to high-tech Chinese companies[22]. As all-out economic competition between the two largest countries continues to grow, Washington is trying to catch up with Beijing in transport infrastructure investment. This funding is the most substantial public investment in national railways and railway transport in the past several decades.

As for China, just 20 years ago it had no high-speed rail. The first HSR passenger line was built in 1999 between Qinhuangdao and Shenyang, and it opened for commercial traffic in 2003. In 2008, Beijing allocated an unprecedented 4 trillion yuan to expand HSR. This investment proved instrumental in overcoming the consequences of the global financial crisis, attaining rapid economic growth, and expediting the nation's urbanisation process.

[22] US Senate approves bill to boost competitiveness with China // DW. 09.06.2021. URL: https://www.dw.com/ru/senat-ssha-odobril-zakonoproekt-po-povysheniju-konkurentosposobnosti-s-kitaem/a-57821514

THE TOTAL LENGTH OF HIGH-SPEED RAILWAYS IN CHINA AND THE EU, thousand km



Source: ec.europa.eu, www.stats.gov.cn

By late 2020, Chinese railways were running over 9,600 high-speed trains daily, including the first long-haul HSR sleeper trains in history. Seventy-five percent of Chinese cities with a population of 500,000 or more had direct access to high-speed rail. New engineering solutions, such as remote train control (without train drivers), state-of-the-art signalling and control technologies, were developed.

Problems of trans-Eurasian connectivity

Today, the development of the Eurasian railway transport and logistics system faces a number of technical restrictions. Russia, Kazakhstan, Belarus and Mongolia use one track gauge (1,520-mm), while Europe and China use standard gauge track (1,435-mm). Thus, today, it is generally necessary to reload containers onto different trains twice on the route between China and Europe. Or, as mentioned above, automated wheel-set gauge change equipment is starting to be used.

Some believe the differing track gauge widths are the main obstacle to shipping times and volumes. In our opinion, this barrier is not that critical. For example, in Khorgos, the time it takes to reload a train from one gauge to another is several hours; when automated wheel gauge technology is used, there is only a 45 minute or so delay. So the Chinese have been working hard on rolling stock with variable-gauge wheelsets.

Considering the impressive increase in rail traffic freight volumes on the Eurasian route between China and Europe, the potential for this route should be reviewed. It is important to identify the bottlenecks and the factors that potentially hinder traffic growth. Most analysts agree that there are two main mid-term challenges. **First**, it is necessary to balance Chinese traffic to and from Europe. **Second**, it is necessary to resolve the capacity problem at the Belarusian-Polish border.

Today, about 66 percent of all railway traffic is headed west, and the remaining 33 percent, east. This situation is unlikely to change anytime soon. A rapid increase in Chinese domestic consumption could be the most promising development in this respect. This would boost China's demand for high-quality European imports. The opening of the Chinese market to goods from the EAEU and Uzbekistan and the elimination of China's traditional and numerous non-tariff trade restrictions would also play an important role.

A critical shortage of containers, related to the COVID-19 pandemic, is another problem. The absence of containers causes a chain reaction along all supply chains and disrupts the international trade system.

According to goods producers, shipping costs jumped from about $1,500 to $6,000-$9,000 per container in February 2021. The shortage of containers also increases prices for new containers. Chinese container manufacturers, who dominate the market now, are charging $2,500 per container, compared to $1,600 last year. In the past six months, container lease rates have increased by nearly 50 percent.

Despite this, most analysts believe container traffic volumes will continue to grow steadily in the near future. Analysts from the Eurasian Development Bank estimate that, given the existing infrastructure, annual railway traffic volumes between China and Europe will reach about 2 million TEUs. Lower rates and tariffs would be required to boost

shipping volumes further. This needs to be supported by investment in the physical infrastructure, the development of transport and logistics centres, boosting the efficiency of locomotives, the automation of border-crossing processes, the digitalisation of processes using block-chain and smart contracts, the standardisation of the regulatory and legal framework, and the improved coordination of freight rates between partners.

Another scenario related to the military-political situation in Afghanistan is the southern branch of the Eurasian railway system. Uzbekistan is the most active supporter of this route, which would include expanded capacity on existing routes, the laying of new track, and construction of new infrastructure on this shorter "southern" route from China to Europe via Kyrgyzstan, Uzbekistan, Turkmenistan, Iran and Turkey. This would contribute to strengthening the Eurasian railway network and would also increase Russia and China's interest in developing Central Asia. To open this new transport corridor, it would be necessary to build about 268 kilometres of new railways from China to Uzbekistan via Kyrgyzstan.

Russia and China could become more actively involved in current and planned railway lines in Uzbekistan, Turkmenistan and Afghanistan using this new corridor. The shortest railway routing via Kyrgyzstan could link China and Russia with three promising routes: 1) India and Pakistan, including reaching the Indian Ocean; 2) Azerbaijan and Georgia, including the Black Sea; 3) Iran and Turkey, the Mediterranean and Black Seas to reach beyond Europe. Estimates show that, compared to current sea routes, a rail route between China and southern Europe would be shorter by about 900 kilometres, and delivery times could be reduced by seven or eight days. According to Uzbekistan, annual freight volume of at least 5 million tonnes would completely compensate for railway construction expenses[23].

Today, any transport or infrastructure projects in Afghanistan are seen as long-term strategic prospects. The practicality and feasibility of these prospects, despite the ambitions and interests of the various regional and Eurasian countries, directly depends on the political will and readiness of a full and stable Afghan government sometime in the future.

[23] China suggests several versions of new Uzbekistan-Kyrgyzstan-China railway // Uzbekistan Update. 14.10.2021. URL: https://podrobno.uz/cat/uzbekistan-i-kitay-klyuchi-ot-budushchego/kitay-predlozhil-neskolko-variantov-marshruta-novoy/

Conclusion

A rapid increase in freight volume between China and Europe is likely for several reasons.

First, the Chinese economy has become more competitive and continues to increase exports to European markets. In the mid-2010s, China had attained impressive production and growth rates that made it possible to invest in expanded transport and logistics connections and to reduce the country's dependence on sea routes. Overall, China's greater economic presence abroad and its expanding commercial ties will play the most important role in this.

Second, China continues to export higher value goods that have to be delivered more quickly to consumers relative to sea shipping. This increases the significance of surface routes and increasing traffic volumes and will help drive the expansion of the Eurasian railway network.

Third, the Chinese policy to relocate production facilities inland prioritises the development of the country's landlocked central and western provinces where it is possible to develop cheaper and faster railway traffic to Europe.

Fourth, the Chinese population is becoming more affluent, thus, more Chinese citizens want high quality and expensive European goods, including wines, certain foods and cars. This, once again, increases demand for the fastest, but cost effective, delivery of these goods to the Chinese market.

Fifth, the stabilisation of the Russian economy, expanded railway traffic on Russian territory, and the country's expanding seaport chain are factors that are being supported by the long-term political stability of the most important Central Asian countries, overall stability, and the development of their interstate relations.

Sixth, the establishment of the Customs Union in Eurasia ensured the free movement of goods, and transport companies gained access to reliable, fast and cost-effective railway service. Overall delivery costs would be reduced even more if other states join this regulatory framework.

The Eurasian railway bridge linking economic powerhouses on the largest continent over the past ten years has confirmed this expansion policy's high profitability and promising nature. In addition to global players, including Russia, China as a whole, and Europe, China's inland provinces and the Central Asian countries would be the main beneficiaries of these commercial routes. For centuries, the latter have suffered from their landlocked position, and they are now seeing new opportunities via surface transport and logistics corridors.

By expanding its transiting potential, Central Asia has every opportunity to become part of the macro-regional transport and logistics system and to become integral to the main global economic centres. The establishment of a diversified transport and communications system will make it possible to realise transport and transit potential, will provide a multiplier effect for the sustainable development of the most dynamic and stable (in the military-political context) region, and will turn it into a logistics hub.

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