

SECOND NATIONAL REPORT OF THE REPUBLIC OF KAZAKHSTAN ON TRADE FACILITATION



2025

**Second National Report of the Republic of Kazakhstan
on Trade Facilitation with Special Emphasis on the
Trans-Caspian Transport Corridor**

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Q87

**Second National Report of the Republic of Kazakhstan on Trade Facilitation with
Special Emphasis on the Trans-Caspian Transport Corridor**

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Q87 The report provides an overview of the measures implemented by the Government of the Republic of Kazakhstan in 2023–2025 in the field of trade facilitation, including within the context of the Trans-Caspian Transport Corridor (TCTC). It examines progress achieved in the digitalization of trade processes, the introduction of paperless technologies, and the development of trade flow management tools aimed at enhancing the transparency, predictability, and efficiency of foreign economic activities. Particular attention is given to Kazakhstan's role in TCTC as a strategic link between Asia and Europe, as well as to efforts directed at the harmonization of procedures and the development of digital solutions along the route. The report also highlights the principles of sustainable and “green” development of TCTC and the formation of an efficient, technology-driven trade model that strengthens Kazakhstan's position within regional and global supply chains.

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DEAR LADIES AND GENTLEMEN!

We are pleased to present the Second National Report of the Republic of Kazakhstan on Trade Facilitation with Special Emphasis on the Development of the Trans-Caspian Transport Corridor.

The deepening of economic fragmentation, the escalation of trade wars, and the rise of protectionist rhetoric among major economies is shaping a new geo-economic reality. Kazakhstan proceeds from the understanding that it is essential to build resilient, diversified, and secure supply chains capable of functioning independently of external shocks and geo-economic risks, based on the principles of balance, mutual benefit, and equal access to markets.

The coordination of efforts among the countries participating in the Trans-Caspian Transport Corridor has become particularly relevant, aimed at harmonizing procedures, advancing digital integration, and enhancing transparency in cross-border processes. In this context, the development of TCTC is viewed not merely as a transport initiative but as a cornerstone for building the region's strategic autonomy amid the realities of a new trade era.

This report, prepared by the Ministry of Trade and Integration of the Republic of Kazakhstan and “QazTrade” JSC with the support of the European Union, reflects the results of reforms undertaken in 2023–2025 and reaffirms the country's commitment to establishing a modern and sustainable trade model, in which TCTC serves as a key vector of Eurasian integration.

Ms. Zhanel Kushukova
Vice Minister of Trade and Integration
of the Republic of Kazakhstan



DEAR COLLEAGUES AND PARTNERS!

Global trade is being reshaped, with new regional hubs emerging and the routes between Asia and Europe gaining renewed strategic importance. In this evolving landscape, Kazakhstan's location makes it a key partner in strengthening the Trans-Caspian Transport Corridor. This corridor is more than a trade route - it is a pathway for digital, green, and sustainable connectivity.

Kazakhstan's leadership in driving these reforms shows real vision and commitment to modernizing trade across the region. The European Union stands ready to continue supporting these efforts, as part of our shared ambition to turn into reality the Strategic Partnership between Central Asia and Europe, agreed in Samarkand in April 2025.

***Ms. Aleška Simkić
Ambassador of the European Union
to the Republic of Kazakhstan***



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This analytical report was prepared through the joint efforts of “QazTrade” JSC and its team, with the support of the Ministry of Trade and Integration of the Republic of Kazakhstan. It presents the outcomes of reforms implemented in 2023–2025 in the field of trade facilitation, as well as the recent progress achieved in the development of the Trans-Caspian Transport Corridor.

The report was prepared by Madina Kazhimova, Nurlan Kulbatyrov, Yenlik Kussainova, Elmira Baimurzayeva, and Sayat Ashimov.

The authors express their sincere appreciation to the Delegation of the European Union to the Republic of Kazakhstan and the International Trade Centre for their support, expert guidance, and participation throughout the preparation process. Their contribution ensured a comprehensive and balanced analysis that accurately reflects Kazakhstan’s current trends and achievements in the area of trade facilitation.

Special thanks are extended to the State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan for providing high-quality materials for this report, as well as to other government agencies, representatives of the private sector, and international partners for their valuable input through interviews and the provision of information.

SUMMARY

Trade facilitation remains one of the priority areas of Kazakhstan's foreign economic policy. Amid the restructuring of global supply chains, the country continues to strengthen its position as a reliable and predictable partner, playing a key role in ensuring connectivity between Asia and Europe. Kazakhstan is consistently shaping a modern model of "smart trade," built on digital solutions, sustainable logistics, and international cooperation.

Institutional stability and policy coordination

Kazakhstan has established a robust institutional framework for managing reforms in the field of trade facilitation. The National Trade Facilitation Committee serves as the central platform for aligning the interests of the government and the business community, ensuring the consistent implementation of reforms and the monitoring of compliance with international commitments under the WTO Trade Facilitation Agreement. Its activities contribute to enhancing the transparency and efficiency of trade regulation, as well as strengthening cooperation with partners along the Trans-Caspian Transport Corridor (TCTC). Such coordination reinforces institutional integration, supports the predictability of external economic policy, and creates favorable conditions for trade and investment development.

Digitalization of trade and system integration

Kazakhstan demonstrates steady progress in the digital transformation of foreign trade procedures. The development of the KEDEN and CART.IS projects aims to automate administrative processes, reduce paperwork, and improve operational transparency. To align digital reforms with real-world practices, field missions are conducted to key border infrastructure facilities, enabling the identification of barriers and the determination of further improvement areas. In parallel, Kazakhstan is integrating its national digital solutions with the Digital Trade Corridor platform and systems of TCTC countries, thereby forming a unified digital trade space and strengthening its role as a regional digital hub.

Infrastructure development and logistics chains

Kazakhstan is consolidating its position as a key transit center of Eurasian trade and a vital link between East and West. The modernization of ports, terminals, and railway hubs is complemented by the active deployment of digital technologies and intelligent flow management systems, ensuring more accurate planning and transparency in logistics operations. The development of multimodal hubs and dry ports creates new opportunities to optimize routes and increase transport efficiency. These measures enhance the throughput capacity of TCTC, reduce costs, and improve the route's resilience to external risks, transforming it into a reliable and competitive corridor for international trade.

Green transformation and sustainable development

Kazakhstan is actively advancing the transition toward low-carbon and environmentally sustainable logistics along the TCTC. Work is underway to introduce green



technologies, improve energy efficiency, and develop systems for digital monitoring of emissions. Joint initiatives with international partners contribute to the modernization of port and transport infrastructure, preparation for the use of alternative fuels, and the implementation of environmentally friendly standards across supply chains. These steps strengthen TCTC's status as a "green corridor," enhance its international appeal, and support the implementation of Kazakhstan's Strategy for Achieving Carbon Neutrality by 2060.

International cooperation and integration into global value chains

Kazakhstan is expanding partnerships with ITC, OECD, ESCAP, CAREC, ADB, the EU, and other international and regional organizations, facilitating the exchange of best practices and access to technical assistance programs. Special attention is given to digital harmonization and the enhancement of competitiveness among small and medium-sized enterprises. In this context, the recently approved CAREC Partnership for Trade and Investment Facilitation (CARTIF) zero draft represents an important step toward establishing a modern regional platform for trade facilitation, investment promotion, and the development of digital and green cooperation. This initiative strengthens Kazakhstan's role as an active participant in regional and global value chains, enhancing the country's attractiveness for international partners.

Joint projects contribute to deeper coordination across Central Asia and the formation of a sustainable, digitally integrated trade space. Overall, Kazakhstan continues to consolidate its status as a key actor in Eurasian trade and a center of digital transformation in the region, while the implementation of comprehensive measures in trade facilitation, digitalization, and sustainable development along the TCTC ensures a strategic advantage within the evolving architecture of global supply chains.

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List of abbreviations

ADB	Asian Development Bank
ABCPMS	Automated Border Crossing Point Management System
AEO	Authorized Economic Operators
AMS	Automated Measurement Station
BS NSC RK	Border Service of the National Security Committee of the Republic of Kazakhstan
CAREC	Central Asia Regional Economic Cooperation Programme
CarGoRuqsat	National Electronic Queue System for Road Transport
CBAM	EU Carbon Border Adjustment Mechanism
CIM/SMGS	Unified Railway Consignment Note (CIM/SMGS Consignment Note)
DTC	Digital Trade Corridor
EAEU	Eurasian Economic Union
EASU	Unified Automated Management System
EEC	Eurasian Economic Commission
ePermit	Electronic Permit System for International Road Transport
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
EU	European Union
FAL Convention	Convention on Facilitation of International Maritime Traffic
FEA	Foreign Economic Activity
ITC	International Trade Centre
KTZh	JSC “NC “Kazakhstan Temir Zholy” (Kazakhstan Railways)
MDD	Main Dispatch Department of the SRC MF RK
MoA RK	Ministry of Agriculture of the Republic of Kazakhstan
MoT RK	Ministry of Transport of the Republic of Kazakhstan
MSMEs	Micro, Small, and Medium-Sized Enterprises
MTI RK	Ministry of Trade and Integration of the Republic of Kazakhstan

NIP “KEDEN”, KEDEN	National Integrated Platform “KEDEN”
NTFC	National Trade Facilitation Committee
OECD	Organisation for Economic Co-operation and Development
OTS	Organization of Turkic States
RK	Republic of Kazakhstan
RMS	Risk Management System
SDW	Single Digital Window
SPECA	United Nations Special Programme for the Economies of Central Asia
Tez Customs	Digital System for Customs Clearance Automation
SRC MF RK	State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan
TF	Trade Facilitation
TCTC	Trans-Caspian Transport Corridor
TRACECA	Transport Corridor Europe–Caucasus–Asia Programme
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNECE	United Nations Economic Commission for Europe
WTO	World Trade Organization



I. Introduction

In 2023–2025, following the presentation of the First National Report of the Republic of Kazakhstan on Trade Facilitation¹, the country continued its systematic efforts to simplify trade procedures (TF), which constitute an essential component of Kazakhstan's strategic course toward economic digitalization, enhanced competitiveness, and national development.

The National Trade Facilitation Committee (NTFC) remains the key coordinating body in this area, bringing together representatives of government agencies, business associations, and international organizations. The Committee serves as the main platform for analysis and the development of coordinated solutions aimed at eliminating administrative barriers and harmonizing procedures. NTFC meetings regularly address issues related to improving the efficiency of trade processes and aligning national initiatives with Kazakhstan's international commitments.

An important role in strengthening the institutional foundations of NTFC is played by Kazakhstan's participation under the regional project implemented by the German Agency for International Cooperation (GIZ) *Trade Facilitation in Central Asia*. The project supports enhanced coordination among NTFCs of the region, information exchange on existing barriers, and the promotion of interoperable digital solutions. The platform enables systematic experience-sharing between government bodies and the private sector, creating a sustainable basis for aligning reforms across Central Asia (CA).

The advancement of this agenda is also supported through a partnership with the International Trade Centre (ITC) under the project "Ready4Trade Central Asia: Fostering Prosperity through the Trans-Caspian Transport Corridor" (2024–2028). The initiative aims to enhance the transparency, predictability, and digitalization of

Figure 1. Kazakhstan's Progress in Trade Facilitation in 2025.²



¹ <https://tradeinfo.kz/menu/228?l=ru>

² In 2023, this indicator also amounted to 76.34%.

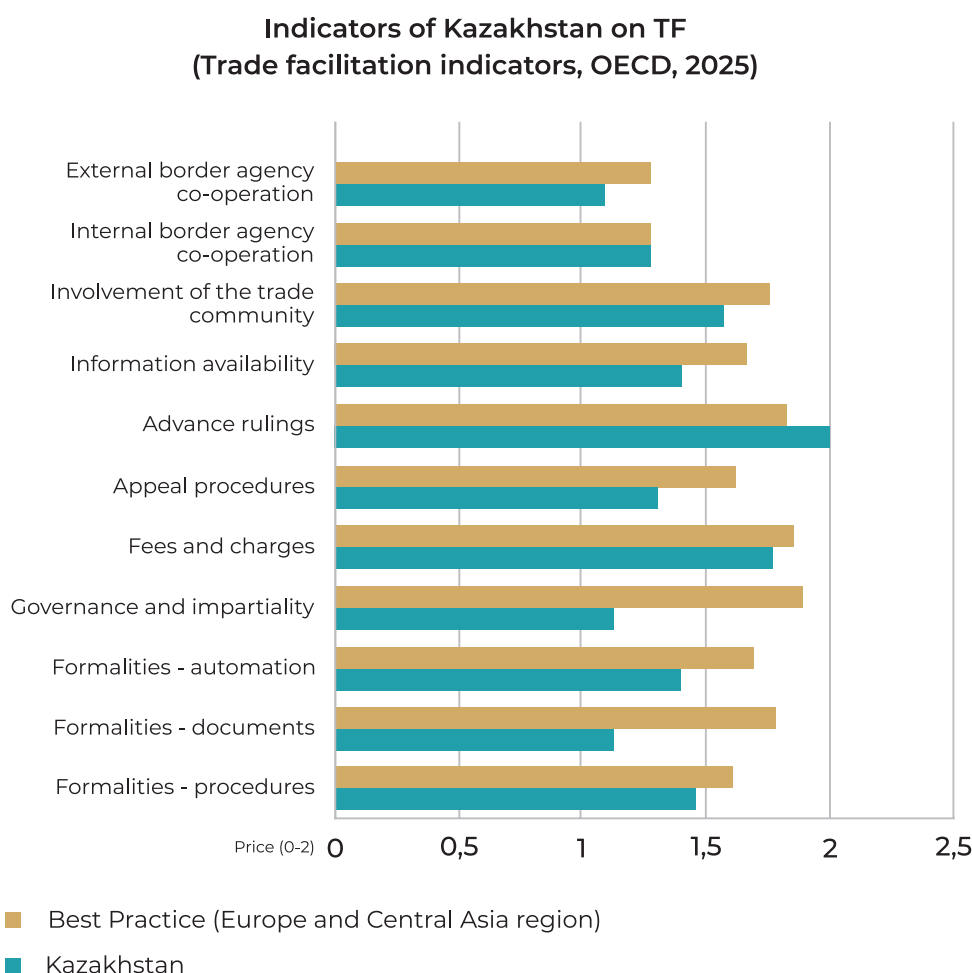
trade procedures. The joint efforts of ITC, the Ministry of Trade and Integration of the Republic of Kazakhstan (MTI RK), QazTrade, and other national partners bring together the state, business, and expert communities to build a sustainable model for managing reforms in the field of trade facilitation.

The results of Kazakhstan's consistent policy in this area are clearly reflected in the recent United Nations Global Survey on Digital and Sustainable Trade Facilita-

tion.³ According to the 2025 findings, Kazakhstan improved its overall trade facilitation score to 76.34%, up from 70.97% in 2021 and only 36.56% in 2015.

The above-mentioned indicator reflects Kazakhstan's implementation of a comprehensive approach to trade facilitation, based on transparency, predictability, and process automation. The country focuses not only on introducing digital tools but also on ensuring their effective application

Figure 2. Kazakhstan's Trade Facilitation Indicators, OECD Data for 2025



³ <https://www.untfsurvey.org/ru/world-map>



in practice- from central government bodies to border crossing points. This approach ensures coordinated actions among state institutions, accelerates cargo clearance, and contributes to improving the overall business environment in foreign trade.

According to the OECD Trade Facilitation Indicators (TFI) for 2025 for the Europe and CA region, Kazakhstan demonstrates strong performance across several dimensions. In particular, the country exceeds the regional best practice level in the “Advance Rulings” category (2.0 vs. 1.818). Kazakhstan also shows steady progress and convergence toward leading regional standards in “Fees and Charges” (1.769 vs. 1.857) and “Involvement of the Trade Community” (1.571 vs. 1.75).⁴

Overall, at the regional level, notable progress has been achieved in enhancing inter-agency cooperation among border authorities and improving access to trade-related information through the launch of national trade facilitation portals, which have simplified business access to trade data (+81%).

At the same time, areas such as automation, document flow, and management still present significant potential for further improvement.

The following Section II provides a detailed examination of the key trade facilitation measures that contribute to increasing the efficiency of foreign trade processes. These include the improvement of customs administration (the KEDEN case), the simplification of transit procedures, the development of paperless and cross-border trade (including the CART.IS initiative), transparency enhancement, as well as a field-based assessment of the situation at border infrastructure facilities.

Section III focuses on Kazakhstan’s role in the development of TCTC and its importance for global supply chains, including institutional development, infrastructure modernization, and the promotion of green trade principles.

Section IV is devoted to the implementation of specific trade facilitation measures within the TCTC, the digitalization of road, rail, and port transport, the integration of information systems, and the strengthening of cooperation with the private sector.

The final Section V outlines recommendations for Kazakhstan’s further steps in trade facilitation and digital integration.

II. Digital Transformation of Customs Administration: the KEDEN Case Study

This section examines the range of measures implemented by Kazakhstan to facilitate trade during 2023–2025. Among them is the digital transformation of customs administration through the national integrated platform KEDEN (NIP “KEDEN”, KEDEN), aimed at introducing modern data processing standards and improving the efficiency of interaction among foreign economic activity (FEA) participants.

Particular attention is given to the development of paperless and cross-border trade through the CART.IS initiative, which provides a comprehensive framework for the interaction of state information systems and lays the foundation for the transition to fully digital processes. The section also discusses steps taken to optimize and accelerate transit procedures, as well as to enhance the transparency and predicta-

⁴ <https://sim.oecd.org/Simulator.ashx?lang=En&ds=TFI&d1c=eca&d2c=kaz>

bility of trade operations. It concludes with an overview of field missions conducted to assess the condition of “hard” and “soft”

border infrastructure and to identify areas for further improvement.

II.A. Digital Transformation of Customs Administration: the KEDEN Case Study

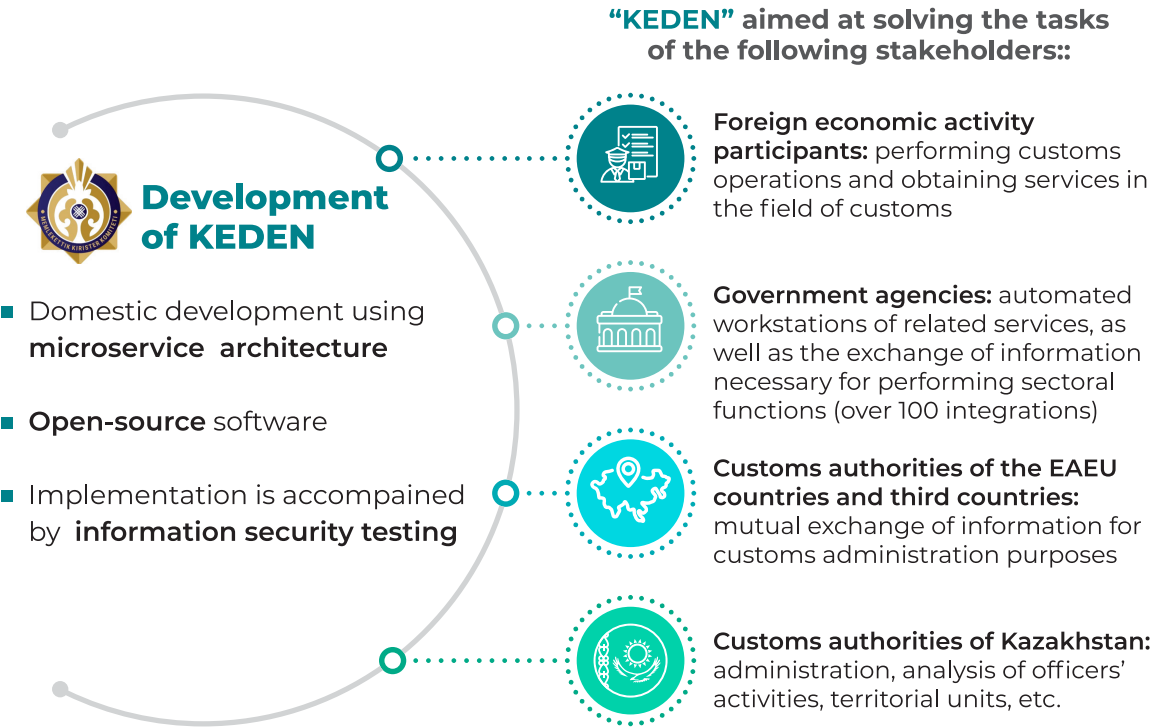
The improvement of customs administration has become the cornerstone of reforms aimed at enhancing the transparency, speed, and predictability of FEA. Since the end of 2024, Kazakhstan has begun a gradual transition to NIP “KEDEN”, which is progressively replacing the “ASTANA-1” and “Single Window for Export-Import Operations” systems. This transition represents not merely a software upgrade but the creation of a national intelligent eco-

system for customs administration that unites the government, businesses, and related services.

Integration of Systems and the Launch of KEDEN

Until 2024, digitalization in the customs sector in Kazakhstan developed in a somewhat fragmented manner. The ASTANA-1 system provided electronic declaration and basic digital service functions, while the Single Window for Export-Im-

Figure 3. Objectives of the National Integrated Platform “KEDEN”





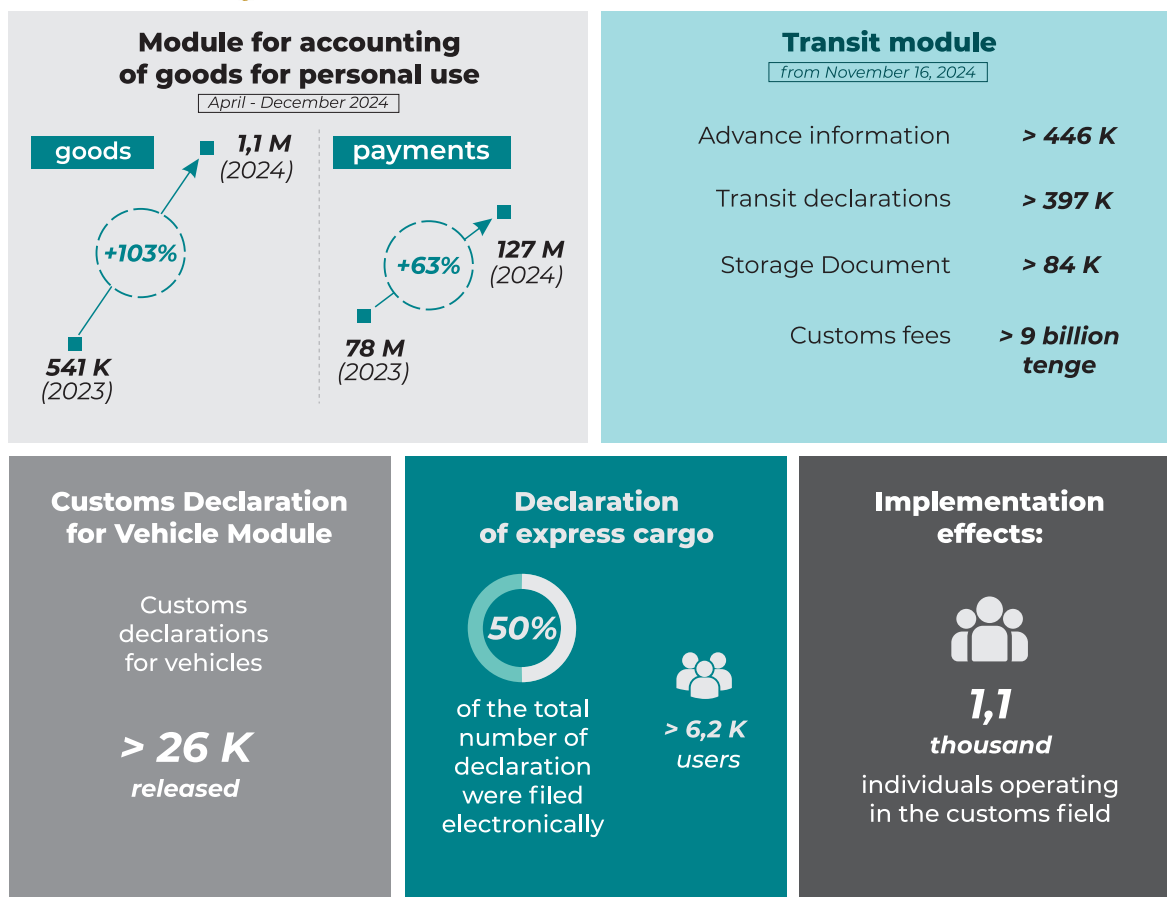
port Operations automated the processing of permit documents. However, both platforms had monolithic architectures,

depended on foreign suppliers, and were based on the vendor solution⁵ ASYCUDA (Automated System for Customs Data),

Figure 4. Practical Outcomes and Effectiveness of the Implementation of KEDEN



Implemented functionality OF “KEDEN”



Implementation effects:

- ✓ Full digitalization of customs guarantee processes
- ✓ Introduction of a virtual warehouse of goods at temporary storage warehouses
- ✓ All types of control implemented under the single window principle

⁵ In the context of customs IT- systems, a vendor-based solution implies dependence on a foreign supplier for software updates, maintenance, and adaptation of the system to national requirements..

which limited integration capabilities and adaptability to national needs. In addition, there was no comprehensive data analytics functionality to support administrative decision-making. The new KEDEN project aims to eliminate these limitations by ensuring technological independence and introducing modern data analysis tools.

In 2024–2025, the implementation of the system's auxiliary components began, including modules for advanced information, accounting of goods for personal use, temporary storage, payment guarantee, and integrated control.

In February 2025, customs declarations for vehicles were introduced, followed by the inclusion of customs registers in March 2025.

According to the State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan (SRC MF RK), the “Transit” module, launched in November 2024, processed 446,000 notifications and 397,000 declarations. At present, 50% of express cargo declarations are processed electronically. The customs registers now include 1,100 participants, and the total number of system users has exceeded 6,200.

These outcomes demonstrate tangible results in practice. Process automation has reduced clearance times, improved the consistency of decisions, and enhanced transparency in control procedures. Foreign trade operators can track the status of declarations and notifications in their personal accounts, while the traceability of goods now extends from border crossing points to warehouses.

The KEDEN platform enables the issuance of electronic inspection reports, automation of staff shift management, and the electronic generation of security guarantees—effectively eliminating paper-based document circulation. Customs inspectors now have access to analytical dashboards

and a situational monitoring center. The use of artificial intelligence and automated control scenarios has reduced human involvement and strengthened procedural discipline.

In this context, the introduction of intelligent tools also required a new organizational model for process management. A crucial element of this model has been the continued development of the Main Dispatch Department of SRC MF RK (MDD)⁶, which ensures centralized monitoring and real-time response, as well as coordination with the Border Service of the National Security Committee (BS NSC RK), the Ministry of Agriculture (MoA RK), and the Ministry of Transport (MoT RK).

The establishment of the MDD made it possible to move from fragmented control mechanisms to a unified monitoring and analysis system. Centralized customs administration ensures timely response to irregular situations, consistent decision-making, and coordinated action among all related services. The MDD's operations have already shown measurable results—improving the throughput capacity of border crossing points, reducing data processing time, and increasing the overall effectiveness of customs control.

Digital Architecture of the National Integrated Platform KEDEN

KEDEN has been developed as a domestically built system based on open-source technologies and a microservice architecture. Each component can be updated and expanded without interrupting the operation of the entire platform. Prior to deployment, all modules undergo cybersecurity testing.

The platform operates across multiple functional levels. FEA participants are provided with a fully digital processing cycle and integrated services for interaction with government authorities. Government agencies and related services are connect-

⁶ The MDD is a nine-story complex with an area of over 5,000 square meters and 210 workstations. It houses a situation center, an electronic declaration center, a contact center, and a training and methodological unit.



ed through more than one hundred system integrations. Customs authorities of the Eurasian Economic Union (EAEU) member states and third countries exchange data to coordinate administrative procedures. Divisions of SRC MF RK use the system for analytics, performance evaluation of inspectors, and monitoring of regional customs units.

The KEDEN architecture includes a risk management system, a reporting module, a mobile application, an integrated cus-

toms tariff, a customs expertise service, a post-clearance control module, a permit documentation system, an integrated control module, and a customs declaration system. All these components are interconnected within a unified digital environment that ensures end-to-end tracking and management of goods—from the submission of advanced information to their final release.

Figure 5. Architecture of the National Integrated Platform “KEDEN”



AI-Based Goods Classification

One of the most innovative tools within KEDEN is the semantic search⁷ module for HS code classification. It is based on natural language processing (NLP) technologies that enable the system to understand the meaning of product descriptions—even when users enter text in incomplete or

conversational form. The algorithm recognizes context, synonyms, professional terminology, and word morphology, matching user input with classifier databases.

In the next development stages, artificial intelligence will perform intelligent HS code selection, automatic verification of prohibitions and restrictions, declaration

⁷ Semantic search is a technology that analyzes the context, structure, and relationships between terms, recognizing synonyms and professional expressions. This enables it to find the required information even when descriptions are phrased informally or contain errors.

analysis, and provide advisory support on requirements in different countries. These capabilities transform the system from a simple digital service into an intelligent assistant for businesses and an analytical tool for forecasting risks and trade flows. Similar solutions are already in use in China, Singapore, and the UAE, and Kazakhstan is confidently moving in the same direction.

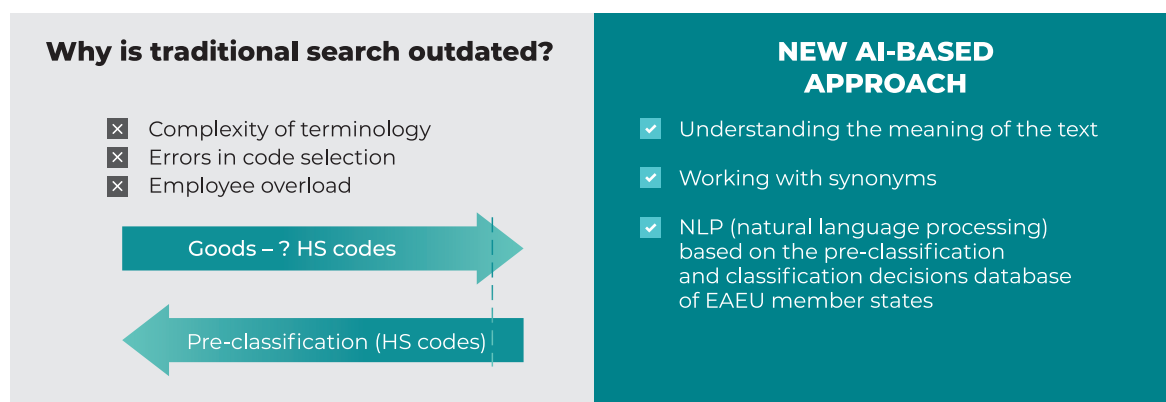
Thus, the AI-powered search in KEDEN represents an important step toward the creation of a truly “smart” customs system - one in which digital technologies not only automate processes but also help specialists think faster and more accurately, making decisions based on meaning rather than formal matches.

Figure 6. Innovative Approach to Goods Classification.



Semantic search of HS codes

An Innovative Approach to Product Classification



II.B. Development of Paperless and Cross-Border Paperless Trade: the CART.IS Initiative

Paperless trade has become a key driver of the digital transformation of FEA. It enables a significant reduction in administrative costs, faster movement of goods, and greater procedural transparency. For Kazakhstan, the transition to paperless formats is not merely an element of modernization—it represents a strategic foundation for integration into the global digital economy.

According to the 2025 United Nations Global Survey on Digital and Sustainable Trade Facilitation, Kazakhstan's cross-border paperless trade indicator increased

from 50% in 2023 to 61.1% in 2025, while the overall paperless trade level for the same period reached 66.7%, reflecting the consolidation of progress achieved in recent years.

It is worth noting that in 2015 these indicators were only 29.6% for paperless trade and 11% for cross-border paperless trade.

CART.IS: Mapping of Information Systems

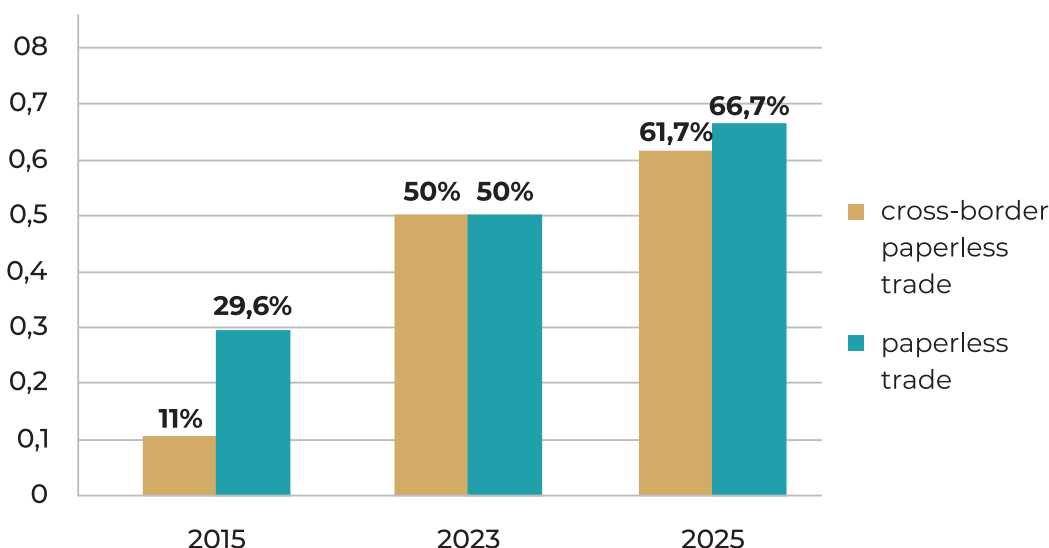
Paperless trade is impossible without a precise understanding of how government information systems involved in the regulation of FEA function and interact.



For this reason, in 2025 Kazakhstan, in cooperation with ITC, launched the CART.

IS (Cartography of Information Systems) initiative—one of the key components of

Figure 7. Kazakhstan's Progress in Paperless and Cross-Border Paperless Trade, 2015–2025



the Ready4Trade CA programme aimed at strengthening the digital architecture of trade.

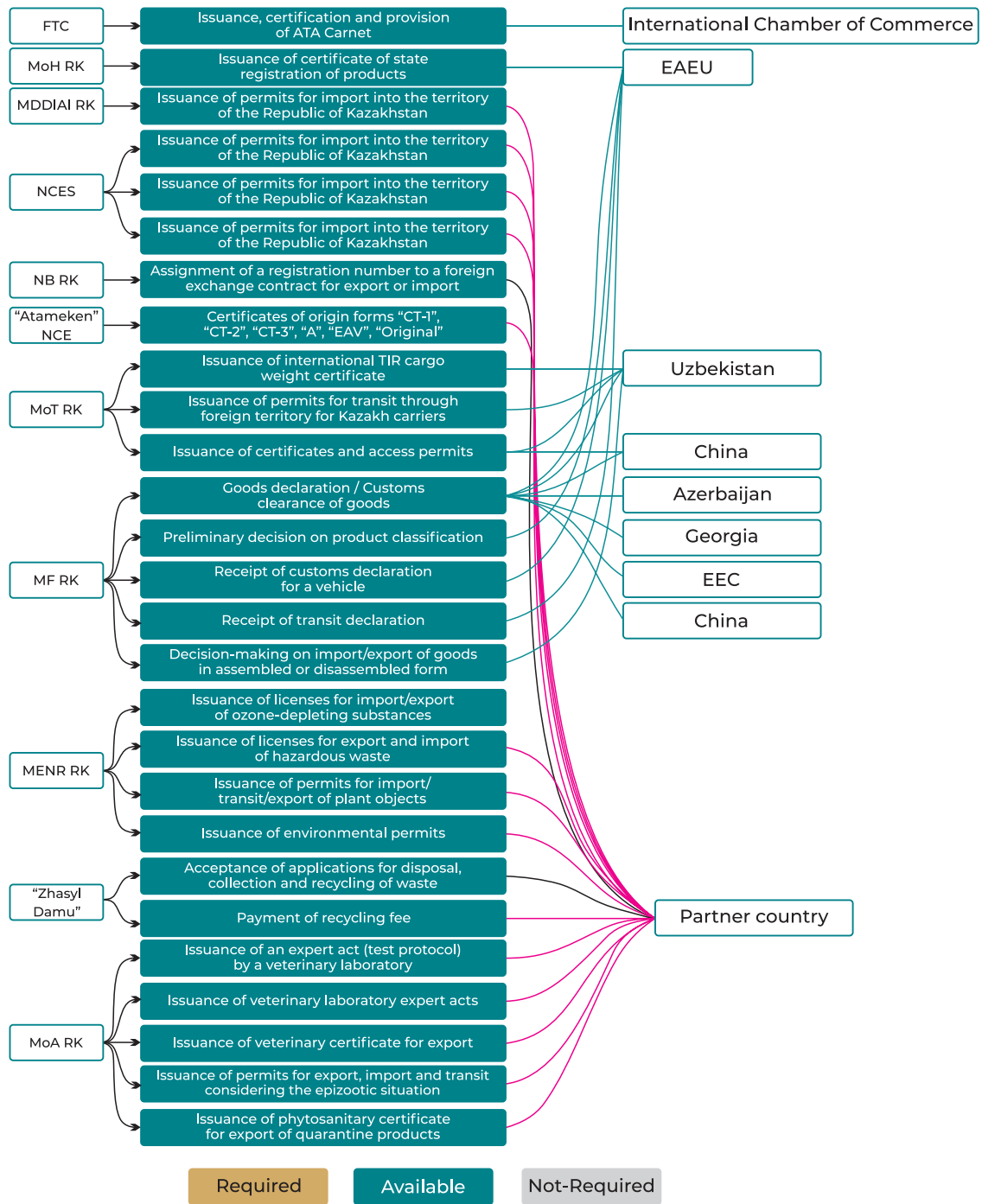
Within the framework of the project, 27 government services related to export, import, and transit procedures were mapped, of which 81% have already been implemented in electronic format. This analysis made it possible, for the first time, to systematically visualize the entire ecosystem of national information systems involved in foreign trade regulation, identify existing data exchange flows, detect functional duplications and bottlenecks, and develop recommendations for transitioning to fully paperless processes.

The analysis covered not only the list of government services but also assessed the digital maturity and inter-agency connectivity among 15 key information systems. The results indicated the need to strengthen integration among systems, reduce data duplication, and expand electronic data exchange with neighboring countries, including Azerbaijan, Uzbekistan, and others.

Based on the findings, a set of practical recommendations was developed for transitioning toward a fully paperless foreign trade model, including:

- ◆ strengthening the legal and regulatory framework for the mutual recognition of electronic documents with trading partners;
- ◆ developing the architecture for inter-agency data exchange and standardizing document formats, codes, and reference directories;
- ◆ expanding digitalization of key processes, including customs clearance, SPS control, transport operations, and licensing;
- ◆ integrating quasi-governmental services with state digital platforms and ensuring their interoperability;
- ◆ promoting international digital corridors (eTIR, eCMR, ePhyto) and eliminating duplication of paper-based procedures.

Figure 8. Map of Cross-Border Information Integrations under the CART.IS Initiative.





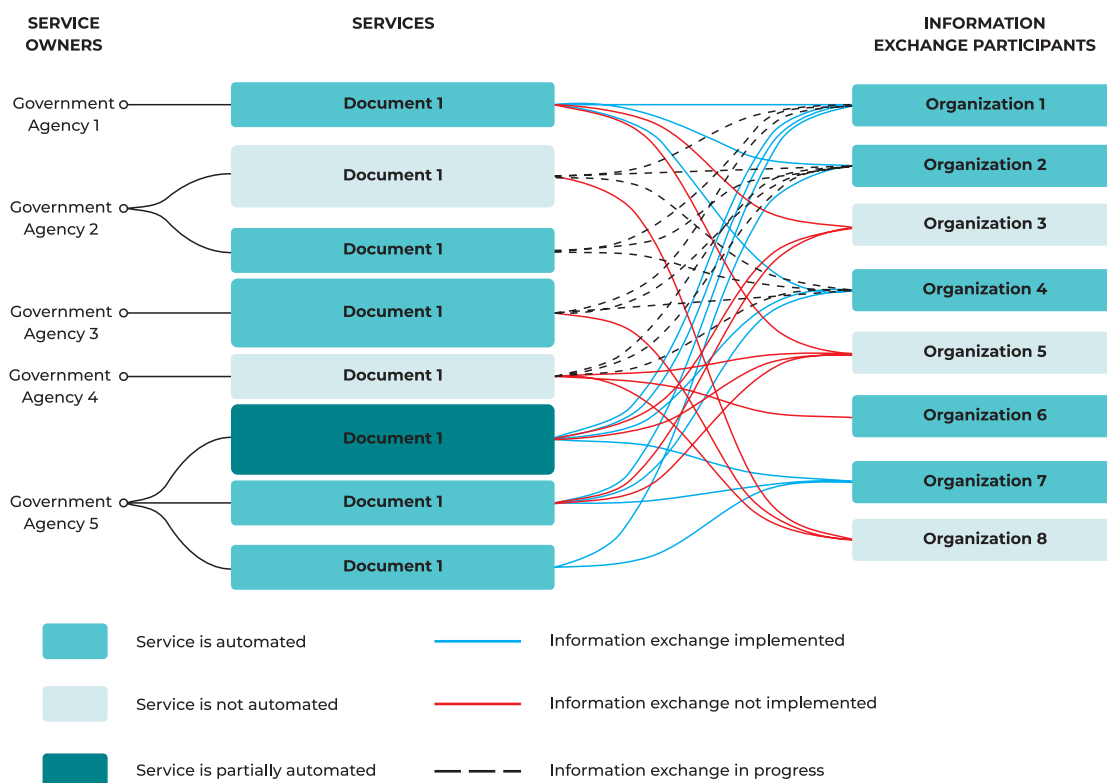
Overall, the CART.IS project is designed to provide a comprehensive understanding of the digital trade infrastructure, identify key interconnections between government platforms and business systems, and ensure transparency and coherence in data exchange. To visualize the results, digital maps of interconnections were developed, illustrating information flows between government agencies, certification and transport authorities, and private sector participants. This approach has made it possible not only to systematize the data exchange architecture but also to identify specific measures for integration and process optimization.

Particular attention during the implementation of CART.IS was devoted to inter-agency data exchange, the legal validity

of electronic documents, and the readiness of national platforms for cross-border integration. The results of the project formed the basis for recommendations on adapting national IT systems to international standards and to the requirements of the ESCAP Framework Agreement on Cross-Border Paperless Trade.

The project also served as a foundation for alignment with key international initiatives such as eTIR, eCMR, and ePhyto, which enable real-time information exchange among the member countries of the TCTC. As a result, Kazakhstan is moving toward the creation of a unified digital environment that integrates transport, customs, and phytosanitary data, ensuring end-to-end traceability and predictability of logistics operations.

Figure 9. Analysis of Interconnections among Government Services and Participants in Data Exchange within the CART.IS Project, 2025



The CART.IS initiative not only enhances the internal digital interoperability of government institutions but also lays the foundation for the creation of a unified information space across CA. Building on the outcomes of the project, Kazakhstan will be able to offer methodological and technical support to regional countries in harmonizing digital solutions—strengthening international partners’ trust and reinforcing Kazakhstan’s role as a technological and methodological hub for trade digitalization.

The presentation of the project’s results is scheduled for November 2025 and will mark an important milestone in Kazakhstan’s transition toward a “Digital by Default”⁸ model in the sphere of FEA.

Electronic Certificates of Origin (e-CO)

In parallel with the CART.IS initiative, Kazakhstan is advancing practical tools for paperless trade, including the introduction of electronic certificates of origin (e-CO), which represent an important step toward simplifying export procedures and achieving mutual recognition of digital documents within the region.

In 2025, Kazakhstan participated in a regional technical meeting on e-CO under the Ready4Trade CA programme. The meeting focused on models for data exchange and mutual recognition of electronic certificates among CA countries. Kazakhstan demonstrated a high level of digital readiness and advocated for the harmonization of standards and the crea-

Figure 10. Regional Technical Meeting on Electronic Certificates of Origin (e-CO)



⁸ “Digital by default” is a principle whereby digital components must be used as a priority in the design and implementation of projects.



tion of compatible APIs⁹ between national systems.

Four models of data exchange were identified—ranging from online certificate verification via QR code to direct government-to-government (G2G) real-time¹⁰ interaction between customs authorities. Each model can be implemented progressively, starting with pilot solutions and gradually transitioning toward full integration.

Following the consultations, the following recommendations were agreed upon:

- ◆ development of a regional roadmap and launch of pilot e-CO data exchange between Kazakhstan and Uzbekistan;;
- ◆ implementation of electronic signatures and digital seals by the Chamber of Commerce and Industry;
- ◆ creation of API interfaces for machine-readable data exchange.

Thus, the implementation of the e-CO initiative will strengthen Kazakhstan's position as a regional leader in trade digitalization, ensure transparency regarding goods origin, and enhance confidence in exports along the TCTC.

Pilot Projects: ePhyto and e-CO

In 2023–2024, Kazakhstan participated in an ESCAP project aimed at advancing cross-border paperless trade in CA. The objective of the project was to conduct a feasibility study of pilot initiatives for transitioning to electronic exchange of trade documents.

Based on the analysis conducted by ESCAP, two priority pilot projects were identified for Kazakhstan: the electronic exchange of phytosanitary certificates between Kazakhstan and Uzbekistan (ePhyto project) and the electronic exchange of certificates of origin between Kazakhstan and Tajikistan (e-CO project).

Figure 11. Analysis of Kazakhstan's Trade Documentation and Partner Countries for the Implementation of Cross-Border Electronic Data Exchange Projects.

Analysis of Trade Documentation and Partner Countries for Kazakhstan

Top-3 partner countries for implementing the cross-border electronic exchange of phytosanitary certificates

1	Uzbekistan	32
2	Kyrgyzstan	23
3	Tajikistan	17

4 criteria
(Score from 1 to 10)

- ✓ Trade potential
- ✓ Logistics and infrastructure
- ✓ Regulatory environment
- ✓ Availability and readiness of IT systems

Top-3 partner countries for implementing the cross-border electronic exchange of certificates of origin

1	Uzbekistan	32
2	Tajikistan	25
3	Kyrgyzstan	21



Results

Uzbekistan is the most suitable country for implementing the pilot project on cross-border exchange of phytosanitary certificates.
Tajikistan is the next most suitable country (after **Uzbekistan**) for implementing the pilot project on cross-border exchange of **certificates of origin**.

⁹ API (Application Programming Interface) is a set of rules and protocols that allows two programs or software components to interact with each other.

¹⁰ "Government-to-Government" (G2G), in real time.

ePhyto Project (Electronic Phytosanitary Certificates)

The project is implemented under the coordination of MTI RK, with the participation of MoA RK and SRC MF RK. The objective of the project is to introduce electronic exchange of phytosanitary certificates between Kazakhstan and Uzbekistan by connecting the national system to the international ePhyto Hub platform. Kazakhstan's EASU information system, used by MoA RK for issuing certificates, is currently ready for integration with the ePhyto Hub.

Specifically, the project provides for the establishment of secure data exchange, mutual recognition of electronic documents and signatures, and the gradual elimination of paper-based certificates. The implementation of ePhyto will accelerate the movement of agricultural goods, reduce costs for exporters and importers, and enhance the transparency of trade procedures.

A dedicated interagency working group has been established to oversee the project, responsible for legal harmonization, technical integration, staff training, and monitoring the implementation of the roadmap.

Pilot Project e-CO (Electronic Certificates of Origin)

This project involves the participation of SRC MF RK, MTI RK, and the National Chamber of Entrepreneurs of Kazakhstan "Atameken," in partnership with the competent authorities of the Republic of Tajikistan.

The project aims to establish secure cross-border data exchange on certificates of origin through the national Single Window systems of Kazakhstan and Tajikistan. Its primary goals are to reduce time and costs associated with export documentation, minimize forgery risks, and strengthen trust among foreign trade participants.

Data on issued certificates of origin will be exchanged automatically between the competent authorities of the two coun-

tries. Customs authorities will be able to verify the authenticity of certificates online before cargo arrival. The implementation of the project will simplify trade procedures, speed up border crossings, and improve transparency in bilateral trade.

Both pilot projects are being implemented under the methodological guidance of ESCAP and serve as practical examples of paperless trade implementation in CA. Kazakhstan's experience with the ePhyto and e-CO projects is regarded by ESCAP as a foundation for further expansion of digital solutions and data exchange among regional countries. The results and achievements of Kazakhstan, presented in 2024 with ESCAP's support, confirmed the country's high level of readiness for the integration of paperless trade procedures.

Other national and international initiatives

Overall, Kazakhstan's progress in paperless trade has been made possible through the implementation of automated customs declaration, electronic payments, expedited release of goods, advanced declaration processing, the establishment of a Single Window system, and many other measures. These actions demonstrate tangible progress but also highlight the need to expand coverage and harmonize processes further.

In this context, Kazakhstan continues to actively cooperate with international partners. For instance, under a joint project with GIZ, in 2024–2025 Kazakhstan, together with Uzbekistan and the Kyrgyz Republic, is exploring the possibility of signing intergovernmental agreements on electronic data exchange and mutual recognition of invoices, phytosanitary certificates (ePhyto), and certificates of origin.

Kazakhstan is also taking steps toward integration with international systems such as eTIR, eCMR, and ePermit, which significantly reduce the use of paper documents in the movement of goods.

In parallel, the country is actively preparing to accede to the ESCAP Frame-

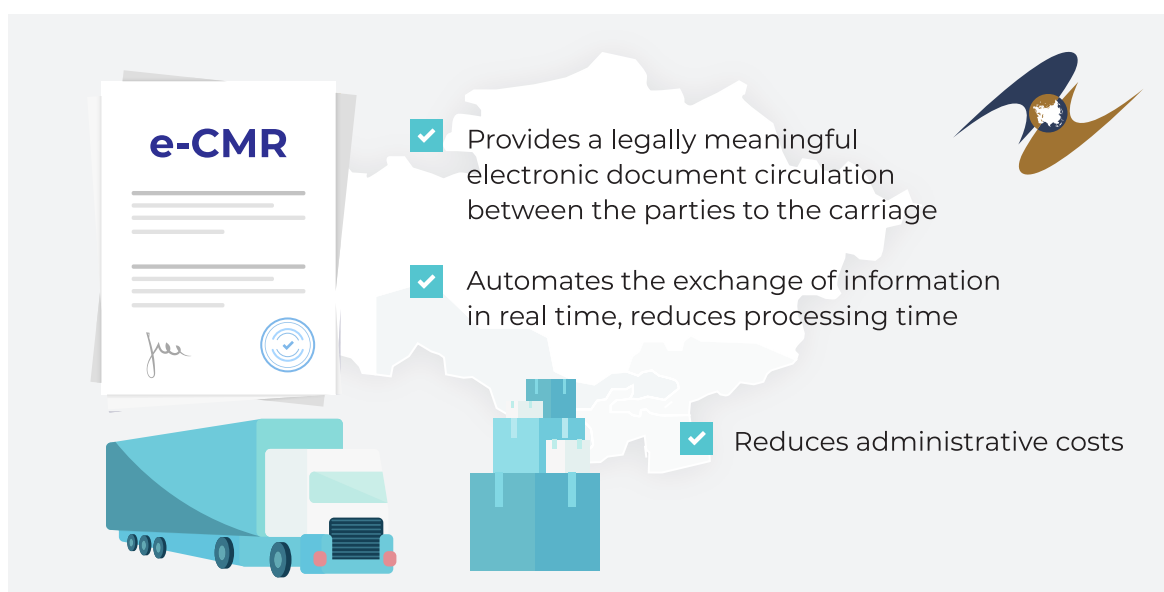


work Agreement on Cross-Border Paperless Trade, which will open opportunities for Kazakhstan to participate in ESCAP programs and pilot projects promoting the adoption of modern paperless trade solutions. This accession will also allow national electronic data exchange systems to be aligned with international requirements, including data protection and mutual recognition of digital documents.

Overall, joining the Framework Agreement will enable Kazakhstan to integrate more effectively into global supply chains, expand export opportunities, and enhance the country's investment attractiveness.

Within the EAEU, steps are also being taken to transition to digital formats in international transport operations. In 2025, EAEU member states launched a pilot project on the use of electronic international consignment notes (eCMR).¹¹

Figure 12. Pilot Project on eCMR within the EAEU



This mechanism is designed to ensure cross-border exchange of legally valid electronic documents using digital signatures and trusted infrastructure. The implementation of eCMR will significantly reduce document processing time, lower administrative costs, and eliminate errors associated with paper-based workflows. In the long term, the project will lay the foundation for establishing a unified EAEU Digital Transport Space, enabling more transparent, faster, and safer logistics chains — ultimately

increasing the efficiency of foreign trade and the region's overall competitiveness.

In turn, the creation of a unified Digital Catalogue of Exporters and Manufacturers of CA Countries (see Section II.E of this Report for details) will also become part of the future paperless trade ecosystem, providing automatic data exchange and mutual verification of information among regional partners.

Furthermore, building on previously launched digitalization initiatives, Kazakh-

¹¹ <https://eec.eaeunion.org/news/v-eaes-pristupili-k-provedeniyu-pilotnogo-proekta-po-primeneniyu-elektronnykh-mezhdunarodnykh-transp/>

stan continues to actively participate in regional events under the auspices of the UNECE and the United Nations Special Programme for the Economies of CA (SPECA). In March 2025, during the 18th UNECE International Seminar on Trade Facilitation and Transport, practical aspects of implementing the SPECA Roadmap on Data and Document Digitalization were discussed, including the use of UN/CEFACT standards.¹²

The discussions focused on harmonizing data exchange formats among the Caspian region ports (Aktau, Kuryk, Baku, and Turkmenbashi) and enhancing the interoperability of their IT systems. During the event, participants presented the results of a pilot project on implementing the CIM/SMGS electronic consignment

note, as well as proposals for integrating port and railway digital solutions.

The discussions confirmed that these initiatives contribute to the development of digital tools for trade facilitation, increase the transparency of transport and logistics processes, and create favorable conditions for the broader adoption of UN/CEFACT international standards across the region.

Thus, the transition toward paperless trade not only reduces costs and processing times for foreign trade participants but also serves as the foundation for Kazakhstan's gradual integration into the global digital economy and the realization of its potential as a regional logistics and trade hub..

II.C. Simplification of Transit Procedures

The development of Kazakhstan's transit potential remains one of the key priorities of national policy. In recent years, Kazakhstan has become a strategic hub connecting Europe and Asia, which has required a comprehensive approach encompassing not only infrastructure modernization but also the digitalization of transit procedures.

Modernization of Border Crossing Points

Kazakhstan is implementing a large-scale programme to modernize nine road border crossing points along the external border of the EAEU. The border crossing points Kaplanbek, Atameken, Kalzhat, and Alakol have already been commissioned. The remaining facilities—Kazyghurt, Tazhen, Temir Baba, Bakhty, and Maikapshagai—are in the final stages of reconstruction, with completion expected by end-2025.

The upgraded checkpoints are equipped with state-of-the-art inspection-and-screening complexes, weighing systems, veterinary and phytosanitary control zones, and intelligent traffic management systems, all aimed at improving efficiency and security.

Automation of Railway Transit

A major focus has been the automation of railway transit. In 2024, Kazakhstan Temir Zholy (KTZh), in cooperation with SRC MF RK, launched a pilot project for the digital processing of railway transit declarations. For the first time, the entire process of registration, release, and notification of cargo arrival and departure is conducted fully electronically, eliminating paper-based stamps and manual confirmations.

As part of the project, an automated release and registration system for transit declarations was introduced, using the Risk Management System (RMS) accessi-

¹² The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) develops international standards, data models, and recommendations aimed at simplifying and digitalizing trade, transport, and logistics processes between countries.



ble to all relevant control agencies. Inspections are conducted automatically, and additional verification is initiated only when the RMS triggers an alert.

According to SRC MF RK, 23,800 transit declarations have already been processed along the Altynkol–Saryagash route, and 6,700 declarations along the Altynkol–Seaport route.

This innovation has reduced the processing time for a single container from three hours to just five minutes, eliminated the use of paper documents entirely, and ensured full transparency of actions across all customs authorities. The system has been integrated with the NIP “KEDEN” and internal railway services, creating a unified information environment for all stakeholders—carriers, agents, and customs authorities. In just the first half of 2025, over 59,000 transit declarations¹³ were processed in digital format. This integration accelerated processing times by 35%, reduced the number of errors, and minimized railcar idle time at stations.

In the future, the digital transit system is planned to be integrated with the platforms of neighboring countries, including China and Uzbekistan, which will establish the foundation for creating seamless transit along the entire TCTC.

Introduction of Navigation Seals in Transit

Since 2023, Kazakhstan has been developing the introduction of electronic navigation-seal¹⁴ technology, which enables real-time tracking of transit cargo movements. Each seal will be equipped with a GPS module and a secure data transmission channel, allowing customs authorities to monitor routes, stoppages, and any breaches of cargo integrity in real time.

Within this process, a national operator has been designated to oversee the monitoring of both road and rail transport. A clear interaction framework has been established between the national operator and regulatory bodies, including the SRC MF RK.

The expected effects of introducing the navigation seal system for transit include several key benefits. For the government, it will primarily promote the development of legitimate transportation across the EAEU territory, eliminate illicit schemes such as false transit and fictitious imports, and ensure that goods are properly entered into legal circulation. In the long term, the implementation of navigation seals will enhance trust in transit operations and, when scaled to TCTC, will make the corridor more predictable and competitive—positioning Kazakhstan as a regional center for digital monitoring of transit flows.

At the same time, Kazakhstan currently needs to develop sectoral regulatory acts governing the use of navigation seals, as well as conducting regulatory impact assessments to evaluate the implications of the system’s implementation. These measures will help accelerate its effective deployment and ensure the system’s successful operation.

Digital Transit Ecosystem

In electronic queuing, the CarGoRuq-sat system, introduced in 2023, has become an effective tool for managing traffic flows at border crossings. It completely eliminated the human factor in queue distribution, ensuring equal access to bookings for all foreign trade participants. The automation of border crossing processes for vehicles is carried out via the QOLDAU.KZ platform.

¹³ <https://kgd.gov.kz/ru/news/zapushchen-proekt-po-avtomatizacii-zheleznodorozhnogo-tranzita-1-141236>.

¹⁴ Based on the Agreement on the Use of Navigation Seals in the EAEU for Tracking Shipments of April 19, 2022 (ratified by a Kazakhstani law on March 15, 2023).

Figure 13. Online Display of the CarGoRuqsat Electronic Queue System at Border Crossing Points of Kazakhstan.

Vehicle Number Номерной знак	Inspection Status Статус проверки	Vehicle Number Номерной знак	Inspection Status Статус проверки
7007DX20	Waiting Ожидание Күту		
Анықтамасы: Күте тұрыңыз: Тексеру нәтижелерін		14:44:32 02.01.2000 1/1	

Currently, 34 border crossing points are connected, with 17 integrations established between state and sectoral information systems.

The system has 96,294 registered users and has processed over 1.27 million active bookings. For carrier convenience, a 24/7 support channel has been launched via the CarGoRuqsat Telegram bot. This digital service has become an integral component of Kazakhstan's new digital ecosystem for transit flow management.

In 2025, the system was enhanced with additional features, including dedicated slots for the transportation of perishable, hazardous, and live-animal cargo,¹⁵ as well as a refund-guarantee mechanism to prevent fraudulent or unused bookings. Moreover, integration with the KazAvtoZhol JSC system enabled the automatic collection of outstanding toll payments from foreign carriers, thereby improving financial disci-

pline and ensuring greater transparency in settlements.

Furthermore, a promising area in the development of transit procedures is the "Seamless Transit" pilot project,¹⁶ implemented jointly with the Republic of Uzbekistan. In July 2025, the first meeting of the working group took place, during which both sides confirmed their readiness to begin the practical implementation phase of the pilot. The project aims to establish a unified mechanism for data exchange between the customs authorities of the two countries, reduce clearance times, and enhance the predictability of cargo movements.¹⁷

All the aforementioned measures have significantly improved the efficiency of transit procedures. Kazakhstan is gradually building a digital transit ecosystem in which control is carried out automatically and human intervention is kept to a minimum.

¹⁵ Order of the Ministry of Finance of the Republic of Kazakhstan of September 17, 2025 No. 505 "On Amendments and Additions to the Order of the Deputy Prime Minister – Minister of Finance of the Republic of Kazakhstan of June 27, 2023 No. 707 "On Approval of the Rules for Crossing the State Border of the Republic of Kazakhstan by Motor Vehicles, Cargo, and Goods, Including Through the Use of a Paid Electronic Queue System".

¹⁶ <https://www.gov.kz/memleket/entities/kgd/press/news/details/1034556?lang=ru>.

¹⁷ <https://www.gov.kz/memleket/entities/kgd/press/news/details/1034556?lang=ru>.



II.D. Field Missions: Analysis of Hard and Soft Border Infrastructure

A practical assessment of the effectiveness of trade facilitation reforms is an essential component of the Government's ongoing efforts to improve trade and transport processes.

In 2025, Kazakhstan continued its systematic practice of conducting field missions to key transport and border infrastructure sites. This approach makes it possible to compare the outcomes of digitalization and regulatory reforms with on-the-ground realities, identify remaining bottlenecks, and determine further areas for improvement.

In July–August 2025, MTI RK, in cooperation with QazTrade and with the support of the International Trade Centre (ITC), conducted a field mission under the Ready4Trade CA project. The mission included visits to the Aktau seaport as well as the Kaplanbek and B. Konyysbaev border crossing points on the Kazakhstan–Uzbekistan border. The primary objective was to conduct a comprehensive assessment of the efficiency of trade procedures, the condition of physical infrastructure, and the level of digital readiness of the facilities for further integration.

Figure 14. Field Missions to Border Infrastructure Facilities of Kazakhstan.



During the mission, a practical analysis was conducted to assess cargo processing and the time required to complete control operations.

Based on field observations, the following average indicators were recorded:

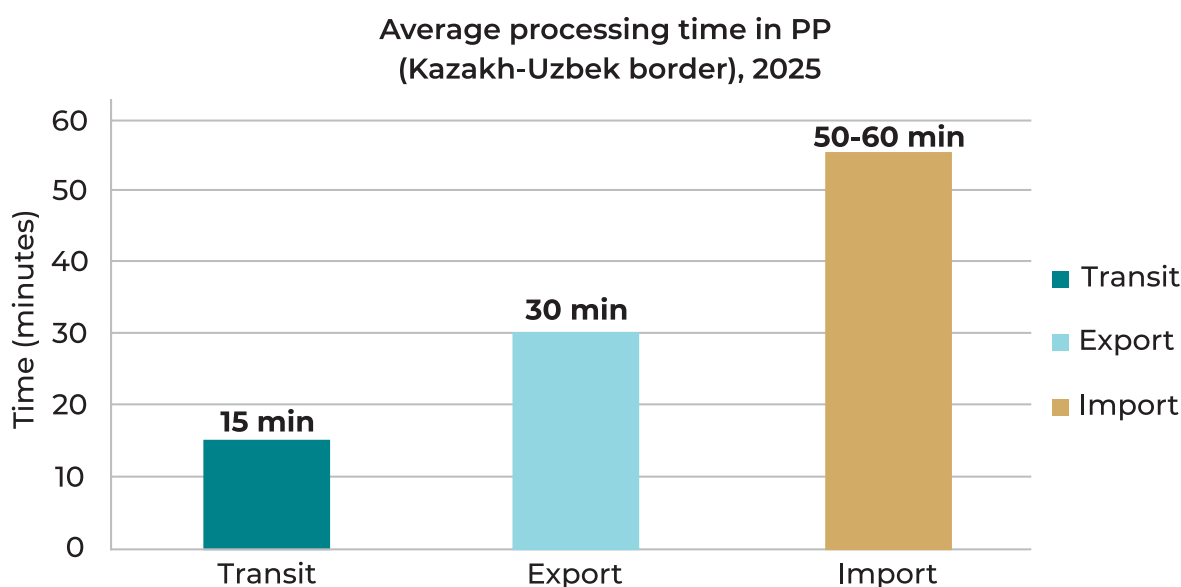
- ◆ border control — up to 2 minutes;
- ◆ electronic checkpoint processing — up to 2 minutes;

- ◆ weight and radiation inspection — approximately 1 minute;

- ◆ customs clearance — up to 14 minutes.

Overall, the average processing cycle amounted to 15 minutes for transit, 30 minutes for export, and 50–60 minutes for import, confirming the positive impact of digitalization and enhanced interagency coordination on the acceleration of trade procedures.

Figure 15. Average Processing Time Measurements at “B. Konysbaev” and “Kaplanbek” Border Crossing Points, July–August 2025.



Key Challenges and Bottlenecks

Despite the notable progress achieved, the analysis revealed that behind the visible improvements there remain several deep-rooted systemic issues that continue to constrain the effectiveness of reforms and limit the development potential of border infrastructure.

Particular attention during the mission was given to the operation of the CarGoRuqsat electronic queuing system and its interaction with other government information platforms. The introduction of automated entry booking has indeed reduced human involvement and improved

the transparency of transport flow management. However, foreign trade participants noted that at certain border crossing points, cases of bypassing the electronic queue through informal intermediaries (“helpers”) still occur. This undermines business confidence in digital tools and partially offsets the positive effects of the implemented solutions.

The analysis also indicated that the potential of digital tools is not yet fully utilized. The CarGoRuqsat system remains partially isolated from other agency platforms, limiting automation and preventing the full realization of the Single Window principle.



Multiple information systems are currently in use across facilities — ABCPMS,¹⁸ AS-TANA-1, KEDEN, EASU¹⁹ (veterinary), Berkut, and Timesheet — yet their integration remains fragmented and incomplete.

In addition to digital challenges, the mission identified several infrastructure-related constraints affecting the efficiency of border crossing points: narrow access roads, insufficient holding areas, lack of dedicated lanes for perishable goods, poor internet connectivity, and unstable power supply. A shortage of parking areas and refrigerated facilities also limits throughput capacity and reduces the quality of cargo handling.

At the same time, positive developments were observed at Aktau Seaport, particularly in the modernization of berthing infrastructure and technical equipment, as well as in its readiness to implement a Port Single Window for integrating clearance and control procedures.

The field missions helped identify specific areas for modernization and investment in border and port infrastructure development. Among the priorities are the launch of a new video surveillance and inspection system (X-ray scanning complexes) by 2027, the construction of dedicated lanes and zones for perishable goods, and the optimization of logistics schemes and interagency coordination mechanisms.

Special attention was given to Kuryk Port, highlighted as a model example of a modern logistics hub. The facility is equipped with both road and rail inspection complexes compliant with international standards and demonstrates high operational reliability and efficiency.

Based on the results of the diagnostic assessment, a set of targeted recommen-

dations was developed to modernize border crossing points (BCPs) and accelerate cargo clearance procedures. Key proposed measures include:

- ◆ Strengthening integration of national IT systems through the Smart Bridge²⁰ and Interagency Data Exchange System²¹ (IDES) platforms to enable real-time data exchange;
- ◆ Ensuring transparency in the operation of the CarGoRuqsat system and eliminating the possibility of interference by informal intermediaries;
- ◆ Full digitalization of veterinary and phytosanitary certificates within the e-license platform;
- ◆ Deployment of video surveillance and transport flow analytics systems to improve monitoring, efficiency, and transparency of border operations;
- ◆ Implementation of a Port Single Window in Aktau and Kuryk integrating customs, port, and logistics services;
- ◆ Expansion of joint inspections and data exchange practices with neighboring countries;
- ◆ Development of cold storage, inspection, and warehousing infrastructure for perishable goods;
- ◆ Enhancement of energy supply and infrastructure reliability at border crossing points;
- ◆ Legislative anchoring of the “Digital by Default” principle and transition to cross-border recognition of electronic documents (eTIR, eCMR, ePhyto);
- ◆ The implementation of these measures will significantly increase throughput capacity, reduce cargo processing times, and strengthen trust between government agencies and the private sector.

¹⁸ Automated Border Crossing Point Management System.

¹⁹ Unified Automated Management System.

²⁰ Smart Bridge is a unified catalogue of services from the information systems of government bodies and the private sector. It was launched into operation on December 20, 2019, by “National Information Technologies” JSC (“NIT” JSC).

²¹ In Kazakhstan, the Interagency Data Exchange System (IDES) is a national integration platform that enables data exchange between government information systems.

Field missions under the Ready4Trade project reaffirmed Kazakhstan's strong potential in digitalization and interagency coordination, while also serving as a practical mechanism for improving the country's trade infrastructure.

Additionally, as part of broader regional cooperation, Kazakhstan participated in the International Trade Centre (ITC) initiative on risk management and integrated border control, held in Baku, Azerbaijan, in

April–May 2024. The Kazakh delegation presented the country's experience in implementing the National Risk Management System (RMS) based on automated trader categorization. The use of machine learning tools has increased the accuracy of risk assessments, with 63% of detected violations occurring within the subset of inspected consignments—a result that demonstrates the growing effectiveness of data-driven risk management in customs control.

Figure 16. Representatives of CA Countries at the Regional Meeting on Risk Management and Border Control, Baku, 2024



As a result of the meeting, the following areas for further work were identified: development of digital data analysis tools, synchronization of risk management systems (RMS) in transit, and promotion of mutual recognition of Authorized Eco-

nomic Operator (AEO) status. Participation in the initiative became an important step in strengthening Kazakhstan's expertise and advancing modern approaches to integrated border management.



II.E. Enhancing Transparency

Enhancing the transparency and accessibility of information for FEA participants remains one of the priority areas of Kazakhstan's state policy. In this field, the country continues to strengthen its position by combining the development of national digital tools with active international cooperation.

One of the key achievements is the consistent development of Kazakhstan's Trade Facilitation Portal (tradeinfo.kz²²), which today serves as the main tool for informing businesses. Through this platform, FEA participants can access detailed descriptions of export, import, and transit procedures, document samples, regulatory references, as well as information on the duration and financial costs of procedures.

At present, the portal contains detailed descriptions of trade procedures for more than 80 goods across 17 customs regimes (in accordance with the Customs Code of Kazakhstan), making it a convenient and practical data source for small and medium-sized enterprises (SMEs).

At the same time, under the GIZ project, work is underway to develop regional tools for assessing trade barriers (Border Bottlenecks Assessment) and a mechanism for exchanging information on emerging obstacles among CA countries. This contributes to the timely adjustment of national procedures and enhances predictability for businesses in the region. The project also supports the development of joint digital solutions based on UN/CEFACT standards and data exchange through the single window format, thereby strengthening trust between administrations and the business community.

Another important area that has strengthened business trust in customs

authorities is the continued implementation of the Authorized Economic Operator (AEO) program. The national assessment conducted in 2025 with the support of the International Trade Centre (ITC) demonstrated a high level of program maturity and strong business engagement. Kazakhstan continues to improve the AEO regulatory framework, expanding opportunities for compliant traders to benefit from simplifications in border crossing and customs clearance procedures.

As part of this assessment, key priorities for further program development were identified, including harmonization of certification criteria, development of a digital AEO module within the "ASTANA-1" system, and establishment of a permanent dialogue mechanism between customs and the private sector. Additional attention has also been given to risk management and information exchange with regional partners, which contributes to greater transparency and predictability of procedures.

Furthermore, within the broader context of transparency, several other important initiatives are noteworthy.

Unified Digital Catalogue of Exporters and Manufacturers of Central Asian Countries

In cooperation with the International Trade Centre (ITC), Kazakhstan launched in 2025 the implementation of an initiative to establish a Unified Digital Catalogue of Foreign Trade Participants of CA countries. The project aims to create a shared information platform that consolidates verified data on exporters, importers, and manufacturers across the region.

The Catalogue will be integrated with Kazakhstan's Trade Facilitation Portal (tradeinfo.kz) and the regional CA Gateway portal (infotradecentralasia.org), ensuring

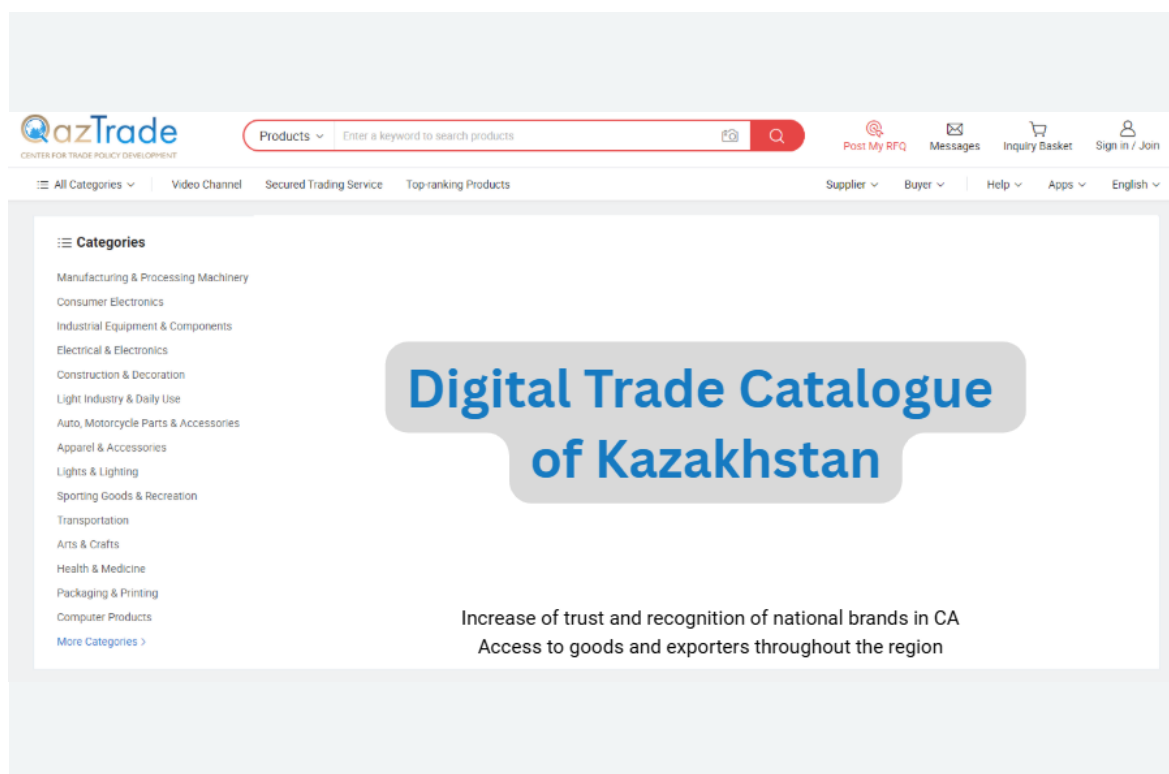
²² <https://tradeinfo.kz/?l=kk>.

synchronized access to information for all countries of the region.

The main objective of the project is to enhance transparency and trust in regional trade, thereby facilitating the identification of reliable business partners in CA. The Catalogue will serve as a practical tool to

broaden SME participation in international trade, enabling them to showcase their export potential on the global stage. Through a user-friendly interface, businesses will be able to search for partners by product category, country, certification, and other key criteria.

Figure 17. One of the possible design options for the homepage of the Digital Catalogue of Exporters and Manufacturers of Central Asian Countries.



It is expected that in the future, the Unified Digital Catalogue will evolve beyond an export promotion tool to become an integral part of the paperless trade ecosystem, facilitating electronic data exchange among countries of the region and promoting the harmonization of information submission requirements. In the long term, the project will contribute to enhancing the investment attractiveness of CA countries and fostering the development of a single digital economic space in the region.

The full implementation of the Unified Digital Catalogue for foreign trade participants of CA is planned for 2026.

UNCTAD TRAINS International Database

In 2025, Kazakhstan also initiated the process of updating information on non-tariff measures in the Trade Analysis Information System (TRAINS) — the international database of the United Nations Conference on Trade and Development (UNCTAD). This platform serves as a cen-



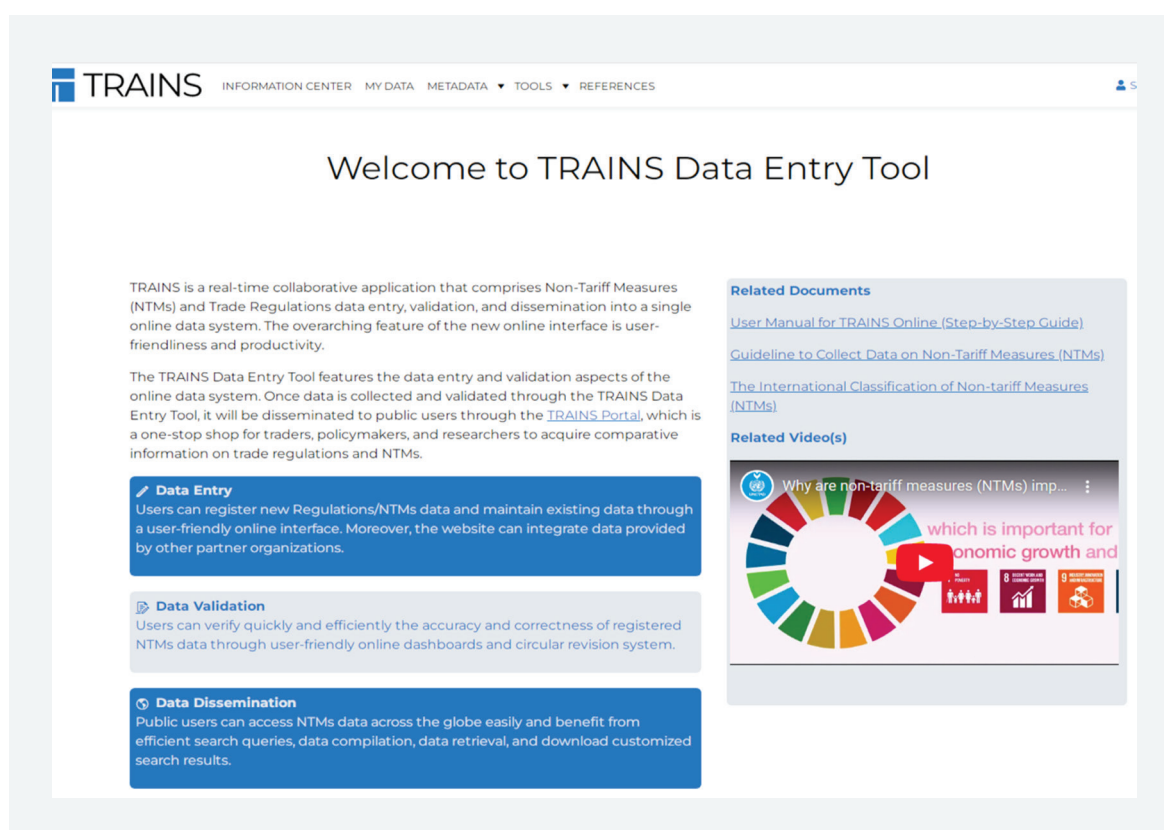
tralized system containing data on sanitary, phytosanitary, technical, quantitative, and other restrictions applied in international trade, and is widely used as a reference tool for exporters, importers, and other foreign trade participants.

Maintaining comprehensive and reliable information within the TRAINS system contributes to greater transparency, facilitates planning of export-import opera-

tions, supports compliance with regulatory requirements, and enhances the clarity of trade and administrative procedures.

Moreover, this work helps build trust among international partners and counterparties, strengthens Kazakhstan's image as an open and predictable trading partner, and increases the country's investment attractiveness.

Figure 18. Interface of the UNCTAD TRAINS international system.



Ensuring access to information on applied regulatory measures also plays an important role in supporting key areas of foreign economic logistics, and can indirectly contribute to shaping a sustainable perception of TCTC as a transparent and reliable trade and transport corridor.

It should also be noted that the enhancement of transparency is closely linked to the digitalization of customs services. NIP “KEDEN” has become an impor-

tant tool for providing timely information to the business community. The system ensures access to customs registers, electronic documents, and declaration statuses, while allowing users to track the clearance process in real time. This helps build trust among foreign trade participants and eliminates the need for direct interaction with officials. (For more information on KEDEN, see Section II.A of the Report.)

III. Trans-Caspian Transport Corridor and Global Supply Chains

III.A. Strategic importance of the route

The Trans-Caspian Transport Corridor (TCTC) is a broad multimodal trade route connecting Asia with Europe through CA (Kazakhstan), the Caspian Sea, Azerbaijan, Georgia, and Turkey. It offers an alternative to traditional maritime transport and the Northern Corridor, providing shorter delivery times and access to new markets. One key part of the TCTC is the Middle Corridor, which links China to Europe via CA and the Caspian Sea. This route combines rail and maritime transport, supported by infrastructure development initiatives and efforts to streamline customs procedures and improve logistics efficiency, making the overall transport network more competitive.

TCTC has become a valuable alternative for companies seeking to diversify and secure their supply chains, particularly as risk mitigation in global logistics becomes increasingly important.

By expanding CA countries' connections to international markets, this route allows them to more actively participate in global trade. This integration is crucial for economic growth in the region. This transport route plays a vital role in connecting multiple economies within the global supply chains, facilitating more efficient logistics and transportation operations. It facilitates the timely movement of goods, ultimately fostering economic cooperation.

The creation and expansion of TCTC has spurred significant investment in critical infrastructure, encompassing railways, ports, and logistics centers in all participating countries. Such investments are crucial for increasing capacity and efficiency.

Kazakhstan, Azerbaijan, Georgia, and Turkey are actively modernizing their transport ecosystems to accommodate the expected growth in trade flows. This infrastructural evolution not only stimulates local economies but also strengthens regional connectivity. To ensure smooth transit of goods, multilateral agreements and partnerships are being concluded to streamline customs procedures and reduce transit times, thereby increasing the overall efficiency of the transport corridor.

Kazakhstan's strategic role as a link between Europe and Asia

Kazakhstan plays a vital role in TCTC, serving as a key hub connecting CA with broader Eurasian and global markets. This route facilitates the movement of goods through CA, linking landlocked Kazakhstan with Caspian Sea ports and further access to international markets via maritime corridors.

Kazakhstan's participation in this route is crucial for the global supply chains, as it facilitates the diversification of transport options and reduces dependence on traditional routes. By leveraging its geographic location and developing infrastructure projects, Kazakhstan is strengthening regional connectivity, supporting economic development, and facilitating integration into the global economy. Kazakhstan's active participation in cross-border cooperation, the development of logistics infrastructure, and transit services underscore its strategic importance in the changing landscape of international trade routes.



Figure 19. Trans-Caspian Transport Corridor (TCTC).



Source: Caspian Herald <https://casp-geo.ru/transkaspiskij-mezhdunarodnyj-transportnyj-marshrut-narashhi-vaet-oboroty/>

III.B. Kazakhstan's strategic role as a link between Europe and Asia

International Association of the Middle Corridor

To increase freight traffic on TCTC, the Coordinating Committee for the Development of the Middle Corridor was established in February 2014.

In December 2016, the members of the Coordinating Committee for the Development of the Middle Corridor - Kazakhstan, Azerbaijan, and Georgia - decided to establish the International Association.²³

Since 2017, the International Association has been operating, with the participation of railway, maritime administrations, and logistics operators from Kazakhstan, China, Azerbaijan, Georgia, Turkey, Ukraine, Romania, Bulgaria, Singapore, Lithuania, and Poland.

Currently, the Middle Corridor runs from Altynkol station on the Kazakh-Chinese border to the seaports of Aktau and Kuryk, where cargo is transshipped from rail to sea vessels.

EU Support for the Development of the Trans-Caspian Transport Corridor

The European Union (EU) has been actively supporting the development of the Trans-Caspian Transport Corridor (TCTC) as part of its broader strategy to strengthen sustainable connectivity between Europe and CA.

A key milestone in this endeavour was the EU-funded EBRD study²⁴ on Sustainable Transport Connections between Europe and CA, the final report of which was

²³ <https://middlecorridor.com/ru/ob-assotsiatsii/history>

²⁴ European Bank for Reconstruction and Development

published in June 2023. The main findings were presented during the second EU–CA Economic Forum, held on 18–19 May 2023 in Almaty.

According to the EBRD study, the implementation of investment projects and measures to ensure uninterrupted operations along the TCTC could increase container traffic through the corridor to 470,000 TEU by 2040.

The EBRD report identified 33 priority investment projects in “hard” infrastructure, including the modernization of railways, the creation of new transport links, and the expansion of port capacities. It also proposed seven “soft connectivity” measures aimed at improving trade facilitation, regulatory harmonization, digitalization, tariff alignment, customs and border control, interoperability, and market liberalization.

Together, these recommendations form a roadmap for strengthening the competitiveness and efficiency of the TCTC, promoting economic growth and deeper integration of CA countries with Europe.

A major step forward was the Global Gateway Investors Forum held in Brussels in January 2024, where participants agreed to invest 10 billion euro in sustainable transport connectivity and to establish the Trans-Caspian Transport Corridor Coordination Platform. The Platform aims to coordinate efforts to develop both hard and soft infrastructure, ensuring coherence among all stakeholders based on the priorities identified in the EBRD study.

Building on these outcomes, in 2024 the EU approved a 30 million euro programme to further support the development of the TCTC in CA. The programme consists of three key components:

Improving Soft Connectivity and Regulatory Frameworks (12 million euro):

Focused on strengthening institutional and regulatory mechanisms across six areas: trade and customs facilitation, sustain-

able and multimodal transport, expansion of public–private partnerships, transport market liberalization and harmonization, tariff policy enhancement, and asset management and financing.

Intra-Regional Cooperation in Transport and Trade (3 million euro):

Supports the activities of the TCTC Coordination Platform, promotes the corridor, and coordinates the implementation of priority projects. The goal is to transform the TCTC into a sustainable, safe, and efficient multimodal route connecting Europe and Asia in no more than 15 days.

Investments in Green and Climate-Resilient Infrastructure (15 million euro):

Aimed at preparing and accelerating infrastructure development, with an emphasis on low-carbon and climate-resilient transport solutions, private sector engagement, and analytical support to governments to overcome infrastructure bottlenecks.

Component 2 was launched in August 2025, while Components 1 and 3 are scheduled to be officially presented at the EU–CA Economic Forum in Tashkent in November 2025.

In addition, the corridor’s development is further reinforced by the “Ready4Trade Central Asia: Fostering Prosperity through the Trans-Caspian Transport Corridor” (2024–2028) project, implemented by the International Trade Centre (ITC). This initiative supports the simplification of cross-border procedures, enhancement of regional coordination, and increased competitiveness of MSMEs, thus contributing to the TCTC’s role as a key driver of inclusive and sustainable economic growth.

Dynamics of transportation

Overall, over the past five years, there has been a sixfold increase in freight transported along the TCTC (from 0.8 million tons in 2020 to 4.5 million tons in 2024). By the end of 2024, freight volumes totaled



4.5 million tons, an increase of 62% compared to the previous year's figure (2.8 million tons).

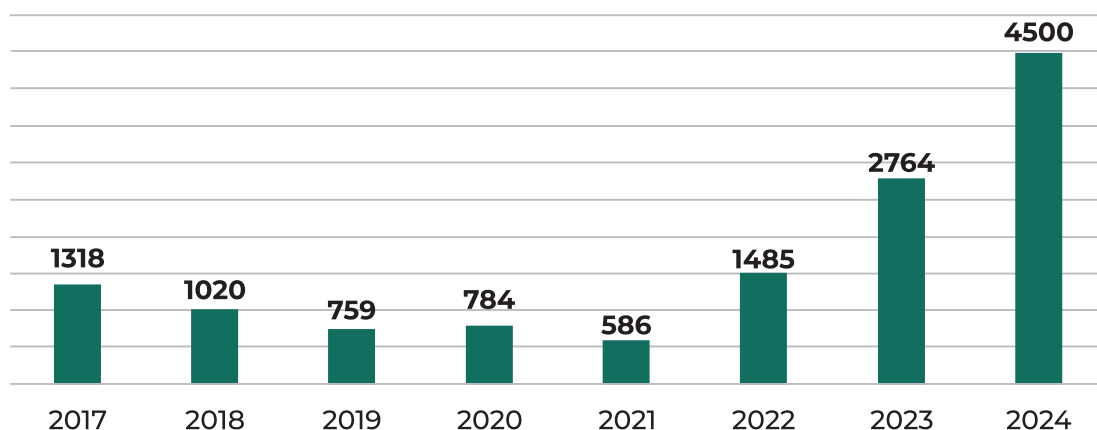
Container traffic along the TCTC reached 56,500 TEUs in 2024, a 2.7-fold increase compared to the same period last year (20,500 TEUs). Of this volume, 35,600 TEUs were transported between China and Europe, representing a 33-fold increase from 1,200 TEUs in 2023.

At the same time, the containerization rate remains low, below 7%. Given the

steady increase in cargo traffic, including transit shipments, a project to build a container hub is underway at Aktau seaport. The complex will include a container storage area and will increase transshipment capacity to approximately 240,000 TEUs per year.

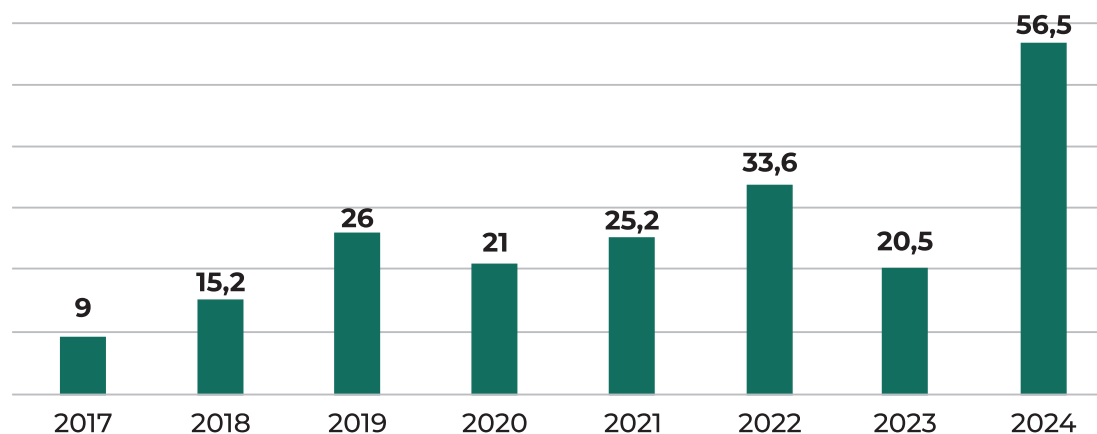
Also, by the end of 2024, transit traffic reached 34.6 million tons, which is 7.1% more than in 2023. This figure is planned to increase to 67 million tons by 2029 and to 100 million tons by 2035.

Figure 20. Volume of transportation via TCTC, thousand tons

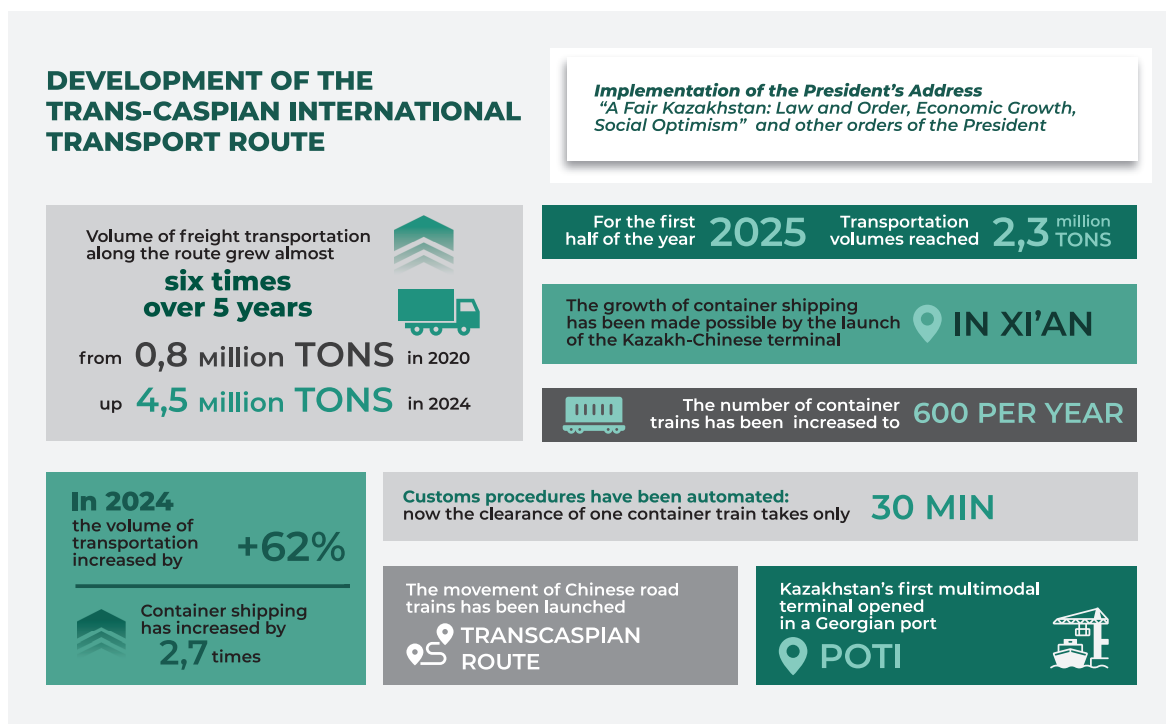


Source: MoT RK

Figure 21. Volume of container transportation by TCTC, thousand TEU



Source: MoT RK

Figure 22. Development of TCTC in recent years.

III.C. Infrastructure modernization and route nodes

Developing infrastructure and upgrading key hubs along the TCTC - ports, transshipment terminals, railways, and multimodal logistics centers - is the foundation for increasing the route's capacity. Its efficiency and competitiveness directly depend on the quality of these links.

Investments are being directed toward dredging, implementing modern transshipment technologies, digitalizing cargo flow management, and unifying technical standards. These measures will accelerate transit, reduce costs, and create the preconditions for further growth in transportation. As a result, the economic integration of the Caspian countries is strengthened and opportunities for developing the region's transit potential are expanding.

To coordinate multimodal transportation, the route participants - KTZh, Azerbaijan Railways, and Georgian Railways

- created a joint venture, Middle Corridor Multimodal Ltd.

To date, delivery times along the route have been reduced to 15-18 days to Georgian ports (Xi'an-Aktau: 6 days).

By 2027, the corridor's capacity is planned to increase to 10 million tons per year. To achieve this goal, work is ongoing to modernize the transport infrastructure and improve the route's efficiency.

In the field of railway transport

To further increase freight traffic, major railway projects are being implemented to address infrastructure constraints. Track modernization is currently underway on a total length of over 2,000 km, with work on 911 kilometers scheduled for completion this year.

Key projects include the construction of double tracks on the Dostyk-Moiynty



section (836 km, 543 billion tenge), which has already been completed, and the construction of a bypass road for Almaty station (75 km, 152 billion tenge). Full commissioning of these projects is expected by the end of 2025.

The implementation of these projects will increase the section's capacity fivefold, from 12 to 60 pairs of trains per day, and increase the average distance traveled by container trains from 834 to 1,500 km per day. These sections are part of TCTC, and their modernization will significantly improve the quality and timing of transportation.

Full completion of these projects will increase the capacity of the railway infrastructure by 37 million tons in the direction of China. This will also improve the speed of freight delivery within the country.

Active construction is also ongoing on other key routes, including Moyn-ty-Kyzylzhar, Darbaza-Maktaaral, and Bakhty-Ayagoz. Completion of these projects is scheduled for 2026-2027. Their implementation will increase the throughput and freight capacity of the entire trunk network.

In addition, construction of a 120-kilometer Turgundi-Herat railway line is planned. A financing structure has been developed

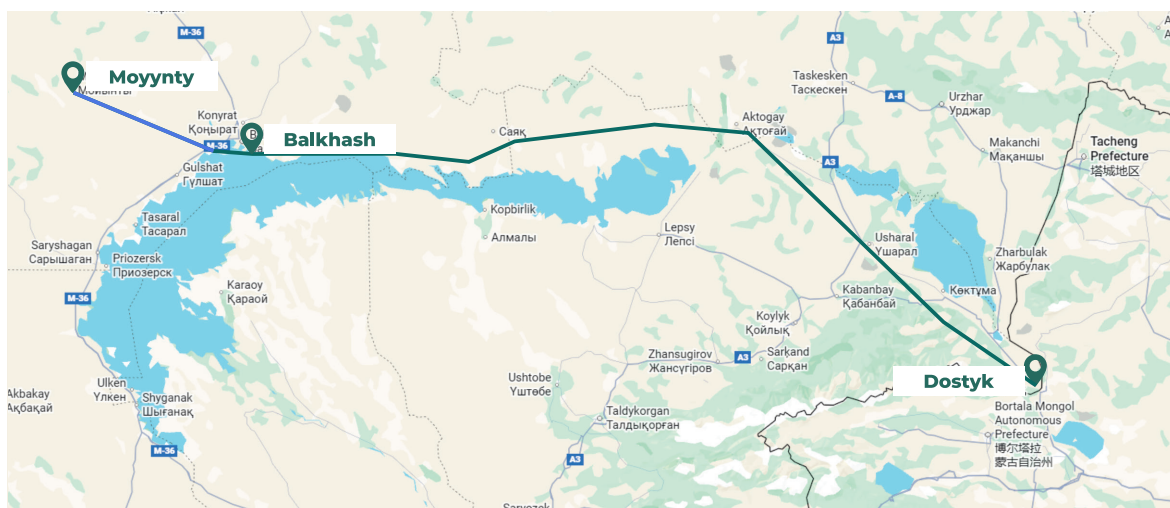
for the project, and investment is being sought. The line's completion will facilitate the export and transit of freight to Afghanistan and, in the long term, will provide access to the markets of Pakistan and India. The project is scheduled for completion in 2026-2027, and overall, large-scale development of railway infrastructure with a total length of 4,600 km is underway.

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Figure 23. Railway direction Dostyk-Moynty



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In the maritime sector

Alongside the modernization of the railway network, maritime infrastructure, which is a vital link in the TCTC route, is being developed.

In 2024, “Jan De Nul” company completed dredging work in the waters of the Kuryk port, costing 25.6 billion tenge. A grain terminal with a capacity of 1 million tons was completed.

At Kuryk port, “Semurg Invest” company is implementing a project to build the “Sarzha” multifunctional terminal, with a transshipment capacity of up to 11 million tons. The project includes the construction of six terminals, which will increase TCTC’s throughput capacity by 11 million tons by 2030, including 5 million tons of dry cargo and over 5.5 million tons of liquid bulk cargo. Two terminals have already been commissioned, two berths have been built, and the third is scheduled for completion in 2026.

The grain terminal is being developed jointly with Abu Dhabi Ports Group. Agreements to establish the “Sarzha Grain Terminal” joint venture were signed in Jan-

uary 2025. The partners are preparing to begin construction of the terminal.

On May 12 of this year, an agreement on the main terms of the joint project was signed in Astana during the UAE delegation’s state visit to Kazakhstan. A final investment decision is expected after the approval of legally binding documents.

Commissioning of new port infrastructure facilities is also ongoing. On June 9, 2025, the first launch complex of the container hub in Aktau port, with a capacity of 240,000 containers per year, was launched, and the official opening of the Kazakh terminal in the Georgian port of Poti took place.

By 2030, warehouse complexes are planned to be built at Aktau port jointly with Rhenus, CMA CGM, and Wandernet. 135 hectares have been allocated for the facilities.

In 2024, the Aktau port purchased two forklifts, two reach stackers, and one gantry crane for 3 billion tenge. Additional equipment upgrades are planned for 2025, including a gantry crane, forklifts, spreaders, and a tractor.

The Kuryk port, in turn, provides ferry service, enabling the transportation of railcars and vehicles by sea. Up to 11 ferries, six of which are multipurpose, operate on the

Figure 24. Aktau seaport.





Kuryk-Baku (Alyat) line. They can transport 28 to 54 railcars or 32 to 50 vehicles.

The Aktau and Kuryk seaports are under the trust management of KTZh. This solution has created a unified logistics space in which sea and rail transportation operate as a single system. This ensures uninterrupted cargo flow, increases operational efficiency, and strengthens Kazakhstan's position as a key link in TCTC.

The integrated implementation of port and infrastructure projects lays the foundation for large-scale transit growth. By 2030, transportation volumes along the TCTC are projected to increase to 10 million tons, including 300,000 TEUs. This will be an important step in creating a sustainable and competitive transport corridor between Asia and Europe.

In the road infrastructure sector

The development of port infrastructure is accompanied by the strengthening of the land transport network, which plays a key role in ensuring the connectivity of TCTC.

A project is underway to construct a new 736-kilometer Beineu-Sekseul highway. This highway will become an important element of the route, connecting the central regions of Kazakhstan with the

Caspian ports. The project will shorten the route to the seaports by about 900 kilometers, increasing delivery speeds and reducing transportation costs. Construction is scheduled to begin in 2026 and be completed in 2028.

The comprehensive development of transport projects will significantly increase the capacity of TCTC and strengthen its competitive position compared to traditional routes.

A total of 55 automobile border crossings operate along Kazakhstan's state border, including 14 on the external border and 41 on the internal border of the EAEU. Modernization work has already been completed at four of these crossings. Reconstruction and technical upgrades for the remaining crossings are planned for 2026-2027. These measures are aimed at expediting border crossings and improving the efficiency of international transportation.

Multimodal facilities at border crossings

Multimodal facilities at border crossings play a key role in integrating transport corridors. They ensure the coordinated operation of road, rail, and sea transport, expediting freight movement and reducing logistics costs.

Figure 25. New road "Beineu - Sekseul"



A network of terminals operated by the KTZh group of companies and private operators operates near the Dostyk and Altynkol stations. These facilities provide the transshipment and processing of transit freight. Specifically, 14 transshipment platforms and terminals operate at the Dostyk station.

Reconstruction of the Kedentransservice terminal is currently underway.

Expansion of the existing infrastructure of the multifunctional cargo handling terminal Dostyk Trans Terminal is planned, with the capacity to store up to 2,000 additional containers, with completion scheduled for 2025-2026.

“DAR RAIL” LLP is also preparing to build a logistics park. In 2023, a multimodal transport and logistics center, owned by “ETT Dostyk” LLC, with a capacity of 150,000 containers per year, was commissioned at the station.

This year, the international transport and logistics center, “Nur Zholy Customs Service”, of the State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan, began operations. The center operates using cross-docking technology²⁵ and has a throughput capacity of 150-200 vehicles per day.

Altynkol station also houses two transshipment terminals: Kedentransservice JSC and Eurotransit-KTC LLC, as well as a hangar and an open area for heavy-lift cargo handling.

Furthermore, a joint Kazakh-Chinese logistics terminal began operations in the Xi'an dry port in 2024, consolidating approximately 40% of all container trains heading to Kazakhstan. The private company PTC Holding has completed a project to build a multimodal terminal in Poti with

a capacity of 200,000 TEUs.

The Kazakh-Chinese logistics terminal at the Port of Lianyungang also continues to operate, handling over 200,000 containers annually bound for Kazakhstan.

Transport rates

Transportation cost is a key factor determining route selection for shippers. To assess the competitive advantages of TCTC, it is important to consider benchmark container shipping costs on key routes, particularly the ERAI index²⁶ and current tariffs along the TCTC route.

Thus, in accordance with the documents of the TCTC participating countries, comprehensive tariff rates for cargo transportation along the route were set for 2024. These rates varied depending on the route and mode of transport, including the transportation of general-purpose loaded containers via the ports of Baku and Hovsan, as well as using ferry services.

For example, on the Altynkol - Aktau - Baku (Alat) - Boyuk Khasik - Gardabani - Batumi - Constanta route, the tariff rate was USD 3,948 per standard container (FEU - forty-foot equivalent unit).

In the context of the main Eurasian route passing through Kazakhstan, Russia (RF), and Belarus (RB), as of December 2024, the composite ERAI index for the Dostyk/Altynkol - Brest/Bruzgi/Svisloch/Kaliningrad route was USD 3,269 per FEU.

A summary comparative analysis of TCTC and Eurasian Corridor routes in terms of cargo turnover, cost, delivery times, and transportation process organization is presented in the table below. The analysis shows that the Eurasian route maintains a competitive advantage in a number of key areas. At the same time, the growing market share of transit container shipping indicates increasing interest from shippers and logistics operators in the TCTC route.²⁷

²⁵ Cross-docking is a modern logistics technology in which cargo is not stored for a long time, but is immediately transferred from one mode of transport to another.

²⁶ Index ERAI (Eurasian Rail Alliance Index) - this is a benchmark indicator of the cost of container rail transit transportation across the territory of the EAEU and Eurasia, in particular the China-Europe and back routes.

²⁷ Review “Trans-Caspian Transport Corridor and other promising corridors in Central Asia”, ERAI, 2025



Table 1. Comparison of latitudinal corridors in the China-Europe-China communication

Route	Eurasian route (via Kazakhstan, Russia, and Belarus)	TCTC (via Kazakhstan, the Caspian Sea, Azerbaijan, Georgia, and the Black Sea)	Sea transportation (deep sea) China - Northern Europe
Transit cargo turnover (projected/final values for 2024)	381,000 TEU	36,000 TEU	8,6 mln. TEU
Price (from border to border, average value)	\$3,239/FEU on the Altynkol/Dostyk - Brest route	\$3,948/FEU on the Altynkol - Aktau - Baku (Alat) - Boyuk-Kyasik - Gardabani - Batumi - Constanta route	\$4,940/FEU on the Shenzhen - Hamburg/ Rotterdam route
Price (from point to point, current as of December 2024)	\$6,650/FEU on the Xi'an - Duisburg route	\$8,200/FEU on the Xi'an - Duisburg (SOC) route	\$4,940/FEU on the Shenzhen - Hamburg/ Rotterdam route
Market share of rail transit container transportation China – Europe – China	89,2%	7,8%	—
Delivery time (point-to-point)	Altynkol/Dostyk - Brest/Bruzgi/Svisloch: 7 days	Altynkol - Batumi: 15 days Altynkol - Batumi/Poti - Constanta: 20-22 days	
Delivery time (point-to-point)	Xi'an - Budapest: 17 days Xi'an - Duisburg: 18 days Xi'an - Milan: 20 days	Xi'an/Yiwu/Zhengzhou - Baku: 12-14 days Xi'an/Yiwu/Zhengzhou - Ambarly: 23-28 days Xi'an/Yiwu/Zhengzhou - Constanta: 31-34 days Xi'an/Yiwu/Zhengzhou - Duisburg/Budapest/Milan: 32-37 days Xi'an/Yiwu/Zhengzhou - Valencia/Barcelona: 44-47 days	Shenzhen - Hamburg: 38 days Shenzhen - Frankfurt: 40 days

Source: Review “Trans-Caspian Transport Corridor and other promising corridors in Central Asia”, ERAI, 2025.

III.D. Green trade and international integration

TCTC is developing not only as a strategic transport corridor connecting Europe and Asia, but also as a green trade route aimed at reducing carbon footprints and increasing the sustainability of supply chains.

Key environmental and energy-efficient measures within the corridor include:

Optimization of routes and modes of transport. Reducing transport distances and switching to rail and sea transport helps reduce fuel consumption and greenhouse gas emissions. Rail and sea transport are gradually replacing more carbon-intensive road transport, ensuring energy-efficient cargo delivery.

Port modernization. Investments in dredging, electrified equipment, energy-efficient lighting, and shore power supply help reduce energy consumption and pollution.

Introduction of eco-friendly vessels. The use of natural gas-powered vessels and the development of infrastructure for alternative fuels, including liquefied natural gas, biofuels, hydrogen, and ammonia, contribute to reducing emissions in the Caspian region and beyond.

Climate compliance. Aligning TCTC with European emissions regulation mechanisms, including the EU's cross-border carbon regulation, will improve the transparency of emissions accounting and create conditions for attracting green financing.

Digitalization and integration of logistics. The use of digital platforms, monitoring systems, and real-time analytics reduces empty runs and downtime, and improves infrastructure efficiency.

Taken together, these measures form the foundation for low-carbon logistics in the Trans-Caspian Corridor. They provide environmental benefits (reduced emissions and pollution), economic advantages

(reduced fuel and cargo handling costs, increased throughput), and facilitate expanded access to international markets focused on sustainable supply chains.

Continued public-private cooperation, targeted investments in the modernization and implementation of low-emission technologies, and the harmonization of policy and regulatory frameworks will be crucial for scaling up green trade across the corridor.

Implementing Environmental Standards and Moving Towards Low-carbon Transport

As part of the TCTC's green transformation, Kazakhstan is actively participating in international initiatives and events aimed at developing sustainable transport and reducing its carbon footprint.

In November 2024, the 29th Conference of the Parties to the UN Framework Convention on Climate Change (COP29) was held in Baku, Azerbaijan, where the Republic of Kazakhstan's National Pavilion was presented. Participation in this forum was particularly significant in the context of the implementation of Kazakhstan's Strategy for Achieving Carbon Neutrality by 2060. Specifically, on the sidelines of COP29, the Ministry of Trade and Integration of the Republic of Kazakhstan and QazTrade held a thematic session titled "Decarbonization of World Trade: Pathways to Sustainable Supply Chains and a Climate-Resilient Economy," which highlighted the importance of transitioning to a low-carbon economy as a key condition for developing global trade and aligning economic growth with environmental sustainability.

A Declaration of Cooperation on Promoting the Middle Corridor as an Environmentally Responsible and Efficient Transport Route was also signed. The document was signed by PSA International (PSA), Global DTC (GDTC), and the Middle Corridor International Association. The main



goal of the Declaration is the digital integration of the Middle Corridor to increase its transparency, sustainability, and accessibility. The partnership envisages the implementation of digital solutions to optimize logistics operations and reduce environmental impact.

It is worth noting that GDTC will coordinate the interaction of participants along the route, and the calculation of greenhouse gas emissions data will be carried out using the OptETracker tool²⁸ by PSA International. The platform will enable emissions tracking along the entire route and increase the transparency of environmental reporting.

The association will promote the involvement of its members in the development of the Green Corridor and strengthen cooperation with the GDTC and PSA to ensure the successful implementation of the initiative.

This partnership is an important step toward establishing TCTC as a sustainable global transport network. By adhering to international environmental standards and reaffirming their commitment to reducing emissions, participants position the Middle Corridor as a modern, environmentally responsible route for international trade and transit.²⁹

Carbon Border Adjustment Mechanism

As part of the implementation of the European Green Deal, the EU is working to adopt a number of legislative initiatives aimed at achieving carbon neutrality by 2050.³⁰

One of the goals of the Green Deal is to reduce net greenhouse gas emissions

by 55% by 2030 compared to 1990 levels³¹. In particular, it is planned to introduce a carbon border adjustment mechanism (CBAM), which will be fully applied from January 1, 2026, and until that time a notification procedure will be applied.

In the context of Kazakhstan and in general, the regulation applies to goods imported into the EU: cement, electricity, fertilizers, iron and steel, aluminum, hydrogen.³² Thus, the main sensitive sectors of the economy in Kazakhstan are those with high atmospheric emissions: energy, metallurgy, chemicals, and mining, which together account for over 50% of greenhouse gas emissions.

In this regard, it should be noted that carbon dioxide emissions in Kazakhstan are significantly higher than the global average. Per capita emissions are approximately 14.4 tons of CO₂, compared to the global average of 5 tons. The global goal is to reduce this figure to 2 tons per capita.

If a carbon tax is applied to all emissions, the costs of Kazakhstani exporters will increase. The higher the share of hydrocarbons in exports, the higher the taxes and fees in EU countries will be.

To mitigate these risks, Kazakhstan is strengthening cooperation with the EU. Key areas include accreditation of national companies for emission verification and the integration of Kazakhstani carbon accounting systems with international platforms. In this context, we note that in 2024, the Ministry of Trade and Integration of the Republic of Kazakhstan and QazTrade, with the support of the OECD, prepared a Guide to Best International Practices for Industrial Exporters.³³ The document helps businesses adapt to new

²⁸ A tool developed for processing and calculating greenhouse gas emissions data for use in TCTC carbon footprint reduction project.

²⁹ <https://middlecorridor.com/ru/press-tsentr/novosti/zeljonaya-transformatsiya-srednego-koridora-znakovaya-deklaratsiya-o-sotrudnichestve-podpisana-na-cop29>

³⁰ https://ec.europa.eu/commission/presscorner/detail/en/IP_21_3541

³¹ https://ec.europa.eu/commission/presscorner/detail/en/IP_21_3541

³² <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021PC0564&from=EN>

³³ <https://www.gov.kz/memleket/entities/mti/documents/details/736623?lang=kk>

requirements and transition to low-carbon technologies.

Furthermore, in September-October 2025, MTI RK and QazTrade, together with international partners, held a webinar and roundtable discussion on adapting Kazakhstan's industrial enterprises to CBAM requirements. These events were highly practical and beneficial for businesses, as participants received clarification on key issues related to reporting, registration, and adaptation to CBAM requirements, helping businesses prepare for the new trading environment.

A practical study to assess the impact of the CBAM mechanism on Kazakhstani enterprises is planned for November 2025 to April 2026. The study will be implemented by ITC jointly with MTI RK and QazTrade. This work will include surveys of exporters, analysis of data on the impact of CBAM requirements on the access of Kazakhstani goods to the EU market, and the development of sectoral guidance and practical recommendations for compliance with the new requirements. The study results will be presented in May 2026, including at the Regional Climate Summit in Almaty.

Industry Initiatives to Facilitate Trade Procedures

As part of the “Ready4Trade Central Asia: Path to Prosperity through the Trans-Caspian Transport Corridor” project, work is underway to develop a Roadmap for the Development of Oilseed Exports for 2026–2028. The document aims to increase oilseed production, improve processing capacity utilization and strengthen value chains, and expand the presence of Kazakhstani companies in high-potential foreign markets.

The development process includes defining priority areas for sector development over the next three years, identifying key challenges limiting export potential, and identifying promising foreign markets to prepare a realistic and practical action plan.

The work is being carried out by ITC jointly with MTI RK, QazTrade, and the National Association of Oilseed Processors. During the process, a diagnostic assessment of 30 companies engaged in the production and processing of oilseeds was conducted to analyze the state of the industry, business needs, and existing barriers. MoA RK, MoT RK, SRS MF RK, KTZh, and

Figure 26. Seminar on the development of export potential and the elimination of non-tariff barriers in the oilseed and fat industry.





specialized associations participated in the development of the Roadmap.

This initiative is considered as an integral part of the national work on TF, as it contributes to the elimination of non-tariff barriers, increasing the efficiency of export operations and the development of export-oriented sectors of the economy.³⁴

Regional Integration and TCTC

The development of the Middle Corridor is closely linked to regional integration processes and the strengthening of cooperation between the countries of CA and the Caucasus.

On November 25, 2022, in Aktau, Kazakhstan, Azerbaijan, Georgia, and Turkey signed a Roadmap for the simultaneous elimination of bottlenecks and development of TCTC until 2027. Implementation of the envisaged measures will increase the route's throughput capacity to 10 million tons per year. The document includes 56 measures, 24 of them joint. Specifically, 12 measures are envisaged for Kazakhstan, 17 for Azerbaijan, and 3 for Turkey.

From August 11 to 17, 2025, a large-scale audit of TCTC was conducted with the participation of KTZh, as well as Azerbaijani and Georgian partners. Following the audit, an Action Plan to Eliminate Restrictions on the TCTC was signed on September 30, 2025, in Almaty during the New Silk Way Forum to address identified bottlenecks and improve the route's efficiency. The plan includes infrastructure development, the procurement of vessels and railcars for container shipping, the digitalization of processes, and a coordinated tariff policy. It is also planned to sign an intergovernmental agreement to strengthen the role of the TCTC countries as regional logistics hubs, unify administrative procedures, and develop a long-term tariff policy.

Furthermore, in 2023, an Agreement on Strengthening the Connectivity of Land Transport was signed in Dushanbe, Tajikistan. It provides for the development of cooperation in the areas of transport corridors, digitalization, logistics services, and environmental sustainability. To coordinate this work, a joint commission of representatives from relevant agencies is planned to be established.

In turn, in August 2024, a Memorandum on the Development of Transport and Logistics Centers was signed. A draft Agreement between the governments of CA states on transport and transit is also being developed.

Overall, there is a growing understanding among countries in the region of the need to strengthen transport connectivity. At the direction of the President of the Republic of Kazakhstan, Kassym-Jomart Tokayev, work is underway to develop a comprehensive strategy for the development of CA's transport systems, which will be an important step toward creating a unified transport space for the region.

Regional Integration and Central Asia

Regional Integration and Central Asia

CA countries, including Kazakhstan, are strengthening cooperation with international partners and institutions to develop trade and simplify procedures.

In this context, the second phase of the previously mentioned Ready4Trade Central Asia project, titled "Road to Prosperity through the Trans-Caspian Transport Corridor" (2024–2028), is noteworthy. It is being implemented by ITC to strengthen ties between Europe and CA and improve the efficiency of TCTC. The project aims to simplify cross-border procedures, promote investment, and improve coordination between countries in the region. It also helps

³⁴ The project's implementation is expected to cement Kazakhstan's status as a global leader in the production of oil and fat products, transform the industry into a sustainable export sector with a turnover of over \$1 billion by 2028, and place the country among the top three largest suppliers of sunflower oil on the global market.

small and medium-sized businesses enter new markets. For example, the QazTrade Academy³⁵ online platform (launched in 2022) has trained and certified over 4,000 participants, 56% of whom are women.

Overall, continental routes, including TCTC, are becoming key for trade between China and Europe. They reduce delivery times and serve as a convenient alternative to maritime transport. In recent years, TCTC has significantly strengthened its position as one of the main routes in Eurasia and an important element of trade and economic ties among the countries of

the Caspian region. The growth of TCTC is driven by the interest of external partners. China is developing the route to diversify supplies to Europe, while the EU sees it as a way to gain direct access to CA resources. For Kazakhstan, Azerbaijan, and Georgia, TCTC opens up opportunities for investment and infrastructure growth. In this regard, it is important to remember that in addition to transit traffic, the route also supports regional freight, including exports from Kazakhstan and Azerbaijan, often represented by non-containerized cargo.³⁶

IV. Implementation of Trade Facilitation Measures within the TCTC

TCTC is gradually transforming into a comprehensive logistics system, where physical infrastructure is interconnected with digital and procedural mechanisms that enable seamless cargo movement from Asia to Europe.

Occupying a central position along the corridor, Kazakhstan plays a key role in shaping its institutional and technological architecture. The country is promoting the implementation of paperless technologies, the harmonization of transport and customs documentation, and the development of advanced data exchange among stakeholders along the route.

According to MoT RK, the implementation of digital solutions and the coordinated actions of TCTC member countries have reduced cargo delivery times along the TCTC route by two to three times — from 38–53 days in 2022 to 12–18 days in 2024.

By the end of 2024, this indicator had reached 9–11 days for cargo transported from Xi'an (China, inland dry port)³⁷ to Poti³⁸ and Batumi³⁹ (both seaports) and Akhalkalaki⁴⁰ (rail terminal) — all located in Georgia.

For the main routes, the transit times were as follows:

Xi'an – Altynkol (Kazakhstan, border railway station) – Poti: 7,634 km, 15–18 days;

³⁵ <https://www.qaztradeacademy.kz/>

³⁶ Review “Trans-Caspian Transport Corridor and other promising corridors in Central Asia”, ERAI, 2025

³⁷ One of the largest logistics hubs in China, it serves as the starting point for container trains to Europe along the TCTC route. This is where container trains bound for Europe via Kazakhstan are formed

³⁸ Poti is one of the main TCTC ports on the Black Sea.

³⁹ Batumi is an alternative port of TCTC, used for container and liquid cargo.

⁴⁰ Akhalkalaki is a junction on the Baku–Tbilisi–Kars (BTK) railway line that provides access to Turkey. Kars is the terminal point of the BTK line, which connects the railway networks of Azerbaijan, Georgia, and Turkey. It serves as a key TCTC gateway to the European transport system (with a 1,435 mm railway gauge). From Kars, cargo continues through Turkey to the ports of the Mediterranean and Black Seas or onward to Europe.

⁴¹ This is a key point for transferring cargo from the Chinese railway gauge (1,435 mm) to the Kazakh gauge (1,520 mm), serving as the actual entry of TCTC into Kazakhstan.



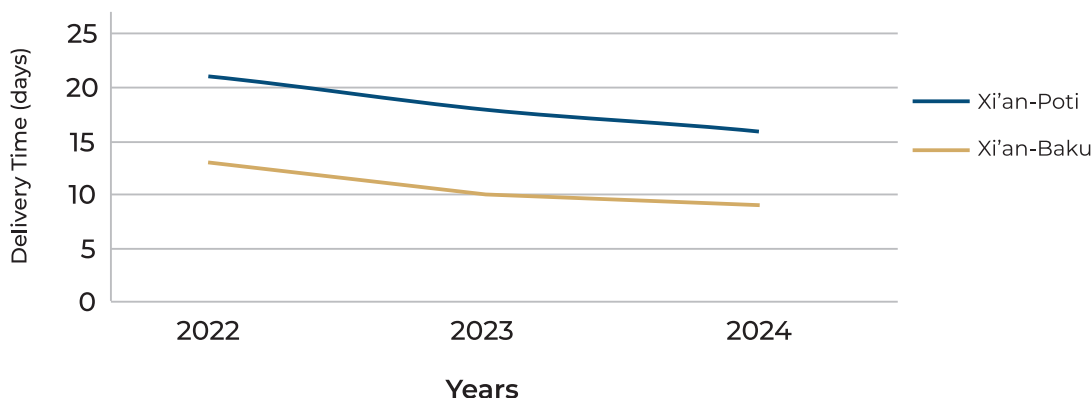
Xi'an – Altynkol – Baku (Azerbaijan, seaport): 6,876 km, 8–11 days.

Overall, the TCTC logistics chain is structured as follows:

Xi'an (China) – Altynkol / Khorgos (Kazakhstan) – Aktau / Kuryk – Baku (Azerbaijan) – Tbilisi / Akhalkalaki (Georgia) – Kars (Türkiye) – Europe.

Figure 27. Dynamics of Cargo Transit Time Reduction along the TCTC Route, 2022–2024..

Delivery time along TCTC, 2022–2024



The key objective for the coming years is to establish a predictable, transparent, digital, and integrated transport corridor, where interaction between the rail, road, and maritime segments takes place within a unified digital environment.

This section presents the progress achieved and the key initiatives of Kazakhstan and TCTC partner countries aimed at trade facilitation, digitalization, and the development of multimodal services.

Particular attention is given to practical solutions that ensure the transition to a paperless mode of interaction along the entire route — from the introduction of elec-

tronic permits and digital consignment notes to advanced systems for managing port and terminal operations. These measures form the foundation for creating an end-to-end digital space, enhancing the transparency, predictability, and efficiency of transport and logistics processes within the TCTC framework.

This section covers trade facilitation measures under TCTC in the context of paperless trade and digitalization, including the road, rail, and port segments, as well as issues related to information system integration, logistics hub development, and engagement with the private sector.

IV.A. Digitalization of Road Transport along the TCTC

Road transport represents an essential link of TCTC, providing delivery flexibility and connecting the rail and maritime seg-

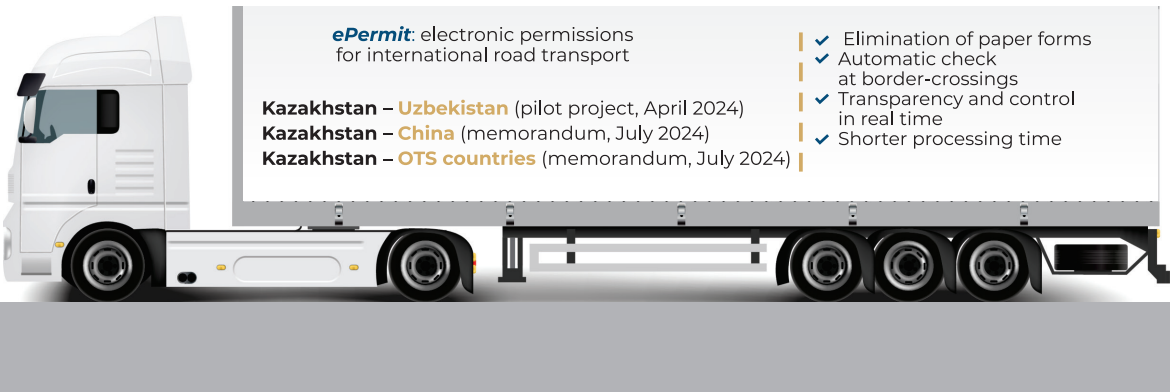
ments. To enhance the efficiency of this sector, Kazakhstan is actively introducing digital solutions aimed at harmonizing

procedures and reducing border crossing times. One of the key initiatives in this regard is the implementation of the electronic permit (ePermit) system for international road transport operations.⁴²

Previously, such permits were issued on paper forms, which were exchanged annually between the competent authorities of neighboring countries. This process created significant administrative costs and risks of document forgery. The transition to a digital format eliminates these issues and enables transparent, real-time monitoring of permit usage.

Since April 2024, Kazakhstan and Uzbekistan have been implementing a pilot project on the exchange of electronic transport permits (ePermit), marking the first step toward the full digitalization of road transport operations in CA. The system enables national transport authorities to exchange data on issued permits directly through secure communication channels. Electronic permits are automatically verified at border crossings, eliminating the human factor and significantly speeding up clearance procedures.⁴³

Figure 28. Status of Kazakhstan's work on ePermit coordination with third countries, 2025.



On July 3, 2024, a Memorandum of Understanding was signed between the Ministries of Transport of Kazakhstan and China, providing for a gradual transition to electronic road transport permits between the two countries. In September 2024, a technical meeting was held in Astana to discuss the integration of national information systems and the standardization of data exchange formats.

In parallel, Kazakhstan initiated a Memorandum of Cooperation within the Organization of Turkic States (OTS) on the implementation of electronic transport permits, which was signed in July 2024. This document laid the groundwork for establishing a common digital environment for road transport among OTS member countries, including Türkiye, Azerbaijan, Kyrgyzstan, and Uzbekistan. In the long term, the eP-

⁴² ePermit (electronic permit) is a system for the electronic exchange of international road transport permits between countries. It allows carriers to obtain and use permits in digital form without paper documents, ensuring control, transparency, and reduced processing time.

⁴³ <https://www.inform.kz/ru/onlayn-sistemu-regulirovaniya-mezhdunarodnih-gruzoperevozok-vnedrili-kazakhstan-i-uzbekistan-5accb3>



permit system could become a component of a unified electronic interaction platform covering the entire TCTC corridor.

At the national level, Kazakhstan continues expanding digital tools to facilitate road transport operations. In addition to the ePermit system for electronic exchange of permits, MoT RK reports that the electronic queue system CarGoRuqsat is now operational at 24 border crossing points. In the future, integration of these systems with other national information platforms — such as KEDEN — is being considered to enable end-to-end data exchange between transport and customs authorities.

In 2025, Kazakhstan and Uzbekistan launched joint work on developing a digital mechanism for the exchange of transit data, aimed at reducing cargo clearance

times and enhancing the transparency of procedures. This initiative is viewed as a step toward establishing “seamless transit” along the TCTC routes.

Furthermore, in response to the growing transit flow along the TCTC, Kazakhstan is consistently introducing digital tools for monitoring road infrastructure conditions and controlling traffic parameters. On key road transport routes, the network of Automated Weight and Dimension Control (AWDC) stations is being expanded to ensure real-time monitoring of vehicle weight and size parameters. The systems record vehicle make, registration number, weight and dimensional characteristics, axle loads, and speed, transmitting the data to a unified information and analytical platform.

Figure 29. Digital monitoring of traffic flows and overload control to ensure sustainable transit along the TCTC.



MoT RK is implementing a large-scale programme to expand the Automated Weight and Dimension Control (AWDC) network. By the end of 2026, approximately 220 automated stations are planned to be installed across the country, including 126 on national highways and the remainder on local roads. Currently, more than 50 stations are operational, including nine complexes located at the entrances to Astana. The project aims to improve the quality of road infrastructure, reduce overloading, and minimize corruption risks in transport control.⁴⁴

These measures represent an element of an intelligent transport system, enhancing transparency of control, reducing road network maintenance costs, and ensur-

ing the sustainability of transit operations along the TCTC route.

Thus, Kazakhstan is developing a comprehensive digital ecosystem in the road transport segment of TCTC, where electronic permits, intelligent control systems, and information services function as complementary tools. These solutions facilitate the transition to paperless documentation, improve the predictability of logistics processes, and strengthen mutual trust among participating countries. In the long term, the digitalization of road transport will serve as the foundation for establishing a “smart corridor” — ensuring sustainable, safe, and transparent transit within the TCTC framework.

IV.B. Digital Transformation of Railway Transport along the TCTC

In the railway segment of TCTC, a key element of simplification is the unified CIM/SMGS consignment note.⁴⁵ The document has been in effect since 2006 and integrates two legal regimes — SMGS and CIM — providing a unified format for processing railway transport between Europe and Asia. This is particularly important when cargo moves between railway networks with different track gauges,⁴⁶ as it helps reduce administrative procedures and eliminates the need to reissue trans-

port documents when crossing borders or transitioning between different technical systems.

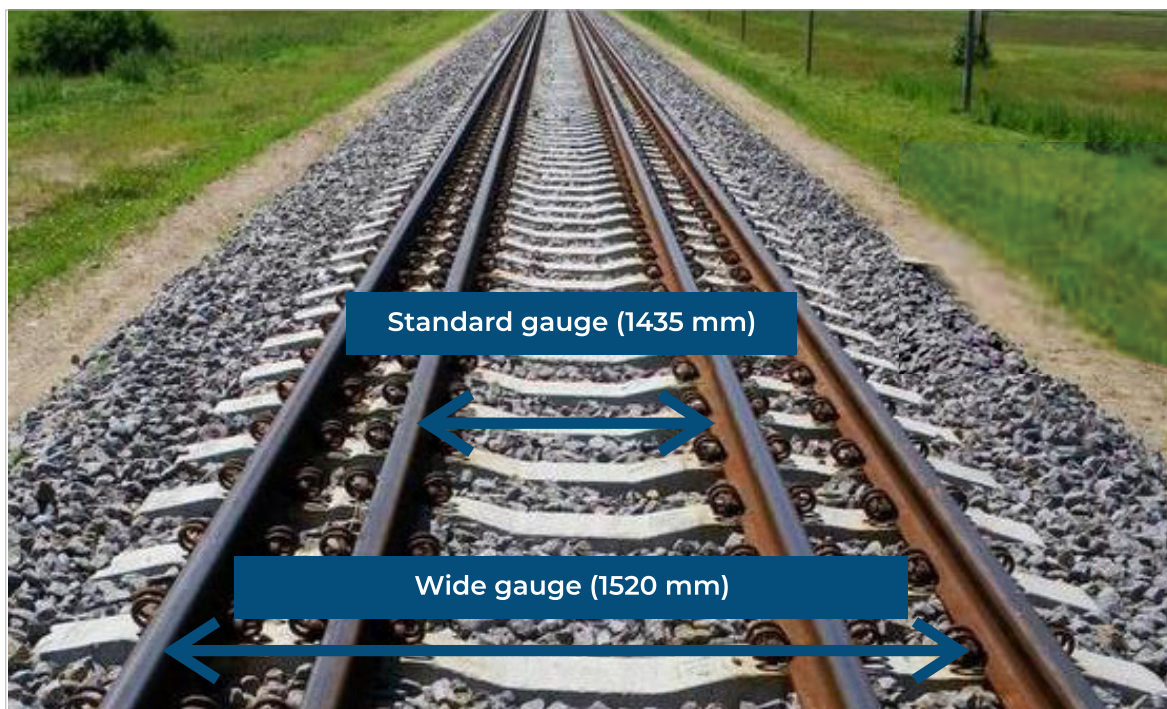
KTZh is preparing to transition the consignment note to an electronic format, abandoning paper-based documents both for the 1520 mm gauge network and for interoperability with the European 1435 mm gauge network. The target date for this transition is set for January 1, 2026. This measure will have a direct positive impact on transit along the TCTC, as it will mini-

⁴⁴ <https://primeminister.kz/ru/news/220-avtosistem-ustanovyat-na-dorogakh-kazakhstana-dlya-kontrol-ya-za-kachestvom-avtodorog-i-peregruzom-transporta-30154>

⁴⁵ CIM (Convention on the Contract For international Carriage of Goods by Rail) and SMGS (Agreement on International Goods Transport by Rail) are international railway transport frameworks under the Organization for Cooperation of Railways (OSJD). The unified CIM/SMGS consignment note simplifies transportation between Europe and Asia by providing a single document for multimodal routes, including TCTC.

⁴⁶ Rail gauge is the distance between the inner sides of the rails of a railway track. Differences in standards (1,520 mm and 1,435 mm) make rolling stock incompatible, requiring either a change of bogies or transshipment of cargo when crossing between systems. In the countries of the former USSR, including Kazakhstan, the broad gauge of 1,520 mm is used, while the global (European) standard gauge of 1,435 mm is applied in most European countries and supported by the International Union of Railways.

Figure 30. Classification of Railway Gauges According to the Standards of the International Union of Railways.



mize manual operations and enhance the possibilities for automatic status exchange between operators.

An additional step in the digitalization of railway transport was the series of virtual trials of the CIM/SMGS electronic consignment note (e-CIM/SMGS). The project involved the railway operators of Azerbaijan, Georgia, Kazakhstan, Türkiye, and Ukraine, coordinated under the TRACECA programme.⁴⁷ The first test, held from 3 to 7 June 2024, focused on validating the basic mechanisms of data exchange between railway administrations. The second trial, conducted from 30 September to 4 October 2024, aimed to assess the technical interoperability and synchronization of information systems at the international

level. The results confirmed the feasibility of transitioning to a machine-readable format for transport documents and enabling seamless data exchange across the entire transport chain, thereby laying the groundwork for the further implementation of electronic solutions along the TCTC route.

In parallel with the implementation of the CIM/SMGS electronic consignment note, Kazakhstan is carrying out the integration of its national railway system with the neutral multimodal digital platform — the Digital Trade Corridor (DTC), developed by the Singapore-based company Global DTC.

The platform enables end-to-end container tracking along the entire TCTC route

⁴⁷ TRACECA (Transport Corridor Europe–Caucasus–Asia) is an international transport cooperation programme between Europe, the Caucasus, and Central Asia.

and supports the automatic exchange of shipment status updates among the participating railway administrations. At present, the DTC platform has been integrated with the systems of KTZh, as well as the Azerbaijani and Georgian Railways.⁴⁸

In 2025, the company completed technical integration with Aktau port and began preparations for connecting to the

Port of Alat in Azerbaijan and the national port system of Georgia. This will enable users to track container movements in real time and access up-to-date information on shipment status and potential delays, thereby ensuring a high level of transparency and predictability in logistics operations.

IV.C. Digitalization of Ports and Logistics Systems along the TCTC

Measures to digitalize maritime transport processes are primarily driven by the need to accelerate cargo movement along the route, which directly affects the overall competitiveness of the transport corridor. In this regard, efforts are underway to reduce the time required for vessels to clear state border formalities.

Kazakhstan is currently working on the ratification of the Convention on Facilitation of International Maritime Traffic (FAL Convention), the provisions of which require member states to implement, maintain, and operate “Maritime Single Window” systems to enable electronic information exchange between vessels and shore-based authorities. Currently, control and inspection procedures at maritime checkpoints take about two hours.

At present, vessels must wait for the arrival of an inspection commission before receiving authorization to commence cargo operations. To optimize this process, the introduction of a Maritime Single Window system is envisaged, which will allow for the one-time electronic submission of

data to be reused by multiple regulatory and permitting authorities.

To support the preparation of technical specifications and system design, an agreement has been reached with GIZ to engage an international expert possessing practical experience in implementing similar systems and in-depth knowledge of the FAL Convention requirements, including international electronic data exchange formats.

It is worth noting that similar digital transformation processes are actively progressing within the country’s domestic logistics hubs. In 2024, near the Burunday railway station, which is part of the Almaty network, the Burunday Container Terminal (BCT) began operations. This modern multimodal logistics center is equipped with the Solvo.TOS system, enabling efficient management and coordination of container operations.⁴⁹ The terminal represents a multifunctional infrastructure complex that includes container yards, temporary storage areas, parking zones for heavy vehicles, and office facilities.

⁴⁸ <https://www.trend.az/business/transport/4013465.html>

⁴⁹ Solvo (Terminal Operating System, TOS) is an automated system for managing terminal and warehouse operations, developed by the company SOLVO. The system is used for planning, accounting, and controlling container and cargo flows at sea and inland terminals. In Kazakhstan, Solvo solutions are being implemented at the seaports of Aktau and Kuryk to automate transshipment processes and integrate with railway and customs information systems.



Figure 31. View of the Entrance to the Burunday Container Terminal.



The use of the Terminal Operating System (TOS) enables the automation of planning and accounting for container operations, as well as integration with railway and road transport flows. This enhances data accuracy, accelerates loading and unloading processes, and allows for synchronized, real-time cargo tracking. Taken together, such solutions contribute to the creation of a transparent digital environment, where all participants in the logistics chain—from operators and freight forwarders to regulatory authorities—have access to unified, real-time data on cargo movements.

In addition, the terminal is designed to handle import flows from China and other neighboring and distant countries,

making it an important component of the TCTC's inland infrastructure. Upon full implementation of the project, plans include the development of a Class "A" warehouse complex⁵⁰ and the expansion of service offerings for 3PL providers⁵¹ and distributors. The availability of modern transshipment equipment, including reach stackers and forklifts, ensures a high level of efficiency and safety in logistics operations.

The Burunday Terminal example illustrates that the development of terminal infrastructure in Kazakhstan is progressing in parallel with the digitalization of international routes, thereby creating a foundation for their integration into a unified paperless trade ecosystem. This aligns with the TCTC's objectives of implementing

⁵⁰ A class "A" warehouse is a high-tech storage facility equipped with modern engineering systems, automated inventory and logistics management, climate control, fire safety systems, and 24-hour security. Such warehouses are designed to handle large cargo volumes, including containerized goods, and are typically located near major transport hubs such as railway stations, highways, and airports.

⁵¹ A logistics company that provides storage, handling, and delivery services on behalf of a client (Third-Party Logistics, or 3PL).

end-to-end data exchange and harmonizing service standards, contributing to the establishment of a resilient and technologically advanced transport and logistics network across the region.

In addition to these initiatives, KTZh is implementing the Single Digital Window project, aimed at the digitalization of mul-

timodal, forwarding, and customs services. The project provides for the integration of the Aktau and Kuryk seaports' systems with railway platforms through the introduction of a Terminal Operating System (TOS) (for more details, see Section IV.D of the Report).

IV.D. End-to-End Digital Integration and Interoperability of Information Systems

One of the key areas of trade facilitation within the TCTC is ensuring end-to-end digital integration between national transport, customs, and logistics systems. Currently, Kazakhstan, together with its corridor partners, is implementing a set of measures aimed at synchronizing information flows and creating a unified data space, which enhances the transparency of operations and the predictability of supply chains.

In 2025, the TCTC participating countries agreed to implement a Unified Transit Cargo Document⁵² and to optimize customs procedures. This initiative provides for the harmonization of transport documentation requirements, integration of national information systems, and the transition to fully digital data exchange between national administrations. These measures are aimed at improving the efficiency, transparency, and predictability of transit processes, which may also have a positive impact on Kazakhstan's performance under the "International Trade" indicator in the upcoming World Bank Group "Business Ready" report, should Kazakhstan be included in the assessment.⁵³

As part of the digitalization of logistics processes, Kazakhstan, in cooperation with PSA International (Singapore), is implementing an initiative to create a neutral multimodal digital platform — the Digital Trade Corridor (DTC).

This platform enables end-to-end data exchange among the railway, road, and port administrations of the TCTC participating countries. It allows for real-time container tracking, synchronization of transit data between the systems of Kazakhstan, Azerbaijan, and Georgia, and lays the groundwork for the future integration of Türkiye, Europe, and China into the network.

One of the practical components of the DTC is the Tez Customs pilot project, launched at the Kazakhstan–China border. The system automates the issuance of transit declarations, reducing the processing time from 2–3 hours to just 30 minutes, thereby significantly enhancing the efficiency of border operations.⁵⁴ Tez Customs is integrated with the customs module of the Digital Trade Corridor (DTC) and clearly demonstrates the tangible impact of digitalization in reducing administrative pro-

⁵² <https://www.transportcorridors.com/ru/15275>

⁵³ In 2021, the World Bank replaced the Doing Business ranking with a new initiative called Business Ready (B-READY), which assesses the quality of the business environment and the effectiveness of public services. Kazakhstan was not included in the first report for 2024.

⁵⁴ <https://www.transportcorridors.com/3710>



cedures and accelerating border crossings. The project has received positive recognition as a practical example of implement-

ing digital solutions to simplify customs processes and enhance overall trade facilitation efficiency.⁵⁵

Figure 32. Indicators of Reduced Processing Time for Transit Declarations.



At the national level, “KTZ Express” JSC implemented the “Single Digital Window” (SDW) project for KTZh, aimed at the full digitalization of customer services in the field of freight transportation. The SDW integrates the commercial functions of KTZh’s subsidiaries into a unified digital ecosystem, providing customers with a

convenient single access point to all services.⁵⁶

The launch of the SDW made it possible to automate request processing, contract management, and the generation of commercial offers, thereby improving the transparency of business processes and the efficiency of logistics operations. Dur-

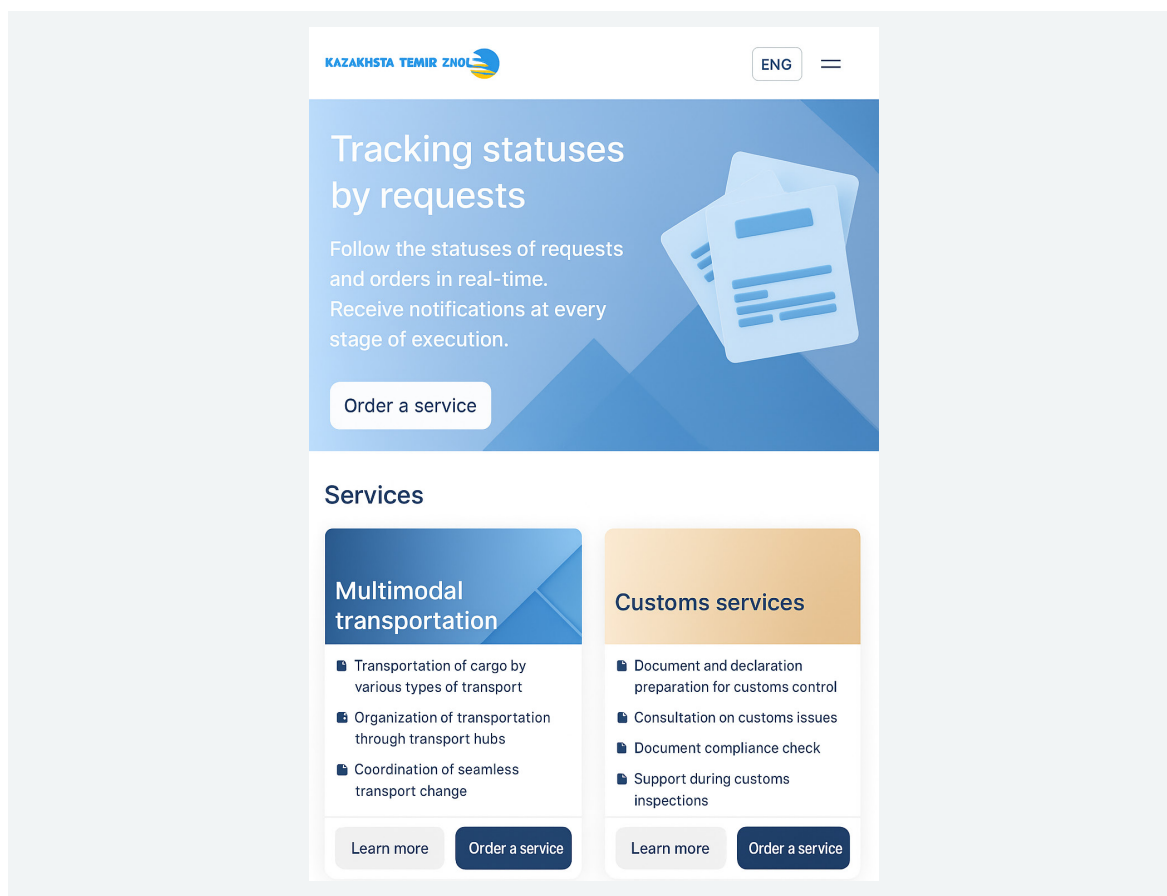
⁵⁵ The system testing began in December 2023 on the Altyntkol–Saryagash and Dostyk–Brest Severnaya sections, with the participation of SRC MF RK, KTZh, and Global DTC. The project demonstrated the feasibility of automating transit declaration procedures on railway routes and confirmed the technical readiness for scaling. Currently, further stages of implementation and functional expansion of Tez Customs are being developed within the framework of cooperation among the countries participating in TCTC.

⁵⁶ The initiative was presented in December 2024 in Astana during a strategic session attended by Global DTC (Singapore) and Huawei Technologies (China).

ing the testing phase, the system enabled customers to submit requests through the call center and online channels, while the introduction of electronic digital signa-

tures reduced contract conclusion times by 2.5 times. According to KTZ Express JSC, customer satisfaction reached 93%, and the loyalty index reached 70%.⁵⁷

Figure 33. Main Page of the Single Digital Window of Kazakhstan Temir Zholy.



The project demonstrates the development of an integrated digital ecosystem within Kazakhstan's transport and logistics sector. The SDW plans to further expand by enabling interaction with partners through API integration.

In a broader context, the digital transformation of the transport and logistics sector along the TCTC is being implemented under the Digital TCTC (Digital Transport Corridor) initiative, which aims to create a

unified architecture for digital interaction among participating countries. The initiative envisions the standardization of data exchange protocols and the integration of national platforms, including DTC and SDW, into a single digital corridor system. Going forward, it is expected that the TCTC Secretariat may assume a coordination role, ensuring the coherent development of digital ecosystems, their technical interoperability, and the implementation of

⁵⁷ <https://rail-news.kz/ru/news/19427-proekt-edinoe-cifrovoe-okno-prezentovali-v-astane.html>



unified principles for managing information flows. These steps will lay the foundation for a seamless digital corridor, enabling transparent and predictable cargo movement along the entire TCTC route.

Further complementing these digital integration efforts, a virtual dispatch center has been established along the TCTC route to coordinate cargo operations. In addition, a regular container shuttle service has been launched along the Altynk-

ol-Poti/Batumi route, and a Joint Roadmap (2022–2027) is being implemented in cooperation with Azerbaijan, Georgia, and Türkiye to eliminate bottlenecks along the corridor. Together, these measures reinforce the digitalization agenda and the development of multimodal services, contributing to the formation of a resilient and well-coordinated transport ecosystem throughout the entire TCTC corridor.

IV.E. Development of Multimodal Logistics Hubs and Synergy with the Private Sector

To enhance the efficiency of transit and export–import transportation, Kazakhstan places strong emphasis on the development of multimodal logistics hubs that integrate rail, road, and maritime infrastructure along the TCTC route. The implementation of such projects aims to reduce transshipment time, optimize warehousing logistics, and increase the resilience

of transport supply chains. According to MoT RK, particular attention is given to developing hubs in regions with high transit potential—notably Aktau, Kuryk, Altynkol, Dostyk, and Zhetygen—where facilities for container operations and “one-stop shop” logistics services are being established.

One example of effective international partnership is the participation of AD Ports

Figure 34. Signing of the Agreement between AD Ports Group and Semurg Invest on the Construction of the Sarzha Grain Terminal at Kuryk Port (Kazakhstan) (source: dknews.kz).



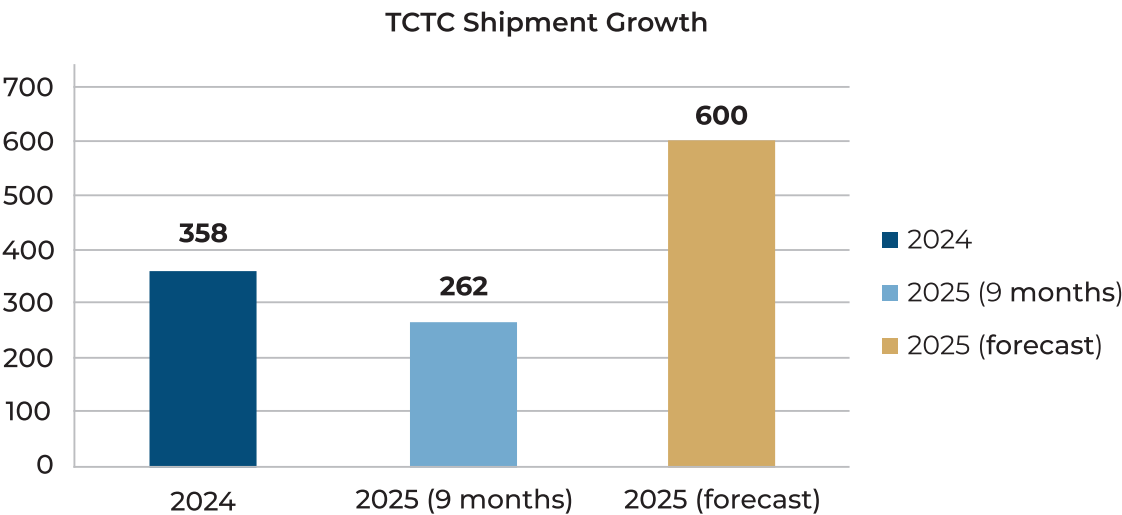
Group (UAE) and Semurg Invest in the construction of the Sarzha Grain Terminal at Kuryk port, which contributes to the integration of maritime and land components of the TCTC corridor.

Kazakhstan is actively expanding its co-operation with the private sector and international logistics operators. Key partners include AD Ports Group (UAE), Rhenus Logistics (Germany), Semurg Invest, and Global DTC (Singapore). Their participation facilitates the attraction of investments, the implementation of digital solutions—including the Digital Trade Corridor (DTC) platform and the Tez Customs system—as well as the modernization of terminal infrastructure. Joint efforts are focused on expanding warehousing capacity, deploying Terminal Operating Systems (TOS-class information systems), and establishing new transport and logistics centers along the TCTC route, thereby enhancing the corridor's overall efficiency and connectivity. An important area of focus is the strengthening of dry ports, which serve as critical links between maritime and railway transport flows. Facilities such as the Altynkol and Khorgos dry ports form the

infrastructural backbone for cargo redistribution and help reduce dependence on individual transport corridors. The public-private partnership model applied in their development promotes the introduction of innovative management solutions and enhances the commercial sustainability of such projects.

In addition, the establishment of the joint venture “Middle Corridor Multimodal Ltd.” represents a significant step toward tariff harmonization, service optimization, and the creation of a unified multimodal offering along the TCTC route. The enterprise was founded by the railway administrations of Kazakhstan, Azerbaijan, and Georgia with the goal of developing a transparent tariff-setting system and coordinated commercial conditions among national carriers and logistics operators of the participating countries. By the end of 2025, China Railway Container Transport Corp. Ltd. (CRCT) is expected to join the company, which will further strengthen cooperation potential and expand the capacity for container transportation between China and Europe.

Figure 35. Actual Data and Forecast of Block Train Arrivals to Kazakhstan from China: 2024–2025, First 9 Months of 2025



⁵⁸ <https://www.globalpsa.com/wp-content/uploads/2024/05/nr240501.pdf>



According to KTZh, in 2024, a total of 358 block trains arrived⁵⁹ in Kazakhstan from China via TCTC, while in January-September of 2025, 262 block trains were received. By the end of the year, the total number is expected to exceed 600 block trains. These figures reflect the steady growth in freight volumes and the effectiveness of the measures implemented within the framework of TCTC.

Joint efforts of the partners are aimed at ensuring seamless, reliable, and technologically advanced multimodal services along the TCTC, including the develop-

ment of digital integration and the implementation of smart logistics solutions. The enterprise's activities contribute to improving coordination among national operators and enhance the competitiveness of the TCTC route compared to alternative transit corridors.⁶⁰

Thus, the development of multimodal logistics hubs and the involvement of the private sector create a sustainable infrastructural foundation for the integration of transport systems and the facilitation of trade along the entire TCTC route.

IV.F. Recommendations for Further Trade Facilitation and Digitalization along the TCTC

To strengthen Kazakhstan's position as a key participant in TCTC and enhance the route's competitiveness, a comprehensive set of reforms is required, focusing on procedure harmonization, digital solution development, and the creation of a predictable environment for trade participants.

First, it is essential to establish intergovernmental principles for mutual recognition of electronic documents and data, including electronic permits, railway consignment notes, and transit declarations. This will help eliminate procedural duplication, shorten clearance times, and improve operational transparency. In this regard, it would be appropriate to initiate, under the auspices of the TCTC Secretariat, the development of a multilateral agreement on the mutual recognition of digital transport and customs documents.

Second, the integration of national in-

formation systems with the Digital Trade Corridor platform and other digital solutions of participating countries should be accelerated to ensure the creation of an end-to-end data chain for cargo movements. It is important to align technical standards and interaction protocols, and to ensure synchronization with Kazakhstan's KEDEN and regional "single window" systems.

Third, Kazakhstan should continue developing multimodal hubs and dry ports as key nodes along the corridor. Priority should be given to expanding private sector participation, attracting international logistics operators, and mobilizing investments through public-private partnership mechanisms.

Fourth, a mechanism should be established for the regular monitoring and evaluation of trade and logistics proce-

⁵⁹ A block train is a railway composition consisting of several wagons that travel along a route without any changes, from the consignor to the consignee. Unlike a conventional freight train, where wagons may carry different types of cargo for various clients, a block train is a single composition with uniform cargo or containers. This approach accelerates transportation by eliminating the need for transshipment or rearrangement at intermediate stations. Such a method increases the efficiency of logistics processes by reducing delivery time and simplifying cargo flow management.

⁶⁰ <https://interfax.com/newsroom/top-stories/113142/>

dures along the route. Such a system will help identify bottlenecks, enable timely adjustment of regulatory frameworks, and ensure data transparency on transit operations for all stakeholders.

Fifth, consideration should be given to establishing a dedicated coordination center for TCTC digitalization, which would ensure coherent development of digital platforms, technical interoperability of sys-

tems, and cooperation with international organizations, including TRACECA, UNECE, and the OECD.

Implementation of these measures will ensure the sustainability and predictability of trade flows, strengthen the transit attractiveness of TCTC, and foster the creation of a modern “smart corridor” ecosystem based on digital and managerial innovations.

V. Conclusion and Future Steps

Kazakhstan continues to make steady progress in implementing its trade facilitation policy and advancing the digital transformation of logistics. In recent years, the country has built a solid institutional foundation that ensures strategic coordination of reforms, strengthened public-private partnerships, and positioned digitalization as a key driver for enhancing transparency and efficiency in FEA.

The development of TCTC has become a central element of Kazakhstan’s strategy to strengthen regional connectivity and diversify export and transit corridors. Kazakhstan remains an active participant in international initiatives aimed at harmonizing procedures, implementing digital solutions, and improving the efficiency of logistics chains. As a result, TCTC is evolving not merely as a transport route but as a platform for shaping a new architecture of trade across the Eurasian space.

To further simplify trade procedures, including along the TCTC, it is advisable to:

- ◆ Continue optimizing foreign trade procedures, focusing on reducing administrative barriers for businesses and simplifying documentation processes while maintaining effective control mechanisms.

- ◆ Complete the formation of a single digital ecosystem for foreign trade, ensuring integration of national systems with TCTC partner countries and a transition to

paperless data exchange. This will create a transparent and predictable environment for traders.

- ◆ Accelerate integration of national information systems with the Digital Trade Corridor platform and other TCTC digital solutions, while defining common technical standards and interoperability protocols.

- ◆ Initiate a multilateral agreement among TCTC participating countries on the mutual recognition of digital transport and customs documents, including electronic consignment notes and permits, to eliminate procedural duplication and reduce border crossing times.

- ◆ Develop soft infrastructure, including digital services, analytical platforms, and inter-agency data exchange systems aimed at reducing time and costs for cargo movement.

- ◆ Expand the use of AI tools not only for classification and control, but also for the analysis and forecasting of trade flows, including along the TCTC. This will enhance the accuracy of analytics, interagency coordination, and the predictability of cross-border operations.

- ◆ Modernize hard infrastructure



along the TCTC - ports, terminals, railway hubs, and border crossing points - by introducing energy-efficient technologies and modern flow management systems.

- ◆ Develop multimodal hubs and dry ports in Kazakhstan as key nodes of the corridor, expanding the participation of private investors and international logistics companies through public-private partnership mechanisms.

- ◆ Strengthen coordination among TCTC countries on tariff policy, ensuring transparency and rate harmonization, and introduce flexible pricing mechanisms to enhance the corridor's competitiveness.

- ◆ Continue cooperation with international organizations and financial institutions to attract investment, technical assistance, and exchange of best practices in the field of digital trade.

- ◆ Expand participation of TCTC countries in global logistics alliances and green transport initiatives, which will strengthen the corridor's position in international supply chains.

- ◆ Establish a route performance monitoring system with key indicators

such as delivery time, cost, level of digitalization, and environmental sustainability, ensuring regular updates and public reporting.

- ◆ Accelerate the development of regulatory acts for the use of navigation seals, including risk assessment and economic impact analysis to ensure effective implementation.

- ◆ Conduct regular reviews and updates of national trade facilitation strategies, taking into account new priorities in digitalization and regional integration.

In conclusion, trade facilitation remains a key priority for Kazakhstan, aimed at building an efficient, transparent, and flexible foreign trade system. Reducing bureaucratic barriers, implementing digital solutions, and harmonizing procedures will significantly decrease the time and costs of foreign trade operations, creating optimal conditions for business. In this context, TCTC serves as a strategic route that will play a crucial role in achieving these objectives, further strengthening Kazakhstan's position as a major trade and transit hub linking regional and global supply chains.

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