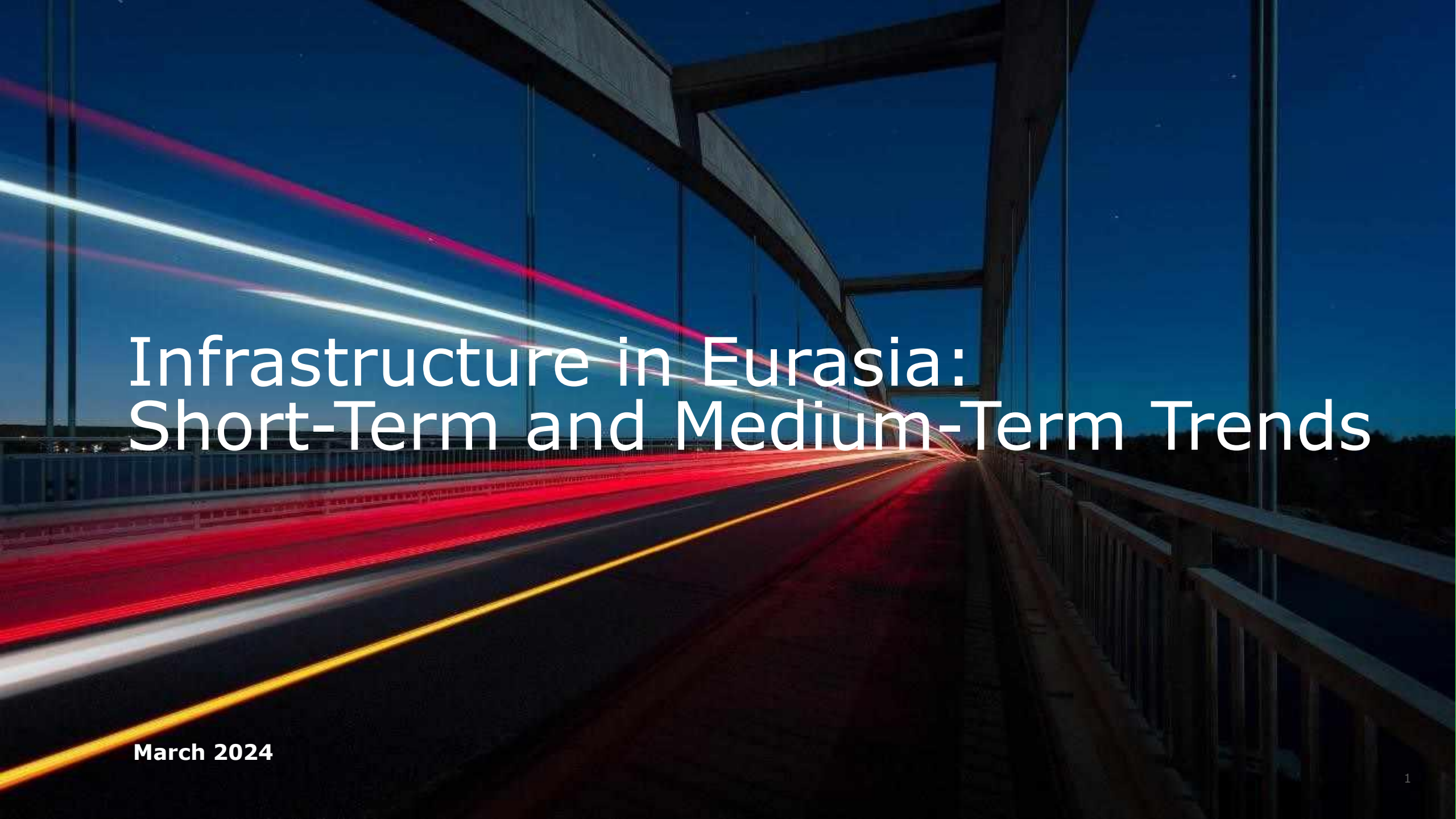


Infrastructure in Eurasia: Short-Term and Medium-Term Trends

March 2024

10 KEY TRENDS IN EURASIAN INFRASTRUCTURE

TREND 1

Links between the East–West and North–South corridors create synergies in transportation and logistics

TREND 2

Gas transportation infrastructure is turning eastwards

TREND 3

The infrastructure of food production and logistics is expanding

TREND 4

Rapid urbanisation boosts demand for sustainable urban infrastructure in Central Asia

TREND 5

Development of digital components of retail financial services and public sector is accelerating

TREND 6

Booming construction of warehousing and logistics infrastructure driven by the growth of e-commerce

TREND 7

Reduction in transit is offset by expansion of cargo turnover with China

TREND 8

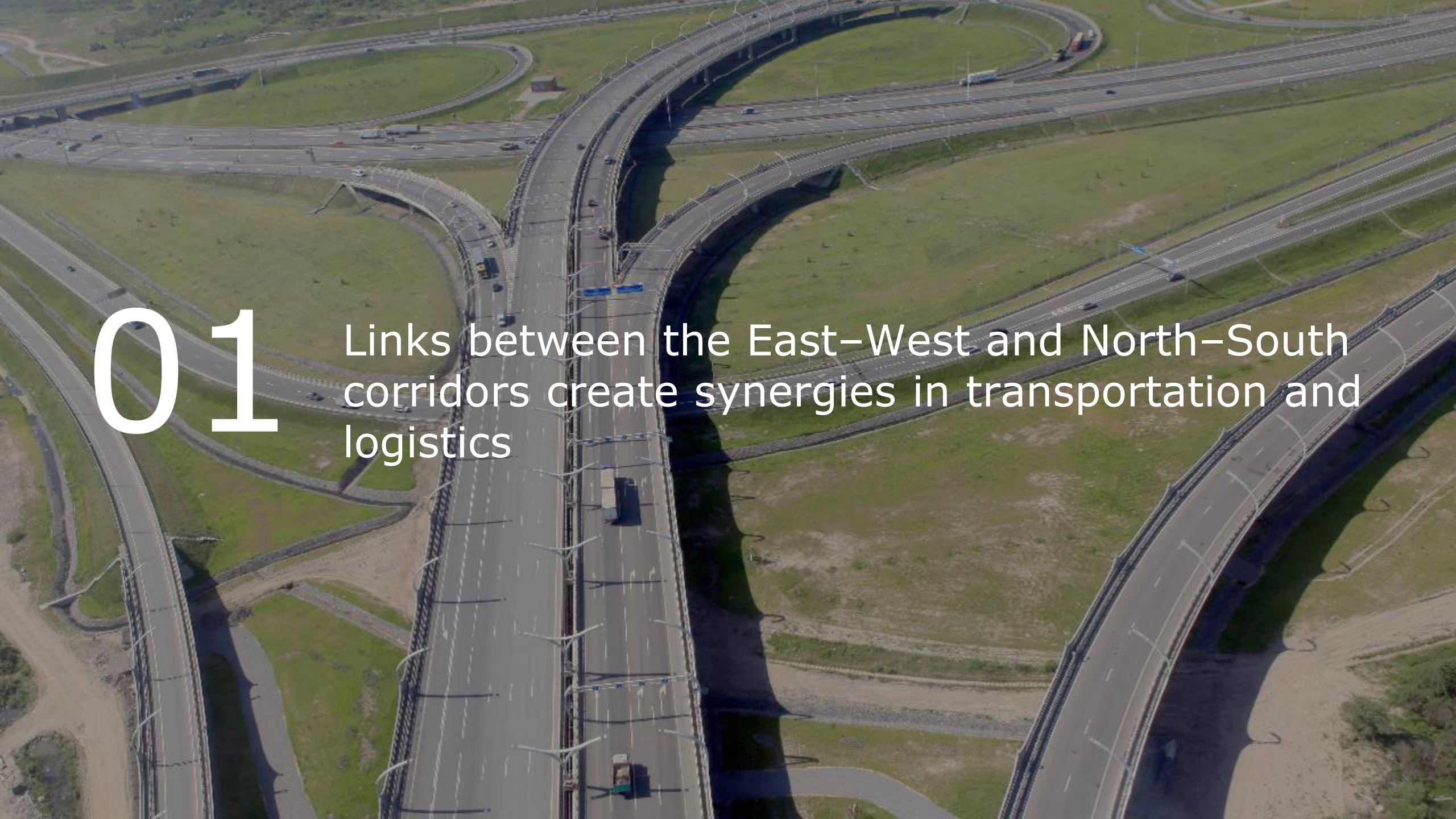
Central Asia is deepening cooperation with China in the power generation sector

TREND 9

Advancement of regional cooperation in the water and energy complex of Central Asia

TREND 10

Activity in irrigation infrastructure is gaining momentum in Central Asia



01 Links between the East–West and North–South corridors create synergies in transportation and logistics

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North and Central Eurasian Corridors

300 million tonnes
(in 2023, +11% compared to 2021)

Access to Azov–Black Sea Basin ports

220 million tonnes
(in 2023, +24% compared to 2021)

North-South ITC: surpassing the EDB's 2021 optimistic scenario

19 million tonnes
(in 2023, +38% compared to 2021)

Source: *Government of the Russian Federation*

Total supply via Russia's priority ITCs

550 million tonnes
in 2023

670 million tonnes
in 2030

Source: *Government of the Russian Federation*

Central Asia (CA) is a nexus of **latitudinal and meridional routes**.

New corridors are being developed in Central Asia: *(a) China–Kyrgyzstan–Uzbekistan; (b) Kazakhstan–Uzbekistan–Afghanistan–Pakistan; and (c) Kyrgyzstan–Russia–Turkmenistan–Uzbekistan.*

Russia is implementing roadmaps for priority international transport corridors (including the initiatives to expand the carrying capacity of the Baikal-Amur Mainline and Trans-Siberian Railway; the North-South ITC), involving the construction of roads, railways and waterways, along with the expansion and modernisation of seaports, border crossing points and other infrastructure.

02 Eurasian gas transportation infrastructure is turning eastwards

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Gas demand shifting towards the Asia-Pacific region

25%

of global consumption in 2026;
372 billion m³ in imports

Growing LNG production

670 billion m³

of LNG supplies globally in 2026
(+25% compared to 2022)

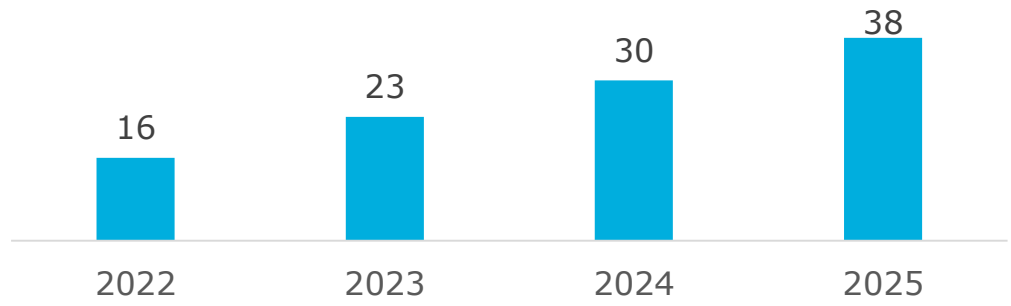
Substantial gas reserves in Eurasia

62.8 trillion m³

or 30% of global reserves

Source: *Government of the Russian Federation*

Gas exports to China via the Power of Siberia pipeline, billion m³



Source: *Government of the Russian Federation*

Perspective projects:

- new gas pipelines and gas distribution networks
- gas storage facilities
- LNG production facilities and regasification terminals
- production of tank containers, including cryogenic tank containers
- gas chemical facilities, etc.

03 The infrastructure of food production and logistics is expanding

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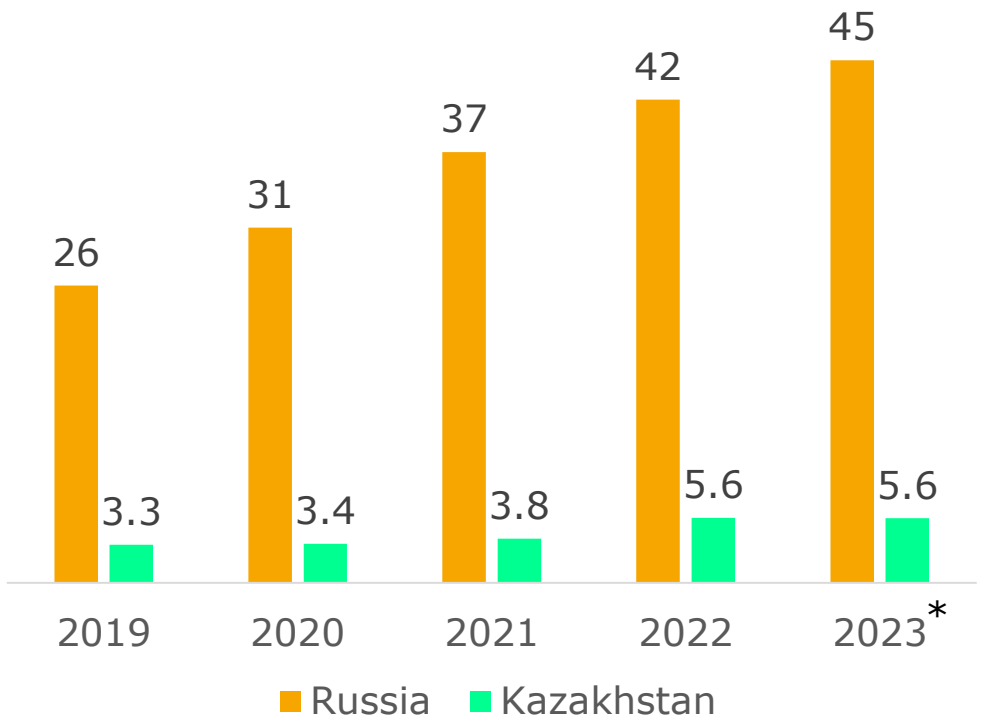
Kazakhstan and Russia increase food exports, US $ billions



** - estimate*

Source: *national statistics agencies, EDB calculations*

Prospects for advancing agricultural production in the region

600 **million people**

to get food supplies from the region in 2035

2x

potential increase in agricultural exports by 2035

Source: *EDB calculations*

North-South ITC infrastructure – agricultural logistics is a priority

Expanding exports stimulate the development of **southward agricultural logistics** (2027: Rasht-Astara, etc.)

Perspective projects:

- Infrastructure construction and modernisation
- Infrastructure for new routes
- Eurasian Agroexpress, Eurasian Commodity Distribution Network
- Devising and implementing digital logistics technology

04 Rapid urbanisation boosts demand for sustainable urban infrastructure in Central Asia

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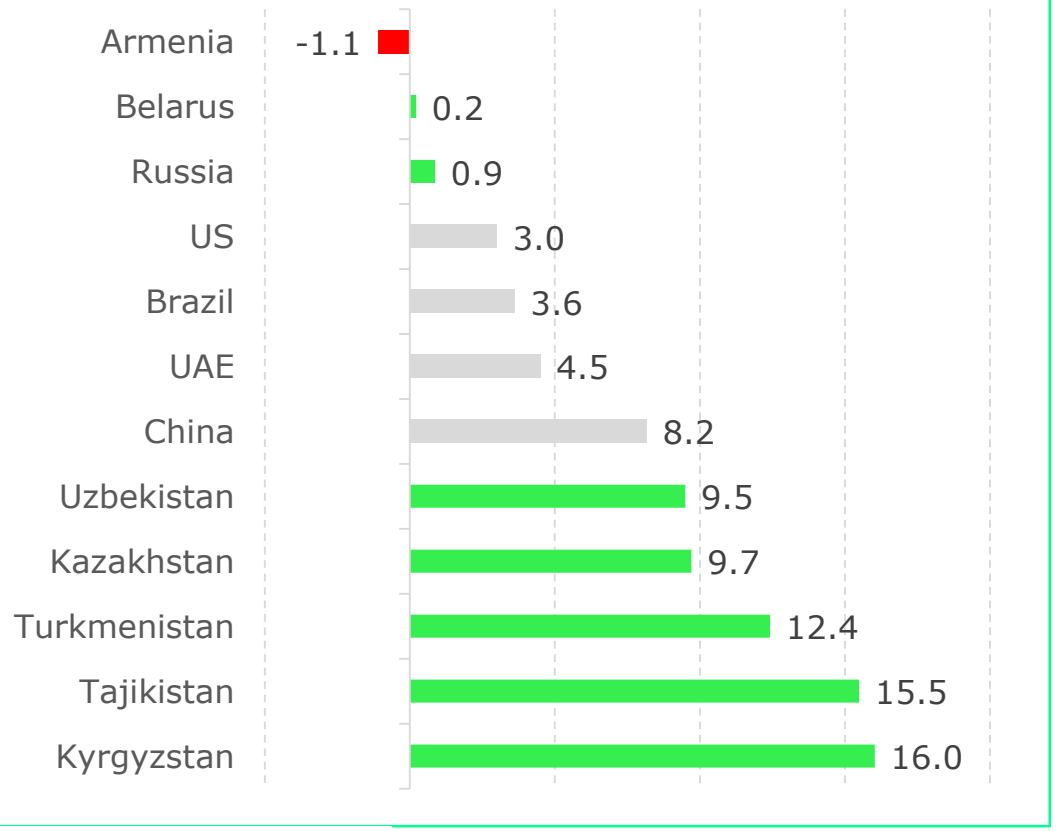
Growth of urban residents in 2018-2023 (%)



Source: *Source: EDB estimates based on WB and UN data*

Growing urbanisation rates in Central Asia

49 % *urbanisation rate in Central Asia in 2023 (66% in the Eurasian region)*

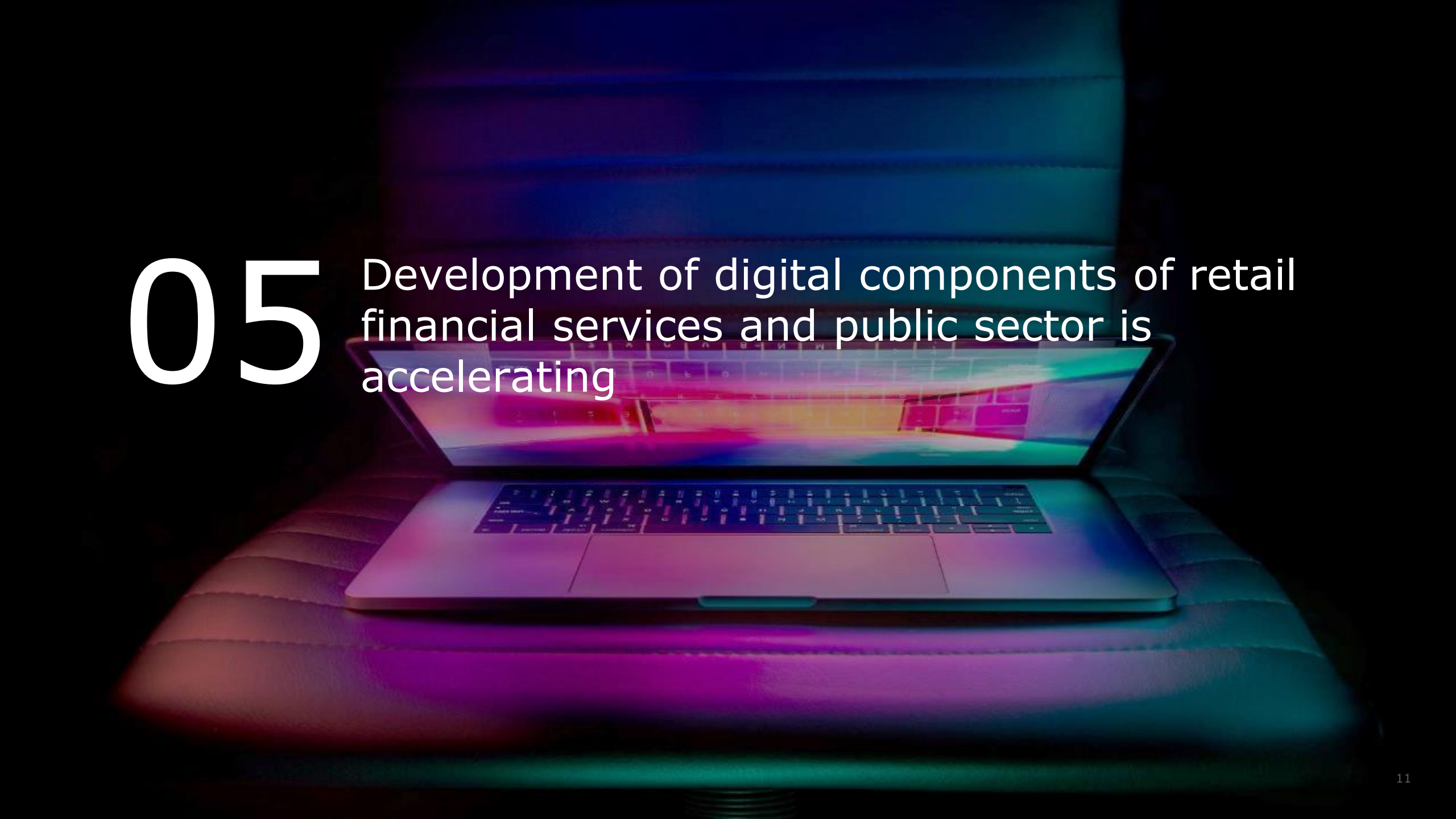
45 million *urban residents in Central Asia in 2035 (39 million people in 2023)*

Source: *Source: EDB estimates based on WB and UN data*

Perspective projects:

1. Public transport (metro, buses, taxis, suburban trains, LRT, BRT, etc.)
2. Water and heat supply and utilities
3. Social infrastructure
4. Urban mobility infrastructure (car sharing, bicycle and electric scooter rental)
5. Smart city infrastructure

As important to Central Asia as the water and energy infrastructure!



05 Development of digital components of retail financial services and public sector is accelerating

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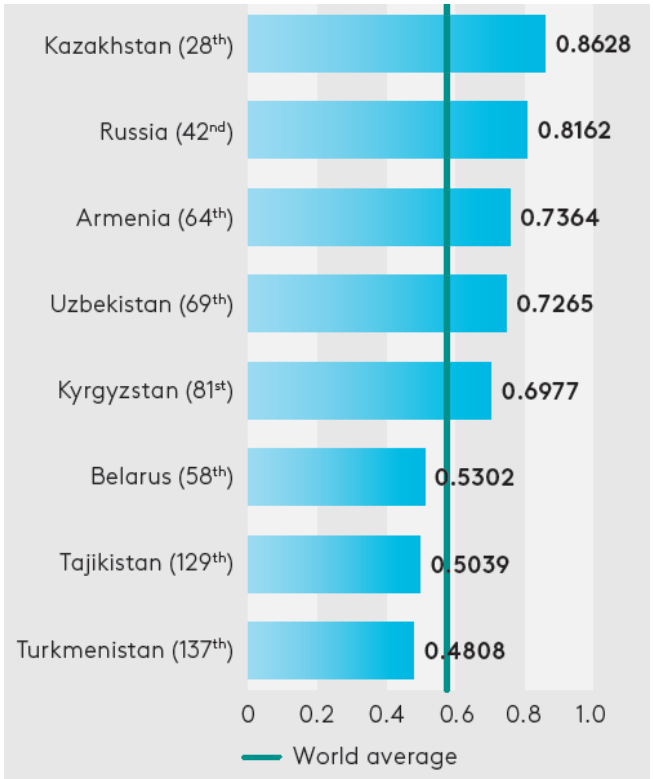
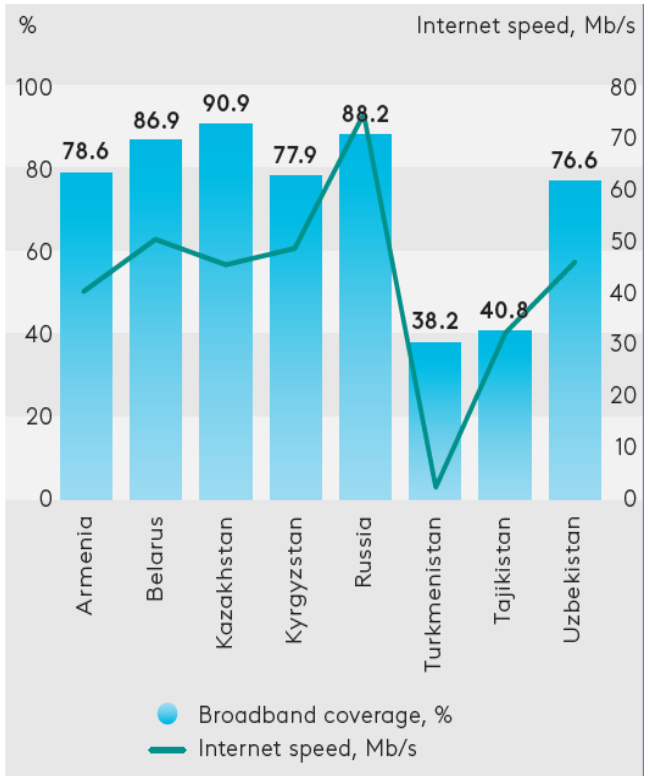
E-government ranking



(place in the world ranking)

Internet Coverage



Source: *UN*

Significant potential for greater digitalisation

76%

Internet coverage in Central Asia by 2028 (70% in 2022)

+11

million people

Internet users in Central Asia by 2028 (53 million people in 2023)

Source: *KPMG*

High digitalisation and advanced digital sectors (public services, finance) in certain countries within the region foster the transformation of the entire economy and smaller nations.

Perspective projects:

- Construction of cross-border communication lines
- Digitalisation of services, including healthcare (telemedicine), tourism, etc.
- Projects to develop seamless transport corridors and smart energy networks
- Projects to ensure efficient water use, balance the pressure on urban infrastructure, etc.

06 Booming construction of warehousing and logistics infrastructure driven by the growth of e-commerce

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Share of e-commerce by country and major players

Low availability of warehousing in the region

Source: *NF Group Research*

Explosive growth of e-commerce and record-high warehouse commissioning

25%

average annual growth rate of the e-commerce market in the region

4.9 million m²

increase in the area of commissioned warehousing in Russia in 2023

Source: *DataInsight*

Perspective projects:

- Construction of warehousing and logistics infrastructure
- Development of the digital component of e-commerce
- Manufacture of heavy- and light-duty trucks
- Redirecting logistics routes eastwards and repurposing western logistics facilities (Prilesie, etc.).

07

Reduction in transit is offset by expansion of cargo turnover with China

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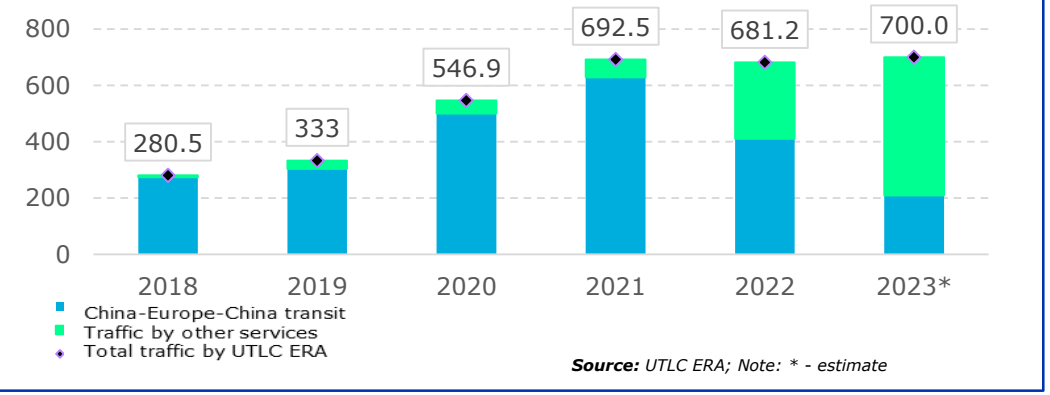
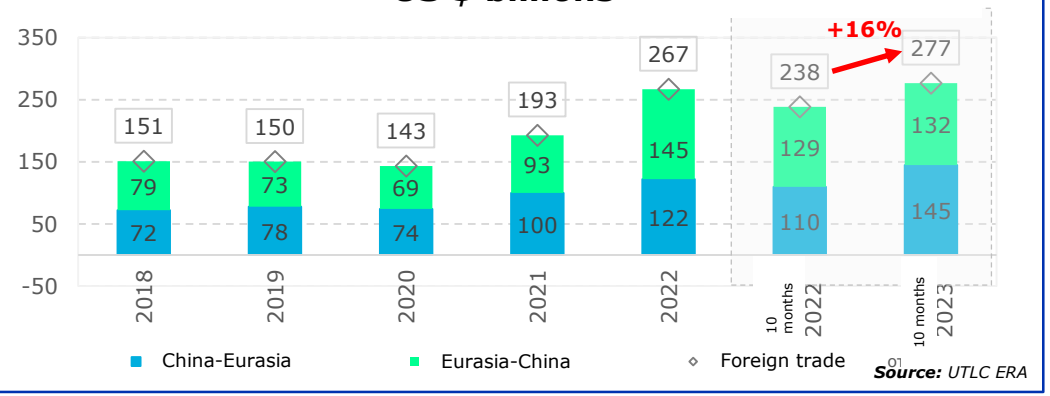
UTLC ERA container traffic, '000 TEU



Source: *UTLC ERA; Note: * - estimate*

Trade between Eurasia and China, US $ billions



Source: *UTLC ERA*

- Redirecting trade drives **infrastructure development**.
- **Improvements in logistics infrastructure** *(TLCs, dry ports, container terminals)* **foster the development of container services** and boost container traffic with China.

Focus on:

- new routes and border checkpoints in the Eastern Range (*Russia–China link*)
- North and Central Eurasian Corridors (*China–EAEU and China–EU links*)
- Trans-Caspian International Transport Route (*China–Turkey link*)
- Bakhty–Ayagoz, China–Kyrgyzstan–Uzbekistan corridor (*China–Central Asia link*)
- other latitudinal initiatives

08 Central Asia is deepening cooperation with China in the power generation sector

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China's FDI stock in Central Asia

52%

channelled into power generation

Share of Central Asia in XUAR's foreign trade

80%

Bringing relationships to a new level

Xi'an Declaration 5+1

Source: *China's statistics agency*

In Kazakhstan:

- a 1 GW wind farm in the Zhambyl Region
- a long-term uranium supply contract with Kazatomprom
- authorisation for Ulba-TVS LLP to produce AFA 3G Type A fuel assemblies

In Uzbekistan:

- solar power plants with a total capacity of 2,000 MW in the Jizzak and Tashkent Regions
- three hydroelectric storage power plants worth US $1.64 billion
- upgrading high-voltage grids and substations
- cooperation in the uranium industry

In Kyrgyzstan:

- a 1,000 MW solar power plant in the Issyk-Kul Region
- a 220–500 kV high-voltage power transmission line, the Kazarman HPP cascade and small HPPs

09 Advancement of regional cooperation in the water and energy complex of Central Asia

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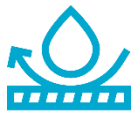
Need for coordinated solutions in the Aral Sea basin

81%

of the population (60 million people) live in the Aral Sea basin

Low water use efficiency



US $25 per m³

water use efficiency (SDG 6.4.1) in Central Asia compared to the world's average of US $19 per m³ per year

Growing pressures on water resources

2.8x

by 2040

Source: *UN*

Construction of large hydropower plants and other facilities in Central Asia is transitioning into the practical phase

- construction of major hydropower plants (Kambar-Ata 1, Rogun)
- small hydropower plants
- increase in the construction of renewable energy facilities supported by foreign investment, etc.

Forms of joint financing are being devised and international and regulatory initiatives are advancing:

- project-specific consortia
- international initiatives in Central Asia's water and energy complex (EDB, ADB, WB and others)
- implementing a water accounting system at the regional level - Kazakhstan's initiative
- Kazakhstan's chairmanship of the IFAS in 2024

10 Activity in irrigation infrastructure is gaining momentum in Central Asia

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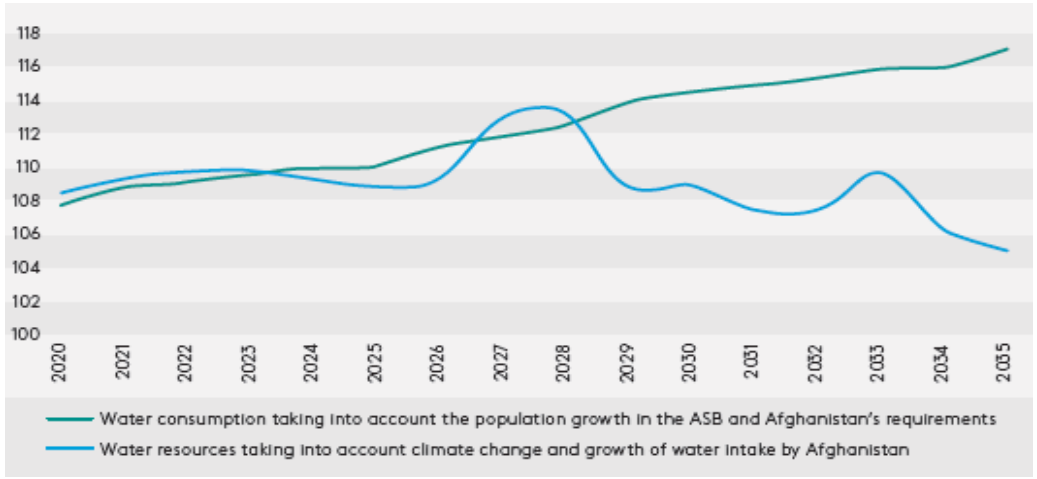
Projected river flow and water intake in the Aral Sea Basin by 2035, km³



***Source**: EDB estimates based on data from ICWS SIC.*

High importance is driving government to intensify their efforts

90%

of water consumed in the region

5-12 km³

possible annual water deficit within the region

***Source**: EDB estimates based on data from ICWS SIC.*

"By 2040, the water deficit in Kazakhstan may escalate 12 to 15 billion cubic metres; however, the implementation of water conservation technologies is very slow and there is no culture of responsible water consumption in the country."

Kassym-Jomart Tokayev, President of Kazakhstan

- **Water resources have been prioritised in the economic policies of all Central Asian countries**
- **Kazakhstan:** constructing 20 new water reservoirs and rehabilitating 15 existing ones; halving water losses during transportation; increasing available water resources by 3.7 km³ per year; refunding up to 80% of the cost of water-saving technologies; introducing digital technologies covering more than 3,500 km of canals; automating water accounting, etc.
- **Uzbekistan:** upgrading 80% of pumps; installing water meters; reinforcing canals; reducing annual water losses by 5 to 6 billion m³; upgrading irrigation systems, etc.

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