



## 6th Railway Working Group Meeting

17-18 October 2022 • Almaty, Kazakhstan

6-е заседание Рабочей группы по железнодорожному транспорту

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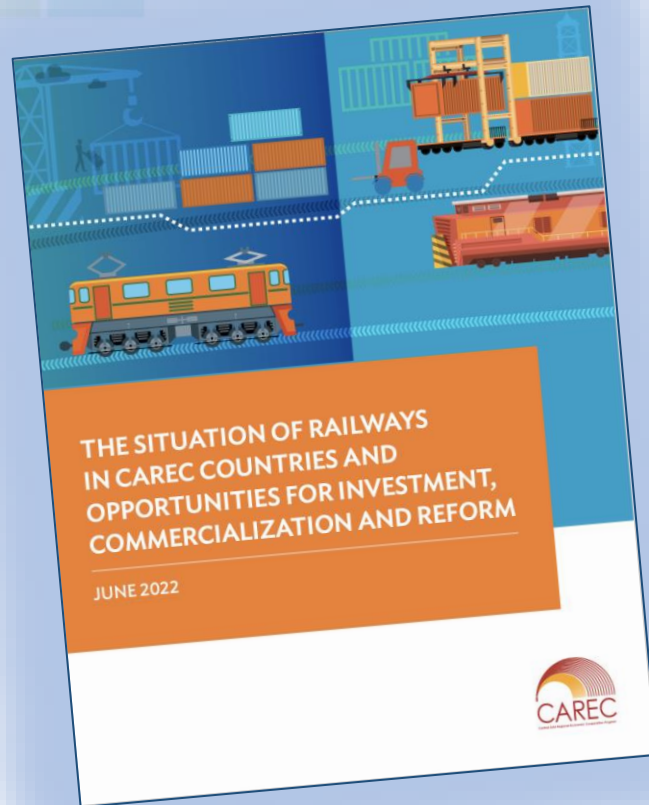
People's Republic of China  
Poverty Reduction and  
Regional Cooperation Fund



# The situation of railways in CAREC countries and the opportunities for investment, commercialization and reform

Tyrrell Duncan, TA team leader

# Contents of the study



## Chapter

1. Introduction
2. The railway corridors
3. Railway institutions and policies
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5. Trends in cross-border traffic at country level
6. How traffic is influenced by trade and railway competitiveness
7. Railway financial and operational performance
8. Options for railway commercialization and reform
9. Options for railway investment

- *Study to inform and support CAREC railway sector dialogue*
- *Focus is mainly on cross-border railway freight*
- *Consolidates and expands evidence on CAREC railways and identifies options for improvement*
- *Builds on railway sector assessments conducted in each CAREC member country and included development of a CAREC Regional Transport Model (available on CAREC website)*





# OVERVIEW OF CAREC RAILWAYS

*Central Asia's cross-border railways and ports in 1990*



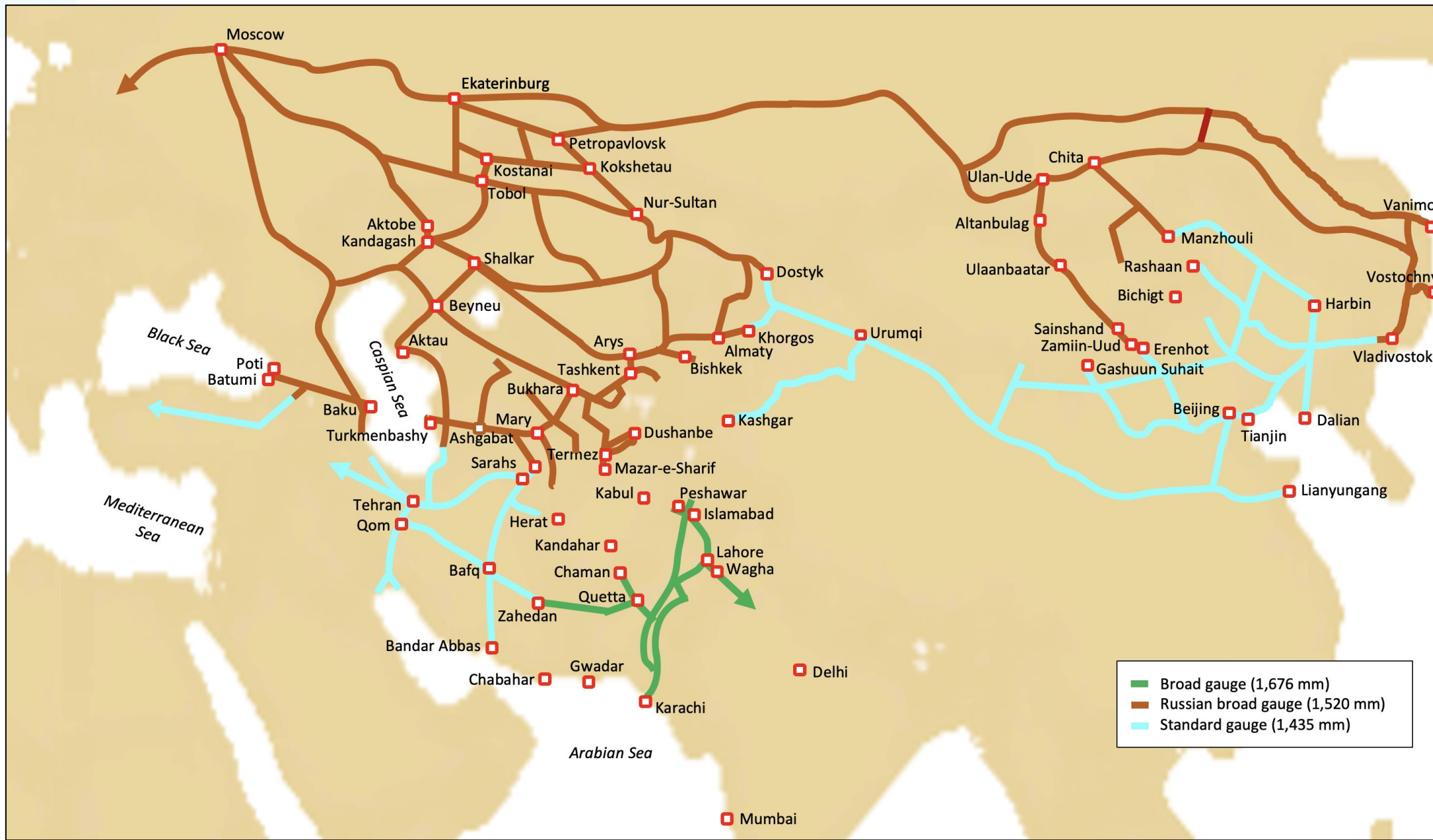


# Central Asia's cross-border railways and ports in 2022



- Trans-Siberian Railway
- Trans-Mongolian Corridor
- Northern Trans-Asian Corridor
- Trans-Caspian International Transport Route
- Uzbekistan Northwestern Corridor
- Lapis Lazuli Corridor
- Caucasus Transit Corridor
- Southern Trans-Asian Corridor
- China-Pakistan Economic Corridor
- North-South Corridor
- Other regional rail links
- Missing regional rail links

Three different track gauges





*Differences in the scale of railway activities*

Railway Type	Member Country/Region	Railway	Number of Staff	Network Length (km)	Freight Traffic, 2018		Passenger Traffic, 2018	
					Volume (million tons)	Turnover (billion tkm)	Volume (million)	Turnover (billion pkm)
Large railways with high traffic levels	IMAR and XUAR regions, PRC	China Railway	165,482	19,951	849.8	361.8	92.6	49.7
	Kazakhstan	Kazakh Railways	130,000	16,040	398.0	283.0	23.1	18.6
	Uzbekistan	Uzbekistan Railways	70,000	4,718	68.4	22.9	22.1	4.3
Mid-sized railways with moderate traffic	Azerbaijan	Azerbaijan Railways	19,000	4,285	14.0	4.5	2.8	0.5
	Georgia	Georgian Railway	13,000	1,443	10.0	2.6	2.9	0.6
	Mongolia	Ulaanbaatar Railway	15,800	1,815	25.8	15.3	2.9 <sup>b</sup>	1.0
	Turkmenistan	Turkmen Railway Agency	22,000	4,890	23.7	12.6	5.3	2.3
Small former branch lines with low traffic	Kyrgyz Republic	Kyrgyz Railways	4,817	424	7.5	0.9	0.3	0.0
	Tajikistan	Tajikistan Railway	5,400	682	5.4	0.2	0.5	0.0
Needing large investments to develop or renew the network	Pakistan	Pakistan Railways	72,078	7,791	8.4 <sup>a</sup>	8.1 <sup>a</sup>	54.9 <sup>a</sup>	24.9 <sup>a</sup>
	Afghanistan	Afghanistan Railway Authority	326	75	3.4	0.2	...	...
Subtotal			517,903	62,114	1,414.4	712.1	207.4	101.9

## *Financial performance of CAREC railways*

<b>Railway type</b>	<b>Country</b>	<b>Recent financial performance</b>
Large	IMAR and XUAR	Very low after-tax profit
	Kazakhstan	Low profitability with losses in some years
	Uzbekistan	Low profitability
Mid-sized	Azerbaijan	Substantial losses
	Georgia	Losses in most years
	Mongolia	If IFRS used, expect small profit in some years and losses in others
	Turkmenistan	More information needed on financial performance
Former branch lines	Kyrgyz Republic	If IFRS used, expect losses each year
	Tajikistan	If IFRS used, expect losses each year
Needing network development/renewal	Pakistan	Losses reported each year, would be higher if IFRS used
	Afghanistan	More information needed on financial performance





## *Condition of railway assets*

### **Railway infrastructure maintenance and capacity upgrading**

- Large railways and some mid-sized railways maintain their track infrastructure in reasonably good condition
- Most other CAREC railways do not—leading to steady deterioration in infrastructure condition, safety risks, and speed and other restrictions

### **Rolling stock fleet modernization and expansion**

- Among large railways, IMAR/ XUAR and Kazakhstan have modernized and expanded their rolling stock. In Kazakhstan, wagons are now provided on a large scale by the private sector
- Among mid-sized railways, Azerbaijan has renewed its rolling stock fleet and Turkmenistan replaced most its locomotives
- Most other CAREC railways have invested less in rolling stock and prioritized renewal of locomotives over wagons. Their fleets include many aged wagons, and fleet size and composition are not well-aligned with customer needs
- Some railways supplement their fleets using wagons of other railway administrations or by leasing for longer periods from private leasing companies in Russian Federation, Belarus, Estonia and Ukraine.
- This is not enough to ensure wagon availability—there are often delays obtaining wagons and seasonal wagon shortages, especially at harvest time





# POLICY, INSTITUTIONAL AND ORGANIZATIONAL ISSUES



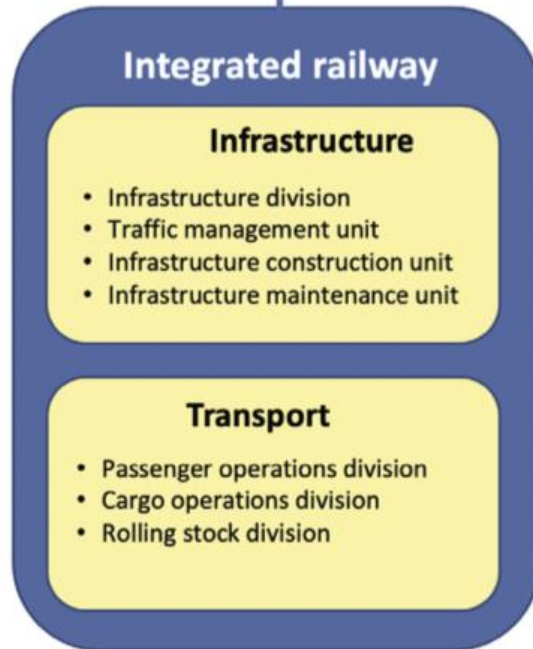
# Railway sector institutional arrangements

*Common approach to policy and regulation*

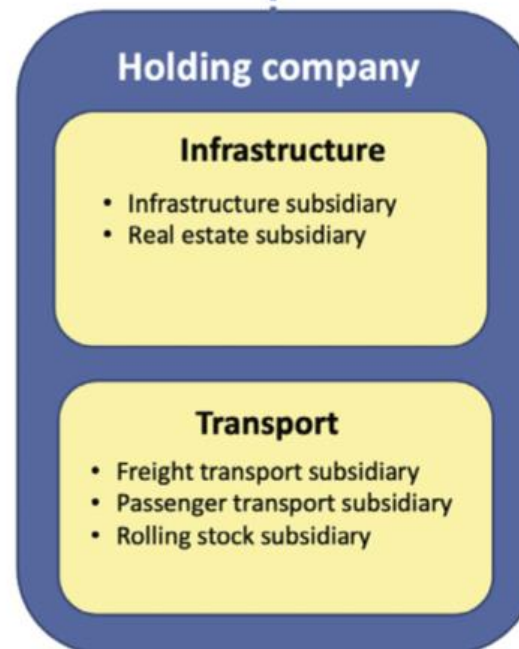


*Used in EU & North America*

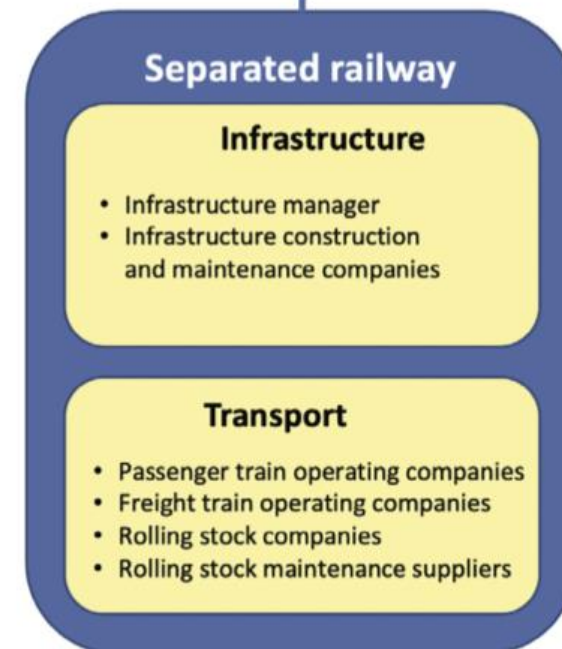
*3 alternative approaches to provision of railway infrastructure and transport services*



Nine CAREC countries



Kazakhstan, Uzbekistan



No CAREC countries



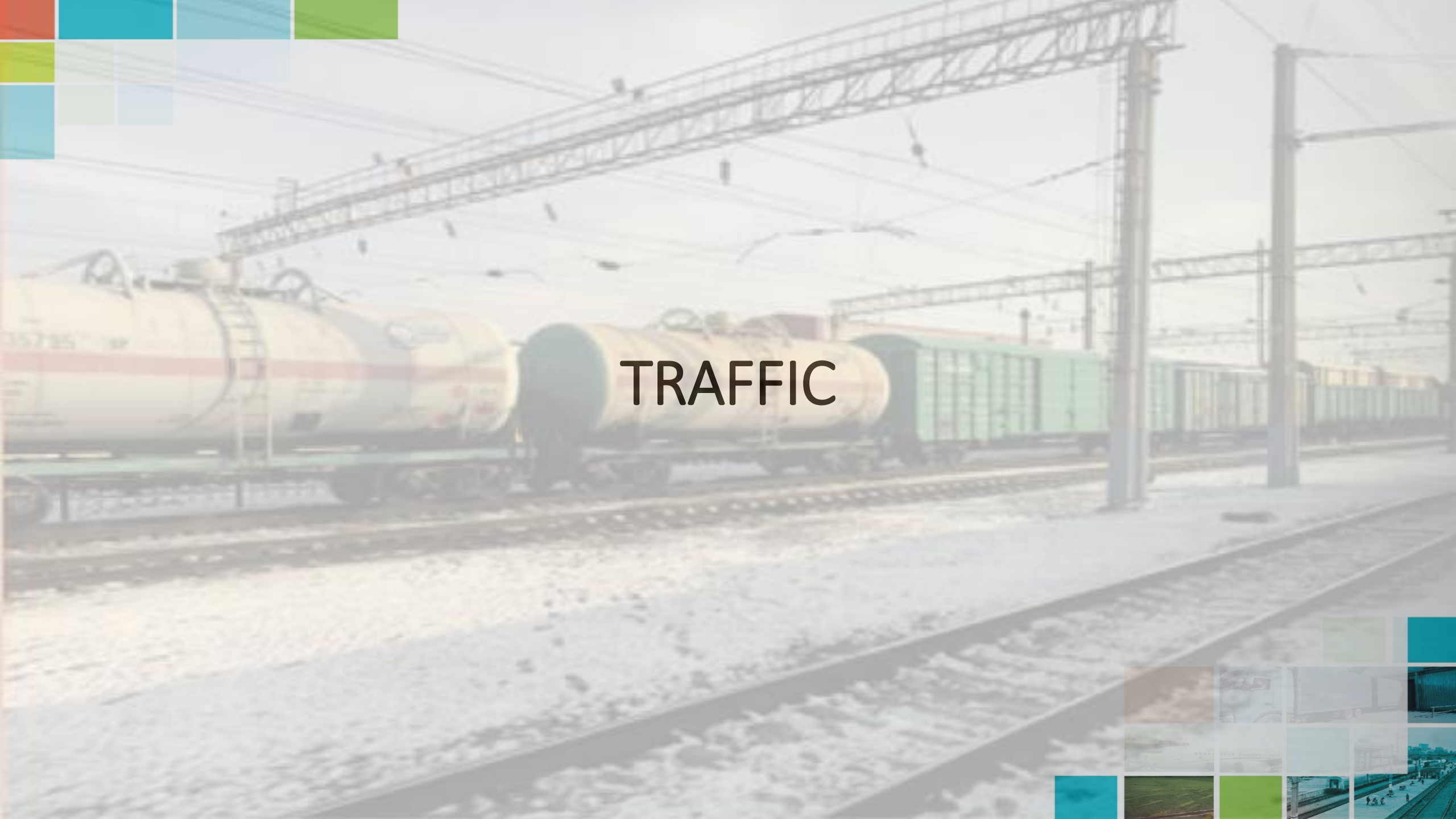


## *Further challenges: railway sector arrangements*

- **Policy oversight and non-tariff regulation.** Not independent of railway organization
- **Tariff regulation.** Less relevant as railways now face significant competition
- **Cross-subsidy of passenger fares and some commodities.** This increases unprofitable traffic and reduces profitable traffic. Case for a public service obligation mechanism
- **Private sector participation.** This would bring investment and increase competition and efficiency but few roles are open to private companies. Exceptions generally involve activities that don't compete with the railway

## *Further challenges: within the railway organization*

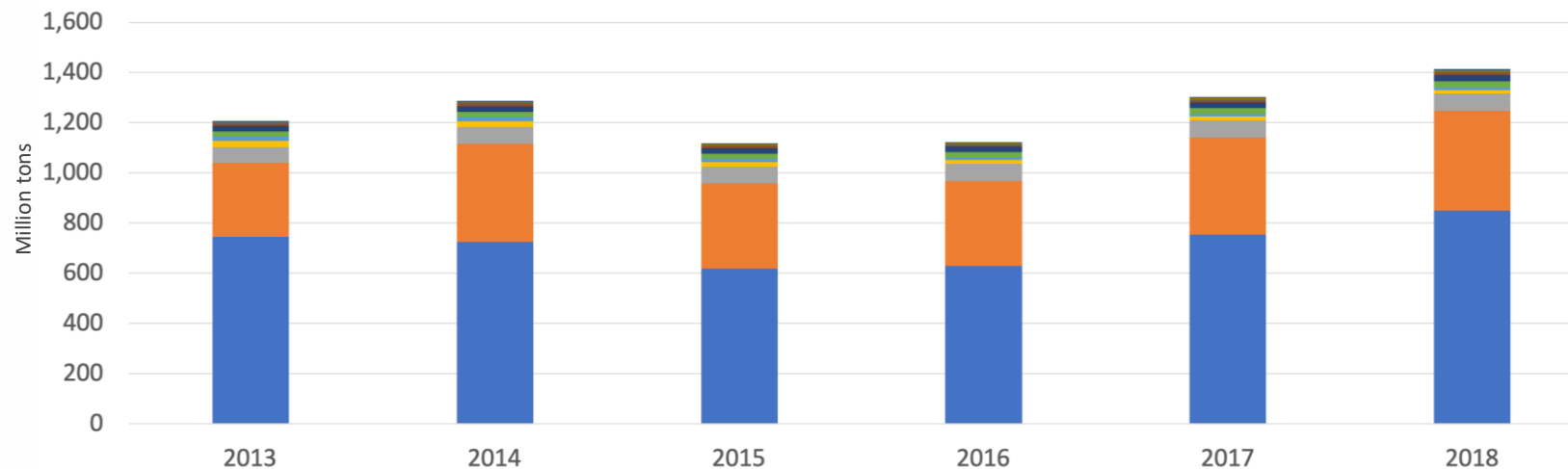
- **Accounting system.** Most CAREC railways use government cash-based accounting systems that are inadequate and provide a misleading measure of business performance. All railways need a modern, commercial accounting system
- **Enterprise resource platform.** Alongside a modern accounting system, an ERP would provide real-time tracking of activities, revenues, costs and profitability for each of the railway's main business lines, enabling commercial decision-making to optimize profitability
- **Staffing.** Some CAREC railways may be overstaffed, especially those with lower traffic
- **Noncore activities.** Most railways retain activities such as schools, hospitals and non-railway businesses. These drain resources and divert attention from core railway business



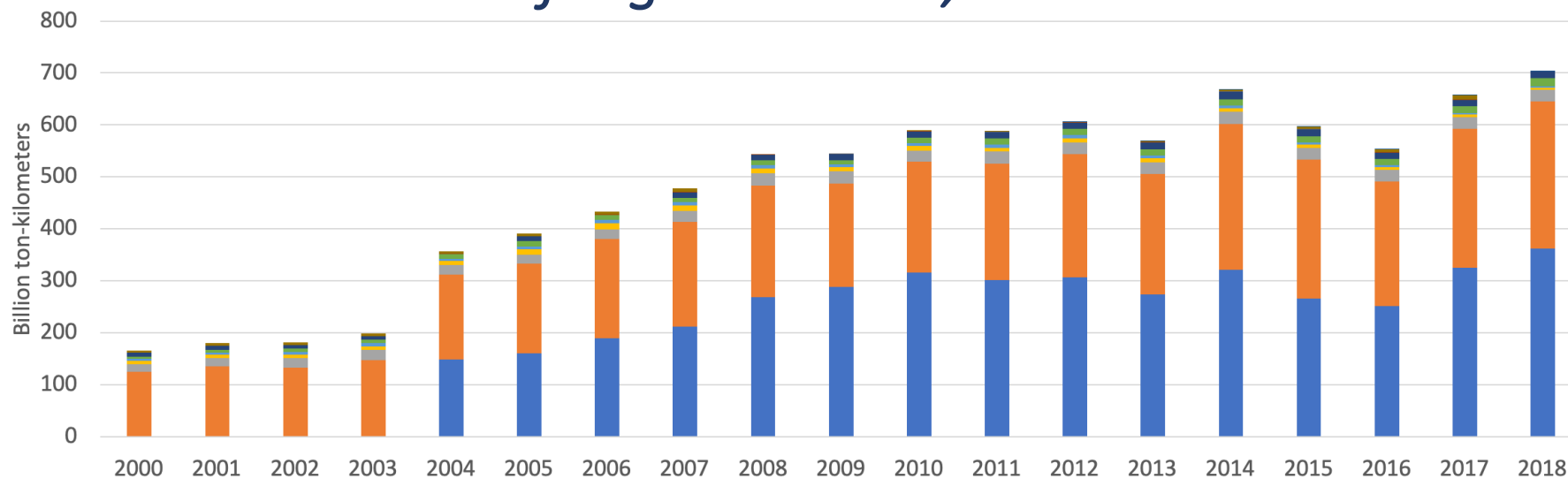
# TRAFFIC



## CAREC freight volume, 2013–2018

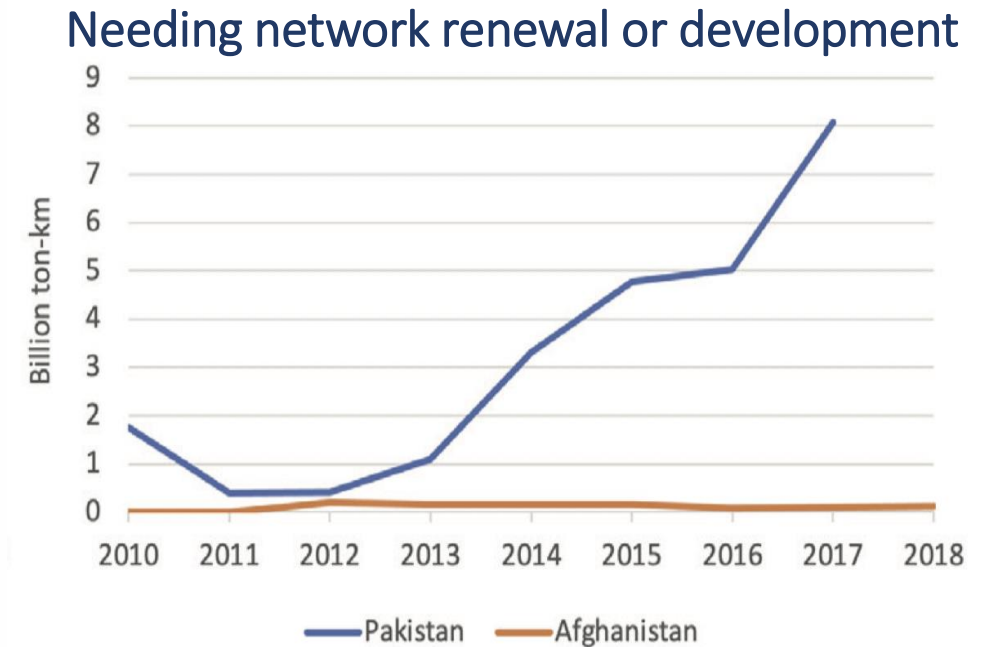
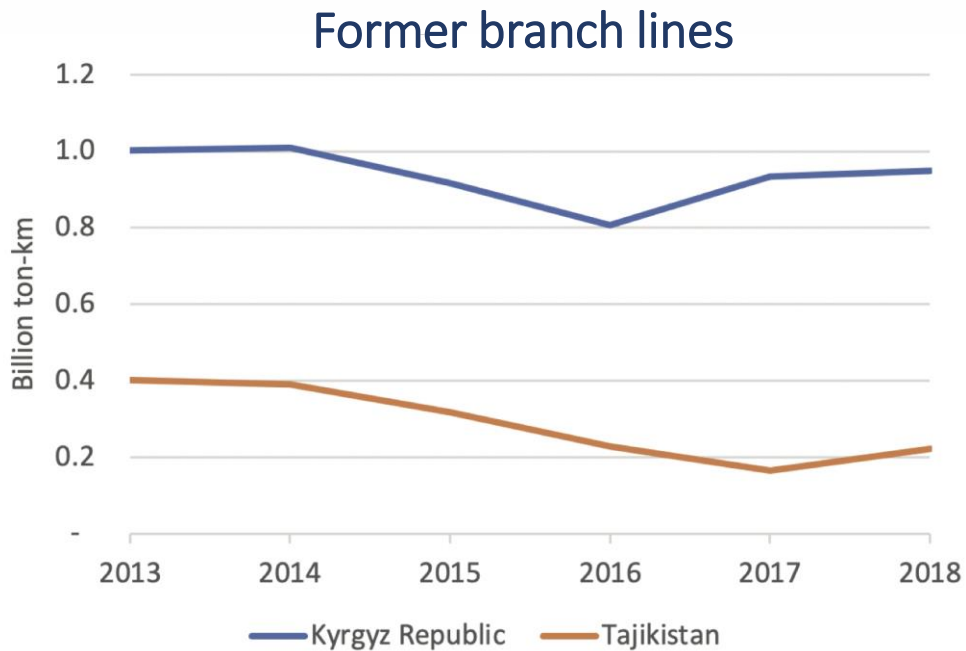
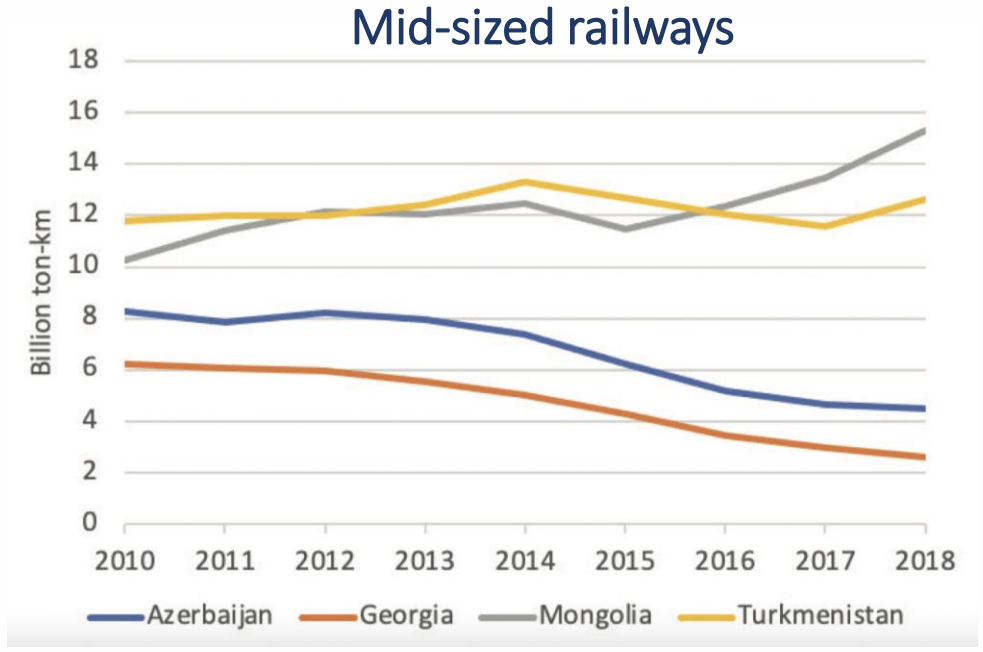
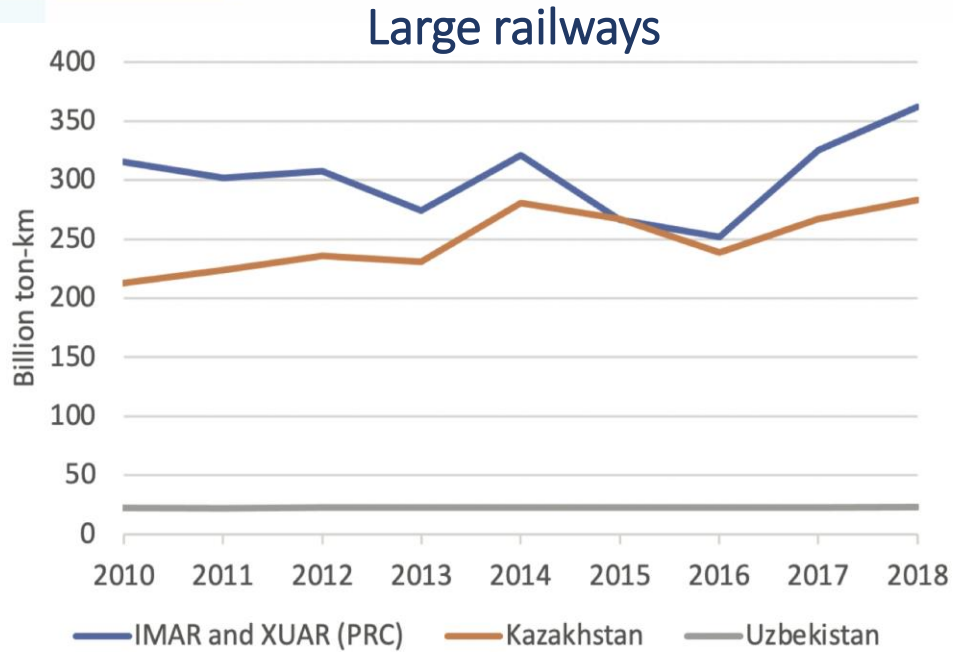


## CAREC freight turnover, 2000–2018

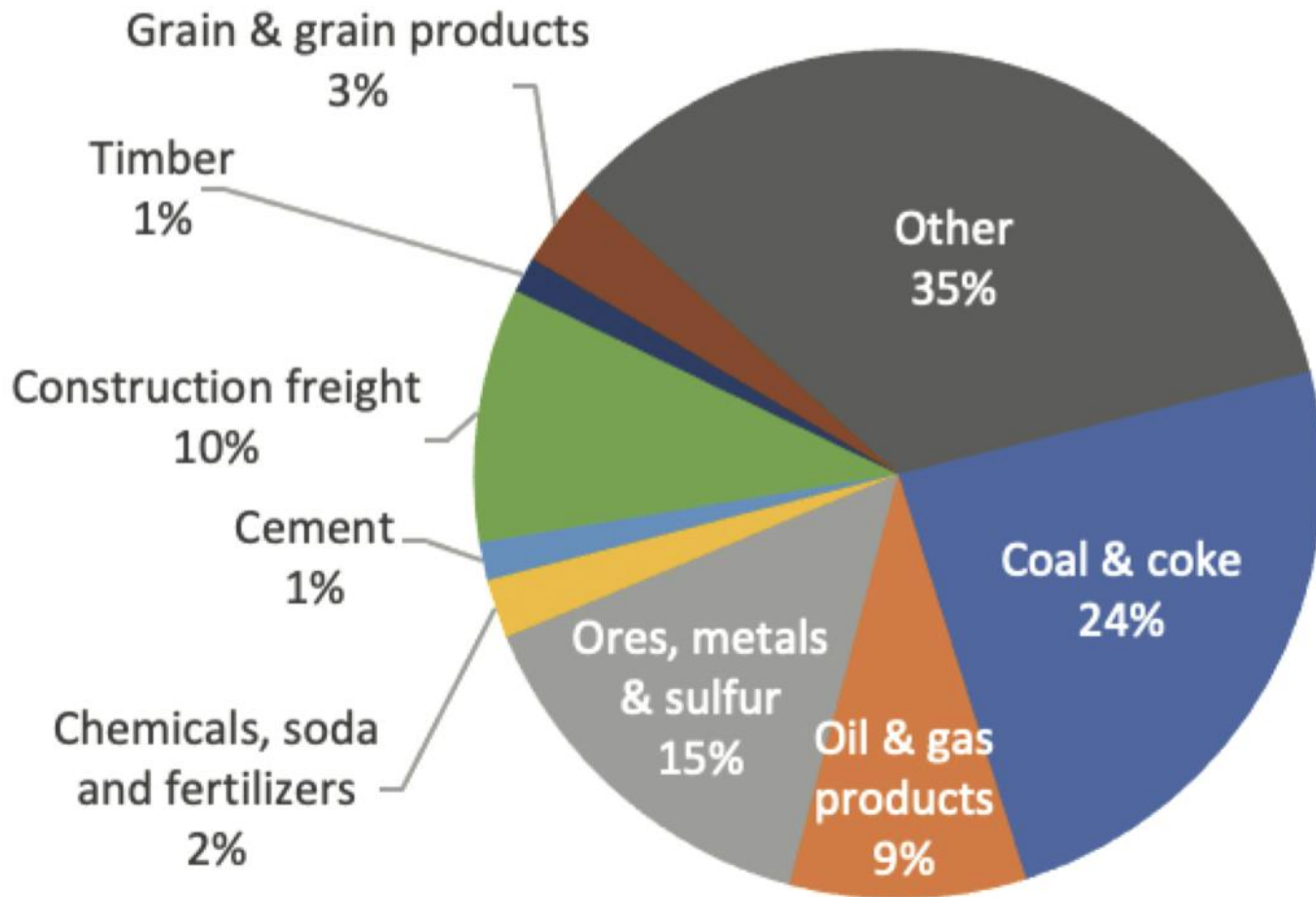




*Trends in railway freight turnover of the 11 railways*



# CAREC freight volume by commodity, 2018

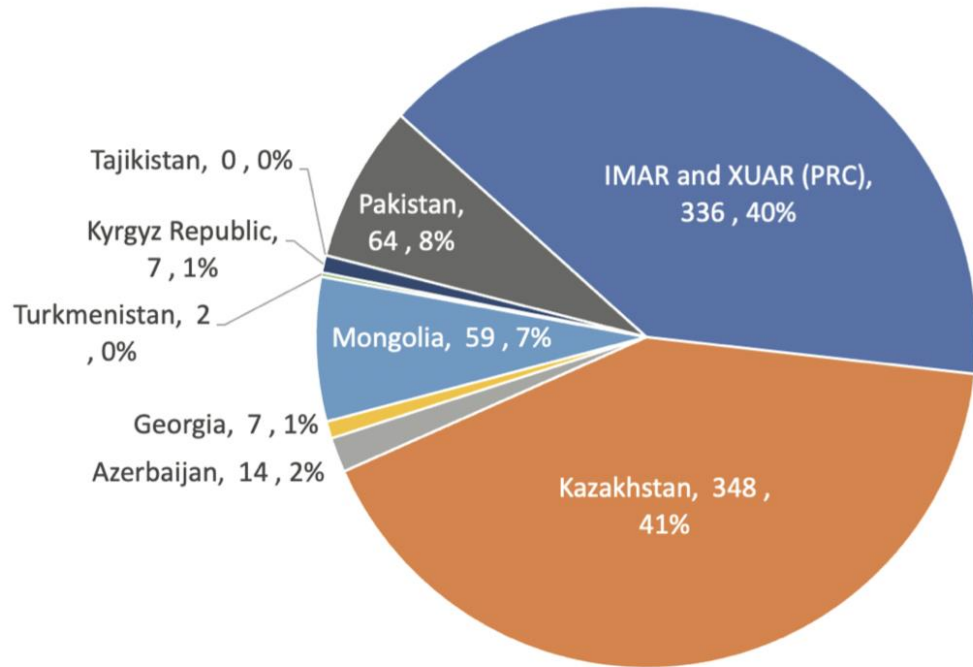


## ***Decarbonization will affect railway traffic in future***

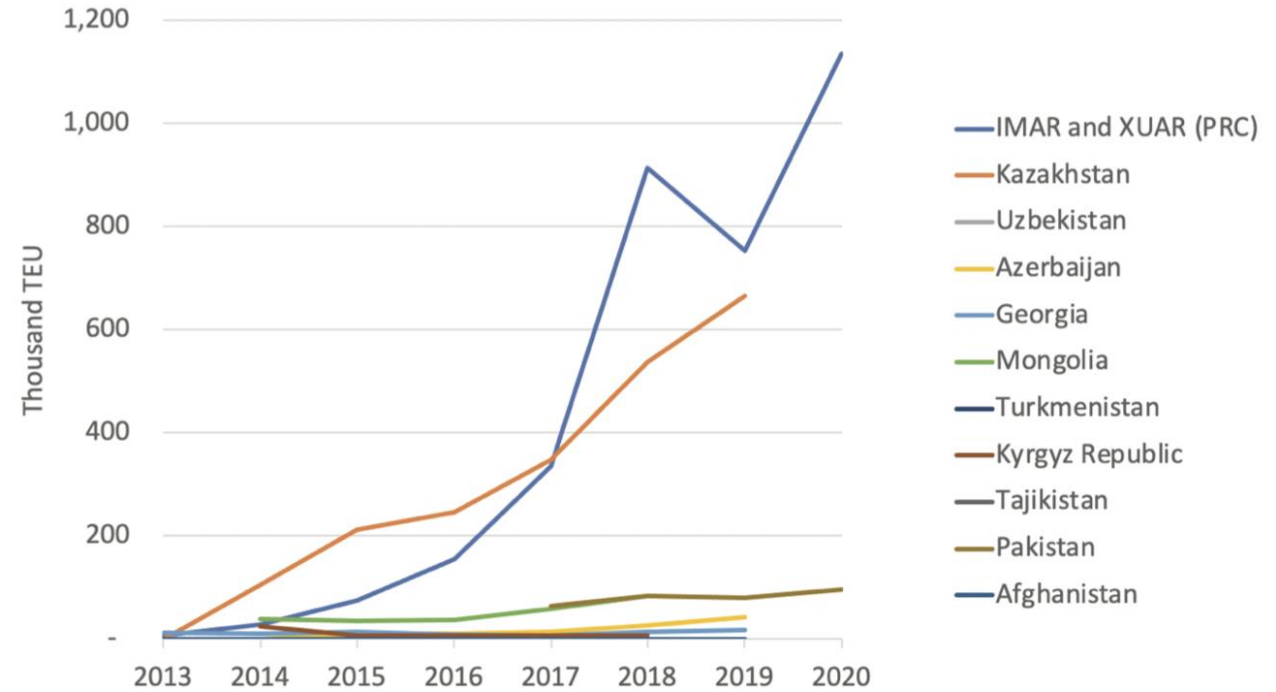
- In 2018, two-thirds of CAREC freight volume was fossil-fuels and other high-emission commodities (e.g. cement)*
- Railways need to examine how decarbonization will affect their traffic and make adjustments to ensure success in future*
- Potential for a win-win outcome—if high-emission traffic is reduced and replaced by higher tariff freight types, particularly containerized freight*

# Railway container traffic

## Share of CAREC rail container TEU, 2017



## Loaded TEU transported by CAREC railways, 2013–20



## PRC cross-border container block trains by border crossing, 2018

Border Crossing	Alashankou	Horgos	Erenhot	Manzhouli	Total
PRC–Europe	2,824	685	1,054	2,041	6,604 <sup>a</sup>
PRC–Central Asia	1,378	1,627	368	0	3,373
<b>Total</b>	<b>3,702</b>	<b>2,312</b>	<b>1,422</b>	<b>2,041</b>	<b>9,477</b>





# OBSTACLES TO COMPETITIVENESS



# Obstacles to quality & customer orientation

## Findings of interviews with freight shippers

- Road transport widely available, dynamic, flexible and competitive
- Some countries' railway networks are too small
- Railway steadily losing market share to road due to **service quality, efficiency and price competitiveness issues**
- Key railway service issues are **speed, punctuality and reliability**
- Often **railway terminals and logistics** are poor
- Often **difficult doing business with railways**, many lack a proper customer interface
- Most railways **inflexible on service quality, pricing**
- Each railway has limited control over total price and service quality of long-distance services
- Railways will struggle to attract new sources of traffic until they implement far-reaching reforms to strengthen commercial orientation

## Views on railway competitiveness by traffic type

Traffic type	Examples
<b>Railways are competitive</b>	
Minerals	Ores and metals
Low value bulk commodities	Coal, coke cement—import, export and domestic
Oil, petroleum, natural gas	Oilfield to refinery to distribution hub—if no pipeline
Chemicals and fertilizers	Poisonous, flammable, corrosive cargo, fertilizers
Project cargo, out-of-gauge	Electricity generation and mining equipment
To locations where backhaul traffic is low	Cargo exports to some Central Asian countries
Long-distance containerized	Containerized imports, exports and transit
<b>Railways are not competitive</b>	
Time sensitive	Goods to be displayed at trade exhibitions
High value	Electronics, manufactured goods, fashion goods
Oil, petroleum, natural gas	If pipeline available
Smaller shipments of consumer products	Shipments requiring door-to-door service
Perishables	Fresh produce
Long-distance containerized	If railway cannot meet speed, punctuality and reliability requirements

# Obstacles to competitiveness: border crossing

Based on CPMM 2019 survey:

- **Av. border clearance time in US, Canada and EU less than an hour but 21 hours on CAREC rail corridors**
- **Av. train speed of reduces from 43.6 kph to 22.6 kph if border crossing included**
- **Crossings with gauge change are worst affected**— Alashankou/ Dostyk, Horgos/Altynkol and Erenhot/Zamiin-Uud
- Issues include **transshipment capacity, wagon availability and the need for marshalling**
- Av. official and unofficial charges of \$162 per 20 tons per crossing— **raising cost of 500 km trip by 25%**

Corridor	TFI1: Time Taken to Clear a Border-crossing (hours) <sup>a</sup>			TFI2: Cost Incurred at Border-crossing Clearance (\$ per 20-ton cargo) <sup>a</sup>			TFI3: Cost Incurred to Travel a Corridor (\$ per 500 km, per 20-ton cargo)		
	Overall	Rail	Road	Overall	Rail	Road	Overall	Rail	Road
Overall	15.8	20.6	12.2	174	162	198	876	820	901
1	22.5	27.6	6.9	235	174	256	781	629	1,092
2	15	12	7.6	135	128	0	662	0	662
3	4.6	1.7	5.2	85	85	85	544	136	606
4	8.2	15.7	3.9	106	116	57	1,308	1,084	1,491
5	28	0	28	296	296	0	706	0	706
6	14.6	4.6	14	151	137	147	876	1,243	823

Corridor	TFI4: Speed to Travel on CAREC Corridors (km/h)			Speed Without Delay (km/h)		
	Overall	Rail	Road	Overall	Rail	Road
Overall	21.4	22.6	19	44.1	43.6	45
1	24.6	31.4	21.6	62.3	57.4	64.4
2	25.6	25.7	7.4	51.9	52	8.4
3	26.3	25.9	28.1	41.9	43.7	33.8
4	19.5	24.2	15.1	30.4	41.1	20.6
5	10.5	10.5	0	30.3	30.3	0
6	20.9	21.9	13.4	40.2	42.4	24.3





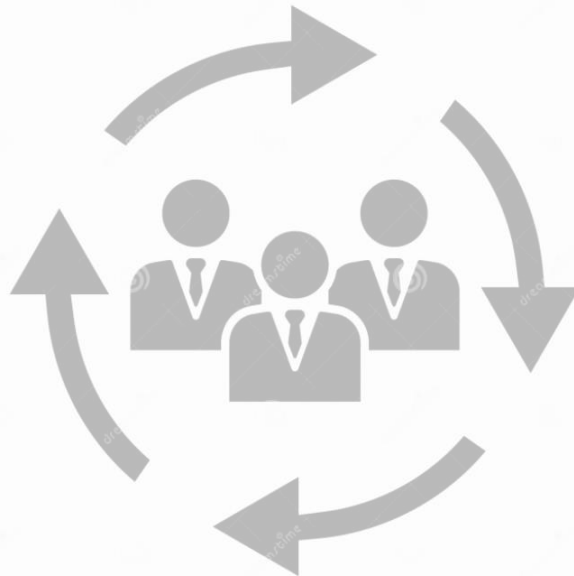
## *Obstacles to competitiveness: ports and shipping*

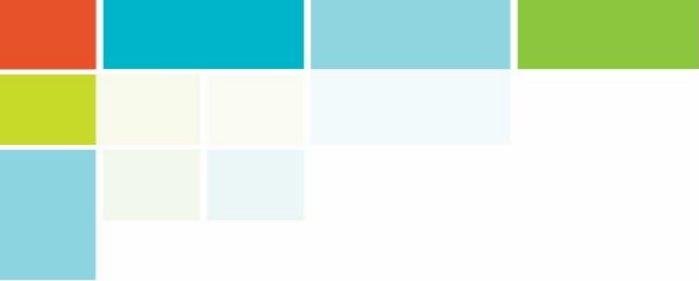
Using the three multimodal CAREC corridors—the TITR, CTC and Lapis Lazuli—railway freight is transferred to ships to cross the Caspian and Black Seas. The efficiency of port operations and shipping, and quality of logistics services, are critical for corridor capacity and competitiveness. Considerable improvements are needed:

- **Port capacity.** Capacity of main Caspian Sea ports at Baku/Alat, Aktau/Kuryk and Turkmenbashi upgraded but Georgia's Black Sea ports are old and need improvement
- **Port downtime.** Storms and high winds cause frequent downtime and high waiting time for cargo at Caspian and Black Sea ports. It is hoped this will improve following upgrading
- **Port logistics and clearance.** Weaknesses in port logistics, train formation arrangements, port handling and ship clearance procedures are a major source of cargo delays
- **Shipping fleet.** Caspian shipping is inefficient—not enough suitable vessels, absence of a shipping schedule, low frequency of service. More competitive shipping available on the Black Sea but Georgia's ports can only receive feeder vessels due to depth limitations
- **Monopolistic market conditions.** As a result, shipping rates on the Caspian and Black Sea ports are high
- **Private sector participation.** Efficiency could be improved and tariffs reduced if private sector was permitted to play a greater role in ports, shipping and logistics



# OPTIONS FOR COMMERCIALIZATION AND REFORM





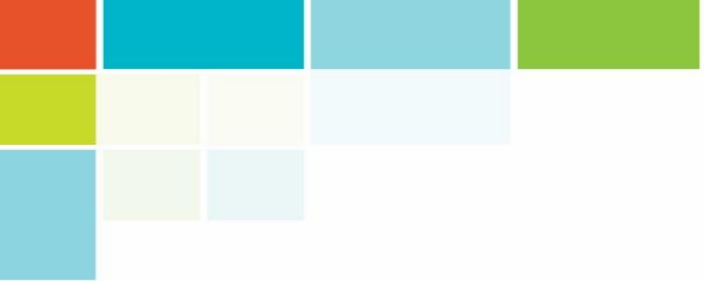
## *Railway commercialization and reform: foundational steps*

Most CAREC countries are at early stage of commercializing their railways. This reflects the difficulty of reform and limited appetite from governments.

All countries can implement foundational steps while retaining 100% government ownership and control. These are needed if railways are to realize their market potential, improve financial performance, and be less burden on public finances:

1. **Commercial orientation.** Government to provide railway a clear mandate to operate along commercial lines
2. **Holding company model.** Transition from integrated railway to holding company model with main railway business lines separated into self-standing companies, subsidiaries or profit centers
3. Establish **IAS- and-IFRS compliant accounting systems and ERP** platform to reliably monitor performance and support commercial decision-making
4. Give railway **more freedom to adjust tariffs** without regulatory approval
5. **Remove cross-subsidies or introduce PSO**
6. Where possible **devolve local passenger services** to subnational authorities

If all or most foundational steps are implemented a genuine shift to operating along commercial lines is more likely. If fewer steps are implemented, they may not be enough and progress may be vulnerable to reversal



*Railway  
commercialization  
and reform: some  
immediate reform  
options beyond the  
foundational steps*

**Railway tariffs.** As all CAREC railways already operate in competitive freight markets, most aspects of tariff regulation can be discontinued

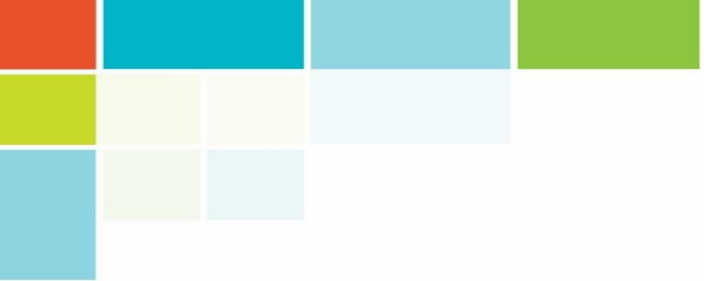
**Non-core activities.** Examine how the many non-core activities can progressively be separated or privatized, freeing railways to concentrate on the core business of providing railway services.

**Railway staffing.** Address overstaffing and inflexibility of railway staffing levels, especially where traffic has been low or declining

**Private sector participation.** Depending on market size, a range of options are available to further deepen commercialization reform by introducing PSP

- **Private rolling stock provision.** This could help overcome the shortages of rolling stock that many CAREC railways face. Russian Federation and Kazakhstan have shown that capable private providers can be attracted at least in larger markets. Depending on market size, private provision could be introduced by individual member countries or groups of countries
- **Private ownership and operation of railway terminals.** These include freight terminals, passenger stations, maintenance workshops and activities at ports. Terminals can be upgraded fairly quickly. Private companies would bring advanced logistics expertise, market knowledge and customer orientation
- **Partnership with private sector on sales and marketing.** Involving the private sector to strengthen railway marketing and product development





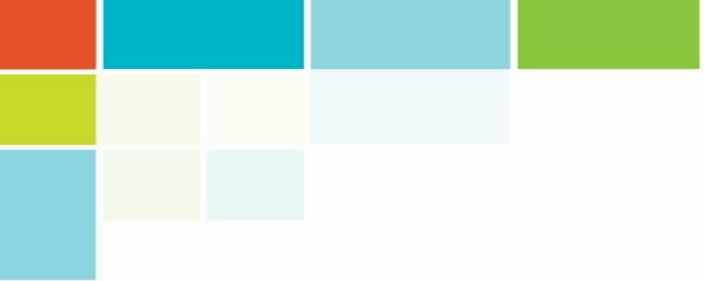
## *Railway commercialization and reform: further reform options over the medium term*

Options to create competition in railway service provision and ensure reliable and equitable arrangements for infrastructure provision and granting of track rights

### **Private train operations**

- **Introducing private freight train operations but retaining public ownership of railway infrastructure.**
  - The government separates railway freight services into an independent commercial public company, partly or wholly privatize that company and then, **if the market is large enough**, introduces competition by granting track rights to private freight train operating companies
  - The government retains ownership of the infrastructure which is eventually separated into a stand-alone public railway infrastructure provider
- **Market integration.** Some or all CAREC countries could integrate their railway markets, allowing qualified train operating companies to operate across borders in a competitive regional market for freight railway services. This would help the major railway corridors recover the efficiency and competitiveness lost after 1991. A first step might be for 2–3 contiguous member countries to integrate their markets, with a view to other countries joining at a later stage.

**Associated regulatory changes needed.** Regulatory arrangements need to be adjusted depending on the railway sector institutional model followed. **If private TOCs or rolling stock providers are permitted, an independent regulator** should be established to ensure arrangements for track access and access charging are efficient and equitable, and oversee compliance with safety regulations.



## *Railway commercialization and reform: commercial practices (1/2)*

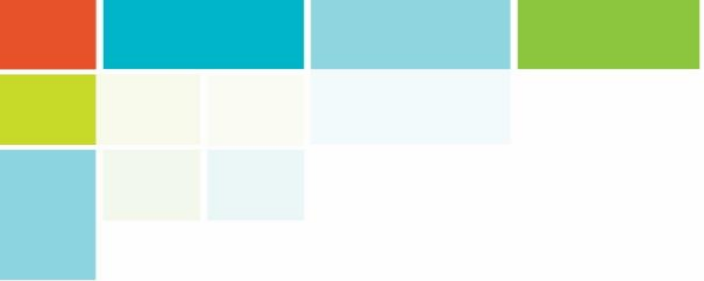
Alongside sector reform, CAREC railways need to introduce improved commercial practices to enhance their operational efficiency

**Improve customer orientation and service quality.** Railways need to improve their services to meet customer requirements—ease of doing business, transit time reliability, freight pickup and delivery services, dependable availability of transport capacity, low losses and damage, shipment trackability, competitive transport rates, and capacity to collaborate in implementing technology applications

**Establish a capable sales and marketing function.** All railways need a professionally-staffed sales and marketing function in continuous contact with customers and focused on developing customer freight solutions and market-based strategies for growing freight traffic

**Strengthen weaker parts of the logistics chain**

- **Modernize and simplify border control processes** at nearly all borders—introduce modern scanning technologies and risk management systems, and standardized and digitizing transit documents, and harmonize international agreements and rules on interline connections
- **Increase capacity and efficiency of transloading facilities and marshalling yards** at most borders requiring gauge change
- **Improve availability of required types and quantities of wagons** needs to be increased— attract private investment in wagon supply, use modern systems of wagon fleet management, upgrade wagon maintenance, balance inbound and outbound traffic, streamline inter-country interchange arrangements



## *Railway commercialization and reform: commercial practices (2/2)*

### **Address ports and shipping bottlenecks**

- **Better port management systems and logistics.** Caspian and Black Sea ports need better systems to support port productivity and efficiency (including direct transfer between ship and rail and between ship and truck), and logistics centers need to be introduced or expanded
- **Container chassis provisioning systems.** These need to be upgraded to eliminate delays due to non-availability of chassis
- **Opening the shipping market.** On the Caspian Sea, market entry restrictions need to be removed to attract private operators. This will attract more suitable modern vessels, including container feeder services, and increase competition
- **Scheduled shipping services.** Shipping companies should be encouraged to use fixed schedules to minimize delays for railway freight customers
- **Increasing the distance containers can be taken west of the Caspian.** Through partnership with container owners (e.g. shipping companies), the supply of containers and distance they can travel beyond ports need to be increased to minimize the need to transship onto road transport

### **Improve coordination along major railway corridors**

Countries need to coordinate closely to streamline corridor freight services and improve competitiveness. This includes working together on selecting and implementing investments to address corridor bottlenecks, adoption of harmonized approaches and standards, and coordination of corridor operational and commercial management



# OPTIONS FOR RAILWAY INVESTMENT



# Range of investments needed

Investment type	Large railways	Mid-sized railways	Former branch lines	Needing network development or renewal
Missing links	4 routes from Kashgar	Tavan Tolgoi–Sainshand–Khuut–2 routes from Kashgar Choibalsan with spurs to PRC border  Longer term aim to develop new Western Transit Corridor		Havelian to PRC border  Peshawar to Afghanistan border  Afghanistan ring railway
Increase railway infrastructure capacity	Parts of TITR, Northern Trans-Asian Corridor  Uzbekistan Northwestern Corridor	Trans-Mongolian Corridor (saturated)  Bottlenecks on Turkmenistan east–west corridor		Pakistan
Track rehabilitation		Mongolia Turkmenistan	Kyrgyz Republic Tajikistan	Pakistan
Modernize/ replace signalling system	Uzbekistan	Mongolia Turkmenistan	Kyrgyz Republic Tajikistan	Pakistan
Rolling stock replacement/upgrading	All large railways need to expand fleet in line with traffic  Renewal of aged locomotive fleet in Kazakhstan and Uzbekistan	Renewal of all rolling stock • Georgia • Mongolia  Renewal of wagon fleet in Turkmenistan	Renewal of all rolling stock • Kyrgyz Rep. • Tajikistan	Renewal of all rolling stock in Pakistan
Freight terminals	Investment needed to modernize and upgrade the capacity of railway terminals in all CAREC countries			

**All large investments need prefeasibility/ feasibility study to confirm viability**



## *CAREC Regional Transport Model: Findings on Railway Corridor Freight Traffic in 2025 in Frictionless Case Without Construction of Missing Links*

<b>Corridor</b>	<b>Changes in Railway Freight in the Frictionless Case</b>		
	<b>Change in Freight Turnover</b>	<b>Change in Travel Time Within CAREC Region</b>	<b>Change in Travel Cost Within CAREC Region</b>
Trans-Siberian Railway	No change <sup>a</sup>	No change <sup>a</sup>	No change <sup>a</sup>
Trans-Mongolian Corridor	>25% increase	10%–25% decrease	5%–10% decrease
Northern Trans-Asian Corridor	>25% increase	10%–25% decrease	No change <sup>a</sup>
Trans-Caspian International Transport Route	>25% increase	10%–25% decrease	10%–25% decrease
Uzbekistan Northwestern Corridor	About 50% increase	10%–25% decrease	No change <sup>a</sup>
Lapis–Lazuli Corridor	>25% increase	10%–25% decrease	No change <sup>a</sup>
Caucasus Transit Corridor	>5% increase	10%–25% decrease	No change <sup>a</sup>
Southern Trans-Asian Corridor	>25% increase	10%–25% decrease	10%–25% decrease
China–Pakistan Economic Corridor	>25% increase	10%–25% decrease	5%–10% decrease
North–South Corridor	>5% increase	10%–25% decrease	10%–25% decrease

# Nine possible investment project interventions examined using CAREC Regional Transport Model



## Nine interventions tested using CAREC model

1. PRC to Uzbekistan via northern route
2. PRC to Uzbekistan via southern route
3. Uzbekistan Northwestern Corridor
4. Gashuun Sukhait–Tavan Tolgoi–Sainshand–Choibalsan
5. China-Pakistan Economic Corridor
6. Northwestern–North–Northeastern Corridor
7. North–Southeastern Corridor
8. Northwestern–South–Southeastern Corridor
9. Central Corridor

## Main cross-border railway corridors

- Trans-Siberian Railway
- Trans-Mongolian Corridor
- Northern Trans-Asian Corridor
- Trans-Caspian International Transport Route
- Uzbekistan Northwestern Corridor
- Lapis Lazuli Corridor
- Caucasus Transit Corridor
- Southern Trans-Asian Corridor
- China–Pakistan Economic Corridor
- North–South Corridor
- Other regional rail links
- Missing regional rail links



*CAREC Regional  
Transport Model:  
Findings on traffic  
levels in 2030 if  
proposed  
intervention/s built  
and in operation*

Project No.	Project Description	Member Country	Annual Link Volume with Friction (million tons) <sup>a</sup>	
			Only This Intervention Built	All Interventions Built
● 1	Capacity of Uzbekistan Northwestern Corridor expanded to carry increased freight levels	Uzbekistan	11.83	12.64
● 2	The PRC to Uzbekistan via northern route through the Kyrgyz Republic	PRC, Kyrgyz Republic, Uzbekistan	19.47	20.16
2a	Combination of Projects 1 and 2 Project 1	PRC, Kyrgyz Republic, Uzbekistan	11.85	12.64
2b	Combination of Projects 1 and 2 Project 2	PRC, Kyrgyz Republic, Uzbekistan	20.53	20.16
3	The PRC to Uzbekistan via southern route through the Kyrgyz Republic and Tajikistan	PRC, Kyrgyz Republic, Tajikistan, Uzbekistan	14.22	<u>8.67</u>
● 4	Gashuun Sukhait–Tavan Tolgoi–Sainshand	Mongolia, PRC	10.29	9.92
	Sainshand–Choibalsan	Mongolia	15.08	17.59
● 5	China–Pakistan Economic Corridor	Pakistan, PRC	12.65	<u>21.57</u>
6	Northwestern–North–Northeastern Corridor + missing link to Kashgar Missing link in PRC to Kashgar	Afghanistan, PRC	7.86	9.13
	Northwestern–North–Northeastern Corridor + missing link to Kashgar Missing links in Afghanistan	Afghanistan, PRC	2.51	2.62
7	Mazar-e-Sharif–Kabul–Torkham <sup>b</sup>	Afghanistan, Pakistan	15.62	<u>3.10</u>
8	Mazar-e-Sharif–Herat–Kandahar–Spin Boldak <sup>c</sup>	Afghanistan, Pakistan	10.19	<u>0.47</u>
9	Afghanistan Central Corridor plus Kabul to Pakistan border	Afghanistan, Pakistan	0.29	0.77

PRC = People's Republic of China.

<sup>a</sup> Assuming each intervention would provide capacity to transport approximately 20 million tons per annum.





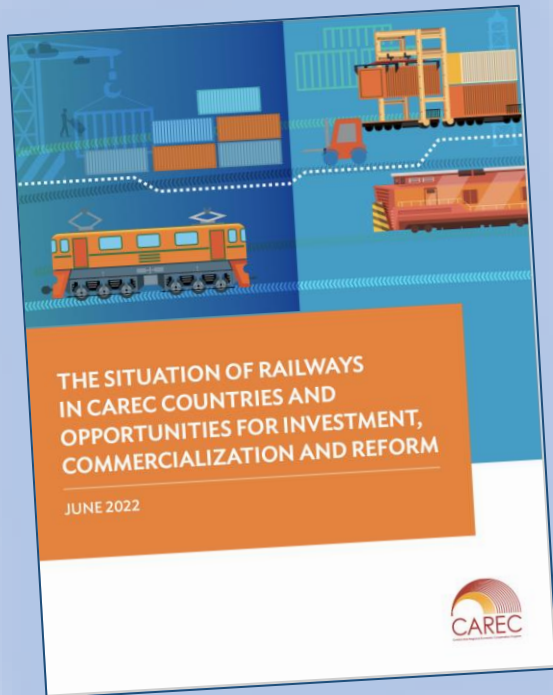
# OPTIONS THE STUDY SUGGESTS FOR POSSIBLE ADVISORY AND PFS SUPPORT

# Long list of knowledge support activities on commercialization & reform, and improving service competitiveness

Status of activity	Commercialization and Reform of Railway institutions	improving Competitiveness of Cross-border Railway Services
Approved TA support	<ul style="list-style-type: none"> <li>• Railway sales and marketing function</li> <li>• Software tools for infrastructure capacity management</li> <li>• Support on railway commercialization, reform, and investment program, Kyrgyz Republic and Tajikistan</li> </ul>	<ul style="list-style-type: none"> <li>• Study of CAREC regional rolling stock needs and financing facility</li> </ul>
Other options for possible TA support	<ul style="list-style-type: none"> <li>• Accounting standards and systems</li> <li>• Best practices for railway commercialization</li> <li>• Best practices for railway customer orientation</li> <li>• Best practices for railway human resource strategies in support of commercialization and reform</li> <li>• Measures to improve operating efficiency and service quality</li> <li>• Railway asset management practices</li> <li>• Open data collection tools for tracking railway traffic and operational performance</li> <li>• Using KPIs to drive railway commercialization and reform</li> <li>• Structuring of railway consortia and concessions</li> <li>• Commercial approaches to railway tariffs</li> <li>• Support for implementation of tariff reform</li> <li>• Review of regulations for railway enterprises, Kazakhstan</li> </ul>	<ul style="list-style-type: none"> <li>• Best practices for container block train operations</li> <li>• CAREC railway containerization study</li> <li>• Joint dialogue with shipping companies on containerization</li> <li>• Approach to development of logistics centers</li> <li>• Country studies on dev. logistics centers and terminals</li> <li>• Private sector participation in operation of railway stations and terminals</li> <li>• Study of missing port railway connections in the PRC to improve connectivity with CAREC railway corridors</li> <li>• Study of shipping on the Black Sea</li> <li>• Advisory support on improving competitiveness of the TITR</li> <li>• Support for establishing regional corridor mgt organization</li> <li>• Preparation of long-term comprehensive program of regulatory improvements and investments to support the development of the railway sector, Kazakhstan</li> <li>• Updating “Transit Mongolia” program</li> <li>• Study of implications of low carbon policies on future railway traffic and strategies to traffic loss by attracting new types of freight traffic</li> </ul>

# Long list of cross-border railway investment FS/PFSs

Railway Type	Country	Possible feasibility or prefeasibility study
Large railways with high traffic levels	PRC, IMAR, and XUAR regions	<ul style="list-style-type: none"> <li>Proposed PRC–Kyrgyz Republic–Uzbekistan Railway</li> <li>Development of Urumqi as a transloading hub for PRC–Europe and PRC–Central Asia trains</li> <li>Expansion of transloading capacity at Alashankou, Horgos, and Erenhot border crossings</li> </ul>
	Kazakhstan	<ul style="list-style-type: none"> <li>Investment program for addressing capacity bottlenecks</li> <li>Expansion of transloading capacity at Altyntkol and Dostyk border crossings</li> </ul>
	Uzbekistan	<ul style="list-style-type: none"> <li>Proposed PRC–Kyrgyz Republic–Uzbekistan Railway</li> <li>Expansion of capacity on Uzbekistan’s Northwestern Railway Corridor</li> <li>Trans-Caspian container block train services between Uzbekistan and Turkmenbashy Port</li> </ul>
Mid-sized railways with moderate traffic	Azerbaijan	<ul style="list-style-type: none"> <li>Facilities for rolling stock maintenance</li> </ul>
	Georgia	<ul style="list-style-type: none"> <li>Con trailer feasibility study</li> </ul>
	Mongolia	<ul style="list-style-type: none"> <li>Tavan Tolgoi–Zuunbayan–Sainshand–Baruun-Urt–Choibalsan Railway</li> <li>Tavan Tolgoi–Gashuun Sukhait Railway</li> <li>Logistics centers associated with the Bogd Khan Railway</li> </ul>
	Turkmenistan	<ul style="list-style-type: none"> <li>Trans-Caspian container block train services between Uzbekistan and Turkmenbashy Port</li> </ul>
Small former branch lines with low traffic	Kyrgyz Republic	<ul style="list-style-type: none"> <li>Proposed PRC–Kyrgyz Republic–Uzbekistan Railway</li> <li>Multimodal terminals in Balykchy and possibly also in Osh or Jalal-Abad</li> <li>Wagon rehabilitation program</li> </ul>
	Tajikistan	<ul style="list-style-type: none"> <li>Jaloliddini Balkhi–Jayhun–Nizhny Pyanj Railway</li> <li>Modern multimodal terminal at Kulob</li> <li>Provision of value-added logistics centers</li> </ul>
Needing large investments to develop or renew the network	Pakistan	<ul style="list-style-type: none"> <li>Upgrading locomotive maintenance</li> <li>Freight and logistics terminals</li> <li>Study of railway service continuity during upgrading of ML1</li> </ul>
	Afghanistan	<ul style="list-style-type: none"> <li>None at present (studies already completed for most sections of proposed ring-railway)</li> </ul>



Thank you!  
[tyrrell.duncan@gmail.com](mailto:tyrrell.duncan@gmail.com)

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