

## SECTOR ASSESSMENT (SUMMARY): RAILWAY TRANSPORT

### Sector Road Map

#### 1. Sector Performance, Problems, and Opportunities

1. **Railways as a backbone to Uzbekistan’s economy.** Uzbekistan is a double landlocked country, requiring crossing at least two countries to reach seaports. Uzbekistan heavily relies on rail transport for freight and passenger movement. Railways in Uzbekistan carried about 82 million tons of freight and 21 million passengers in 2015. The joint stock company O‘zbekiston Temir Yo‘llari (UTY) is responsible for the management and operation of the nationwide 4,200 kilometer (km) railway network.

2. The Uzbekistan railway network is relatively dense compared with other countries in the region (9.46 km/1,000km)<sup>2</sup>: Iran–3.7, Kazakhstan–5.2, the Peoples Republic of China–6.9, and Turkmenistan–6.4. Railways have a strong position in the transportation market in Uzbekistan. UTY operates transport services for freight and passengers and is in charge of infrastructure development and maintenance. UTY carries 40%–50% of the total freight traffic by volume (ton-km)<sup>1</sup>, a significant market share when compared with railways worldwide.<sup>2</sup> The passenger rail market has a share of approximately 4% by volume (passenger-km).<sup>3</sup>

3. **Freight traffic trends.** UTY is predominantly a freight company. The volume of freight transported by rail increased by about 24% between 2005 and 2012, but rail market share decreased from 54% to 47% compared with road transport. Since 2012, freight traffic has remained constant in tonnage terms at around 80 million tons. About one-third (in terms of ton-km) of the freight traffic carried by the railways are international movements (import, export, and transit), mostly grain, fuel and other bulk and semi-bulk commodities. Despite recent growth in traffic volumes, UTY’s freight traffic stays significantly behind the traffic volumes of the Uzbek sections of the Central Asian Railways<sup>4</sup> prior to the disintegration of the Soviet Railways. A decline in freight wagon fleet accompanied the decline in traffic. Over the period between 2007 and 2016, the freight wagon fleet has averaged about 30,000 wagons. Of this amount, some 19% were reported to be privately owned. Wagon age distribution shows that a large proportion of the wagon fleet (nearly 90%) would need to be replaced between 2017 and 2026.

**Table 1: UTY freight and passenger traffic (2011–2015)**

Traffic volumes	2011	2012	2013	2014	2015
Freight traffic, million tons	80.91	82.39	82.82	82.29	82.30
Freight traffic, million ton-km	22,482	22,686	22,918	22,931	22,933
Passenger traffic, million passengers	15.95	17.12	18.36	19.85	20.63
Passenger traffic, million passenger-km	3,025	3,428	3,673	3,760	3,758

Source: O‘zbekiston Temir Yo‘llari.

4. **Passenger traffic trends.** Annual passenger traffic over the period between 2005 and 2015 has increased by about 25% to about 21 million passengers and 3.8 million passenger-km. About 80% of UTY’s passengers are on local services but two-thirds of the passenger-km

<sup>1</sup> State Committee of the Republic of Uzbekistan on Statistics. 2015. *Open Data -Freight*. Tashkent.

<sup>2</sup> For example, railways in the European Union have an average freight market share of 18%. Eurostat. 2016. *Europe in Figures – Eurostat Yearbook*. Luxembourg.

<sup>3</sup> State Committee of the Republic of Uzbekistan on Statistics. 2015. *Open Data –Transportation of Passengers*. Tashkent.

<sup>4</sup> Sredneazitskaya Zheleznaya Doroga (Central Asian Railways) is the predecessor of UTY, which existed and was headquartered in Tashkent until 1991 and included railway networks of Uzbekistan, Tajikistan, Turkmenistan, South Kyrgyzstan and South Kazakhstan.

are on intercity regional trains, which provide connections between Tashkent and all major centers.<sup>5</sup>

5. **Completing missing links for domestic connectivity.** Prior to the break-up of the Soviet Union, the rail network in Central Asia was driven by a Moscow-centered planned economy without regard for internal boundaries among the Soviet Republics. Since the 1990s, national boundaries among the newly independent states of the former Soviet Union have created new barriers to trade flows and market access. This has had many serious effects on Uzbekistan's railway operations and activities. Newly erected border crossings worsened internal connectivity, as many rail and road routes had to cross into neighboring countries before crossing back into Uzbekistan. Similarly, neighboring countries depended on the Uzbekistan transport network to transport their goods and passengers (e.g., southern Uzbekistan provided transit for Tajikistan and northern Uzbekistan provided transit for the Kyrgyz Republic)

6. One of the most serious issues was connecting the Fergana Valley region to the rest of Uzbekistan and ensuring adequate capacity for traffic from this productive and fruitful region. Until 2016, rail traffic to and from the Fergana Valley was disrupted by lengthy border crossing procedures and high transit tariffs through Tajikistan. With the commissioning of the Kamchik tunnel in September 2016,<sup>6</sup> Uzbekistan was finally able to complete a fully internally integrated railway network.

7. **Electrification.** In parallel with the completion of missing links, UTY has focused on improving the condition of its infrastructure and electrifying its main lines. Uzbekistan has incrementally electrified its core railway network. Such efforts started in 1971, but major progress was made between 2009 and 2016 when Uzbekistan electrified around 1000 km of its railway network. Further plans for the years 2017 to 2025 is to increase the share of electrified track to more than 65% of the total rail network. Enabled by electrification, high-speed passenger trains (above 250 kph) operate between Tashkent, Samarkand, Bukhara and Karshi. The new line to the Fergana Valley is electrified from Tashkent to Angren and Pap. The southern portion of the Fergana rail loop, from Pap to Kokand to Andijan is also electrified. This leaves the northern portion of the Fergana rail loop, from Pap to Namangan to Andijan unelectrified. New higher-speed passenger services will begin operating on these newly electrified lines. UTY's ability to fully benefit from the increasingly electrified network depends on the speed at which electric locomotives can be procured and commissioned. To this end, UTY is aiming to purchase up to 24 new electric locomotives in 2017 and 2018, with partial support from the Asian Development Bank (ADB).

8. **Operational improvements.** UTY is a strongly managed organization with a focus on operations schedules and infrastructure, and with insufficient attention to the commercial aspects of business. Assisted by ADB and other development partners, UTY is improving its operational efficiency to maximize the use of the improved infrastructure. The operating staff of UTY has barely changed between 2011 and 2015 and labor productivity is currently 500–600,000 traffic units per operating employee. UTY labor productivity is 20% lower than of neighboring Turkmenistan Railways and only a small fraction of what was achieved in Kazakhstan (3.2 million traffic units per operating employee).

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<sup>5</sup> O'zbekiston Temir Yo'llari. 2016. *Company reports*. Unpublished.

<sup>6</sup> Kamchik tunnel of 19.2 km length on Angren–Pap railway section was completed in 2016.

9. As the passenger traffic is cross-subsidized by the freight operations and is growing significantly, further improvement of financial performance is possible with the increase in premium passenger services and the growth of operational efficiency in freight rail operations, which remains at constant traffic volume (Table 1). Opening up of Fergana Valley for additional railway traffic can also contribute to increased productivity of operations and improvement in the operating ratio. UTY has the potential to improve customer service in all categories of clients and develop new logistics products, especially in general freight traffic. With improved commercial orientation, UTY has great potential to offer new high profit margin logistics products, which will further improve its profitability and prospects of long-term growth.

10. UTY has maintained solid technical and operational expertise. It has a workforce of about 70,000 in main operations and subsidiary divisions and undertakes rail construction projects as well as operations and maintenance.<sup>7</sup> The company is profitable and it does not receive operating subsidies from the state. It is able to finance most investments necessary to preserve the current infrastructure and modernize its rolling stock. It also finances a significant portion of the modernization of the railway corridors. UTY has historically financed most of its investment from its own sources but any further deterioration of operating assets will begin to restrict its ability to fund its own asset replacement whilst also limiting its ability to obtain loans on its own account. UTY should, therefore, prioritize improving its technical efficiency and its operating ratio.

## 2. Government's Sector Strategies

11. The government, cognizant of the relative strengths of railway transport, continues to support the development and strengthening of the railway sector.

12. The government created UTY by a presidential decree in November 1994. Initially, it was a policymaker, regulator, and operator of all railway services in Uzbekistan until institutional reforms separated policy-making and regulatory functions from the commercial management of the company. Institutional reform of UTY was initiated by the Government in 1997—under which ancillary rail services were largely separated from core operations—and was supported by ADB.<sup>8</sup> Some downsizing of staff and non-core assets improved efficiency and sustainability of operations. In 2001 UTY was corporatized as an open joint stock company with reformed management structure and a new board of external appointees, including some of UTY's main customer industries.

13. The presidential decree of 6 March 2015<sup>9</sup> backs the further creation of railway assets. This includes the construction of a new railway line for Navoi–Kanimekh–Misken, rehabilitation of 240 km of rail track, electrification of several railway sections, purchase of fast speed trains, organization of fast speed traffic on new routes, and purchase of locomotives. Based on the

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<sup>7</sup> UTY completed, with its own workforce and equipment, the construction of several new railway investment projects totaling 1,100 km (including the rail sections Navoi–Uchkuduk–Nukur–Sultanuizdag, and Tashguzar–Baisun–Kumkurgan, with a total length of 565 km). UTY also built the 80km Khayraton to Mazar-i-Sharif rail link in Afghanistan funded by Asian Development Bank.

<sup>8</sup> ADB. 2000. Technical Assistance to the Republic of Uzbekistan for Institutional Strengthening of the Uzbekistan Temir Yullari. Manila (TA 3068-UZB); and ADB 2002. Technical Assistance to the Republic of Uzbekistan for Furthering Railway Sector Reform in Uzbekistan. Manila (TA 3529-UZB).

<sup>9</sup> Republic of Uzbekistan. 2015. *On transport and communications infrastructure development during 2015–2019 (PP-2313)*. Tashkent.

presidential decree issued on 4 March 2015,<sup>10</sup> UTY shall manufacture more than 4,000 freight cars, and restore 164 locomotives, 7,200 freight cars, and 82 passenger cars.

### 3. ADB Sector Assistance

14. ADB has assisted the development of railways in Uzbekistan at subregional and national levels. This two-track approach reflects the need for railway investments to be planned at the subregional level, augmented by projects executed at the national level.

15. **Planning at subregional level.** Uzbekistan, having once been the headquarters of the Central Asian Railways, has a strong subregional identity and actively participates in regional railway cooperation initiatives. UTY is a member of the Organization for Cooperation among Railways (OSJD) and the Commonwealth of Independent States (CIS) Railway Transport Council. Its operational development priorities are aligned those set through such regional initiatives.

16. ADB has assisted the government and UTY to further improve these strategic subregional links, largely through the Central Asian Regional Economic Cooperation (CAREC) Program. Established in 2001, CAREC brings together ten partner countries and promotes the implementation of regional projects in energy, transport, and trade with the support of six multilateral institutions.<sup>11,12</sup> Out of the six CAREC multimodal corridors that link the region's key economic hubs to each other and connect the landlocked CAREC countries to other Eurasian and global markets, three corridors transit through Uzbekistan.

17. In 2013, CAREC member countries endorsed the CAREC Transport and Trade Facilitation Strategy 2020 (CAREC TTFS 2020),<sup>13</sup> which calls for a more integrated approach to improving transport and logistics infrastructure, as well as trade and transport facilitation. Compared to the original CAREC TTFS, endorsed in 2008, CAREC TTFS 2020 emphasizes the importance of increased investments in railway infrastructure and institutional and operational reforms. CAREC TTFS 2020 includes 18 investment projects in Uzbekistan in the period 2012–2021 with a total estimated value of around \$4.3 billion. Among those investments, three projects, with a total estimated value of \$1.2 billion, are railway electrification projects with financing from the state budget, ADB, and/or the World Bank. Some of these projects have been completed while others are ongoing.

18. The CAREC program facilitated the development of a subregional railway strategy.<sup>14</sup> This strategy builds on CAREC TTFS 2020 and identifies six designated rail corridors, on which long-distance freight and specific passenger services will be given priority to move through the rail system with minimal delay. It offers a long-term framework for the sound development of railways in the CAREC region. While the strategy recognizes the importance of building missing railway links and investing in modern railway technologies, significant attention is given to promoting cooperative operational arrangements among regional railways and commercial reforms in the railway sector.

<sup>10</sup> Republic of Uzbekistan. 2016. *On restructuring, modernization and diversification of industrial production during 2015–2019 (UP-4707)*. Tashkent.

<sup>11</sup> Afghanistan, Azerbaijan, Kazakhstan, Kyrgyz Republic, Mongolia, Pakistan, People's Republic of China, Tajikistan, Turkmenistan and Uzbekistan.

<sup>12</sup> Asian Development Bank, European Bank for Reconstruction and Development, Islamic Development Bank, International Monetary Fund, United Nations Development Program and the World Bank.

<sup>13</sup> ADB. 2014. *CAREC Transport and Trade Facilitation Strategy 2020*. Manila.

<sup>14</sup> ADB. 2017. *Unlocking the Potential of Railways: A Railway Strategy for CAREC, 2017–2030*. Manila (endorsed at the 15th CAREC Ministerial Conference on 26 October 2016 in Islamabad, Pakistan).

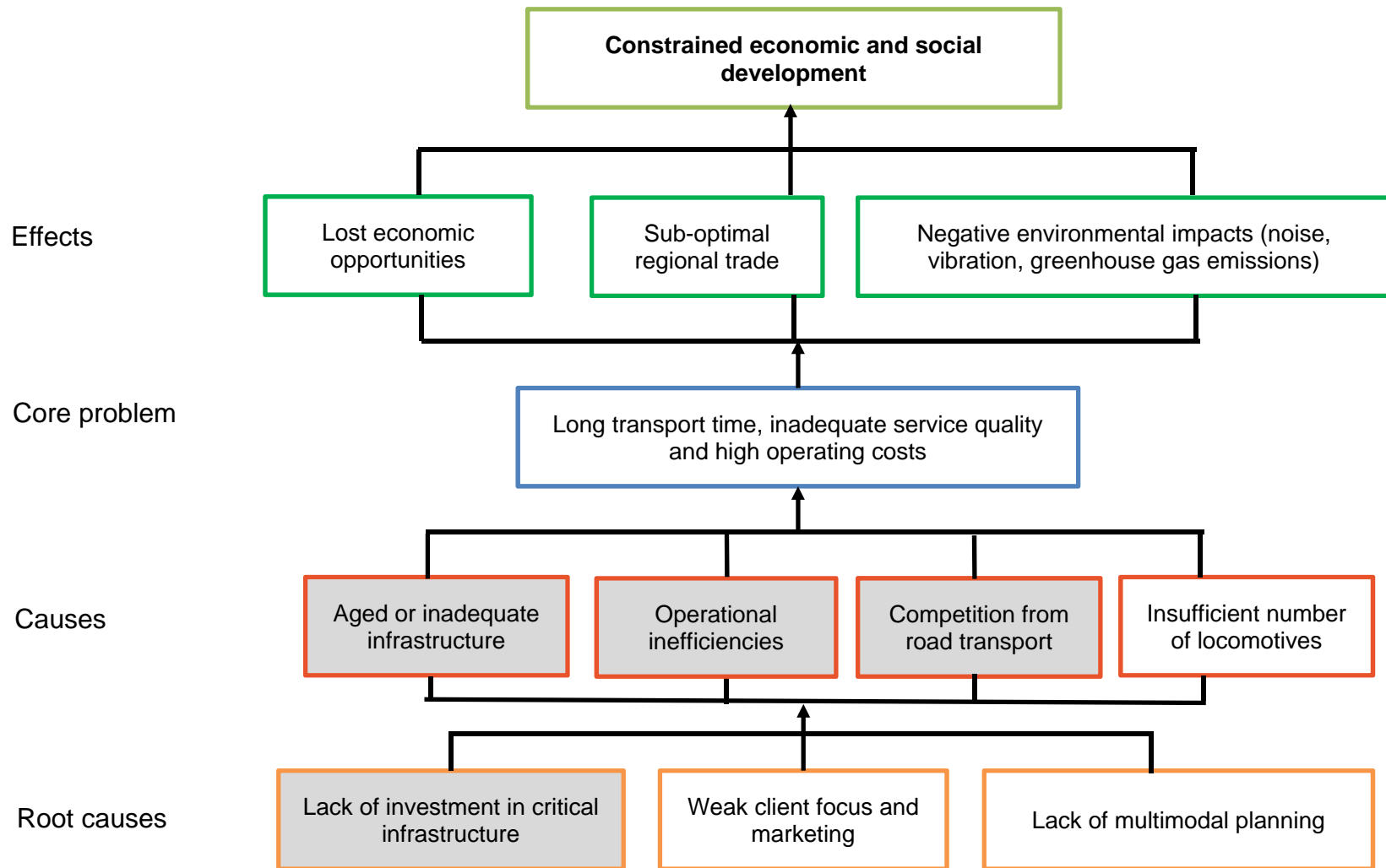
19. **Execution of projects at national level.** ADB has provided two loans for the rehabilitation and modernization of railway infrastructure, and a loan for the electrification of a railway line between Marakand and Karshi,<sup>15</sup> all of which support the regionally planned approach noted in paragraphs 15 to 19. All projects have had UTY as the executing agency. ADB's Independent Evaluation Department rated the two completed projects as *successful* and the government's and UTY's performance as *highly satisfactory*. The Marakand–Karshi electrification project is still ongoing as of March 2017 and is progressing towards successful completion, expected to be by end of 2017.

20. Future support for railways in Uzbekistan will be formulated in view of remaining challenges as outlined in section 1, and in support of a regionally integrated approach.

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<sup>15</sup> ADB. 1998. Loan 1631-UZB: *Railway Rehabilitation Project*. Manila; ADB. 2000. Loan 1773-UZB: *Railway Modernization Project*. Manila; ADB. 2011. Loan 2781-UZB: *CAREC Corridor 6 (Marakand–Karshi) Railway Electrification Project*. Manila.

### PROBLEM TREE FOR RAILWAY TRANSPORT IN UZBEKISTAN



Note: shaded boxes denote the causes and root causes which the project will help address.

Source: Asian Development Bank.