

JSC GEORGIAN RAILWAY

GREEN BOND ALLOCATION AND IMPACT REPORT

June 2022

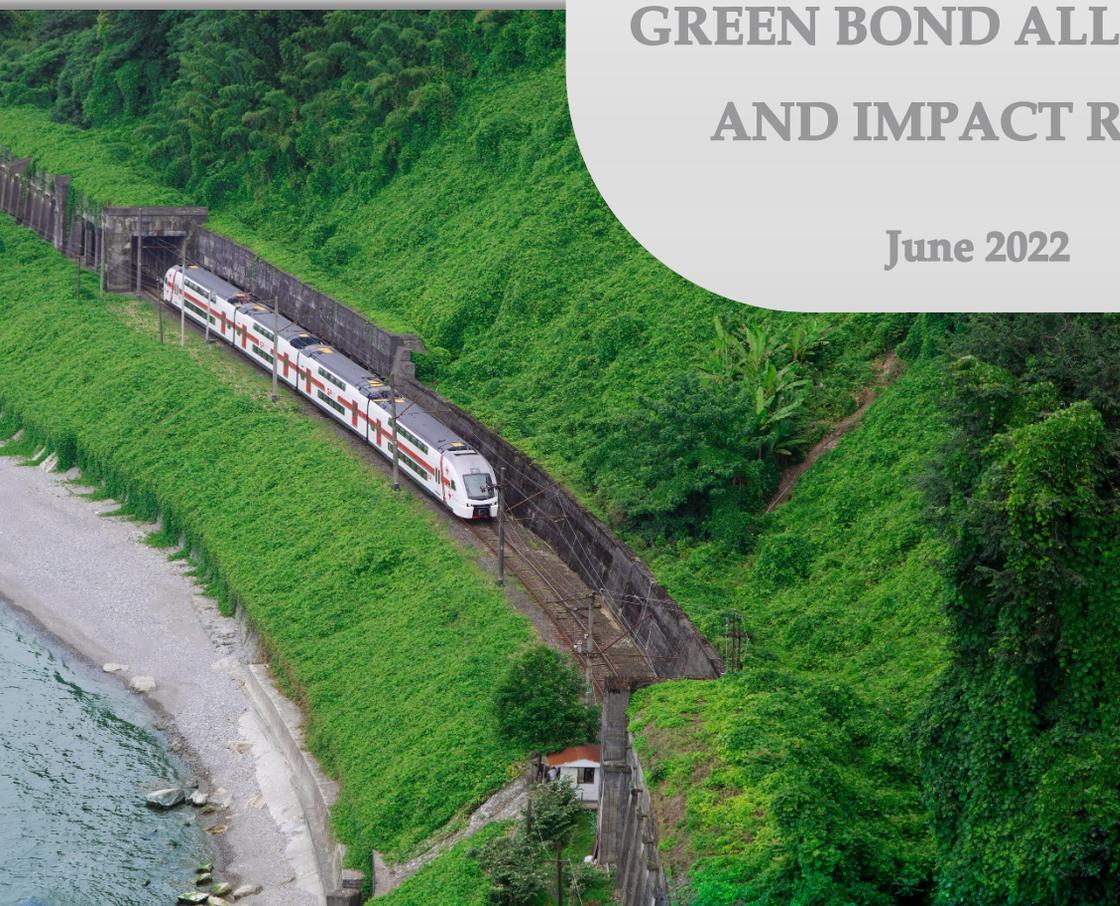


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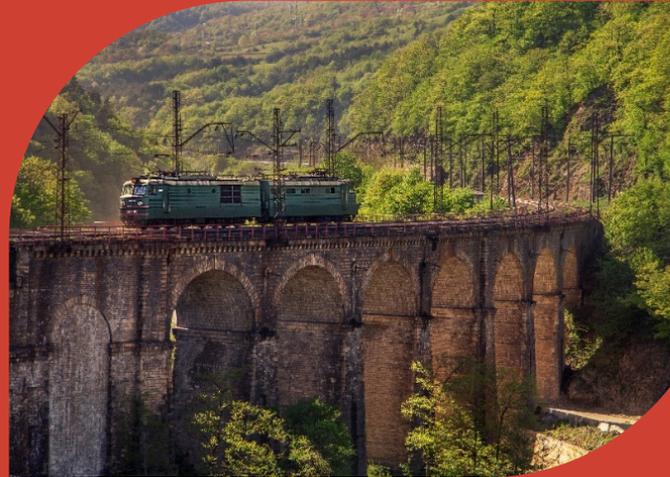
Description of the projects

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Impact Reporting:

CO2 emissions avoided

Development Impact:

The efficiency and speed of trains

Volume and capacity

Gender diversity and employment

Alignment with SDGs

Continuous focus on sustainable development

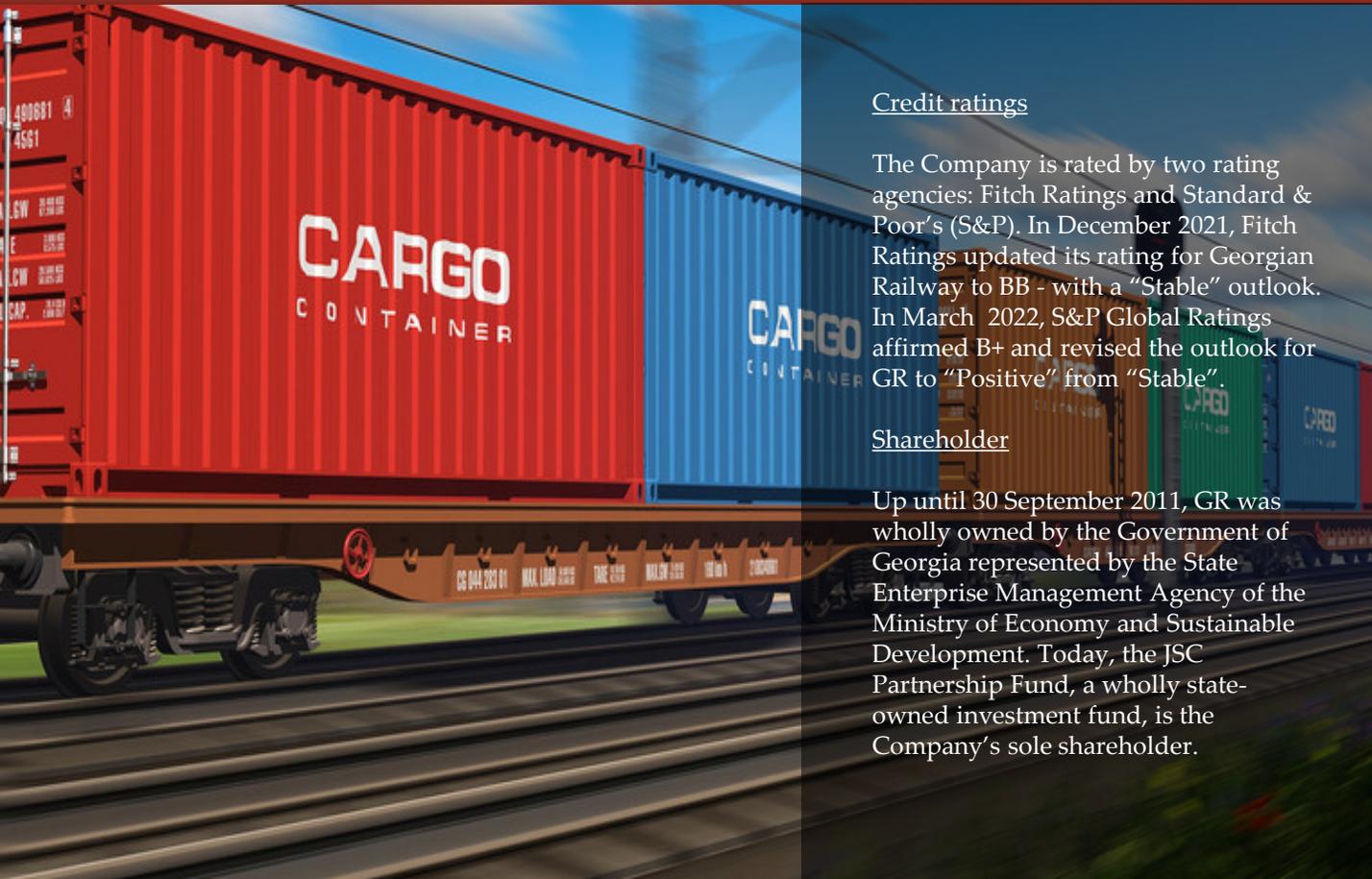
DESCRIPTION OF THE COMPANY

JSC Georgian Railway is, by statute, Georgia's only railway company. It principally provides freight and logistics services, transshipping wide range of diversified cargo, from the Caspian Sea ports and Central Asia across Georgia to the Black Sea ports. The Group also provides passenger services. It has a vertically-integrated business model, owning and operating the tracks, stations, other infrastructure and rolling stock comprising Georgia's entire railway system, as well as the land adjoining the tracks. Currently, the Group sets its tariffs without the need to obtain approval from the Georgian government.

The Group's mainline rail network, together with that of CFSC Azerbaijan Railway ("Azerbaijan Railway"), forms the Caucasus railway corridor, a key segment of the Transport Corridor Europe Caucasus Asia ("TRACECA") corridor. The Group's mainline rail network is thus a key link in the shortest route from the Caspian Sea and Central Asia to the Black Sea and the Mediterranean basin. As a key link in

the transportation chain between Europe and Central Asia, the Group believes that it is uniquely positioned to capitalize on trade between Europe and the Caspian Region and Central Asia. Three of the Group's lines terminate at the Black Sea, at the Georgian port cities of Batumi, Kulevi, and Poti. Access to these ports allows easy on-shipment of transit cargo to the Mediterranean basin and Europe.

The Group operates the national railway system through three strategic business units, or "SBUs": the Freight SBU, which consists of freight traffic (transportation and handling) and freight car rental services; the Passenger SBU, which primarily transports passengers within Georgia; and the Infrastructure SBU, which operates, maintains and manages the Group's principal infrastructure assets. The Infrastructure SBU provides services only to the Freight SBU, and the Passenger SBU and does not conduct business with third-party customers.



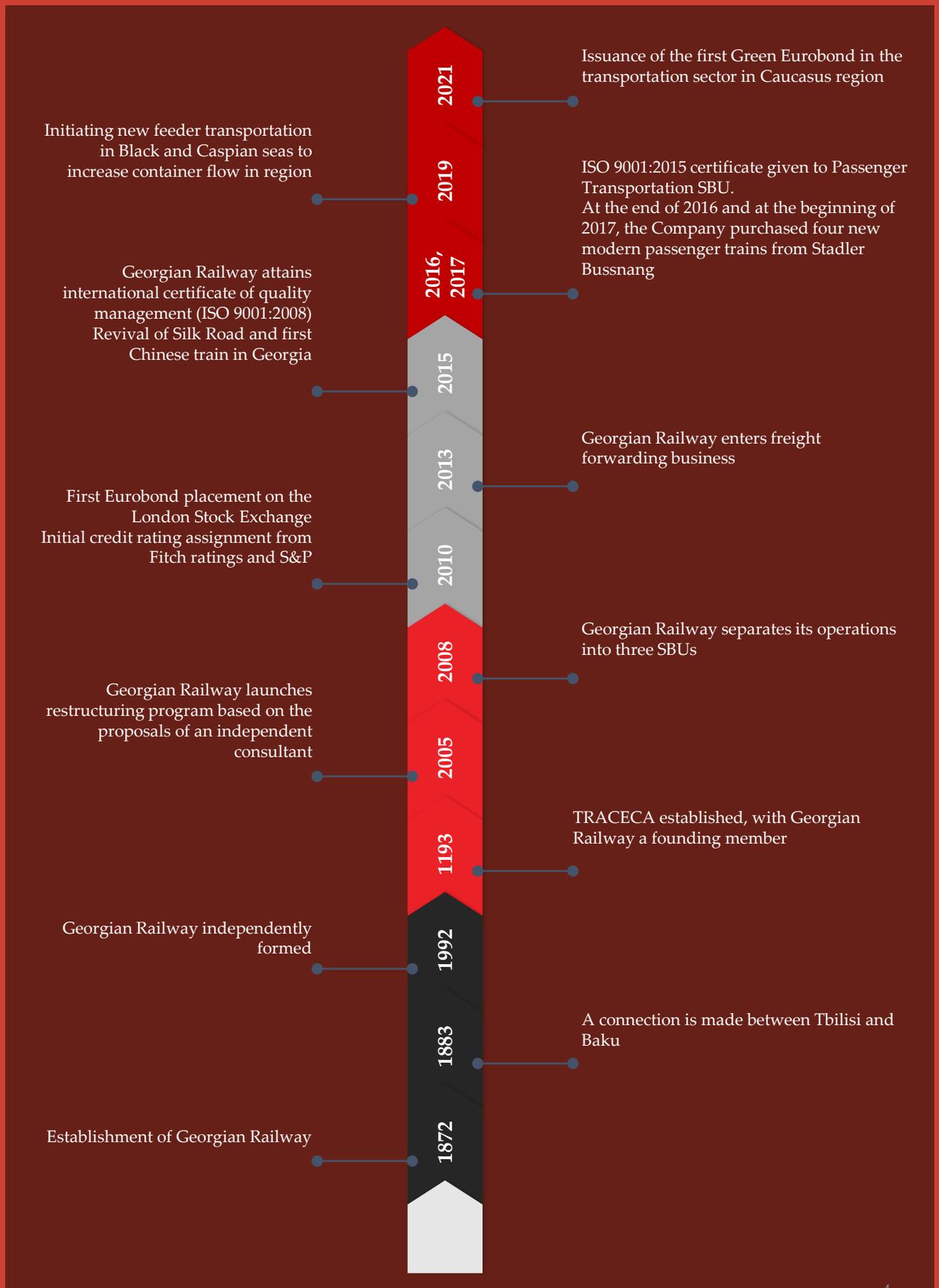
Credit ratings

The Company is rated by two rating agencies: Fitch Ratings and Standard & Poor's (S&P). In December 2021, Fitch Ratings updated its rating for Georgian Railway to BB - with a "Stable" outlook. In March 2022, S&P Global Ratings affirmed B+ and revised the outlook for GR to "Positive" from "Stable".

Shareholder

Up until 30 September 2011, GR was wholly owned by the Government of Georgia represented by the State Enterprise Management Agency of the Ministry of Economy and Sustainable Development. Today, the JSC Partnership Fund, a wholly state-owned investment fund, is the Company's sole shareholder.

HISTORY OF THE COMPANY



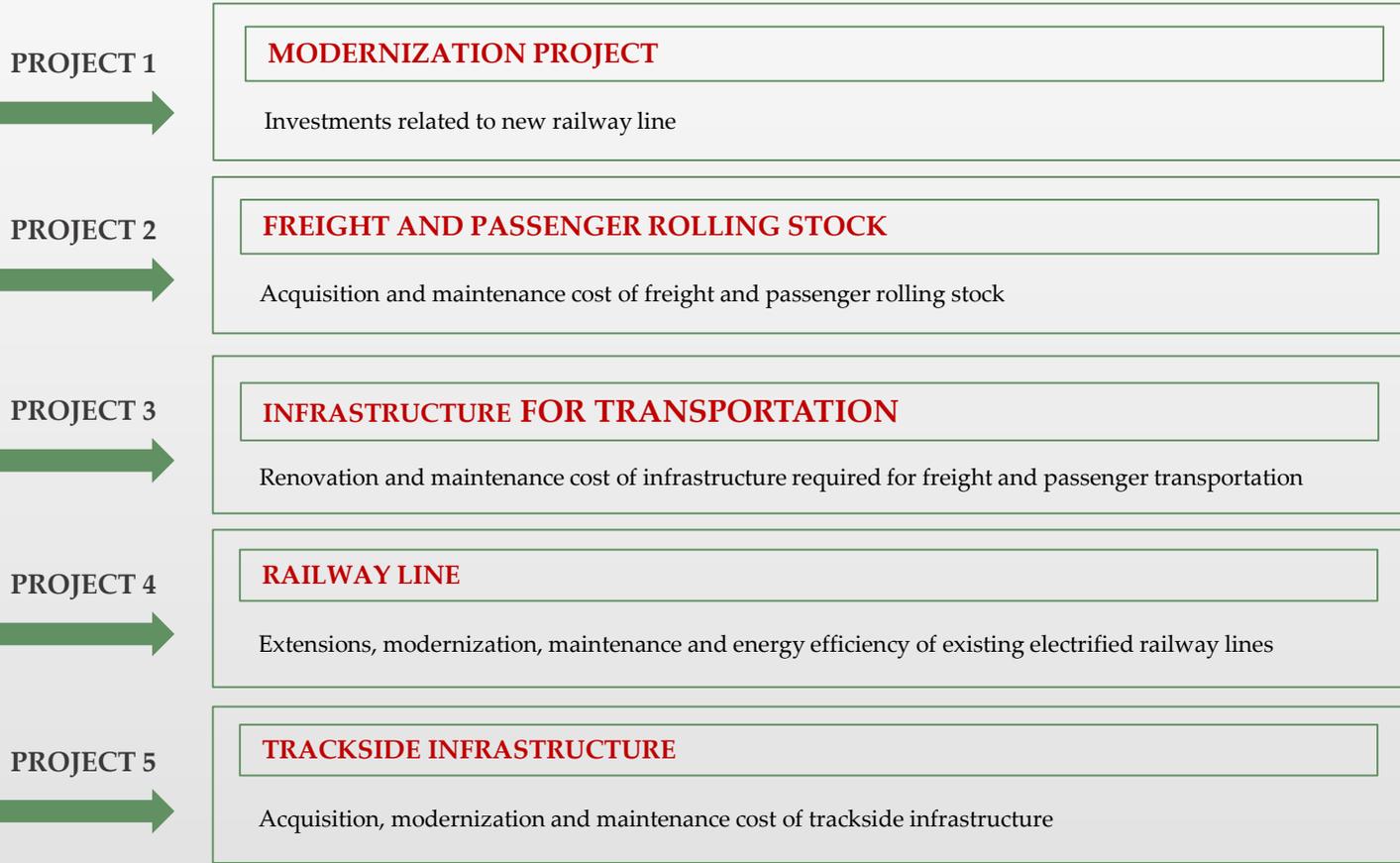


JSC GEORGIAN RAILWAY

ALLOCATION REPORT

June 2022

ELIGIBLE GREEN PROJECTS



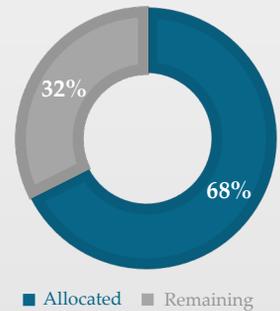
USE OF PROCEEDS

TOTAL ALLOCATED FUNDS

USD 337.6 MN

	<i>In million USD</i>
MODERNIZATION PROJECT	\$157.2 ALLOCATED
FREIGHT AND PASSENGER ROLLING STOCK	\$34.8 ALLOCATED
INFRASTRUCTURE FOR TRANSPORTATION	\$65.4 ALLOCATED
RAILWAY LINE	\$55.0 ALLOCATED
TRACKSIDE INFRASTRUCTURE	\$25.2 ALLOCATED

**TOTAL AMOUNT FOR
ALLOCATION
USD 500.0mn
OF WHICH
USD 337.6mn
IS ALLOCATED**



MODERNIZATION PROJECT

Status: Under Construction

USD 157.2 million from USD 337.6 million is allocated on the Modernization Project. The Railway Modernization Project is designed to modernize rail infrastructure, increase safety and capacity of the main line.

FREIGHT AND PASSENGER ROLLING STOCK

Status: Ongoing

USD 34.8 million from USD 337.6 million is allocated on the acquisition and maintenance cost of the Company's wagon and locomotive fleet.

INFRASTRUCTURE FOR TRANSPORTATION

Status: Ongoing

USD 65.4 million from USD 337.6 million is allocated on the costs related to freight and passenger stations, logistic terminals and platforms.

RAILWAY LINE

Status: Ongoing

USD 55.0 million from USD 337.6 million is allocated on the extensions, modernization, maintenance, energy efficiency and electrification of existing electrified railway lines.

TRACKSIDE INFRASTRUCTURE

Status: Ongoing

USD 25.2 million from USD 337.6 million is allocated on the costs related to signaling, centralization and blocking systems

P1. INVESTMENTS RELATED TO NEW RAILWAY LINE

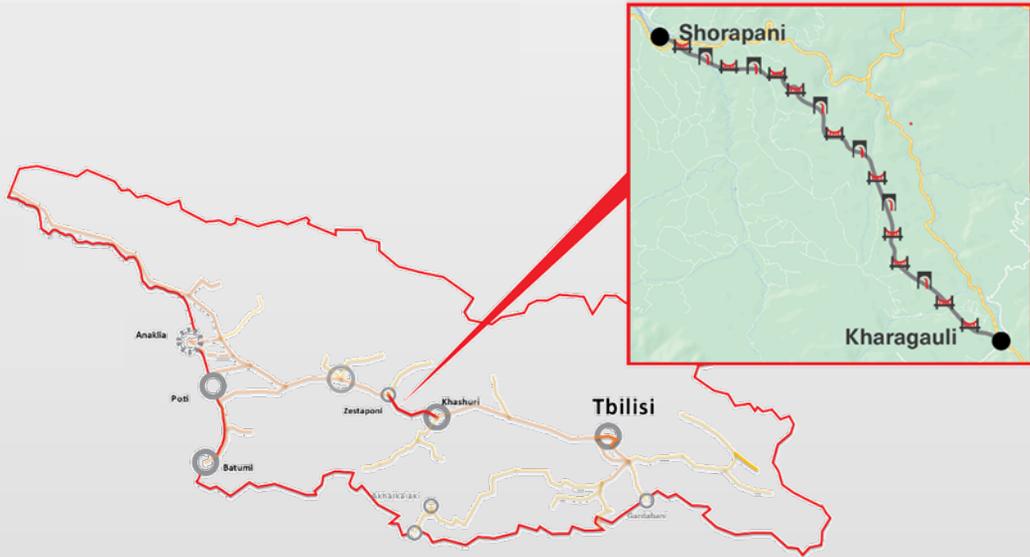
Modernization Project

The Railway Modernization Project is designed to modernize rail infrastructure, increase safety and capacity of the main line. The Project is concerned with debottlenecking the line by building a new, fully electrified, railway and thereby increasing its capacity. The main bottleneck is the mountain pass in the centre of Georgia, referred to as the gorge section (40-km long).

The project is supervised and managed by the

reputable and experienced Owner's Engineer, International Austrian-German consortium ILF and DB.

The cost of the project is over USD 300 million (preparation of new subgrade on a new route, plus track, plus electricity lines) and at the moment 96% of works are completed. We expect project to be finalized and fully operational by the end of 2023.



Benefits of the project:

- Reduced electricity consumption, and therefore lower indirect CO2 emissions
- Greater resource efficiency, resulting from less wear and tear on wheels and tracks
- Reduced air pollution from electrification of the rail
- Increase the capacity of the Group's infrastructure;
- Eliminate the need for extensive capital expenditures for the maintenance of existing tracks;
- Increase transportation speed along the line, offering improved services for freight and passenger customers;
- Further increase the safety level of transportation; and
- Reduce operational expenses.



P2. ACQUISITION AND MAINTENANCE COST OF FREIGHT AND PASSENGER ROLLING STOCK

Freight and Passenger Rolling Stock

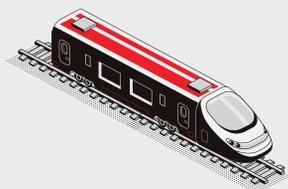
The Project includes investments related to acquisition, maintenance and repair of the Company's wagon and locomotive fleet. Georgian Railway owns electric locomotives and EMUs for transporting the freight and passengers. GR uses diesel locomotives only for shunting operations and for non-electrified sidings. Allocated amount on the mentioned project excludes expenditures related to the diesel locomotives and tank cars.



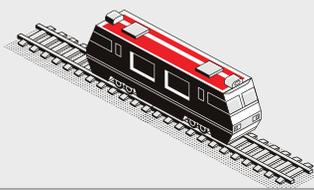
Benefits of the project:

- Reduced electricity consumption, and therefore lower indirect CO2 emissions;
- Greater resource efficiency;
- Reduced air pollution from renewed infrastructure;
- Increase the capacity of the Group's infrastructure;
- Eliminate the need for extensive operating expenditures for the maintenance of existing fleet;
- Increase transportation speed along the line, offering improved services for freight and passenger customers;
- Further increase the safety level of transportation.

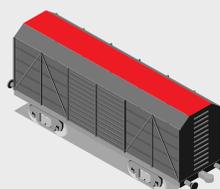
25 PASSENGER
TRAINS (EMUs)



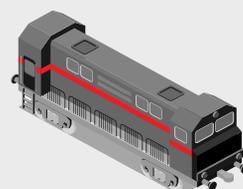
40 PASSENGER
WAGONS



4'469 FREIGHT
RAILCARS



89 ELECTRIC
LOCOMOTIVES



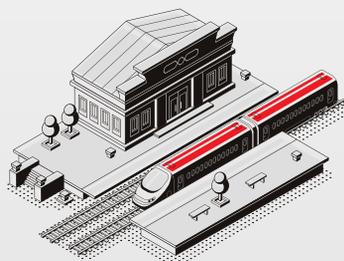
P3. RENOVATION AND MAINTENANCE COST OF INFRASTRUCTURE REQUIRED FOR FREIGHT AND PASSENGER TRANSPORTATION

Infrastructure for Transportation

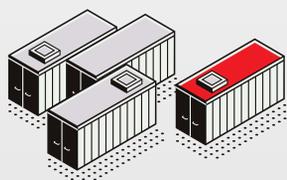
Project includes costs related to freight railway stations and logistic terminals, as well as passenger station and platforms.

The freight infrastructure and installations of mentioned project are dedicated to transshipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods.

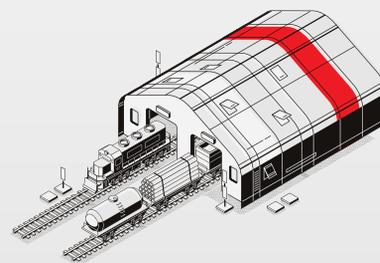
The passenger infrastructure and installations are dedicated to the transfer of passengers from rail to rail or from other modes to rail.



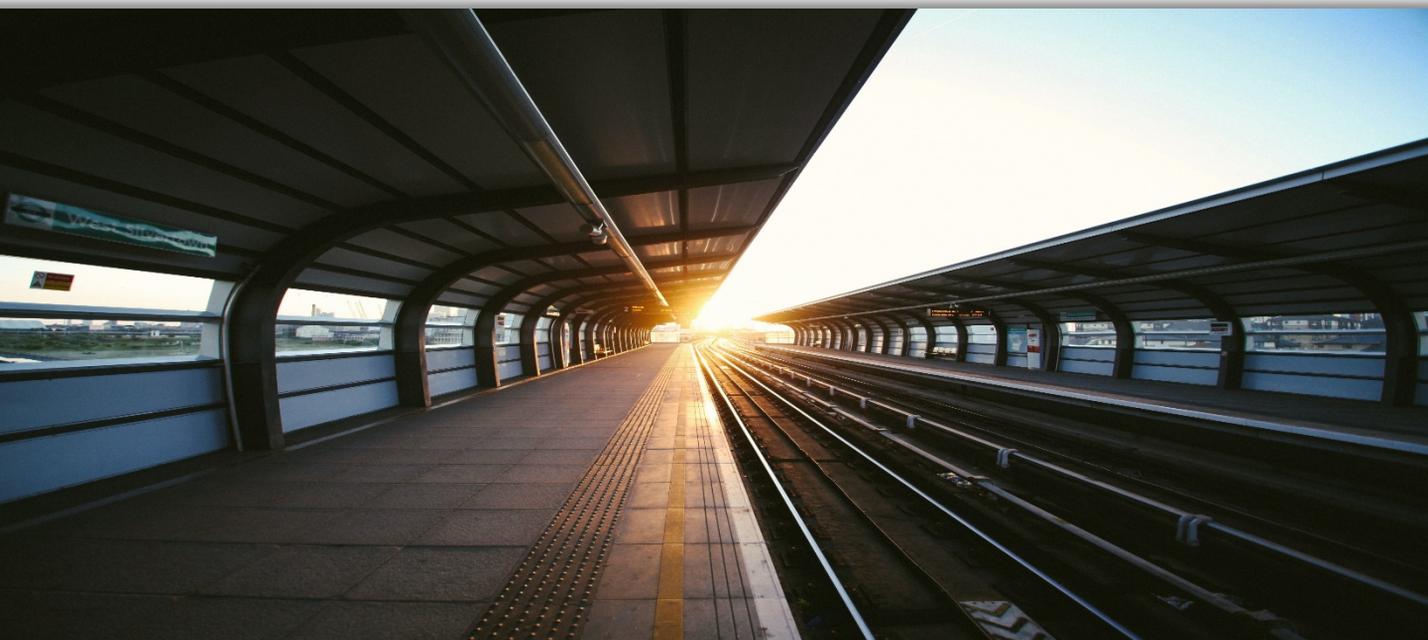
PASSENGER STATIONS 31



CONTAINERS 586



FREIGHT STATIONS 100



Benefits of the project:

- Increase the capacity of the Group's infrastructure;
- Greater efficiency;
- Increased effectiveness and flexibility of services, therefore increased competitiveness over trucks
- Increased competitiveness over busses;
- Decrease in average transportation time along the line, offering improved services for freight and passenger customers;
- Improved and efficient services, therefore decrease in operating expenditures;

P4. EXTENTIONS, MODERNIZATION, MAINTENANCE AND ENERGY EFFICIENCY OF EXISTING ELECTRIFIED RAILWAY LINES

Railway Line



1,411km

Network length



296km

Double-Track line length



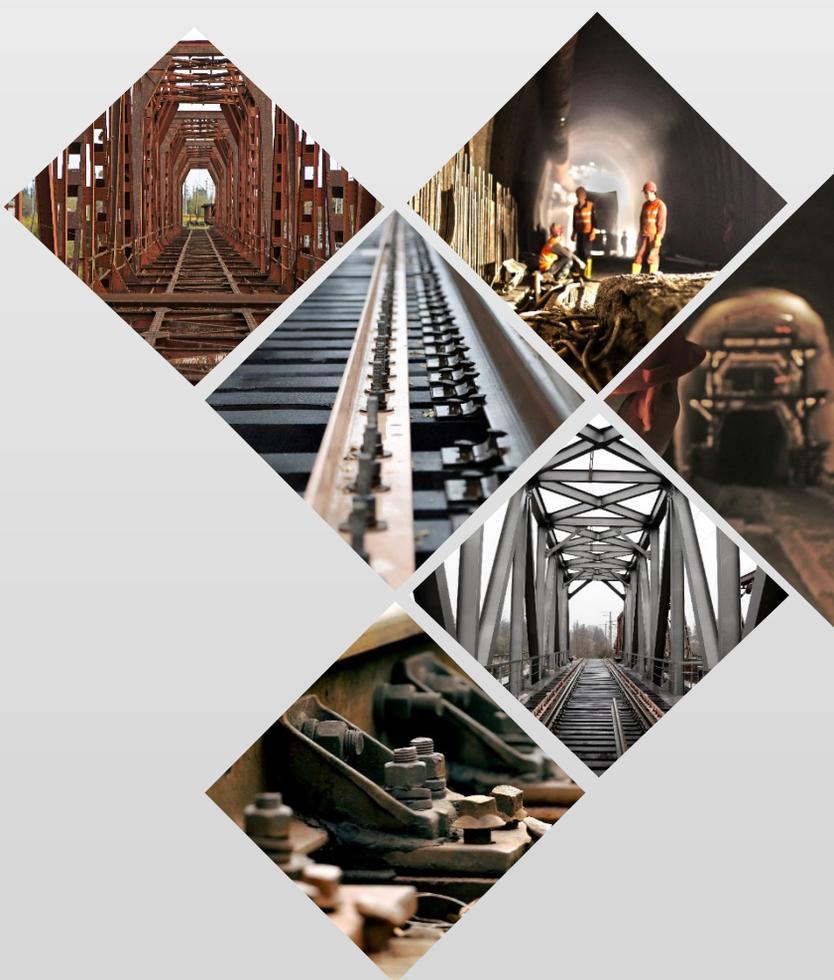
97%

Fully electrified

The project focuses on maintaining the Group's rail infrastructure assets in good condition. Capacity varies across the Group's different lines.

GR's network is connected to Azerbaijani and Armenian railways. The Company's rail network is now connected to the Turkish railway as well, after the BTK railway line became operational in 2017. In 2018, the first passenger train passed through the BTK line. As of today, total length of GR's rail is 1,411 km, of which 296 km is double-track line.

The project is related to extension of existing railway line. Modernization of rail infrastructure, increase safety and capacity of the line.



Benefits of the project:

- Reduced electricity consumption, and therefore lower indirect CO2 emissions;
- Greater resource efficiency;
- Reduced air pollution from renewed infrastructure;
- Increase the capacity of the Group's infrastructure;
- Eliminate the need for extensive operating expenditures for the maintenance of existing fleet;
- Increase transportation speed along the line, offering improved services for freight and passenger customers;
- Further increase the safety level of transportation.

P5. ACQUISITION, MODERNIZATION AND MAINTENANCE COST OF TRACKSIDE INFRASTRUCTURE

Trackside Infrastructure

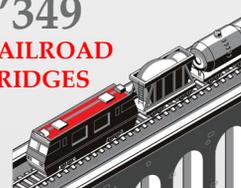
The project includes costs related to signaling, centralization and blocking systems. Mentioned system regulates and manages safe movement of locomotives along the rail line with modern type relay-microprocessor (hybrid) electrical centralization systems.

Project considers renovation and construction of new traffic control systems, establishment of postal equipment, replacement of board cables etc. Mentioned project also comprises costs related to the construction and maintenance of bridges and tunnels.

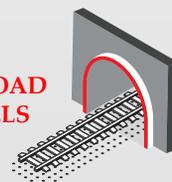
Benefits of the project:

- Further increase the safety level of transportation.
- Simplification of technical operations, therefore increased effectiveness;
- Expansion of technological features;
- Reduced air pollution from renewed technologies and trackside infrastructure;
- Decrease in traffics, therefore increased effectiveness;
- Decrease in average transportation and travel time along the line, offering improved technologies;

1'349
RAILROAD
BRIDGES



42
RAILROAD
TUNNELS



PROJECT SELECTION AND EVALUATION PROCESS

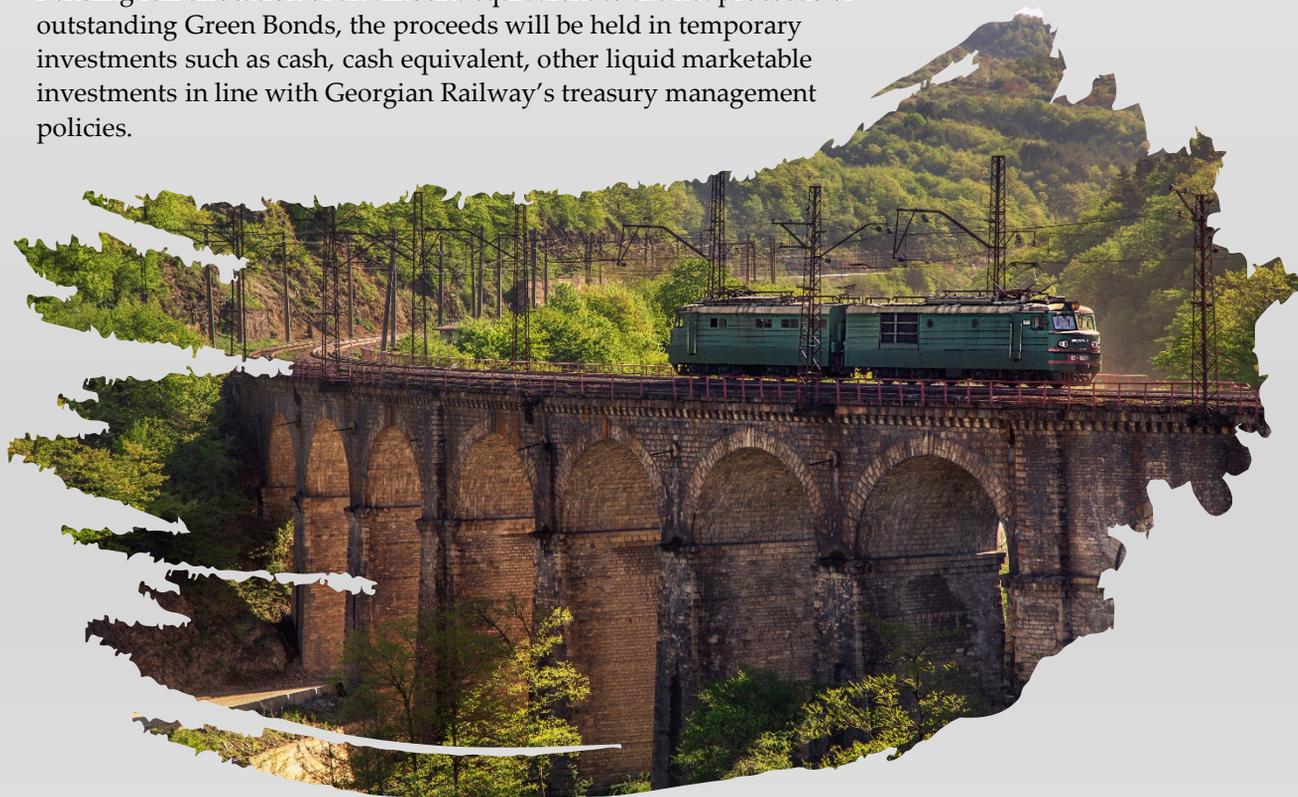


- Working group consisting of representatives from Company's Corporate Department, together with the Economic and Accounting Departments evaluated projects against the eligibility and exclusion criteria defined in the Green Bond framework under section 6.
- Projects that met the criteria defined in the green bond framework under section 6 were classified as eligible for the green bond financing/refinancing.
- The Eligible Projects are tracked using an internal register.

The working procedure in SAP program has started to create a report through which a certain cost will be categorized as green or non-green at the moment of cost generation. Mentioned report will allow us to track out spending throughout the year and monitor their compliance with the eligibility criteria permanently.

MANAGEMENT OF THE PROCEEDS

Pending full allocation of an amount equivalent to the net proceeds of outstanding Green Bonds, the proceeds will be held in temporary investments such as cash, cash equivalent, other liquid marketable investments in line with Georgian Railway's treasury management policies.



JSC GEORGIAN RAILWAY

IMPACT REPORT

June 2022

AVOIDED CO2 EMISSIONS

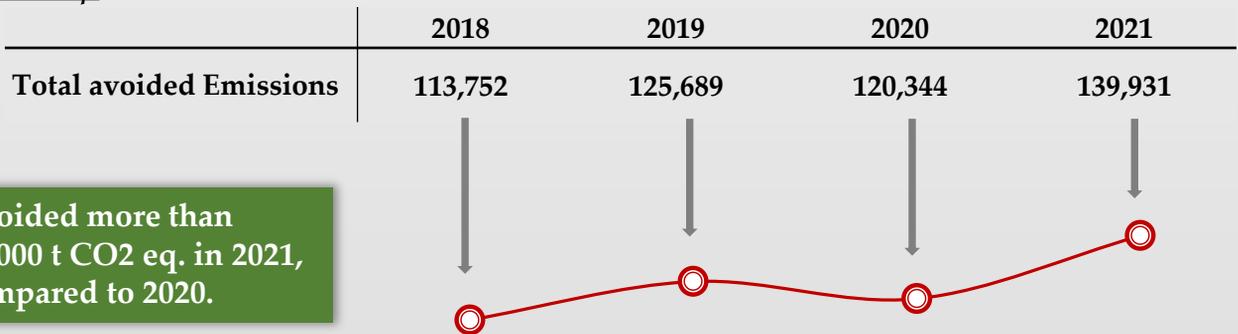
Railway is one of the most environment-friendly transportation modes. According to International Energy Agency (IEA)¹ achieving the ambitious goals of the Paris Agreement will require a transport modal shift, particularly from road and air transport to rail

Georgian Railway owns and operates fully electrified railway network and owns electric locomotives and EMUs for transporting the freight and passengers. GR uses diesel locomotives only for shunting operations and for non-electrified sidings.

ZERO DIRECT EMISSIONS

To estimate the greenhouse gas emissions avoided in Georgia due to the existence of JSC Georgian Railway, company compared the greenhouse gases emitted into the atmosphere by energy consumed as a result of rail transport to the emissions in the absence of railway. Minibuses – for passengers and trailers – for freight was used as an alternative type of transportation.

t CO₂ eq.



Avoided more than 19,000 t CO₂ eq. in 2021, compared to 2020.

**The international IPCC 2006 methodology is used to calculate greenhouse gas (CO₂, CH₄, N₂O) emissions from the railway sector².*



- ✓ Realization of strategic green projects, such as Modernisation project, aimed to reduce GR's environmental impact (reduced electricity consumption, lower CO₂ emissions) and increase operations safety further



- ✓ Regular conducting environmental audits and monitoring of the railway throughout the country



¹<https://www.iea.org/reports/the-future-of-rail>
²Publications - IPCC-TFI ([iges.or.jp](https://www.iges.or.jp/))

THE EFFICIENCY OF TRANSPORTATION

Improved efficiency and speed of freight and passenger trains



Travel time for freight trains in both directions from the Azerbaijani border to the Batumi port

16-18 hours

Allowed Average Speed for:

57 km/hr

Passenger trains on the 64 km mountainous gorge section in Central Georgia



47 km/hr

Freight trains on the 64 km mountainous gorge section in Central Georgia

70 km/hr

Passenger trains on the mainline



54 km/hr

Freight trains on the mainline

The main bottleneck of the infrastructure is a mountain pass located in the center of Georgia. De-bottlenecking of existing infrastructure will:

- Reduce the travel time for freight and passenger trains;
- Increase allowed speed to 80km/hr for passenger trains;
- Increase annual volume of freight to over 12 million tons;
- Increase number of railway passengers to over 2 million per year.

Addition to Railway Network During Last Four Years

2018-2021 Years



Total Addition to Railway Network



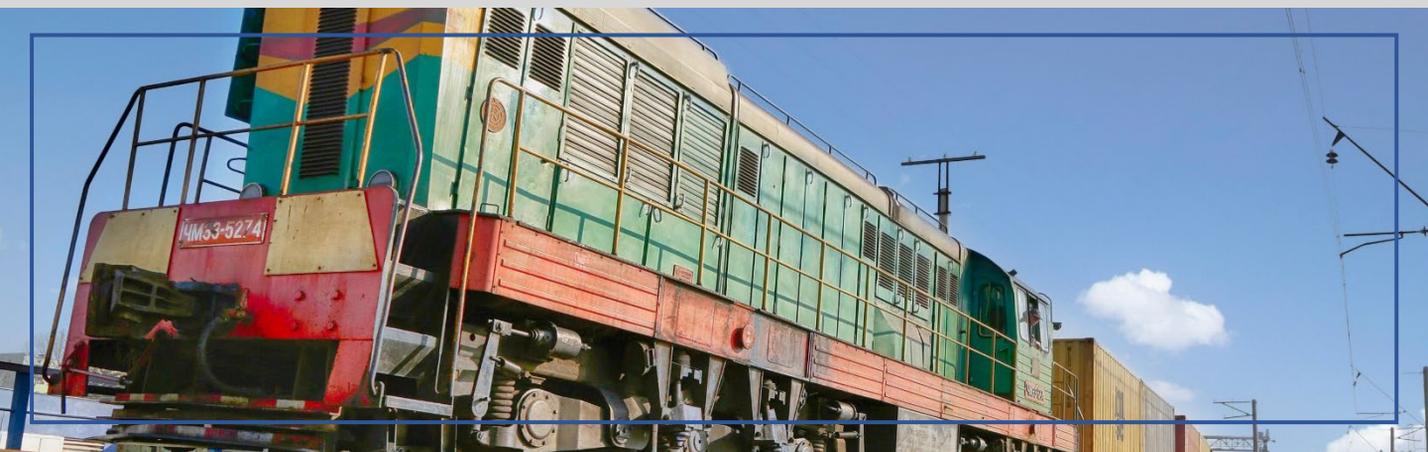
Under Modernization Project



1,411km
Network length



296km
Double-Track line length



INCREASED VOLUME AND CAPACITY

Freight Capacity

One of the main component supporting the capacity of the rolling stock is the number of railcars and containers available for transportation. Currently, the Group can use railcars from three different sources: The Group's railcars; railcars owned by other railways; and the railcars of private companies.

27 mln tonnes

Current capacity

Current railroad capacity is 27 mln tons of cargo annually. It is expected to be extended to 48mt by 2023 (Modernization project)

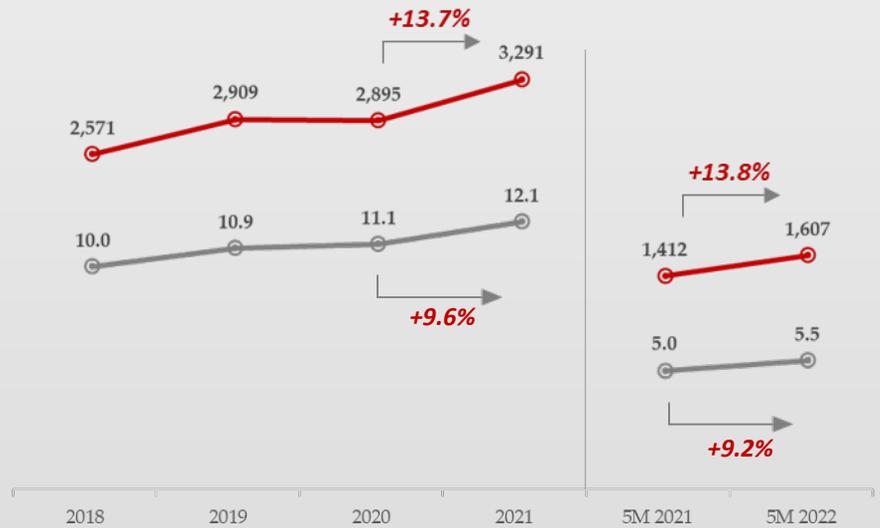
GR's growth strategy is focused on the modernization of the existing infrastructure to facilitate freight growth and decrease operating expenses

Freight Transportation

Noticeable upturn in freight transportation

Million ton-kilometers

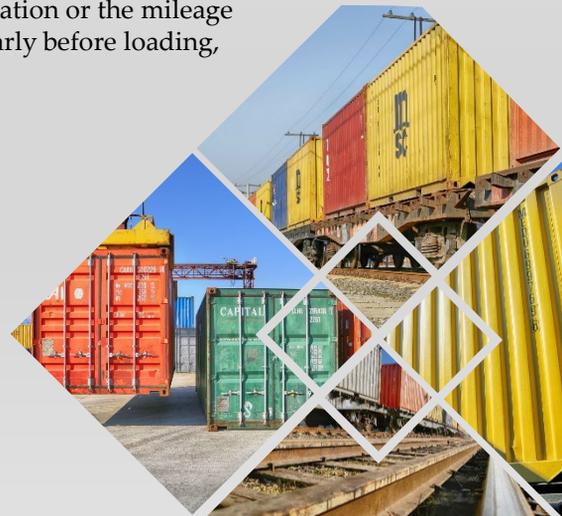
Million tonnes



Freight Rolling Stock

The Group's rolling stock undergoes regular maintenance and repair. The Group's maintenance and repair work falls into two main categories: (i) scheduled repairs carried out according to current technical standards in the region and applicable regulations; and (ii) unscheduled repairs carried out according to the condition of railcars.

Scheduled repairs are carried out based on either the period of operation or the mileage of operation. The Group's rolling stock is generally inspected regularly before loading, after unloading, and during transportation through freight stations.



INCREASED VOLUME AND CAPACITY

Passenger Capacity

GR is the national passenger railway of Georgia and has strategically important social function.

Company's Passenger SBU transports passengers within Georgia and on international routes, connecting Georgia with Azerbaijan and Armenia.

GR and the Government are expected to enter into a public service contract for compensation of the Passenger SBU with effect from 2024

Due to Covid-19 pandemic, passenger transportation was canceled several times resulting lower number of passengers and revenues in 2020 and in 2021

GR intends to modernize the railroad and electric supply infrastructure between Tbilisi and Batumi (315km), incl. the 64km mountainous Gorge region, after which the average speed of the passenger train is expected to increase from 80km/h to 120km/h, and from 50km/h to 80km/h at the crossing area

4.5 mn passengers

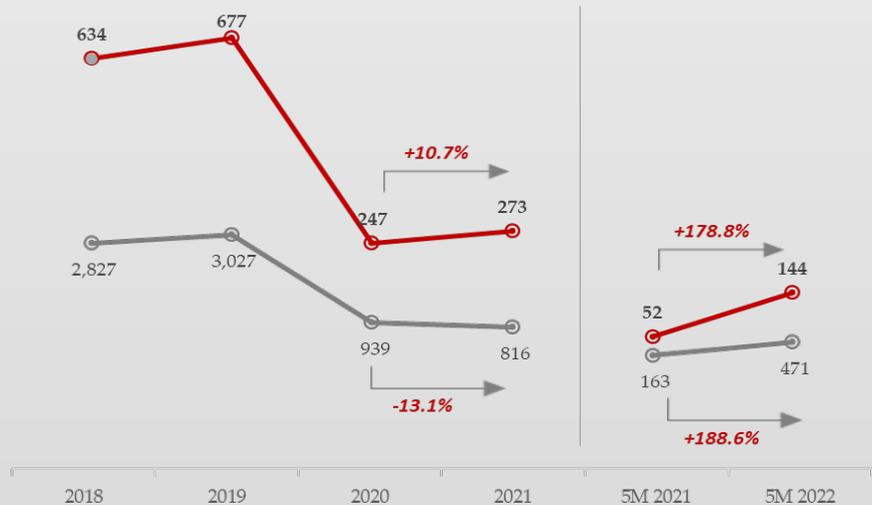
Current capacity

Passenger Transportation

Representation of Covid-19 Impact

Million Pass-kilometers

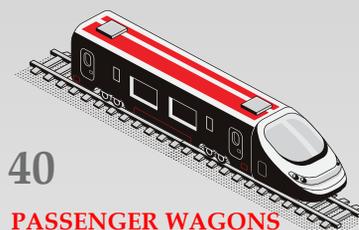
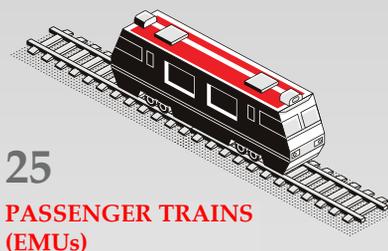
Thousand Passengers



Strategy

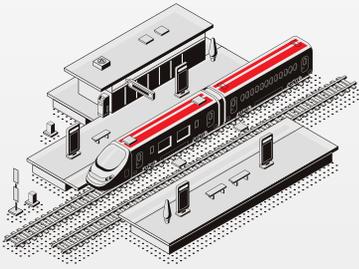
The Group's medium-term strategy is to optimize the expenses and increase the revenue of the Passenger SBU by increasing the number of passengers and achieving increased revenue per passenger. To achieve this, The Group aims to take the following measures:

- Adjusting passenger train timetables to optimize utilization;
- Providing substantial discounts on tickets;
- Easing the accessibility of tickets via different sales channels; and
- Launching a marketing campaign to attract potential customers.



GENDER DIVERSITY AND EMPLOYMENT

Promoting gender diversity and inclusion



12 train stations

20 platforms

Containing posters with all appropriate information and promoting women's and girls' safety

Additionally, the Company has a **24-hour hotline and e-mail address** in case of reports about violence and harassment. All the citizens, as well as tourists can use mentioned hotline.



Internal Corporate Regulatory Processes



The Code of Ethics of JSC Georgian Railway has been developed and approved by the Supervisory Board and Board of Directors. Article 12 of mentioned code regulates the prohibition of all forms of harassment and discrimination.

Also, developed a grievance redress mechanism in JSC Georgian Railway aims to regulate the submission, review of grievances/applications related to alleged violations of the rights of persons. The mentioned rule, currently is going through approval process.

Awareness-raising activities

The link of the informational film about the meaning of sexual harassment was sent by mail and SMS (the main was sent to 94% of women in the Company).



Additionally, the meetings were conducted by the Railway Transport College (RTC) on the topic - "Domestic Violence Against Women" for students, as well as for the whole staff. The majority of the attendees work for JSC Georgian Railway.

In terms of health safety and environmental protection, the Company has a pre-written schedule, containing about 14 trainings that will be conducted for students and employees

Promoting employment



Female Employees

6 percent of jobs related to construction industry is allocated to female employees



Female Employees

28 percent of jobs related to transportation sector is allocated to female employees



Modernization Project

85 new jobs created under the Modernization Project



Employees

One of the largest corporate employers in Georgia, with approximately 12,000 employees



SDG 5 - GENDER EQUALITY

To ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life:

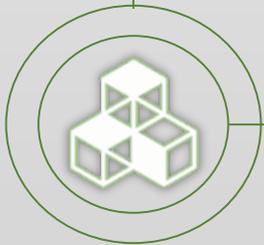
- As an employer, Georgian Railway follows the Georgian legal labor law, which includes principles on equality. The company reports having included these principles in its Code of Conduct and Ethics, and in its internal labor regulations. Georgian Railway notably applies equality and no discrimination principles in its internship program and for its job opportunities; the company also has career development tools equally available for female and male staff, such as short-term programs to enhance staff qualifications.
- As well as EBRD allocated grant and announced a tender for hiring a consulting agency, that with GR representatives will work on Projects directed to gender equality, decent work, productive employment and etc.



SDG 8 – DECENT WORK AND ECONOMIC GROWTH

To achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value and to protect labor rights and promote safe and secure working environments for all workers:

- the Group has a pension policy for employees in retirement age, that include paying six months salary to those who voluntarily leave the job. This will open up the positions for young employees.
- In terms of accessibility and usage of Georgian Railway lines, GR has security measures at the train stations in terms of separate facilities and functioning lightning, and video surveillance systems in some trains. A number of trains (e.g. Stadler Bussnang), service centers and station platforms (e.g. Kopitnari Railway Station) are adapted to wheelchair users and have special seats, bathrooms and elevators.



SDG 9 - INDUSTRY, INNOVATION AND INFRASTRUCTURE

To develop quality, reliable, sustainable and resilient infrastructure, including regional and trans border infrastructure:

- The Group is investing to improve and optimize its Electrical Centralization. For this purpose, multiple stations have been equipped with advanced technology.
- New relay-microprocessor devices that fulfill the safety criteria of European standards and the SIL-4 level of accuracy and safety issued by the European Committee for Electrical Standardization were chosen (CENELEC). The use of these systems will improve railway safety while also making technical operations easier.

CONTINUOUS FOCUS ON SUSTAINABLE DEVELOPMENT

E



- ✓ Green transportation with low carbon emissions
- 97% of the railway is electrified



- ✓ Responsible waste management:
- All hazardous waste is disposed
- Iron waste (old rolling stock etc.) is sold out to third parties for recycling



- ✓ Commitment to high ESG standards in new CAPEX projects

S



- ✓ Over 12,000 people employed
- ✓ The largest employer in Georgia, providing employment opportunities all over the country
- ✓ Established HSE⁽¹⁾ policy



- ✓ GEL 9.1mn employees' healthcare and insurance expenses in 2021



- ✓ Own Railway transportation college established in 2015

G



Adherence to the best governance standards
All BoD members are independent
3 committees established on the BoD