TRANSNET

delivering freight reliably

freight rail

REINVENT
FOR GROWTH

TRANSNET FREIGHT RAIL **2023**

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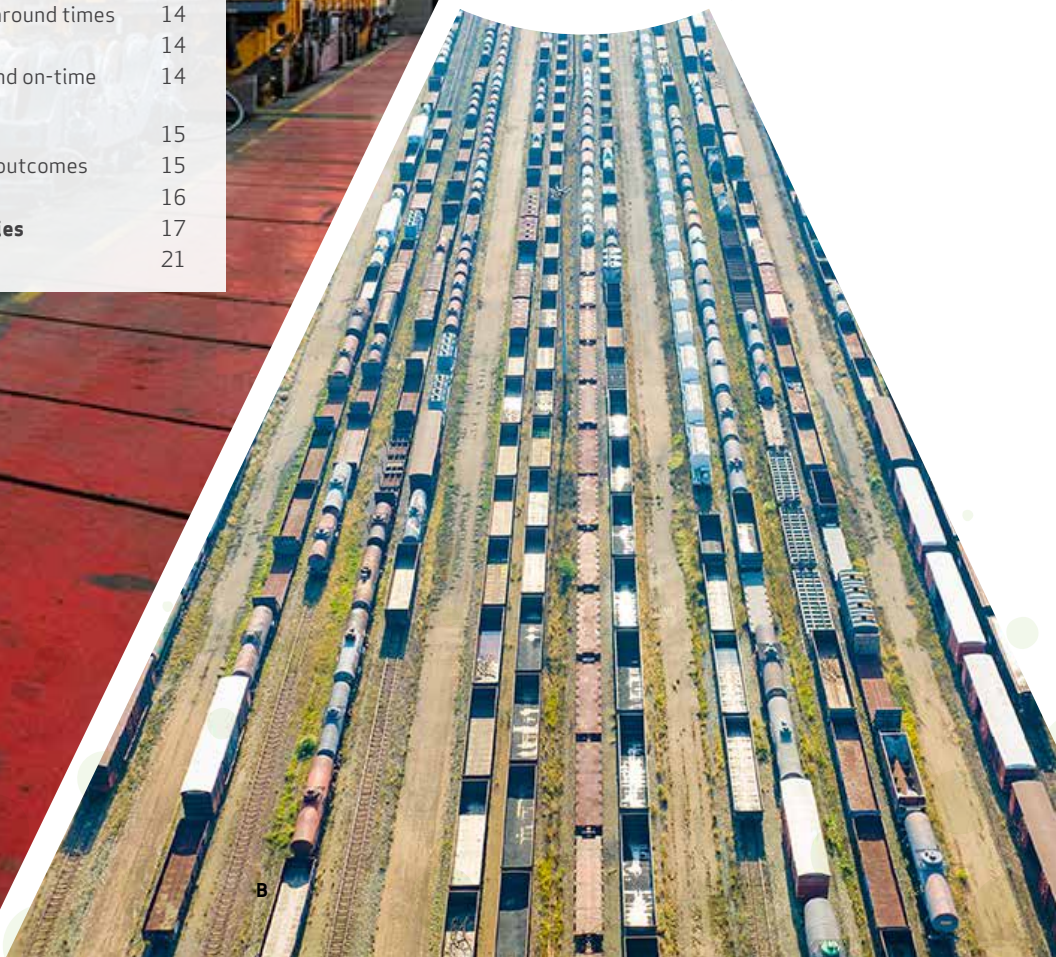

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BUSINESS OVERVIEW

Transnet Freight Rail (TFR) is Transnet's largest Operating Division. The division provides rail network infrastructure and operates rail services on key rail corridors to transport commodities for export, regional and domestic markets. Freight Rail operates world-class heavy haul coal and iron ore export lines and has extended this capability to export manganese on the iron ore and Gqeberha lines. Freight Rail also transports a wide range of bulk and general freight commodities including mining, agricultural, manufacturing goods, bulk liquids, containerised freight, automotive parts and components.

The Freight Rail network and rail services provide strategic links between ports, freight terminals and production hubs and connectivity with Southern African Development Community (SADC) railways to support regional integration. The infrastructural connectivity, combined with close cooperation between Transnet Operating Divisions and collaboration with key customers and industry players, enables the delivery of freight volumes across the industry's logistics supply chains.

Freight Rail's ability to capitalise on available addressable rail demand and to grow volumes, particularly in general freight, has been impacted by past underinvestment in network rehabilitation, increases in theft, vandalism and sabotage of network infrastructure and rolling stock and contractual disputes over locomotives (resulting in older fleet being kept in service that cannot meet current demand and incurs high maintenance costs).

Freight Rail is optimising existing human capital through restructuring with intent to flatten management layers, improve workplace conditions and develop skills, competencies and capabilities.

To improve commercial viability and sustainability, TFR has comprehensively assessed performance on each route and identified opportunities to improve logistics services and revenue on commercially viable routes. Freight Rail remains committed to working with the industry and existing customers to explore and deploy alternative, appropriate treatment models and value propositions for underperforming routes.

Freight Rail has renewed its pricing strategy to enable full cost recovery on all routes and this has been communicated to customers of the various segments. The pricing strategy will continue in the new financial year.

HIGHLIGHTS

Despite a difficult trading environment, characterised by rampant theft of the state 's infrastructure, difficult negotiations with several OEMs regarding rolling stock delivery and the effects of an ailing infrastructure in desperate need of funding, Freight Rail has advanced several critical initiatives in 2022/2023. They are highlighted below as follows:

- We have become an active participant in the transformation of the mining industry by increasing access for emerging miners on the national rail network, across the major commodities including export coal and manganese.
- We increased the capacity share of emerging miners in the export manganese sector from 12,5% to 25%, a 100% improvement year on year.
- We entered into a partnership with Kalagadi Manganese to provide support to emerging miners. Kalagadi has made available its advanced rapid-loading station to the emerging miners.
- Following the catastrophic KwaZulu-Natal floods in April 2022, Freight Rail acted decisively to restore operations on the Container Corridor (a vital connection between South Africa's inland and the Port of Durban servicing the automotive, container, agriculture and fuels sectors) ahead of time and within the projected budget.
- Implemented a Transformation and Digitisation Strategy to ensure the long-term sustainability, growth, and modernisation of railway operations, predicated on strategic partnerships with national and global leaders in critical aspects of the business, and accelerated investments in infrastructure across all Corridors.
- Went to market to find alternative OEMs to supply spare parts and for maintenance support to mitigate the operational disruptions cause by the shortage of locomotive availability, due to inaccessibility of spare parts.
- In June 2022 we piloted a new borderless train to Maputo to service chrome and magnetite producers. This is a joint project between Freight Rail and Portos e Caminhos de Ferro de Mozambique (CFM).
- To further increase economic participation in the country's freight logistics system, Freight Rail has initiated a private sector partnership through the leasing of the Container Corridor for a period of 20 years.
- Expanding our crime information gathering and analysis capabilities through the increased use of technology and innovative strategies and tactics to reduce security related challenges by awarding new outcomes-based security contracts. The strategies include strengthening relationships with communities along the network to create force multipliers in the fight against the scourge of theft, vandalism and sabotage of railway infrastructure, rolling stock and facilities.
- Bolstered our sustainability efforts by seeking alternative energy sources for its traction energy loads across all its corridors. This will aid in the reduction of greenhouse gas emissions in line with the UN Sustainable Development Goal 13 and promotes the development and use of green energy sources.
- Secured a Railway Safety Permit until 2025. We retained the Integrated Management System in accordance with ISO 9001; Quality Management System and ISO 14001; Environmental Management System, and ISO 45001; Occupational Health and Safety Management System;
- We have already made significant strides in delivering against the principles as set up through the National Rail Policy (NRP):
  - We opened access to the Container and Cape Corridors, allowing third parties access to the network as a part of its commitment to work with government and the private sector to improve rail logistics, support strategic industries such as the automotive industry and to increase rail volumes.
  - We have also started the process to implement the accounting separation to comply with the NRP.

STRATEGIC CONTEXT

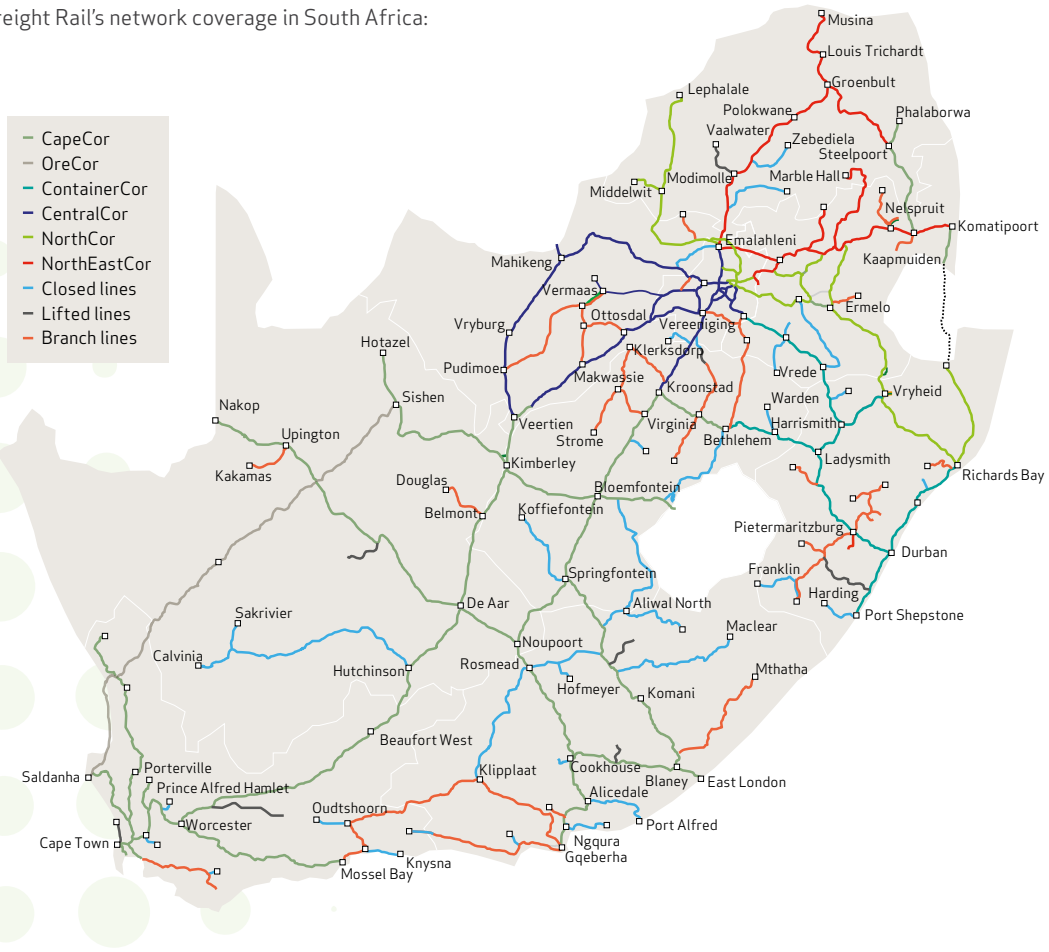
Freight Rail continued its initiatives to implement segment strategies, leverage private sector participation (PSP) and promote Transnet's financial sustainability.

The key strategic priority to improve business performance was to improve the overall condition of the rail network infrastructure. Network renewal is supported by interventions to secure the network against theft, vandalism and sabotage and to improve safe operational performance.

To increase operational efficiency on all rail corridors, operating models are introduced that go hand-in-hand with the maintenance of the network and rolling stock. This approach is supported by interventions to revise the organisational design and organisational culture to increase productivity, as well as individual and team performance and to improve organisational culture and employee wellbeing.

WHERE WE OPERATE

Freight Rail's network coverage in South Africa:



Rail infrastructure

- ±30 400km of track
- 20 953 route km
- Core network:
  12 801 route km
- Network traction
  - 50kV AC (861 route km)
  - 25kV AC (2 516 route km)
  - 3kV DC (4 650 route km)
  - Diesel (12 955 route km)
- Axle loading
  - Main lines at 20t/axle
  - Ore line at 30t/axle
  - Coal line at 26t/axle
- Bridges/structures
  - Bridges: 2 696
  - Tunnels: 198
- Train authorisation systems
  - Signalling basic stations: 2 146
- Traction substations
  - 3kV DC: 346
  - 25kV AC: 99
  - 50kV AC: 7

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The management of the rail network includes the condition monitoring, maintenance and protection of the rail infrastructure, the development of rail network designs managing network access, fleet and managing, as well as the management of the Freight Rail real estate portfolio.

Asset base and resources

Various commodities are railed on Freight Rail's complex rail network infrastructure of 30 400 track km (20 953 route km), which consists of 12 801 route km core network. The main lines and core network can carry 20 tons/axle or more. The Sishen to Saldanha and Ermelo to Richards Bay heavy haul lines are built to accommodate 30 tons/axle load and 26 tons/axle load, respectively. Branch lines generally have an axle load of less than 20 tons/axle.

The following table reflects the rail network's asset base and key resources:

Asset type	General freight	Export coal	Export iron ore
Rail network (route km)	19 395	697	861
Infrastructure axle loading (tons/axle)	Main lines: 20 Branch lines: 18	26	30
Network electrification (route km)	25kV AC: 2 063 3kV DC: 4 316 Diesel: 12 955	25kV AC: 453 3kV DC: 334	50kV AC: 861

kV = kilovolt
AC = Alternating current
DC = Direct current

Train operations

Freight Rail implemented the Corridor Model to respond to rapidly changing business and market requirements to improve business performance and competitiveness. The characteristics of each corridor are unique and are used to improve corridor efficiency and optimise integrated supply chains for key Transnet commodity sector growth.

North Corridor (NorthCor)

The NorthCor consists of a diverse mix of line types and capacities that, together, serve both domestic and export markets and carry more than 50% of total Freight Rail volumes. The most prominent line section is the heavy haul export line between Ermelo South and Richards Bay, which serves the coalfields of Mpumalanga via a feeder network known as the coal backbone. The system also serves the Waterberg coalfields via the Waterberg line and the Gauteng freight ring. The dominant flow direction is from Lephalale towards Pyramid South and Richards Bay, with export coal, domestic coal, Eskom coal, chrome, ferrochrome and cement being the main commodities. The chrome and ferrochrome flows originate from Phokeng and Pendoring and are mainly transported to Richards Bay for export. Domestic coal originates from Mpumalanga and Lephalale and is transported to various destinations across the country. The corridor focuses on the efficiency of coal flows and creates opportunities for the growth of other mining commodities.

Ore Corridor (OreCor)

The OreCor is one of the two main heavy haulage routes in South Africa. The Iron Ore Corridor stretches 861km from Sishen in the Northern Cape to Saldanha on the Western Cape coast. The ore line provides a world-class platform with heavy haulage capacity (30 tons per axle), technologies and efficiencies. The current iron ore export operation is optimised with 348 CR13/14 wagon trains. The corridor has developed into an international player offering a wide range of heavy-duty logistics solutions for growing local and international markets and has also been handling manganese exports since 2014.

The ore line operates a 375 CR17 wagon manganese train, which is the longest production train in the world. The main commodities transported on the corridor are iron ore, manganese, cement and lime. For OreCor to meet customers' growth demands amid fluctuating global commodity prices, logistics costs must be kept to a minimum. Economies of scale and density are critical for efficiency and effectiveness.

The line is currently limited to transporting 60mt of iron ore as the air emission licence is limited to this amount. Negotiations are ongoing to obtain a new licence that will enable the logistics system on the Sishen-Saldanha line to convey 67mt of iron ore. In order to obtain this new licence, Freight Rail will need to increase both the locomotive and wagon fleet on the OreCor and make joint capital investments throughout the pit- to- port system. This will depend on the long-term outlook for the iron ore market and the validation of volumes.

North-East Corridor (NorthEastCor)

The NorthEastCor stretches from the Limpopo River at Beitbridge in Limpopo Province to Richards Bay on the east coast via Komatipoort and from Pyramid/Rayton/Emalahleni to Komatipoort. The corridor carries 14% of Freight Rail's volumes. The NorthEastCor strategically links the South African rail freight system with that of other SADC countries, mainly via Eswatini, Zimbabwe, Mozambique, Zambia and the Democratic Republic of Congo. Commodities are transported via various border posts or entry gates such as Komatipoort, Golela, Beitbridge, Livingstone and Sakania.

The corridor has three prominent linear flows:

- Phalaborwa to Maputo and Richards Bay, mostly transporting magnetite and rock phosphate;
- Emalahleni to Maputo, mainly transporting chrome and coal; and
- Intermodal (reefers) originating from Tzaneen, Musina and Bela-Bela destined for Durban.

High-yield general freight flows within the corridor include magnetite, chrome, ferrochrome and rock phosphate. The corridor provides good rail connectivity to sub-Saharan Africa, enabling regional operational integration and collaboration across Operating Divisions improving service on integrated pit-to-port flows. Initiatives on this corridor will be geared towards enabling flows on the North-South Corridor which runs between the Democratic Republic of Congo and South Africa, with opportunities for investment in the revitalisation of the corridor.

Cape Corridor (CapeCor)

The CapeCor has the largest area footprint in Freight Rail, stretching from Warrenton in the north-east to Cape Town in the south and from Hotazel in the north-west to Gqeberha in the south-east. CapeCor is the natural hinterland for the ports of Cape Town, Mossel Bay, Gqeberha , Ngqura and East London. The areas of Bethlehem and Kroonstad have been incorporated into CapeCor.

Corridor lines from the key mining area around Hotazel in the Northern Cape connect to the ports of Gqeberha and Ngqura in the south-east, providing the primary export channel for South Africa's manganese exports. Corridor connections between these mines and the Central Corridor (CentralCor) also enable the transport of manganese and iron ore for the domestic market. The corridor also includes various branch lines such as the Bellville-Bitterfontein and De Aar-Upington lines, as well as sections of the Bloemfontein to East London and Gqeberha lines, which provide rail access for agriculture.

The corridor offers growth opportunities for the agricultural sector, especially for refrigerated goods such as fruit and grain for domestic and export markets. Other growth opportunities for rail include grain, cement and lime, as well as goods for the automotive industry. The route connecting the Port of Cape Town to the Reef and linking to the ore export line and Namibia, offers opportunities to increase cross-border traffic to Namibia.

Container Corridor (ContainerCor)

The ContainerCor is the backbone of South Africa's overall rail freight network and its efficient and effective functioning is critical to promoting the country's economic growth. This corridor is the rail artery to the port of Durban and plays a key role in connecting the Port of Durban to the hinterland, as well as in connecting inland freight terminals serving the Gauteng area and neighbouring countries. Containers, fuel, grain, motor vehicles and other general cargo are the main commodities railed on the corridor, serving about 70 customers. These segments are considered high-value industrial sectors and contribute significantly to the South African economy and GDP.

The port of Durban, which has been repositioned as a regional container port, anticipates significant growth in containers handled at the port and efficient evacuation and handling of containers are highly dependent on an effective and efficient rail solution. The estimated rail volume will be 69 trains per day in 2023. Rail transport reduces logistics costs and carbon emissions and is a critical enabler for reducing traffic on national roads and within the port area. Reliable and efficient rail service is therefore crucial to enable further economic benefits. The corridor runs a mix of low-density, high-value, low-margin and time-sensitive industrial cargo from different origins, with additional costs of transfer from road-to-rail handling costs in the case of intermodal cargo. Most categories of cargo in the corridor are very sensitive to road competition.

Poor cost recovery, inadequate infrastructure spending, the increasing maintenance backlog due to funding constraints, as well as theft, vandalism and the impact of flood shave accelerated the deterioration of service on the corridor, opening opportunities for Freight Rail to look for alternative solutions and partnerships to redevelop the corridor.

Central Corridor (CentralCor)

CentralCor is located at the centre of the Freight Rail network and connects to five other corridors. Geographically, it spans three provinces (Gauteng, Free State and the North West). The corridor is key to the north-south interface through landlocked Botswana, via the Mafikeng to Krugersdorp and Vryburg rail lines, supporting regional integration. The corridor is a feeder to the ports of Maputo, Richards Bay, Durban, Gqeberha and Cape Town.

CentralCor supports the network interface with the Passenger Rail Agency of South Africa (PRASA) along key Freight Rail and PRASA rail lines in Vereeniging, Pretoria and Krugersdorp.

CentralCor includes an 18 ton per axle branch line network serving the maize triangle in the North West province (Klerksdorp, Lichtenburg, Coligny and Vryburg operating areas). CentralCor also supports the manufacturing industry, especially the automotive sector, by providing rail links and services to the automotive hub and container terminal in Pretoria.

The corridor faces major spatial planning challenges that require close cooperation between all stakeholders, including industry, PRASA, municipalities and community forums. There are informal settlements around Transnet operations where problems occur such as illegal electricity connections from Transnet services, illegal dumping of waste on Transnet land, railway reserves used for ablution purposes, which poses operational and safety risks to communities next to the railway lines.

The most prevalent settlement encroachments include Sentrarand, Krugersdorp cluster, Leeuhof cluster and Isando cluster. To address the problem, collaboration with customers regarding security service provision was undertaken, commenced with the Central Hub security initiative and knowledge sharing, a positive collaboration and relationship with communities was started as well.

REGULATORY ENVIRONMENT

Freight Rail is accountable to all stakeholders within the applicable legal framework and is committed to complying with the legal obligations applicable to its business and operating environment. It is important to use appropriate systems and processes to manage an ever-increasing regulatory universe and to ensure that compliance risks identified are mitigated through the development of appropriate controls, which remains a priority and a strategic objective.

The rail reforms envisaged by the National Rail Policy in South Africa advance Freight Rail's initiatives to further liberalise the rail sector by introducing measures that will result in better access for third party rail operators that require access to Freight Rail's network by meeting access criteria. Through the National Rail Policy, the Department of Transport has introduced the Interim Rail Economic Regulator Capacity to conceptualise and prepare the regulatory framework for the implementation of the Economic Regulation of Transport Bill (ERT Bill) with key stakeholders such as Freight Rail and Transnet as a whole.

Freight Rail has begun the process of separating the accounting for the management of rail infrastructure from rail operations to provide the transparency and visibility of accounting information required for regulation by the economic regulator. Progress has been made in establishing an interim access regime and charging model based on current access practices, to accelerate the access regime and increase learning to best meet its objectives and compliance requirements. This will further support Freight Rail's role and its ability to benefit from the opportunities presented by the regulatory reforms in the transport sector.

It is anticipated that Freight Rail is likely to become a regulated entity within the next 24 months following the completion of the stakeholder engagement and consultation process.

By supplementing the current access regime and introducing third party access on designated slots, the current regulatory environment will provide Freight Rail with the opportunity to gain experience and practise that can inform the wider implementation of the National Access Framework.

Freight Rail follows the compliance process to identify and manage its regulatory risks that apply to its business in relation to its policies and procedures. Legislation that has a strategic impact on the way the division conducts its business is prioritised and closely monitored. The relevant legislation, listed below, forms part of the operational compliance plan and will be monitored and reported on to ensure compliance:

Regulation	Impact	Extent of compliance	Mitigation/action plans
White Paper on National Rail Policy	High	• High level of compliance • High level of compliance	• Control Plans, Monitoring and Reporting
ERT Bill	High	• High level of compliance	• Impact Analysis, Control Plans, Monitoring and Reporting
Railway Safety Legislation	High	• High level of compliance	• Impact Analysis, Control Plans, Monitoring and Reporting • Implementation of a Safety Management System • Submission of an Annual Safety Improvement Plan • Submission of information regarding the proposed safety permit fee model
Public Finance Management Act (PFMA), 1999	High	• High level of compliance	• Control Plans, Monitoring and Reporting • Training • A PFMA Improvement Project has been established Company-wide • Monthly meetings relating to condonations and disciplinary action status • Training of employees on the PFMA • Implementation and review of the Delegation of Authority Framework • Appointment of PFMA champions
Competition Act, 1998	High	• High level of compliance	• Control Plans, Monitoring and Reporting • Model contract per category in compliance with the Competition Act • Pricing policies in compliance with the Competition Act • Facility Policy for all PSP concessions, including unsolicited bids • Training material and training to drive a culture of compliance
National Infrastructure Plan, 2050	High	• High level of compliance • Transnet will comply once the Draft Infrastructure Plan is approved • No compliance required at this stage	• Transnet has submitted comments on the National Infrastructure Plan, 2050 during September 2021 • Impact Analysis and Reporting

Environmental impact plan

Freight Rail's historical and current activities traverse South Africa's complex environmental landscape, characterised by a sensitive environmental footprint. Driven by increasing South African environmental legislation and Freight Rail's sustainability requirements, the division continues to embrace environmental practices that drive the organisation to fulfil its due diligence in complying with legislation and to identify and implement innovative solutions to minimise its overall impact on the environment, while ensuring that any likely future impacts are identified, assessed and responded to appropriately.

The table below lists the key focus areas for 2022/23 to ensure prevention and minimisation of risks related to compliance with legislation arising from past operational activities, while ensuring that current and future activities are compliant with legislation through the implementation of key risk mitigation plans.

Environmental aspect/exposure	Legislative requirement	Extent of compliance	Mitigation/action plans
Asbestos land contamination	• National Environmental Management: Waste Act. No 59 of 2008	• High-risk asbestos-contaminated land was declared to the Mister of the Department of Forestry, Fisheries and the Environment • Scoping for further investigations is being concluded	• Continuous ad hoc removal and safe disposal of exposed asbestos ores
Hydrocarbon and contamination	• National Environmental management: Waste Act. No 59 of 2008	• Bio remediation orders for refueling facilities	• Bio remediation of hydrocarbon polluted land in refueling depots
Emissions and dust pollution	• National Environmental Ma11agemenl:Au-Quality Act. No 39af 2004	• Tank methods are used to calculate emissions at refueling facilities and reports are submitted to authorities via the National Atmospheric Emission Inventory System	• Scientific monitoring and reporting of emissions from refueling facilities as well as multi-user facilities
Discharge of industrial effluent	• National Water Act. No 36 of 1998	• Monitoring regime comprehensively determined	• Ground, surface, effluent and potable water monitoring and reporting

OPERATIONAL CONTEXT

The performance of the entire logistics system was affected by the key constraints, which include the lack of locomotives, the poor state of infrastructure and the high number of incidents of crime, vandalism and sabotage.

The suspension of the contract for 1 064 locomotives and the ongoing contract disputes with CRRC have resulted in reduced locomotive availability and an increase in inoperable locomotives as an older, less reliable fleet remains in service, causing systemic inefficiencies, a decrease in capacity, which impacted overall performance.

Core initiatives

Freight Rail negotiated with Caminhos de Ferro de Mozambique (CFM) to allow chrome trains to run through without stopping on the route to Maputo. The initiative resulted in an increase in weekly performance of 12 trains per week in the first three months, from an average weekly performance of nine trains, with the best throughput weekly performance of 13 trains in week 21. This model is adopted as the standard for regional cooperation and will be extended to other traffic flows.

The successful completion of the Selati line signalling rehabilitation in the Northeast corridor project increased slot capacity from six to 12 per day on both the outbound and the return journey to Maputo.

The Railway Safety Regulator has granted a permit to implement a 160 wagon Radio Distributed Power (RDP) train, running from Phalaborwa to Komatipoort. The certification of drivers to operate these RDP trains is underway.

The Container Corridor was significantly affected by the catastrophic floods in KwaZulu-Natal on 11 and 12 April 2022. The devastation resulted in the main line between Durban and Cato Ridge being completely closed until June 2022. Repairs to the Container Corridor following the April 2022 floods began in April 2022 and progressed as planned during the year.

In June 2022, five slots per day per direction were restored after single line operations between Durban and Cato Ridge resumed.

In October 2022, operations on the double line were partially restored, resulting in a total of 15 slots per day per direction.

The corridor has begun developing solutions underpinned by customer-focused investments to reduce the TFR cost to serve and grow volumes on the rail. The two solutions developed in the past year are the Cato Ridge Inland Port and the Estcourt Intermodal Terminal.

Freight Rail's strategic direction for the Container Corridor is to seek partnerships with the private sector to enter a 20-year operating lease for the corridor. The lease is primarily aimed at leveraging capital and capacity for loss-making operations for a limited period. Freight Rail will retain primary ownership of this strategic corridor for the duration of the partnership, while continuing to drive the financial sustainability of the 12 organisations.

Given the critical role that the Central Corridor plays as a connecting hub for the major corridors, the corridor has focused on increasing collaboration with customers, strengthening community relationships and soliciting municipal and local government support for the provision of safety services, as well as working with business forums and other associations to identify job and training opportunities.

The Cape corridor has a strong focus on stimulating rail activity for general freight commodities and will continue to pursue opportunities to attract private sector investment in its branch line and rail siding network to increase volumes. The project team developed the Transnet Grain Strategy in collaboration with the private sector. All South African Coop silos were visited in February 2023 to jointly develop solutions for shifting grain from road-to-rail grain solutions.

Freight Rail renewed its branch line partnership concept in 2022 to offer more branch line concessions to the market. The Paarl-Franschhoek concession, which operates the Wine Tram, continues its growth in tourist ridership in the Western Cape. The Wolseley–Prince Alfred Hamlet concession has increased its shift of reefer container freight from road to rail and its seasonal tourist passenger services with great success.

FINANCIAL AND OPERATIONAL PERFORMANCE

OVERVIEW OF KEY PERFORMANCE INDICATORS (KPIS) Restated

Financial performance against KPIs

Salient features	Year ended 31 March 2023 R million	Year ended 31 March 2022 R million	% change
Revenue	**34 810**	37 812	**(7,9)**
General Freight	16 941	18 429	(8,1)
Export Coal	9 208	10 481	(12,1)
Export Ore	7 270	7 420	(2,0)
Other	1 391	1 481	(6,1)
Operating expense	**28 088**	(26 514)	**5,9**
Energy costs	(6 009)	(5 876)	2,3
Maintenance cost	(2 793)	(2 692)	3,8
Materials cost	(799)	(228)	>100
Personnel cost	12 398	(13 651)	(9,2)
Other costs	6 089	(4 067)	49,7
Profit from operations before depreciation and amortisation	**6 722**	11 297	**40,5**
Depreciation and amortisation	(10 420)	(8 821)	18,1
Profit from operations before items listed below	**3 698**	2 476	**(>100)**
Impairments and Fair value adjustments	(2 610)	(828)	>100
Net finance costs	(6 137)	(4 464)	37,5
Profit before taxation	**12 445**	(2 811)	**(>100)**
Total assets excluding (WIP)	144 387	150 834	(4,3)
Profitability measures			
EBITDA margin* - %	19,3	29,9	(10,6)
Operating margin	10,6	6,5	(17,2)
Return on invested capital**	(2,5)	1,0	(3,5)
Asset turnover (excluding CWIP)****	0,24	0,26	(0,2)
Capital investments^	11 288	10 037	12,5

* *EBITDA expressed as a percentage of revenue*

** *Profit from operations before impairment of assets, fair value adjustments, net finance costs and taxation expressed as a percentage of revenue.*

*** *Profit from operations before impairment of assets, fair value adjustments, net finance costs and taxation expressed as a percentage of average total assets, excluding capital work in progress.*

**** *Revenue divided by average total assets, excluding capital work in progress.*

^ *Actual capital expenditure (replacement plus expansion), excluding borrowing costs and including capitalised finance*

PERFORMANCE COMMENTARY

Financial sustainability

Revenue

Despite the challenges faced, Freight Rail achieved a total revenue of R34.8 billion during the fiscal year. This, however, represents a 7.9% decrease when compared to the previous year's revenue of R37,8 billion. The decline in revenue is mainly attributed to the underperformance factors discussed below:

Underperformance factors

- Unavailability of locomotives due to non-availability of spare parts.

  Freight Rail faced significant challenges in maintaining an adequate fleet of locomotives due to the non-availability of spare parts. This resulted in reduced operational capacity and delays in service delivery. The unavailability of locomotives led to decreased efficiency and customer dissatisfaction, impacting the Company's financial performance.

- High rates of theft and vandalism.

  Freight Rail experienced a continued surge in theft and vandalism incidents throughout the fiscal year. These criminal activities not only resulted in substantial financial losses, but also disrupted operations and affected customer confidence. The Company had to allocate significant resources for security measures, investigations and repairs – further straining its financial position.

- Underinvestment in infrastructure.

- Insufficient investment in infrastructure negatively impacted Freight Rail's ability to meet growing demand and maintain an efficient rail network. Aging infrastructure, inadequate maintenance and limited capacity resulted in operational inefficiencies and frequent breakdowns. This further hampered the Company's financial performance.

Operating expenses

Freight Rail implemented cost management strategies to mitigate the impact on its financials by optimising operational processes, reducing unnecessary expenses and streamlining its workforce.

Despite efforts to contain costs through austerity measures implemented during the period, operating costs increased by 6,1% to R28 billion (2022: R26,5 billion). Staff costs decreased by 9,2% to R12,4 billion (2022: R13,6 billion), mainly due to fewer staff being employed as a result of voluntary redundancies. Energy costs increased by 2.3% to R6,0 billion (2022: R5,9 billion) attributable to higher diesel prices partially offset by lower electricity cost due to continued power outages and load shedding. Other operating expenses recorded a 49,7% increase to R6,1 billion (2022: R4,0 billion), mainly due to the one-off cost of clearing the flood damage in KZN.

EBITDA and operating margins

EBITDA margin decreased to 19,3% (2022: 29,9%) due to lower revenue and increased costs during the year.

Transnet Freight Rail recognises the importance of addressing the underlying causes of underperformance to ensure sustainable growth. The Company has developed a comprehensive plan that includes the following key initiatives:

- Investment in locomotive maintenance and spare parts procurement to improve availability and reduce downtime;
- Strengthening security measures through implementation of an outcome-based security contract process and collaborating with law enforcement agencies to effectively combat theft and vandalism; and
- Increasing capital expenditure on infrastructure development and upgrading to enhance operational efficiency and capacity.

By implementing these initiatives, Freight Rail aims to regain its operational strength, enhance customer satisfaction and improve financial performance in the upcoming fiscal years.

Return on invested capital

Return on invested capital decreased to -2,5% (2022: 1,6%). This was mainly due to lower volumes and lower revenue performance during the period, as well as increase in operating expenses, which resulted in an operating loss of R3 698 million (2022: R2 476 million).

Asset turnover (excluding CWIP)

Asset turnover decreased to 0,24 times during the period (2022: 0,26 times), in line with the decrease in revenue, mostly related to non-productive assets.

Capacity creation

Table 2 : Freight Rail investment summary (CAPEX)

Category	Actual 2023 Rm	Actual 2022 Rm	Deviation
Infrastructure	**4 761**	2 932	(1 829)
Locomotives	**1 405**	1 760	(355)
Wagons	**2 883**	2 816	67
Total	**9 049**	7 499	(1 550)

Looking ahead

Despite the challenges experienced in the 2022/23FY, Freight Rail remains resilient and will continue to focus on the implementation of tactical initiatives to support its strategic focus areas, improve operational efficiency and bring about significant improvement in customer service.

At a Transnet level, the 2024 Freight Rail's Turnaround Strategy includes:

- Efforts to restore capacity and improve operations that include price re-basing and leasing out the Container Corridor;
- A sustained growth trajectory underpinned by innovation, cost control and profit growth;
- A business mandate with increased reliability and performance of rolling stock and infrastructure assets; and
- A positive brand equity that will enhance safety and lead to objective decision-making across the operational value chain.

Project	High level focus
Manganese Export Capacity Allocation (MECA III)	• Enable new entrants to meaningfully and sustainably participate in global manganese export markets as it lowers the cost of logistics from high road charges to rail.
Project	**High level focus**
OEMs confined tender for the repair of long-standing locomotives for Wabtec, Alstom and Mitsui	• Volume improvement for key commodities. • Securing the locomotives will also result in the use of diesel locomotives in high theft areas, to ensure continuation of service in areas where there are electricity shortages.
OEM long-standing locomotives (step-in OEM) open tender	• Will ensure 120 locomotives back in service for coal/chrome flows and some Arcelor Mittal South Africa volumes. • Will result in overall volume improvements and additional revenue for the fiscus.

Manganese	
East London Manganese	• In a historic move, Transnet will launch a new service to export manganese (Mn) ore through the Port of East London.
Mamathwane Loop extension	• Transnet will explore alternative channels for Mn exports to supplement capacity for the industry and will fast track the construction of key projects that form part of its long-term manganese expansion projects to release capacity in the short term.
Chrome and Magnetite	
Borderless trains to Maputo	• TFR and Portos e Caminhos de Ferro de Mozambique (CFM) implemented a new borderless train service that will result in improved regional integration and economic development.
Longer trains to Richards Bay and Maputo	• TFR embarked on rail renewal, extension of loops and re-signalling on the Selati line, which will increase magnetite and rock phosphate volumes by an additional 6,4mtpa.
Richards Bay Coal Terminal Export Coal	
Restore eroded infrastructure capacity	• Restored slot capacity previously eroded by deteriorated geo-technical conditions on the heavy haul export coal routes in collaboration with industry. • Restore slot capacity by reducing processing times of loaded trains in Ermelo yard by replacing the tubular track with conventional ballast line.
Containers	
ContainerCor	• TFR will increase the number of slots, from 15 to 42, between the Johannesburg and Durban line for movement of containers and automotive after the refurbishment post the floods and the replacement of the stolen overhead traction equipment cables in the Ladysmith area.
Iron Ore	
Iron ore	• TFR increase iron ore capacity via Saldanha by 4mtpa through re-routing iron ore emerging miner slots to higher axle loading sites.

Table 3: Freight Rail investment in capitalised maintenance

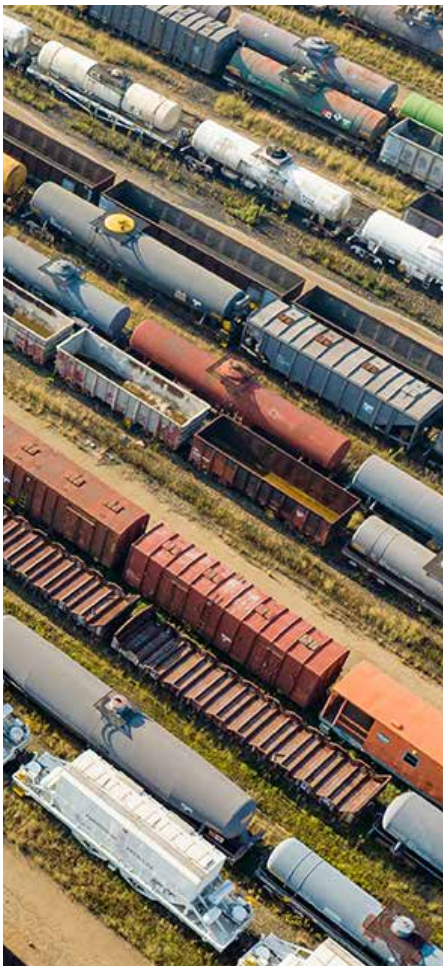
Category	Actual FY 2022 Rm	Actual FY 2023 Rm	Revised budget FY 2023 Rm	Original budget (corporate plan) FY 2023 Rm	(%) Deviation on revised budget	(%) Deviation on original budget
Infrastructure	2 923	**3 031**	**3 500**	**3 500**	(13)	(13)
Infrastructure – Durban floods	–	**1 730**	**2 040**	**–**	(15)	100
Locomotives	1 760	**1 405**	**1 576**	**1 800**	(11)	(22)
Wagons	2 816	**2 883**	**3 024**	**2 800**	(5)	3
Capitalised maintenance (locos, wagons and infrastructure)	7 499	**9 049**	**10 140**	**8 100**	(11)	12

Table 4: Network maintenance (including export coal, iron ore and general freight)

	KPI	Measure	Actual 2021	Actual 2022	Budget 2023	Actual 2023	Deviation (%)
Network reliability and efficiency	Km screened on the rail network	km	164	103,7	200	**160,6**	(19,7%)
	Number of turnouts replaced on the rail network	number	33	30	20	**18**	(10,0%)
	Number of sleepers installed on the rail network	number	284 442	144 918	100 000	**139 869**	39,9%
	Km of rail replaced on the rail network	km	42	102,08	180	**182,77**	1,5%

Looking ahead on the rail network

- The Ore line upgrade project resulted in the completion of two substations during the 2023FY and the remaining two substations are due for completion in 2025.
- The KwaZulu-Natal flood damaged infrastructure restoration work is ongoing into the new financial year and will provide the required lost slots capacity on the network.



Overview of operational KPIs

Table 5: Operational performance against KPIs

Key performance area and indicator	Unit of measure	Actual 2021	Actual 2022	Target 2023	Actual 2023	Target 2024
Operational excellence						
Asset utilisation						
General Freight business	Gtkm/Ntkm	1,4	1,35	**1,35**	1,33	1,35
Export coal	Gtkm/Ntkm	1,3	1,26	**1,26**	1,25	1,25
Export iron ore	Gtkm/Ntkm	1,2	1,21	**1,20**	1,20	1,20
Loco utilisation						
General Freight business	GTK'000/loco/month	3 702	3 446	**2 562**	2 962	4 023
Export coal	GTK'000/loco/month	17 052	14 161	**19 252**	14 220	22 503
Export iron ore	GTK'000/loco/month	42 209	42 735	**47 142**	38 235	38 002
Cycle time						
Export coal	Hours	69	70,83	**64,00**	88,24	75
Export iron ore	Hours	110	90,37	**88,00**	112,51	88,8
Export manganese	Hours	205	187,88	**127**	180,19	145
Wagon turnaround time						
General Freight business	Days	11	13,79	**9,91**	15,04	11,17
Density						
General freight	GTK/Routekm	3,5	3,22	**4,04**	2,90	3,55
Natcor	GTK/Routekm	5,4	4,40	**5,44**	2,41	2,87
Capecor	GTK/Routekm	3,7	3,64	**4,51**	3,89	4,43
Southcor	GTK/Routekm	4,8	4,90	**6,12**	5,69	6,12
Service delivery						
On-time departure (average deviation from scheduled times)						
General Freight business	Minutes	17	12,61	**108**	(6,64)	96,96
Export coal	Minutes	(47)	(43,06)	**29**	(32,48)	26,24
Export iron ore	Minutes	(40)	19,73	**41**	(38,93)	36,45
On-time arrivals (average deviation from scheduled times)						
General Freight business	Minutes	243	336	**121**	430,24	108,62
Export coal	Minutes	127	327	**58**	363,00	52,49
Export iron ore	Minutes	24	42	**135**	(9,57)	121,74
Rail network availability	%	86,63	84,47	**92**	90	92
Market segment competitiveness						
Volume and revenue growth						
Commodity classification						
General Freight business	Mt	63,37	60,05	**67,94**	49,58	60,68
Export coal	Mt	66,94	58,10	**74,21**	48,81	63,09
Export iron ore	Mt	52,97	54,50	**60,00**	51,10	60,00
Total volumes	**Mt**	183,29	172,65	**202,15**	149,49	183,77

Operational performance for the period ended 31 March 2023

General Freight business volumes declined by 17,44% to 49,6mt railed (2022: 60,1mt) and 26,9% below the target of 67,9mt because of the prevailing weak economic climate and various operational issues, including network, manning and resource challenges.

Extreme weather conditions in KwaZulu-Natal at the beginning of the financial year disrupted operations and impacted customers in the automotive, intermodal, cement, timber, grain and other general freight industries. The South Coast line will still be out of service for most of the 2023/2024FY as the major damage occurred on the PRASA-owned section of the line – Illovo Bridge.

The manganese business portfolio slightly exceeded the previous year's result and recorded an increase of 0,82% to 14,6mt (2022: 14,5mt).

This was offset by a decline in performance in other sectors such as intermodal wholesale, which declined by -47,57% to 2,8mt (2022: 5,4mt); Mineral Mining declined by 20,9% to 4,8mt (2022: 11,6mt), chrome, which decreased by 5,32% to 4,6mt (2022: 4,8mt) and domestic coal, which decreased by 29,09% to 3,2mt (2022: 4,5mt) and cement and lime decreased by 29,29% to 2,2mt (2022: 3,1mt), mainly due to the unavailability of products, equipment failures, extreme weather conditions, civil unrest that blocked train services and the impact of infrastructure-related crimes on the Freight Rail network.

Freight Rail transported 247,735 TEUs in the main corridors, compared to 419,017 TEUs in the previous year (2022) excluding Eskom containers. The number of cars transported was 13,752 units for imports and 49,644 units for exports compared to the previous year's results of 15,682 and 91,193 units respectively.

Operations excellence

Locomotive utilisation

Locomotive utilisation has fallen as a result of locomotives idling for extended periods due to contract disputes, derailments and vandalism during outages caused by cable theft.

Cycle times and wagon turnaround times

The increase in cycle time for export coal to 88 hours (2022: 70 hours) and the failure to meet the target (64 hours) is due to the high number of system disruptions due to theft and vandalism, a high number of speed restrictions and derailments on the network.

The cycle time for the iron ore line of 113 hours in 2023 (2022: 90 hours) reflects an increase from the previous year.

Turnaround times for freight wagons increased from 14 days in 2022 to 15 days in 2023 due to a higher number of speed restrictions on the network due to underinvestment and disruptions caused by cable theft and vandalism.

Density

The decrease in density is relative to the lower volumes transported in the period.

On-time departures (OTD) and on-time arrivals (OTA)

Delayed arrivals and train re-plans are mainly due to security incidents (theft), locomotive failures, power outages, derailments, speed restrictions and long section authorisation and where applicable (Maputo), customs processes.

Looking ahead

Freight Rail will improve its operational efficiency through:

- Implementing results-oriented security solutions, including the use of technology and improved information gathering;
- Focusing on resolving the 1 064 contract disputes with the OEMs;
- Prioritising the allocation of locomotives to economically viable flows due to the shortfall in availability to maximise the funds generated from the operation and financing of the network;
- Procurement of new locomotives to replace the current fleet, which has reached the end of its life cycle, in order to improve performance in key segments such as manganese;
- Negotiating and implementing MRSAs with OEMs to ensure fleet reliability and availability over a long-term period;
- Re-commissioning of long-standing locomotives to serve customer demand in key corridors;
- Ensuring that long-term contracts are put in place in a timely manner for the successful implementation of decommissioning, rail network and construction crews to be integrated into the corridors under rail network to improve maintenance execution; and
- Prioritising the limited Capex budget to ensure that network capacity is freed up by reducing speed restrictions and authorisations on key profitable routes.

Table 6: Overview of sustainable development outcomes against KPIs

Key performance area and indicator	Unit of measure	Actual 2021	Actual 2022	Target 2023	Actual 2023	Target 2024
Human capital						
Employment equity	%	90,60	92,80	**90,00**	93,20	92,00
Female employees	%	31,20	31,70	**34,50**	32,04	35,00
People with disabilities	%	2,90	2,78	**2,40**	2,73	3,00
Training spend	% of personnel cost	2,11	0,97	**0,97**	1,60	2,16
Employee turnover	%	3,40	7,78	**5,00**	3,04	5,00
Employee headcount	Permanent	25 616	23 465	**25 793**	22 993	24 360
Risk, safety and health						
Cost of risk	% of revenue	7	9,9	**6,2**	18,9	6,2
Disabling injury frequency rate	Rate	0,81	0,77	**0,88**	0,74	0,80
Safety incidents	Number	278	217	**191**	227	181
Derailments – Mainline	Number	88	70	**62**	78	62
Number of derailments – Shunting	Number	147	122	**107**	121	97

Sustainable developmental outcomes

Human capital (employment and transformation)

- Freight Rail ended the 2022/23FY with a permanent headcount of 22 993;
- Headcount reduced from 23 465 in 2021/22FY to 22 993 for the year under review. This reflects a 2% reduction when compared to the previous year and is largely attributable to embedding the new people management operating model and delayered structures, while prioritising the retention of critical workforce segments to drive the Freight Rail Strategy;
- The employee turnover rate during 2022/23FY was recorded at -3,04%. This is lower than the target of 5% and lower than the previous year. The high turnover in the previous financial year (2022: 7,78%) was mainly attributed by the Voluntary Severance Packages (VSP);
- Freight Rail sustained its employment equity performance, with Black employees representing 93,20% (target: 90%) of the total employee base – an improvement on the previous year's performance (2022: 92,80%);
- Total female employees represented 32,04% of the workforce, with the percentage of female employees at the Executive Committee Level remaining stable at 50% and people with disabilities represented 2,73% of the total employee base; and
- The training spend increased from the previous year, being recorded at 1,60% (2022: 0,97%), however, it remained below the target of 2,01%. Recovery plans are in place to address the training backlog, primarily due to the COVID-19 pandemic and the management reorganisation.

Number of engineers and technicians on the employment equity performance

Transnet Freight Rail continues to boast the continuing successes of the Transnet Academy in providing sector-specific training and development for employees and young professionals. Learning and development include internal and external training interventions, further studies and on-the-job training. Our moral and business imperative ensures that we continuously upskill, train and empower our employees as well as remain relevant to the communities within which we operate.

Table 7: Number of engineers and technicians on the Employment Equity Performance

Training area	Actual 2021/22FY	Target 2022/23FY	Actual 2022/23FY
P1 and P2 learners (work integrated learning)	179	**56**	56
Engineering bursars	60	**27**	27
Young professionals in training	156	**145**	142
Technicians in training	196	**133**	147
Engineers in training	147	**81**	120

Table 8: Youth employment and development strategy

Employment/development	Actual 2022	Target 2023	Actual 2023
Youth employed as % of total permanent employees	28,0	**24,50**	24,89
Youth developed as % of all employees trained	37,0	**76,19**	77,46

REINVENT FOR GROWTH

Risk, safety and health

Cost of risk

The cost of risk was 18,9% compared to 9,9% in the previous year. The target of 6,2% was not achieved.

Lost time injuries frequency rate (LTIFR)

Freight Rail achieved an LTIFR of 0,74 as in 2021/22FY, which is better than the global industry benchmark of 1,00 (an index below 1,00 is favourable). Performance was within the tolerance limit of 0,88 and a stretch tolerance of 0,75.

Number of safety-related incidents

The total number of rail safety-related incidents recorded in the Balanced Scorecard (BSC) decreased by 11% compared to the previous year, but was slightly below the tolerance limit of -12%. Train collisions decreased by 50%, shunting derailments decreased by 23%, Signal Passed at Danger (SPAD) remained the same, the downside was the running line derailments which increased by 9% with huge costs implications. The overall performance of the BSC is below the stretch tolerance limit of 182.

Railway safety incidents have declined linearly over the last three years. Improving performance depends on addressing the underlying problems related to theft and vandalism that reduces the capacity to conduct planned routine maintenance.

Number of mainline derailments

The number of mainline derailments increased by 9% from 78 in 2021/22FY to 85 in 2022/23FY. The performance is above the tolerance limit of 62. Mainline derailments were mainly caused by the poor condition of the tracks due to inadequate maintenance and lack of replacement components.

Number of shunting derailments

The number of derailments in shunting operations decreased by 23% from 122 in 2021/22FY to 93 in 2022/23FY. The performance is below the tolerance limit of 97. Most of the shunting derailments occurred at the points as a result of not complying with rules pertaining to operation of hand operated points and trains running through points that are not set for intended movement.

Train-on-train collisions

The number of train-on-train collisions decreased by 50% from six in 2021/22FY to three in 2022/23. The performance is below the tolerance limit of five. The train-on-train collisions were primarily caused by failure to adhere to verbal authorisation protocols, (such authorisations are brought about by theft of cables and inability to restore the service).

Signal passed at danger

The number of SPADs remained at 22 in both 2021/22FY and 2022/23FY, performing above the tolerance level of 18.

Further performance improvements will be achieved by continuing to focus on improved adherence to maintenance schedules, rail replacement programmes, repair of degraded infrastructure, use and deployment of technology to reduce derailments on the line.

KEY RISKS AND MITIGATING ACTIVITIES

Enterprise risk management ensures that Freight Rail identifies both strategic and operational risks and takes action to manage these risks and their impact, while identifying and exploiting inherent opportunities. The strategic risks identified during the year and the actions taken to mitigate them are shown in the table below.

The following strategic risks were identified in the reporting year with corresponding mitigation plans:

Key risks	Mitigating activities
1. Funding risk: Freight Rail's inability to sustain and expand its capital programme requirements due to funding constraints	• Re-prioritised capital allocation focused on key capital projects enabling volumes in line with affordability. • Continuous exploration of alternative funding model options through PSPs for identified programmes. (Sale and lease back of wagons, leasing options, terminal PSPs etc.). • Focused debtors' management and recovery from top 20 debtors, including recovery of PRASA debt. • Reviewing the pricing strategy and implementation of tariff reform/rebase process with customers. • Continuous engagements with development financing institutions for securing funding. • Reallocation of unspent budgeted Copex across Transnet to TFR for Infrastructure maintenance.
2. Rolling stock risk: Unavailability and unreliability of rolling stock (locomotives) to ensure safe, reliable and sustainable provision of services to business immediate and long-term requirements	• Delivery of 146 locomotives for the next four years from Alstom as per 1 064 locomotive contract. • Implementation of the material, reliability and support agreement with service providers to ensure supply of material and technical support for rolling stock maintenance. Initiation of procurement events to repair long standing locomotives.
3. Rail network infrastructure risk: Inability to provide a reliable and safe infrastructure for the passage of trains, threatening TFR's ability to achieve volumes and threatening its financial sustainability	• Continuous condition assessment of the infrastructure to prioritise planned maintenance intervention using technologies such as ultrasonic monitoring (UMC), infrared monitoring of rail (IMV). • Prioritising infrastructure renewal programs based on meticulous condition assessments and global benchmarks (i.e. replacement schedules for rails, sleepers, ballast screening, turnouts, overhead traction equipment components), particularly for the infrastructure supporting heavy haul operations and high density areas of the network.

KEY RISKS AND MITIGATING ACTIVITIES CONTINUED

Key risks	Mitigating activities
4. Security risk: Increased security incidences leading to TFR's inability to secure its assets and deliver a reliable service to Customers	• Implementation of outcome-based security contract. • Partner/collaborate with customers in respect of joint security interventions (coal, chrome, steel) and implement results-based contracting. • Continue to drive the reduction of security incidents across the country through the use of more targeted security solutions as part of the security improvement plan.
5. Procurement and contract management risk: Lack of a coordinated approach in the management of procurement processes impacting the effective delivery of services to business and poor procurement contract management	• Focused execution of key strategic commodities to secure long-term contracts aligned to the business demands and implementation of short-term contracts to close the gap while finalising the long-term contracts. • Established contract management office, ensuring continuous and effective rollout of contract management regime across the business, thus eliminating non-compliance • Continued implementation of the automated procurement process, eliminating influence within the process, with the advantage of recorded data/traceable events.
6. People risk: Poor working conditions, lack of conducive working environment and inadequate tools of trade resulting in fatigued workforce and inadequately skilled personnel	• Continuously improve poor working conditions, provide work equipment and work with the safety authority to address unsafe conditions within the workplace. • Partner and collaborate with various institutions to address skills gaps, fill critical vacancies, provide critical skills and continued development of feeder pipeline.
7. Information system risk: Outdated legacy systems and infrastructure resulting in inability to digitally transform TFR business and operations to achieve its objectives	• Continue to implement the Digital Transformation Programme to support critical business processes and enable a safe, secure, relevant and resilient infrastructure through the following strategic programmes: – Integrated Train Planning (ITP) – Rail Operations Asset Management (ROAM) – Commercial Systems – Enterprise information management, disaster recovery and cyber security – Artificial Intelligence Driven Analytics (AIDA) • Optimal use of the current asset management system, Maximo, to enable the business to effectively manage its assets
8. Rail reform risk: Failure to effectively implement the Rail Reform Policy within TFR due to lack of operational readiness.	• Continued implementation of an operational readiness plan that includes: – Separating TFR Accounts into Infrastructure Management and Rail Operations. – Determining and design of an appropriate organisational architecture and structure.
9. Revenue contract risk: Poor Contract Management leading to revenue leakage and inadequate billing management	• Establish a contract revenue management office at Corporate to oversee all contract-related matters for TFR and liaise with business. • Establish a process for implementing the assurance function to ensure compliance with the recording of contractual penalties and additional services to customers. • Partner with Information and Communication Technology (ICT) to digitise all commercial contract management processes and eliminate manual work.
10. Operational administrative approval processes risk: Operational administrative approval processes resulting in failure to implement programmes timeously	• Continued exploration of areas for improvement opportunities to facilitate timeous approvals relating to investment projects. This will enable the business to function optimally. • Review governance processes and Delegation of Authority in consultation with Group to promote expeditious decision-making, including decentralisation of decision-making powers. • Review critical business processes to align with the needs and requirements of the business through a gap analysis conducted by Business Improvement.

FREIGHT RAIL SUSTAINABILITY REPORT 2023

Freight Rail's operations traverse South Africa's complex environmental landscape and are characterised by sensitive environmental parameters. Driven by increasing South African environmental legislation and Freight Rail's sustainability requirements, the Operating Division continues to embrace environmental practices that drive the organisation to fulfil its due diligence in complying with legislation, discovering and implementing innovative solutions to minimise the overall impact on the environment while ensuring that all anticipated future impacts are identified, assessed and responded to appropriately.

During 2022/23FY, Freight Rail achieved the following sustainability objectives:

Asbestos land contamination

In the past, Freight Rail transported asbestos ore and asbestos-containing products from mines to various destinations (e.g., ports and local businesses). Spills of asbestos ore occurred along the main lines and in the marshalling yards, resulting in environmental contamination. This has also resulted in some asbestos fibres being buried beneath the surface of the ground.

Over the years, Freight Rail has appointed a number of competent asbestos abatement contractors to remove exposed asbestos found in operational areas as required. The division continues its efforts to continuously assess the risks of asbestos contamination of properties and develop remediation plans while seeking a more sustainable solution for the removal of all asbestos contamination.

During 2022/23FY, 9,52 tons of asbestos waste was removed from Kimberly Mid-Fieldview, Beaufort West and Eerstelangsfontein.

The asbestos removal and risk assessment are necessary to comply with, among others, the National Environmental Management: Waste Act, 59 of 2008 and the Asbestos Abatement Regulations, November 2020 established under the Occupational Health and Safety Act, 85 of 1993.

Hydrocarbon land contamination

Freight Rail has 47 Fuelling stations. Diesel spillages during the fuelling of locomotives has contaminated some filling station sites over time. All contaminated sites have been reported to the Department of Forests, Fisheries and the Environment (DFFE) in accordance with the requirements of the National Environmental Management: Waste Act, 59 of 2008. The DFFE received the site assessment reports to issue remediation orders.

In accordance with the requirements of the remediation orders issued for the sites, two contractors were appointed to carry out bioremediation at these refuelling locations.

Alien and invasive plant species control plans

All state organs in all spheres of government are required to prepare invasive species monitoring, control and eradication plans for the land they manage, in accordance with the terms of Section 76 of the National Environmental Management: Biodiversity Act, 10 of 2004 and the provisions included in the Alien and Invasive Species Regulations of 2014.

In order to comply with the above regulations, Freight Rail has identified alien and invasive plant species in its operational areas and submitted five-year control plans to DFFE for the eradication and control of listed invasive and alien species in accordance with Section 75 of the National Environmental Management: Biodiversity Act, 10 of 2004.

Freight Rail has to date eradicated approximately 1 309,1 hectares of alien and invasive plant species in 2022/23FY out of 5 171,56ha identified under the five-year control plan. The invasive plant species control target for 2023/24 is 2 618,2ha.

Air pollution

Freight Rail owns several sidings where materials containing dust such as coal, manganese, iron ore, etc. are handled. Air pollution is caused by the dispersion of dust particles that rise into the atmosphere. In addition, TFR has five diesel locomotive refuelling sites which have a combined storage capacity of more than one thousand cubic metres (1 000m^3). Emissions from these diesel storage tanks must be monitored monthly to comply with the National Environmental Management: Air Quality Act, 39 of 2004 (NEMAQA).

Freight Rail has appointed a contractor to conduct monthly dust and air monitoring at six multi-user facilities, namely: Rustenburg, Pendoring, Steelpoort, City Deep (Kaserne), Bloemcon and Newcon; and five refuelling sites (Millsite, Masons Mill, Wentworth, Ermelo and iNsezi Depots), respectively.

Monitoring of the multi-user facilities is required to comply with the National Dust Control Regulations (GN R827, published in Government Gazette 36974 of 1 November 2013), under the National Environmental Management: Air Quality Act, 39 of 2004 (NEMAQA). The National Dust Control Regulations prescribe the general measures to control dust throughout the country.

Ballast waste

Ballast refers to the specially crushed granite rock used to support the railway track. Large quantities of ballast waste are generated annually during track maintenance. Track maintenance involves the process of ballast screening, which is the removal of impurities (i.e., crushed ballast stones) from the rail lines to maintain the required ballast stone aggregate sizes.

On average, between 1 400m^3 and 1 600m^3 of new ballast is replaced per kilometre of track. About 40% of this is ballast waste and is removed from the track during ballast screening.

Ballast waste is defined as waste in the National Environmental Management: Waste Act, 59 of 2008, defined as waste and as such must be removed from operational areas for disposal at approved landfills.

TFR has appointed a contractor to conduct a risk assessment for the exclusion of ballast waste and submit the application to the DFFE to obtain a decision on the exclusion of ballast waste from the waste definition. The exclusion of ballast waste from the waste definition will allow TFR to use uncontaminated ballast waste for maintenance of service roads and stabilisation of railway embankments or to sell it to the construction industry for use in buildings and road construction.

Water consumption (kl)

Freight Rail receives most of its water supply from the municipalities. In the 2022/23FY, about 10 260 996 kl of water was consumed in the operational areas, compared to 9 425 727 kl in the previous year. This represents an increase in water consumption of 8,86%.

Despite the implementation of water conservation and management initiatives, the increase in water consumption can be partly attributed to the increase in operational activities as a large number of employees have returned to work after the end of COVID-19 lockdowns.

Freight Rail remains committed to raising awareness of the importance of freshwater resources and advocating for the sustainable management of these resources. The impact of these efforts will help reduce water waste within the company.

Energy use and carbon emissions

Electrical traction consumption – Total electric traction consumption for the year to date the 2022/2023FY as at end March 2023 decreased by 14,55% year-on-year, while volumes decreased by 14,1% resulting in a 0,3% improvement in efficiency performance above target. (Note: Gross Ton Kilometre (GTK) numbers are currently calculated from tons moved). Traction YTD electricity cost decreased by 5,0% against PY while the average price increased by 11,1% compared to the previous year.

Traction diesel fuel – Total traction diesel for 2022/2023FY as at end March 2023 decreased by 15,0% while diesel volumes decreased by 10,7%. This resulted in a 5,1% year-on-year improvement in fuel efficiency. (Note: GTK figures are currently estimated). Traction diesel fuel costs in 2022/2023FY as at end March 2023 increased by 26,6% against PY and the average price increased by 49,0% against PY.

Carbon emissions – Freight Rail's Scope 1 and 2 carbon emissions from rail freight for YTD January 2023 were 1 674 641 TonCO_2e.

Energy efficiency performance – Freight Rail has performed well against the targets set for the year (2022/2023FY). As shown in the table below:

	Measurement	Target on PY	YTD target	YTD performance	Energy efficiency gain on PY	Target achieved
TFR Traction Electrical	GTK/kWh	0,3%	68,5	67,3	(1,7%)	No
TFR Traction Diesel	GTK/litre	0,5%	284,2	296,7	4,4%	Yes

TABLE OF ACRONYMS

AMSA	Arcelor Mittal South Africa
BSC	Balanced Scorecard
COPEX	Capitalised Maintenance
COPEX	Capitalised Maintenance
CPI	Consumer Price Index
CRRC	CRRC Corporation
DFFE	Department of Forests, Fisheries and the Environment
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortisation
ERT	Economic Regulation of Transport
GTK	Gross Ton Kilometre
ICT	Information Communication Technology
IDC	Industrial Development Corporation
KPI	Key Performance Indicators
KZN	KwaZulu-Natal
LTIFR	Lost time injuries frequency rate
MRSA	Maintenance Reliability Service Agreement
OEM	Original equipment manufacturers
OTD	On-time Departures
PFMA	Public Finance Management Act
PRASA	Passenger Rail Agency of South Africa
PSP	Private sector participation
PY	Per year
RDP	Radio Distributed Power
SADC	Southern African Development Community
SARB	South African Reserve Bank
SARS	South African Revenue Services
SPAD	Signal Passed at Danger
TE	Transnet Engineering
TFR	Transnet Freight Rail
YTD	Year to date