ROAD & RAIL

SEPTEMBER 2020

Published by:

Creamer Media's
RESEARCH CHANNEL
AFRICA

Sponsored by:

ZEST
WEG Group

A REVIEW OF SOUTH AFRICA'S
ROAD & RAIL SECTOR

The material contained in this report was compiled by Chanel de Bruyn and the Research Unit of Creamer Media (Pty) Ltd, based in Johannesburg.

The information in this report is correct as of September 16, 2020.

Report edited by Sheila Barradas, David Shepherd and Ria Theron.

Ordering information
To subscribe to Research Channel Africa or purchase this report contact:
Creamer Media (Pty) Ltd
Tel +27 11 622 3744
Email subscriptions@creamermedia.co.za

Cover picture by Creamer Media

CONTENTS

ABBREVIATIONS AND ACRONYMS

ASJV	Aveng/Strabag joint venture
BCC	Bombela Concession Company
BRT	bus rapid transit
capex	capital expenditure
CNR	China North Rail
CSR	China South Rail
DoT	Department of Transport
ETC	Electronic Toll Collection
GFB	general freight business
GFIP	Gauteng Freeway Improvement Project
GMA	Gautrain Management Agency
GRRIN	Gauteng Rapid Rail Integrated Network
IRPTN	integrated rapid passenger transport network
ITP	integrated transport planning
Meca	manganese export capacity allocation
MTEF	Medium-Term Expenditure Framework
NDB	New Development Bank
N2WCR	N2 Wild Coast road
OEM	original-equipment manufacturer
Opex	operational expenditure
Outa	Organisation Undoing Tax Abuse
PRASA	Passenger Rail Agency of South Africa
PRASA CRES	Passenger Rail Agency of South Africa Corporate Real Estate Solutions
PRMG	provincial roads maintenance grant
RSR	Railway Safety Regulator
RTRP	Revised Taxi Recapitalisation Programme
Saboa	South African Bus Operators' Association
Sanral	South African National Roads Agency Limited
TAG	Transport Authority of Gauteng
TE	Transnet Engineering
TFR	Transnet Freight Rail
Trac	Trans African Concessions
TRP	Taxi Recapitalisation Programme
UNTU	United National Transport Union

KEY DEVELOPMENTS

June 2019: State-owned Transnet Freight Rail signs its ninth contract under the second phase of its manganese export capacity allocation programme.

July 2019: Transport Minister Fikile Mbalula announces that a governmental task team will be established to consider the future of electronic tolling on the Gauteng Freeway Improvement Project roads.

September 2019: The Brazil, Russia, India, China and South Africa, or Brics, trade bloc's New Development Bank extends a R7-billion loan to the South African National Roads Agency.

September 2019: South African parastatal responsible for the management, maintenance and development of the country's proclaimed national road network the South African National Roads Agency Limited (Sanral) applies to the National Treasury to allow for it to negotiate with other prequalified bidders to restart construction on the Mtentu megabridge contract, in the Eastern Cape.

October 2019: Transport Minister Fikile Mbalula says the minibus taxi industry is in support of the Revised Taxi Recapitalisation Programme and that thousands of applications have already been received for the scrapping of old taxis under the new programme.

October 2019: Transnet Freight Rail launches the world's longest train, at 4 km, for the transportation of manganese.

October 2019: Agency of the Gauteng Department of Roads and Transport the Gautrain Management Agency enables the use of contactless bank cards to pay for the Gautrain's rail, parking and bus fares.

November 2019: *Engineering News* reports that the South African National Roads Agency Limited plans to issue tenders for projects worth about R40-billion over a three-year period.

November 2019: The board of directors of Transnet decide to initiate a legal review of a locomotive procurement contract entered into between subsidiary Transnet Freight Rail and various original-equipment manufacturers.

December 2019: Transport Minister Fikile Mbalula dissolves the interim board of directors of the Passenger Rail Agency of South Africa and places the entity under administration for a 12-month period.

January 2020: The Bombela Concession Company issues tenders for the procurement of pre-owned trains to be sourced from the UK and for the local refurbishment of those trains.

January 2020: The Gauteng provincial government announces that Gautrain Management Agency COO William Dachs will succeed Jack van der Merwe as CEO of the entity.

March 2020: News organisation Moneyweb reports that the South African National Roads Agency Limited has extended the Electronic Tolling Collections' contract to manage e-tolls on the Gauteng Freeway Improvement Project to December 2020.

May 2020: Gautrain Management Agency CEO William Dachs says construction on the first phase of the Gautrain expansion is likely to start only at the end of 2024.

May 2020: The procurement of pre-owned trains from the UK is delayed as a result of restrictions imposed to curb the spread of Covid-19.

May 2020: Passenger Rail Agency of South Africa Administrator Bongisizwe Mpondo appoints CEOs for the Rail, Technical and Autopax divisions.

May 2020: Construction resumes on the Msikaba megabridge project, in the Eastern Cape, as construction companies are given permission to resume projects following the Covid-19-related national lockdown.

June 2020: Former Gauteng Management Agency CEO and Transport Authority of Gauteng head Jack van der Merwe says government has decided to financially support the taxi industry, but notes that details about the planned support still need to be clarified.

July 2020: Road concessionaire Trans African Concessions reports that the completion dates of some of its rehabilitation projects will be delayed as a result of the Covid-19-related national lockdown.

August 2020: Trade unions call on Transport Minister Fikile Mbalula to review his decision to appoint a new board for the Railway Safety Regulator without consulting labour, despite a standing resolution to include them.

INTRODUCTION

The billions of rands in investment already spent on South Africa's transport infrastructure, including roads, rail and public transport, in recent decades, needs to be substantially increased if the country is to deal with infrastructure backlogs and to cater for anticipated future growth.

The South African National Roads Agency Limited (Sanral) has various large-scale projects in the pipeline to expand existing roads and to develop new roads, as well as plans to invest in the maintenance of existing road infrastructure. However, as with all State-owned entities (SOEs), its financial resources are limited. The yet to be resolved issue of electronic tolling on some Gauteng highways also continues to weigh on its finances.

Notably, Sanral is also facing difficulties with the roll-out of new infrastructure as intimidation and violence by certain disgruntled community groups is contributing to delays in project execution.

Fellow SOE Transnet is also continuing to invest in scaling up its freight rail infrastructure as it seeks to move more rail-friendly cargo off the country's roads and back onto the railways. It has, however, had to re-strategise its investments from being focused on creating capacity ahead of demand to a focus on sustaining capital, as constrained demand for certain commodities has impacted on its operations.

It also continues to try to resolve issues pertaining to State capture and to recoup funds that were spent on locomotives as part of contracts that have since been found to have been irregular.

Meanwhile, in recent months, the Department of Transport and the Competition Commission have shone a spotlight on the state of South Africa's public transport. With the majority of people relying on public transport to travel to and from work and school, it plays a significant role in South Africa's economy; however, the cost of public transport, as well as its reliability and the safety of passengers remain areas of concern.

It is estimated that South Africans spend about 20% of their disposable income on public transport, which compares poorly with other developing countries, where citizens spend about 10% of their disposable income on public transport.

The Competition Commission initiated an inquiry in May 2017 into the country's public transport sector to determine if there were areas that were inhibiting competition and, thereby, contributing to higher costs for commuters. The commission released the findings of its Market Inquiry into Land-Based Public Passenger Transport for public comment in February 2020.

In its report, the commission states that an effective and efficient public transport system can contribute to job creation, improving efficiency across the economy and contribute to reducing transport-related emissions.

Transport Authority of Gauteng (TAG) head Jack van der Merwe, who previously managed the Gautrain, has urged government to focus on ensuring that reliable, safe and affordable public transport systems are available to commuters.

It is necessary to ensure that such services are available to the public to get more commuters to substitute their private vehicles with public transport, which could, in the long run, help to reduce transport-related emissions, particularly if more environment-friendly fuel sources are used to power the buses, trains and taxis.

Van der Merwe pointed out in an address at a Transport Forum event in December 2019 that Gauteng, South Africa's most populous province, could face significant road congestion if it does not urgently develop the necessary public transport systems. He stated that the average speed on the province's roads could decrease to 10 km/h by 2037, if projected traffic levels become a reality.

Among findings of the inquiry into competition in the public transport sector, the Competition Commission has determined that a lack of integration of South Africa's public transport systems is a significant area of concern. The commission attributes the lack of integration to fragmentation in the roles of the various spheres of government, as well as ineffective intergovernmental relations and that local government does not prioritise public transport.

To overcome this challenge, it has recommended that provincial transport authorities be established in each of the country's nine provinces to help improve coordination.

To deal with the lack of integration of the Gautrain and Metrorail services in Gauteng, specifically, the commission has also recommended the devolution of the Metrorail operations in the province, with the province to operate the Gautrain and Metrorail.

Further, given that Gauteng and the Western Cape are best prepared to operate commuter rail services at this stage, it has also recommended the devolution of Metrorail services in the Western Cape, with this too to be operated by the province in future.

Another area of concern highlighted by the commission is the fragmented public transport subsidy regime and the fact that minibus taxis are not subsidised, despite transporting the majority of people in South Africa. It has, therefore, recommended that the proposed provincial transport authorities be mandated to manage all transport-related subsidies and that the minibus taxi industry also receives subsidies.

TAG's Van der Merwe told *Engineering News* in July 2020 that government acknowledges the important role the taxi industry plays in the country and that it is, therefore, important for government to financially support the industry. However, how that will be done and where the funds will come from have yet to be finalised. He noted that, as a condition for receiving financial assistance from government, the industry will probably have to be formalised.

He further noted that government is considering progressing to subsidising the public transport user rather than the companies that provide public transport services, as is done in various other countries in the world. He said this would encourage competition, with the user to choose the most effective public transport service. He emphasised, however, that government would have to be careful to ensure that the user subsidy was not used as currency for other types of transactions. There would also have to be more than one choice of public transport.

The commission further found that the extension of subsidised bus service contracts, without having put the contracts out to tender, was contributing to the creation of monopolies in the commuter bus industry.

It has recommended that such contracts be put out to tender when new routes are identified and that the existing large operators be encouraged to empower smaller bus operators. The commission also recommended that at least 30% of contracts be awarded to small bus operators in future.

The commission also found the bus rapid transit or integrated rapid passenger transport network (BRT/IRPTN) operations to be inefficient, with a lack of high-density routes and low passenger volumes. It has recommended that the proposed provincial transport authorities review the BRT/IRPTN model to determine the sustainability of such services and how the minibus taxi industry can be integrated into those operations.

Meanwhile, in Gauteng, the TAG, which is to be responsible for coordinating transport planning in the province, started its work in April 2020.

Van der Merwe told attendees at a Transport Forum event in June 2020 that the entity was updating the Provincial Land Transport Framework and that it would, thereafter, develop a strategic transport plan.

ROAD INFRASTRUCTURE IN SOUTH AFRICA

SIZE AND STATE OF THE ROAD NETWORK

South Africa has about 750 000 km of roads, representing the tenth-longest network in the world. It has a replacement cost of about R2-trillion. Further, with 158 124 km of paved roads, the country also boasts the eighteenth-longest paved road network in the world, according to the Department of Transport (DoT).

The country's nine provinces are responsible for 273 621 km of road, of which 47 348 km is paved and 226 273 km is gravel. Eight large metropolitan municipalities are responsible for 66 143 km of roads, comprising 51 682 km of paved roads and 14 461 km of gravel road. Other municipalities are responsible for 256 914 km of roads, comprising 37 691 km of paved and 219 223 km of gravel roads. The overall network also includes 131 919 km of unproclaimed gravel roads.

According to the DoT, the South African National Roads Agency Limited (Sanral) is responsible for about 21 403 km of paved roads; however, Sanral points out in its 'Integrated Report 2019', published in September 2019, that the national road network under its management stood at 22 214 km as at March 31, 2019. While this accounts for only about 3.60% of the country's proclaimed network, these roads carry about 34.50% of all vehicle kilometres travelled and more than 70% of long-distance road freight.

Sanral further reports that about 15 304 km of the network under its management is now in a good condition.

Sanral has in recent years increasingly been given responsibility for certain provincial roads, which in many cases have poor surface conditions.

The DoT notes in its 'Strategic Plan 2019 – 2024' report that the insufficient budget allocation at provincial and municipal level has contributed to much of the country's road network being in a poor to very poor condition. The department estimates the maintenance backlog to be as high as R197-billion.

Further, it states that the provincial roads maintenance grant (PRMG), which is used to fund provincial road maintenance and preservation activities, has had mixed results. It points out that the provincial road network continues to age, that its deterioration is accelerating and that many roads are nearing the end of their life, resulting in the majority of the available funds being spent on expensive rehabilitation rather than preventive maintenance. The DoT states that good planning and strong asset management is essential and that it is important for provinces to allocate funding appropriately between rehabilitation and preventive maintenance.

It highlights, however, that many provinces lack the necessary resources – financially and in terms of institutional capacity – to achieve that balance. It emphasises that the PRMG remains an important source of funding for maintaining provincial roads and suggests that the grant be increased over time to ensure sufficient funding to undertake preventive maintenance, as well as decrease the backlog in road rehabilitation.

The department states in its strategic plan that it, Sanral and relevant provincial departments will collaborate on capital infrastructure programmes to improve the condition of those roads that are in a poor state, as well as to expand road infrastructure and consistently maintain the road network.

Sanral notes that: "Constant maintenance is critical to preserving the life span of roads and maximising the return on capital investment. Road maintenance is supported by active road management, which involves regular inspection of roads, bridges and slopes. It also involves the management and servicing of road users, with activities ranging from overload control to the sophisticated management systems offered on some of the country's busiest urban freeways, where information technology assists in incident response."

FUNDING

The development, upgrade, repair and maintenance of the majority (about 87%) of Sanral's road network is funded from a grant provided by the National Treasury, while the balance is funded from toll fees.

The National Treasury noted in its 2019 national budget, published in February 2019, that Sanral had received R5.44-billion in allocations for the 2018/19 financial year.

Treasury's 2020 national budget, published in February 2020, shows that Sanral had been allocated a further R5.60-billion for the 2019/20 financial year, with the expenditure estimates for the 2020/21, 2021/22 and 2022/23 financial years set at R6.90-billion, R7.62-billion and R7.24-billion.

Provincial roads maintenance grant expenditure programmes				
Programme	**2019/20**	**2020/21 projections**	**2021/22 projections**	**2022/23 projections**
Roads resealed (lane kilometres)	4 700	4 935	5 429	5 863
Surfaced roads rehabilitated (lane kilometres)	1 700	1 785	2 053	2 361
Blacktop patching on roads (square kilometres)	900 000	945 000	1.24-million	1.55-million

Source: Compiled from the National Treasury's 2020 national budget

Meanwhile, the agency notes in its 'Integrated Report 2019' that it invested about R3.32-billion on toll roads during the 2018/19 financial year, with R2.31-billion spent on maintenance and R1.01-billion on capital projects. A further R9.59-billion was spent on the agency's nontoll roads, with R4.06-billion spent on maintenance and R5.43-billion on capital projects.

It generated revenue of R9.98-billion from its nontoll portfolio during the 2019 financial year, ended March 31, 2019. This was 23% lower year-on-year after it transferred R5.75-billion to the toll portfolio.

Toll revenue from operations decreased by 18% year-on-year to R4.24-billion. The majority of the toll roads are managed by concessionaires that use the funds they collect from toll fees to maintain the roads they are responsible for.

Meanwhile, electronic toll (e-toll) revenue from the Gauteng Freeway Improvement Project (GFIP) decreased by 63% year-on-year. Sanral also received a R439-million grant from government to help cover the shortfall in e-toll payments by road users, who refuse to pay.

To help support Sanral, government has also issued guarantees to the agency for R37.91-billion, of which R29.50-billion had been used as at March 31, 2019. Sanral expects to have fully used government guarantees by March 2021 and, in May 2019, requested that it be increased to R48-billion.

Sanral notes that government has, on several occasions, provided funding to it to help address its liquidity issues, pending a decision on e-tolls by The Presidency. It expects government will continue to provide funding to Sanral over the coming years.

The agency has also been in discussions with international funding organisations, including the African Development Bank and the New Development Bank (NDB) established by the Brazil, Russia, India, China and South Africa, or Brics, group of countries. In September 2019, the NDB approved a R7-billion loan to the roads agency. News organisation Business Report, at the time, quoted Sanral as stating that the loan would help it to implement important upgrades to national roads, including bridges and intersections. Concerns, however, remain about the agency's liquidity in light of its ongoing struggles to collect e-toll revenues.

In terms of provincial roads, Treasury, in its 2020 national budget, allocated R36-billion for the PRMG for the medium-term expenditure framework (MTEF) period from 2020/21 to 2022/23. The PRMG funding will go towards resealing about 16 277 lane kilometres of road, the rehabilitation of 6 199 lane kilometres of road and blacktop patching of 3.70-million square kilometres of road.

TOLL ROADS

Three toll concessionaires – Trans Africa Concessions (Trac), the N3 Toll Concession (N3TC) and the Bakwena Platinum Corridor Concessionaire – manage large parts of Sanral's toll portfolio.

Trac manages the N4 eastward between Pretoria and Maputo, in Mozambique, under a concession due to end in 2028; N3TC manages the N3 between Cedara, in KwaZulu-Natal, and Heidelberg, in Gauteng, under a concession due to end in 2029; and Bakwena manages the N1 between Pretoria and Bela Bela, in Limpopo, and the N4 westwards from Pretoria to the Botswana border, under a concession that is due to end in 2031.

Sanral also directly manages toll roads on the 185 km of roads that comprise the GFIP, in Gauteng, as well as on sections of the N1 in the Western Cape, the Free State, Gauteng and Limpopo; a section of the R31 in the Free State; sections of the N2, in the Eastern Cape and KwaZulu-Natal; a short section of the N4 near Pretoria; the N17 between Gauteng and Mpumalanga; and the N1/N3 and the R21.

The toll portfolio generated an operating profit of R2.52-million for the financial year ended March 31, 2019. Income from toll operations increased by 56.10% year-on-year to R4.24-billion as a result of the transfer of R5.75-billion to the toll portfolio from the nontoll portfolio.

The collection of e-tolls on the GFIP, however, remains an area of concern. Since its implementation in 2013, a vast majority of road users have refused to pay e-tolls for using the GFIP roads, despite concessions by government to cap the monthly toll. Road users maintain that there was insufficient consultation before e-tolls were implemented. E-toll revenue for the 2018/19 financial year decreased by 63% to R687-million, from R1.87-billion in 2017/18.

Sanral also received R505-million from the National Treasury as part of an annual grant to help cover the shortfall in e-toll revenue. The agency stated in its 'Integrated Report 2019' that government had indicated its willingness to further support the GFIP until a more permanent solution was considered. To that end, Sanral has included a budgetary allocation of R2.53-billion for each of the 2019/20, 2020/21 and 2021/22 financial years that it expects to receive from government. The Finance Minister has, however, not approved these yet.

Amid the standoff between road users and Sanral about the payment of e-tolls, government has interceded to try to find a solution. In July 2019, Transport Minister Fikile Mbalula announced that a governmental task team had been established to produce a report on the future of e-tolls on the GFIP. The report was expected to be handed over to President Cyril Ramaphosa by August 2019, but by June 2020, the outcome of that process had yet to be announced to the public.

The delay in that process is resulting in challenges for Sanral in terms of its contract with Electronic Tolling Collections (ETC), which is owned by an Austrian company, Kapsch, which manages e-tolling on the GFIP. The contract with ETC had been due to come to an end at the end of 2018, but was subsequently extended by a year to December 2019.

News organisation Moneyweb reported in March 2020 that ETC's contract had again been extended to December 2020, while the roads agency finalises a tender for the management of e-tolling on the GFIP. According to the news report, Sanral, issued a tender in August 2019 for the management of e-tolls on the GFIP, but in March 2020 cancelled the tender as it had not been informed by government of a decision on the future of e-tolls. The report stated that Sanral planned to re-issue the tender

One year later and still no clarity on e-tolls, says Outa

Cabinet's failure to make a decision on a funding mechanism for Gauteng's freeways is affecting long-term road planning and allows for the South African National Roads Agency Limited (Sanral) to avoid responsibility for an incoherent electronic-toll (e-toll) collection strategy, the Organisation Undoing Tax Abuse (Outa) said in a statement in September 2020. Outa says that the Cabinet mandated a team more than a year ago, in July 2019, to find a solution to the failed e-toll system in Gauteng, promising a decision within two weeks.

"We're still waiting."

In early September 2020, Sanral CEO Skhumbuzo Macozoma confirmed that Gauteng's e-toll compliance rate before the Covid-19 pandemic was at 20%, collecting only R60-million a month.

"The Gauteng e-toll scheme is significantly different to Sanral's other boom-down toll-plaza collection mechanisms," Outa avers.

"In the first instance, Gauteng daily commuters were expected to pay for using urban roads, whereas the other toll schemes situated on national economic corridors are less intrusive on the cost of living for daily commuters.

"Secondly, if Sanral wants to introduce a drive-now-pay-later e-tolling scheme in any city, it needs to ensure that these systems are workable, efficient and promote the public's willingness to participate.

"Sanral got this horribly wrong and collapsed the system through its own mismanagement and poor leadership."

Outa has said that it does not object to privately funded road infrastructure projects, which are done on a build-operate-transfer basis with the State.

"This is precisely what is taking place on the long-distance economic corridors and these work because they are manageable through 100% [toll payment] compliance rates."

"To add to its woes, Sanral's overpayment at R18-billion for the Gauteng freeway upgrade was more than double the price that should have been paid," Outa notes.

"In addition to the overpriced construction costs, we uncovered that the e-toll collection contract increased without explanation by 61% after the tender was awarded and for years they [Sanral] misled the public on the e-toll compliance levels. This is no way to win the trust of the public.

"The Gauteng e-toll scheme would have generated almost 25% of Sanral's revenue from 1% of its road network, had it got its way with the Gauteng road users. This would have been a grossly unfair user-overpays scheme through which Gauteng residents would have been milked to fund other projects that its users were not using.

"The quicker Sanral and the State accept their folly on the e-toll decision and that it will forever remain unworkable, the sooner they may decide to pull the plug on the defunct scheme."

Source: *Engineering News*

in due course. The news organisation stated that the potential bidders were Kusa Kokutsha, Phambili joint venture and SAeTO. The Organisation Undoing Tax Abuse (Outa), which has been fighting against e-tolls since they were first implemented, has, however, questioned the business history of these entities and who the shareholders are.

Moneyweb in April 2020 also reported that, amid the South African lockdown to help curb the spread of Covid-19, Outa and the Automobile Association had called on government to announce the end of e-tolls on the GFIP, as very little funds could be flowing to Sanral through e-tolls when very few citizens were permitted to be on the country's roads.

According to the news report, Outa estimated that Sanral was paying ETC between R50-million and R60-million a month to manage the collection of e-tolls on the GFIP, while the income ETC would generate during the lockdown was uncertain.

ROAD PROJECTS

Despite the funding challenges, Sanral continues to invest in road construction projects, with just over R1-billion spent on capital projects during 2018/19. The key ongoing projects include construction of the N2 Wild Coast road (N2WCR), the R573 Moloto road and the De Beers Pass on the N3.

Engineering News reported in November 2019 that Sanral planned to issue tenders for about 915 projects, valued at about R40-billion, over a three-year period. The majority of the projects would be focused on preventive maintenance, but some would also involve the construction of new road infrastructure.

The publication further reported that various projects were out to tender as part of the development of the N3 between Pietermaritzburg and Durban and the N2 between the old Durban airport and the new King Shaka International Airport. The development work on these two routes is valued at about R15-billion.

Further, the article stated that on the N2WCR seven greenfield construction packages valued at about R9-billion would be put out to tender. This included the construction of the Msikaba and Mtentu megabridges, both of which have faced challenges. The R1.65-billion Mtentu bridge contract had initially been awarded to the Aveng/Strabag joint venture (ASJV), but the contract was terminated in February 2019 after the ASJV declared force majeure following continued violence on site since late 2018. The so-called 'construction mafia' – groups of people demanding a share of projects without investing in them and threatening to bring projects to a halt if their demands are not met – in late 2018 disrupted construction work on the project. Sanral tried to negotiate a settlement with the ASJV and the group that had disrupted the project, but the ASJV believed its employees would not be safe on site and declared the force majeure, eventually leading to the termination of the contract.

Engineering News reported in September 2019 that Sanral had applied to the National Treasury to allow for it to negotiate with the five other previously prequalified bidders for the project, to complete it. It said this would be the quickest way to get the project back on track. By November 2019, Sanral had yet to receive a response from the Treasury. If unable to receive Treasury's approval, it would have to put the project out to tender again, which would lengthen the tender process timeframe, *Engineering News* reported in November 2019.

Meanwhile, work has continued on the R1.65-billion construction of the Msikaba megabridge, which also forms part of the N2WCR. The contract for the bridge, which will be the longest cable-stayed bridge and the second-longest main-span bridge crossing ever built in Africa, was awarded to a joint venture between Concor and Mota-Engil Construction South Africa in September 2018.

Work on the project was temporarily suspended in late March 2020, when South Africa went into a lockdown to try to halt the spread of Covid-19. All construction work in the country came to a halt for several weeks. However, as restrictions began to ease and construction work was allowed to resume, work on the project resumed in May 2020.

Sanral still plans for the N2WCR to be a traditional tolled road that would not be managed by a concessionaire but by the roads agency itself.

The roads agency is also continuing discussions with various stakeholders regarding the development of the proposed De Beer's Pass project, on the N3. If the project goes ahead, it will relieve pressure on the existing Van Reenen's Pass and allow for trucks to travel at 80 km/h along the entire N3. The proposed De Beer's Pass will also be 15 km shorter than the current N3 route between Gauteng and Durban. In terms of discussions with concessionaire N3TC, Sanral anticipates N3TC will have to carry the cost of the De Beer's Pass. Plans to proceed with the project have, however, not been finalised.

Another significant project is the upgrade of the Moloto Corridor, which stretches from Gauteng to Mpumalanga and to Limpopo. The corridor is generally considered among the most dangerous in South Africa, with a high number of vehicle accidents occurring each year, often resulting in fatalities. Sanral will spend about R2.50-billion on various contracts along the corridor over the three-year period.

The R7-billion loan, granted to Sanral by the NDB in September 2019, will be used for Sanral's toll strengthening and improvement programme. *Engineering News* reported in November 2019 that the funds would be used to double the road capacity on some of its existing toll roads. This would include building new lanes on the toll roads that had reached their capacity, including the N3 between Pietermaritzburg and Durban; the N2 North Coast road; and the N1, near Winburg, in the Free State.

The roads agency is also prioritising maintenance of its existing toll roads. It plans to invest about R850-million on new asphalt overlays for the Gauteng e-toll network.

In Cape Town, Sanral is also considering plans to reduce congestion on key roads, including the possible addition of lanes on the N1 and the N2, as well as the proposed construction of a new stretch of road on the N2 through Somerset-West.

The roads agency affirmed its readiness in August 2020 to implement R30-billion worth of projects, with *Engineering News* quoting engineering executive Louw Kannemeyer as saying that Sanral had, in the 2020/21 financial year to date advertised 278 maintenance, operations and construction projects valued at about R30.20-billion. Of those advertised, Sanral had already awarded 136 projects valued at about R7.30-billion.

Kannemeyer said the agency was planning to roll out a further 200 road infrastructure projects across all provinces in the country.

Despite the progress made, the agency has also had to cancel and retender 12 projects valued at about R12.10-billion as a result of having received noncompliant bids.

Kannemeyer pointed out that noncompliant bids often resulted in delays in the awarding of tenders and said Sanral was engaging with entities like the National Treasury to discuss ways to streamline procurement processes.

Meanwhile, Trac reported in July 2020 that the Covid-19-related national lockdown, which had brought a temporary halt to all construction work in the country, would result in delays to various construction contracts on the N4, which Trac manages on behalf of Sanral.

Engineering News reported that, while contractors had made up for some of the time lost on the various road construction projects, some delays were inevitable.

The R380-million rehabilitation of the N4 between the OR Tambo International Airport and the Van Dyksdrift interchanges, being undertaken by Raubex Construction, was about 17% complete by July 2020.

The project was initially scheduled for completion in November 2021, but will now be completed only in March 2022.

Further, the R400-million upgrade of a 30 km section of the N4 between Belfast and Machado, being undertaken by Wilson Bayly Holmes-Ovcon, will now be completed only in May 2022.

In addition, the completion of the R340-million upgrade of a 15.50 km stretch of road on the N4 between Kaapmuiden and Kaalrug, being undertaken by Tau Pele Construction, has been delayed until February 2022.

FREIGHT TRANSPORT BY ROAD

About 77% of freight moved in South Africa is transported by road, despite the fact that much of the goods can be transported by rail.

Operational inefficiencies, as well as ageing infrastructure, in the rail sector have contributed to the large percentage of freight being transported by road, which raises transport costs and contributes to the deterioration of the country's roads.

Engineering News in January 2020 quoted business analyst Dr Lee-Anne Terblanche, who developed the country's first road freight decarbonisation framework, as stating that the transportation of road freight in South Africa emitted about 16.80-million tons of carbon dioxide a year.

Covid-19 impact

The International Road Transport Union reports that restrictions on movement related to the Covid-19 pandemic are likely to result in an 18% year-on-year decrease in the global road freight transport industry's turnover for the 2020 financial year. In Africa, excluding North Africa, the industry is expected to record an 11%, of about R124-billion, year-on-year decrease in revenue.

Source: *Engineering News*

Through her research, she determined that the country's road freight was inefficiently operated and that there is potential to significantly reduce emissions. By shifting the transportation of more goods onto the freight rail system, as opposed to transporting those goods by road, emissions could decrease by 7.50%, she said.

Terblanche pointed out that South Africa's road freight traffic was likely to continue increasing, with an estimated one-million freight vehicles to be driving on the country's roads by 2050.

As part of initiatives to help reduce transport congestion and emissions from the transport sector, the DoT in 2018 launched the Green Transport Strategy, which aims to ensure a 30% shift of freight transport from road to rail.

While some progress is slowly being made in the road-to-rail shift, that progress is slow and is unlikely to change in the near term, as rail inefficiencies remain of concern.

Gauteng Transport and Roads MEC Jacob Mamabola, meanwhile, believes Gauteng can significantly enhance the provincial economy by building that economy around its transport infrastructure. He told delegates at the inaugural Innovation in Transport seminar in October 2019 that the province had to ensure that all freight movement through the province was able to operate as effectively as possible and said the province had to improve road conditions, decrease congestion and decrease transport-related pollution and emissions.

He further suggested that the areas around the key transport corridors be developed into business nodes.

Meanwhile, transporting goods by road is not without risk. According to news publication Business Insider South Africa, truck hijackings cost the economy about R10-billion a year. It reported in February 2020 that, according to the Road Freight Association, the industry had reported more than 11 100 such incidents to the police over a ten-year period. Trucks are often hijacked for the goods they carry, but in some instances, also for the truck parts. These incidents result not only in the loss of the goods being transported or the trucks being stripped for parts, but can also become violent, putting truck drivers' lives at risk.

Meanwhile, truck drivers across South Africa embarked on a national shutdown in July 2020 in protest against the hiring of foreign nationals as drivers in the sector. The protestors expressed anger about the purported hiring of foreign nationals, while qualified South African drivers could not find employment. The shutdown resulted in some trucks being damaged and vandalised.

PASSENGER TRANSPORT BY ROAD

The minibus taxi industry

The minibus taxi industry remains the primary mode of transport for most South Africans. The Competition Commission states in a report on the findings of its Market Inquiry into Land-Based Public Passenger Transport that there are between 200 000 and 250 000 minibus taxis operating in South Africa. These vehicles travel about 19-billion kilometres a year and the industry is estimated to generate about R100-billion in revenue a year. Despite past efforts by government to formalise the industry, it has remained informal.

The roadworthiness of vehicles used to transport passengers and the overloading of minibus taxis remain concerns in terms of road safety.

Government implemented a Taxi Recapitalisation Programme (TRP) in 2006 to encourage taxi operators to scrap their unroadworthy vehicles in return for an allowance that could be used towards buying newer and safer vehicles. Former Transport Minister Dr Blade Nzimande announced the launch of a Revised Taxi Recapitalisation Programme (RTRP) in April 2019 to have the remaining 135 000 minibus taxis initially targeted for scrapping under the

AfDB loan

The African Development Bank (AfDB) in March 2020 signed an eight-year $100-million loan agreement with SA Taxi Development, which plans to use the funds to empower small and medium-sized enterprises in the minibus taxi industry, as well as to contribute toward the sustainability of the minibus taxi industry.

Source: *Engineering News*

Picture by Creamer Media Chief Photographer Donna Slater

Taxi being loaded to be scrapped under government's Taxi Recapitalisation Programme

TRP, scrapped. While most of the requirements set out in the initial TRP remain relevant under the RTRP, the scrapping allowance was increased to R124 000, compared with the R91 100 allowance previously granted.

The DoT appointed service provider Anthus Services 84 to manage the RTRP. Anthus, in turn, established Taxi Recapitalisation South Africa as the trading entity to implement the RTRP.

Engineering News reported in October 2019 that the department had received more than 2 000 applications for the scrapping of minibus taxis by September 30, 2019. This put the RTRP on track to reach its target of scrapping about 3 000 vehicles a year. New Transport Minister Fikile Mbalula at the time said the department's discussions with the taxi industry had been successful, with the industry said to be in support of the RTRP.

Another safety concern for commuters and the industry is conflict between rival taxi associations fighting over the rights to certain routes. The commission found that municipalities often do not have the capacity to undertake integrated transport planning (ITP), resulting in taxi operators or associations identifying their own routes and then applying for the rights to operate on those routes or illegally operating on those routes.

In instances where more than one association believes they have the rights over a certain route, conflict and violence can ensue, in some cases resulting in the death of taxi operators or even commuters.

The commission further points out that, owing to the lack of proper ITP, there is also sometimes conflict between minibus taxi operators and the operators of other modes of transport, such as buses, operating on the same routes.

Another area where the minibus taxi industry feels it is being disadvantaged is in terms of subsidies. Unlike other modes of public transport, the industry receives almost no subsidies from government. The commission has recommended that the industry receive subsidies through the increased funding of the TRP.

Fikile Mbalula backs "long overdue" subsidy for taxi industry

Transport Minister Fikile Mbalula announced in September 2020 that government plans to introduce a subsidy for the R50-billion taxi industry by April 2021.

Mbalula said that the subsidy was long overdue. "If you transport 15-million people per day, then that industry deserves a government scheme, like we do with other modes of transport," he said at the release of a set of discussion documents on the taxi industry ahead of the national taxi summit planned for the end of October 2020.

Mbalula did not say the form that the subsidy would take, emphasising that the process would be agreed on by all stakeholders during the lekgotla. It was also not elaborated on in the discussion papers. Mbalula said the documents did not represent any formal government position and were intended only to "stimulate debate and discussion".

A subsidy system would imply formalising the industry, which operators have resisted.

Taxi operators rejected government's R1.14-billion Covid-19 relief fund for the sector and the conditions attached to it in June 2020, which were aimed at formalising the sector. Among these were for taxi operations to be registered formally as businesses and have bank accounts into which the relief allowances would be paid, and that these businesses should be registered for income tax and other taxes pertaining to running a business.

The documents purportedly explore various models of empowerment, including a national company that could compete for government tenders, and a proposal for a national cooperative bank with branches in all provinces.

Source: BusinessLive

TAG head Jack van der Merwe told delegates participating in a virtual Transport Forum event in June 2020 that government had acknowledged the importance of minibus taxis to South Africa's economy and that the industry needed greater financial assistance. However, he noted that while a policy decision had been taken to financially assist the industry, details around how the industry will be assisted and where the funds to achieve that will come from, had yet to be determined. He pointed out that the industry would also be required to meet certain conditions in return for the financial support and that those conditions would probably include the need to formalise the industry.

Meanwhile, the minibus taxi industry in South Africa has also been negatively impacted on by the measures implemented to help stop the spread of Covid-19. Newspaper The Citizen reported in June 2020 that the industry was losing about R25-million a day as a result of lockdown restrictions.

At the start of the lockdown in late March 2020, only some taxi operators were able to operate to transport essential workers to their jobs. As more sectors of the economy have started opening, the industry has been allowed to increase the capacity of passengers it is allowed to carry. However, many drivers have suffered income losses and the industry was unsatisfied with the share of funds it was due to receive from government's overall R1.14-billion transport sector support package. This resulted in the industry embarking on strike action, particularly in large metropolitan areas, including Gauteng, leaving commuters stranded. Further, in late June 2020, taxi associations had called on the industry to disregard government's regulations and to operate taxis at full capacity, but some drivers were reluctant to participate. Following discussions with government, minibus taxis undertaking short trips were allowed, from mid-July 2020, to carry passengers to 100% of capacity, while those operating long-distance routes will be allowed to carry passengers to 75% capacity.

Taxi operators and drivers will, however, need to ensure that vehicles are regularly cleaned and sanitised and that all passengers wear the required face masks to help prevent the spread of Covid-19.

While government has been criticised by some for allowing the industry to transport more passengers at a time when Covid-19 infections were rising fast, Mbalula defended the decision in July 2020, stating that the industry would have collapsed if it was forced to continue operating at only 50% to 75% of capacity.

Many companies have been innovating to help in the fight against the spread of the virus and a company based in Cape Town, CanbiGold, in April 2020, told *Engineering News* that it had designed a conversion to the standard air ventilation system in vehicles to enable the dispersion of hypochlorous acid (HOCL), which it said could help in the fight against coronaviruses such as Covid-19. The company said HOCL was a disinfectant that had been proven to kill viruses and bacteria on general and hospital surfaces. The company had incorporated the air ventilation diffuser system using HOCL, as well as hand sanitiser and mask spray into the ViroGOLD Taxi Sanitiser Protocol, which it would initially market to the taxi industry, but potentially also, at a later stage, to other public transport system operators.

The commuter bus industry

The South African Bus Operators' Association (Saboa) estimates that there are about 25 000 buses and coaches operating in South Africa, with about 19 000 used for public transport purposes and the other 6 000 used for in-house purposes. It states that these buses travel about 1.40-billion kilometres a year, with public

Source: Creamer Media

The commuter bus industry is facing financial difficulties transport operators undertaking about 912-million passenger trips a year and employing about 34 200 people.

Commuter bus services provide scheduled services over short distances of about 100 km or less and these services are managed and subsidised by provinces, which also determine the fares for commuter bus services. Service providers include Putco, which is the biggest in the country and mainly operates in Gauteng and Mpumalanga; Golden Arrow Bus Service (GABS), which operates in the Western Cape; Algoa Bus Company, which operates in Nelson Mandela Bay, in the Eastern Cape; Great North Transport, which operates in Limpopo; Buscor, which operates in Mpumalanga; Interstate Bus Lines, which operates in the Free State; and Metro Group of Companies, which operates in KwaZulu-Natal.

The Competition Commission states that there are also small bus operators, most being part of the South African National Small Bus Operators Council, which operate subsidised or unsubsidised services.

It further points out that there are also service providers that are owned by some of the bigger cities and municipalities, including Metrobus, owned by the City of Johannesburg; Tshwane Bus Services, owned by the Tshwane municipality; People Mover, owned by the eThekwini municipality; and a service owned and operated by the Buffalo City municipality.

GABS CEO Francois Meyer points out in a news report published by *Engineering News* in October 2019 that the commuter bus industry is facing financial difficulties and that the subsidy paid to the MyCiTi bus-rapid transit (BRT) system was up to six times higher than what GABS received. Further adding to the commuter bus industry's financial struggles is that the allocation paid to the Western Cape Department of Transport and Public Works to contract out the provision of public transport services has not been keeping up with inflation, which in the transport sector is driven by higher personnel and fuel costs. He states in the news report that this has held back the expansion of the commuter bus sector.

Another concern is that there has been no progress on the creation of a new system for putting public transport contracts out to tender, with service providers still operating on interim contracts and month-to-month extensions of those contracts. Meyer noted that this made it difficult for the commuter bus industry to commit to long-term investments in the sector.

The commission, meanwhile, states in a report on the findings of its Market Inquiry into Land-Based Public Passenger Transport that the commuter bus subsidy system prevents competition between operators and prevents more small operators from entering the market and competing with existing operators. The report states that the extension of subsidy contracts in perpetuity has created monopolies on subsidised routes, while there is competition only at the contracting phase with municipalities and not on the bus routes. In turn, the lack of competition on subsidised bus routes has contributed to inefficiencies and the provision of poor quality service, the report states.

Homegrown hydrogen fuel cell bus

Hydrogen South Africa (HySA) has partnered with bus body builder Busmark, the Council for Scientific and Industrial Research and various South African universities and government departments on the local development of a hydrogen fuel cell bus. *Engineering News* reported in July 2019 that the parties were trial testing the hydrogen fuel cell bus and hoped to secure a supply contract with a local bus operator.

Source: *Engineering News*

Another challenge identified by the commission is that old routes, schedules and timetables have not been updated to meet the needs of commuters and that not all provinces are open to reviewing schedules and timetables.

Further, poor road conditions in rural areas make it difficult for buses to provide services, leaving commuters in those areas neglected by the larger services providers. The small bus operators are generally entering this part of the market.

The commission has recommended that the perpetual extension of subsidised bus contracts should not continue without proper tender processes being undertaken. It further recommends that, where tenders are opened to operators, contracts should be broken down into smaller contracts to enable the smaller operators to enter the market.

Coach operators, meanwhile, provide scheduled long-distance, but unsubsidised, bus services between cities or provinces. The biggest coach operators are Intercape, Translux, City to City, Greyhound, Citiliner, Eldo Coaches, Eagle Liner, Africa People Mover and Nozulu Enterprise.

The commission notes that interprovincial bus service providers have in recent years complained about how the Passenger Rail Agency of South Africa (PRASA), which owns the City to City and Translux brands, manages the bus terminal facilities used by the service providers through its Corporate Real Estate Solutions (CRES) subsidiary. PRASA CRES charges the service providers for using the terminal facilities, but Autopax, through which PRASA holds the City to City and Translux brands, does not have to pay these fees. The complaints included that Autopax was being given preferential treatment by being allocated exclusive loading and offloading bays at Johannesburg's Park Station, in Gauteng.

The commission states that its investigation has shown that PRASA was reluctant to demand payment from Autopax for bus access fees and that it had allocated a large exclusive area to Autopax at Park Station, albeit not the exclusive access to loading bays complained about by other service providers.

The commission has referred the complaints received from other service providers to the Competition Tribunal for determination.

The commission notes that PRASA's ownership of Autopax is problematic and that the rail agency tries to safeguard Autopax even where it is not economically justifiable. It notes that this protection of Autopax distorts competition between Autopax and the other service providers.

The commission has recommended that Autopax be separated from the PRASA group and that PRASA CRES be incorporated as an independent State-owned entity outside of the PRASA group to eliminate the conflict of interest.

PRASA, meanwhile, reported in its 'Corporate Plan 2021 – 2023' report that Autopax is on the brink of collapse, with only a quarter of its fleet of buses in operation, contributing to a significant loss in revenue. This has resulted in Autopax being able to cover less than 60% of its costs a month. Also of concern is that it has R173-million of historic debt to external suppliers outstanding, in addition to R963-million in internal debt.

PRASA has identified various opportunities to turn the business around but emphasises that this will all depend on it being able to increase the number of operational buses. PRASA has identified certain intercity routes that could benefit Autopax and it will lodge applications with the relevant authorities to operate on these routes.

Further, Autopax is already operating daily cross border bus trips between Gauteng and Maputo, Mozambique, and has acquired permits to also start operations between Gauteng and Lusaka, Zambia. It is further exploring potential opportunities to provide cross border services to Swaziland, Lesotho, Namibia, Botswana and Zimbabwe.

As more buses become operational, Autopax hopes to also take advantage of opportunities in the charter services market.

In addition to traditional municipal and long-distance passenger bus services, a number of cities have also started rolling out BRT systems.

These systems have been rolled out with varying degrees of success, with some faring better than others; but challenges remain. *Engineering News* reported in July 2018 that high capital costs and subsidies, along with low ridership figures, have contributed to questions about the viability of BRT systems in South Africa.

To date, 13 cities have started implementing or are planning to implement BRT or integrated rapid public transport network (IRPTN) systems. The most well-known of these are the Rea Vaya BRT system, in Johannesburg; the A Re Yeng BRT system, in Tshwane; the Harambee BRT system, in Ekurhuleni; the Go George IRPTN system, in the Western Cape; the Go Durban IRPTN system, in eThekwini; and the MyCiti BRT system, in Cape Town, in the Western Cape.

City of Cape Town Public Transport Operations acting director Gershwin Fortune in October 2019 told attendees at a Transport Forum event that achieving financial and fiscal sustainability for the MyCiti system had proved difficult. He encouraged developers of BRT and IRPTN systems to ensure they develop long-term financial plans for the systems and emphasised the importance of these systems being able to operate in dedicated lanes to ensure faster transit times.

He further identified the need to ensure there were skilled persons to continue with the maintenance of BRT and IRPTN systems once they had been implemented and the need to deal with service delivery protests, during which transport infrastructure is often damaged and vandalised, as priority areas for developers and operators.

Meanwhile, in its investigation into the public transport sector, the Competition Commission had determined that the majority of smaller cities had not undertaken feasibility studies or needs assessments to determine the need for BRT/IRPTN systems, which has, in some cases, resulted in a duplication of services, with multiple public transport providers set to operate on the same routes. It states that this has become apparent in Johannesburg, Tshwane and Cape Town and that it contributes to increasing under-recovery of revenue, resulting in higher subsidies; low ridership; and uneconomic infrastructure roll-out, besides others.

A lack of integration with other modes of public transport is also of concern. The commission believes BRT/IRPTN systems are not the most suitable model for South Africa's public transport needs and that a review of the model is needed.

Investment in BRT and IRPTN services, nevertheless, continues. The City of Johannesburg announced in July 2020 that it had allocated R800-million for the procurement of new buses for the Rea Vaya BRT system to ease demand pressure on the current fleet.

Meanwhile, the DoT has indicated that it has plans to take over the functioning of struggling IRPTNs in five out of six cities operating these systems. *Engineering News* in May 2020 quoted DoT director-general Alec Moemi as saying that the department intended to help cities get their IRPTNs that have stalled back on track, as well as to increase the average number of weekday trips from about 165 000 to 350 000.

RAIL INFRASTRUCTURE IN SOUTH AFRICA

South Africa's rail network comprises about 12 801 km of core lines, 7 278 km of branch lines, a narrow gauge urban network of 2 228 km and an 80 km standard gauge regional rapid transit network. State-owned Transnet subsidiary Transnet Freight Rail (TFR) operates the long-distance freight network, while the Passenger Rail Agency of South Africa (PRASA) provides long-distance rail services through its Shosholoza Meyl and Premier Classe operations, as well as urban commuter service through its Metrorail business.

The Gautrain Management Agency (GMA) operates the Gautrain rapid rail network in Gauteng.

In terms of freight, TFR has invested billions of rands in recent years on upgrading its infrastructure and acquiring new rolling stock, but that has not been without its challenges. Government and TFR also continue to strive to get more rail-friendly freight moved off the country's roads and onto rail, but that transition has been slow.

South Africa still uses the 1 067 mm narrow, or Cape, gauge, for its long-haul networks rather than the 1 435 mm standard gauge that is better suited to long-haul rail networks, which has been adopted in most parts of the world and is increasingly being built in the rest of Africa.

The country is, however, considering the future move to standard gauge, but this will, in all likelihood, require increased private-sector financing.

Engineering News quoted University of Pretoria master's student Christian Demmerez de Charmoy in July 2019 as having stated that the construction of a new standard gauge rail track alongside the existing narrow gauge rail track between Durban and Gauteng would greatly benefit this freight corridor.

Additional security

The Passenger Rail Agency of South Africa and the Department of Transport launched the multidisciplinary Ministerial Integrated Security Plan on September 16, 2020, which involves the employment and deployment of an additional 3 100 security personnel to monitor and protect rail infrastructure.

"The prevalence of crime in the rail environment has reached alarming levels," Transport Minister Fikile Mbalula said.

He added that, in some instances, daylight vandalism and theft of critical rail infrastructure had taken place with no law enforcement in sight. Theft included that of high-voltage cables and building materials from rail stations and rail lines.

Mbalula highlighted that the Ministerial Integrated Security Plan had been in operation since mid-August and had already recorded successes.

However, he added that there remained a lot of "rotten apples in the system, but equally . . . a lot of goodwill".

Source: *Engineering News*

De Charmoy told attendees at a Southern African Transport Conference that while it was cheaper to build a narrow gauge rail track, using standard gauge allows for a higher axle loading, the double stacking of containers and better economies of scale.

Meanwhile, in terms of passenger rail services, the Metrorail division, in particular, has an important role to play in keeping South Africa's economy moving; however, PRASA has been slow in modernising its ageing infrastructure, while vandalism and the misspending of funds has further undermined those efforts.

FREIGHT TRANSPORT BY RAIL

TFR operates South Africa's long-distance rail network, which includes heavy haul coal and iron-ore export lines. It also transports bulk, breakbulk and containerised freight.

To counteract the decades of underinvestment in South Africa's transport infrastructure, Transnet embarked on an investment drive across all its business units in 2012, including in TFR, to create capacity ahead of demand. In the seven years to March 31, 2019, it had invested R183.50-billion in capital expenditure (capex). This includes R17.90-billion in capex invested in the financial year ended March 31, 2019.

Following many years of significant investment, the State-owned entity has, however, been forced to revise its capex and infrastructure investment plans, which had been based on growing demand, globally and domestically.

The group noted in its 'Annual Report 2019', published in September 2019, that the global economy was struggling to recover, while trade protectionism and trade tensions among advanced economies were resulting in market volatility and negatively impacting on emerging and developing economies such as South Africa. It stated that slower-than-projected growth in China and the euro area was contributing to lower export demand and investment in sub-Saharan Africa.

Further, South Africa's weak economic growth was also negatively impacting on demand.

Transnet has, therefore, decided to shift its focus for the short to medium term to prioritise investment on sustaining capital, rather than capex, and where it does invest capex, to do so based on validated demand.

The group stated in its annual report that it would invest about R153.50-billion over the next five years, with R109.40-billion of the total investment to be spent on sustaining capital.

Meanwhile, among its most significant investments to date, has been the acquisition of new locomotives and rolling stock, particularly for the general freight business (GFB).

By March 31, 2019, TFR had spent R33.60-billion on its 1 064 locomotive contract, with 525 of those locomotives having been accepted into service.

TFR announced in 2015 that the multibillion-rand contract, which involved the supply of 599 electric and 465 diesel locomotives, would be divided among four original-equipment manufacturers (OEMs) – GE, China North Rail (CNR), China South Rail (CSR) and Bombardier Transportation. The transactions, and the dealings with CSR in particular, have since attracted scrutiny over allegations of State capture. Transnet appointed law firm Werksmans Attorneys in July 2017 to investigate the allegations. The firm had found that certain procurement processes had not been followed as needed and TFR in September 2019 said it was in talks with the OEMs about possible settlements.

In November 2019, Transnet acting CEO Mohammed Mahomedy announced that the State-owned group's board had agreed to initiate a legal review of the 1 064 contract, which he said had been declared unlawful. He noted that Transnet would be

Transnet signals intent to support domestic manufacture of rail despite global tender

State-owned freight logistics group Transnet has indicated its intention to support the localisation of rail manufacture, but is simultaneously proceeding with a global tender for the supply of 60 kg a metre of head hardened rail, which enables interoperability of rolling stock and ensures that maintenance is optimised. Transnet has said that it is an interim solution for meeting its continuous replacement requirements.

The group, which operates and maintains more than 30 000 km of track infrastructure, issued a request for information (RFI) in July 2020 pertaining to the local manufacture and supply of rail and reported in late August 2020 that it would begin assessing responses, received on August 4, by the end of that month.

The objective of the RFI was to assess the domestic market’s capability and capacity to manufacture rail according to South Africa’s standard specification and lengths, as well as to determine the timelines and investments required to meet Transnet’s projected yearly demand of about 77 000 t.

Transnet is undertaking the rail localisation drive in collaboration with the Department of Public Enterprises and the Department of Trade, Industry and Competition (DTIC), which has identified localisation as one of its key industrialisation priorities.

The DTIC has already designated rail for procurement from local suppliers. Transnet has indicated, however, that there is currently no local manufacturer. “Hence, Transnet has issued an RFI to assess interest and capacity for local manufacturing of rails.”

In the interim, it will have to secure an exemption from the DTIC to source rail from abroad.

Trade, Industry and Competition Minister Ebrahim Patel said in his July 2020 Budget Vote that “strategic localisation” should be a major domestic policy goal, along with the greater use of locally manufactured inputs of steel.

Transnet has said that the localisation of rail manufacturing could have various benefits, including job creation, local economic development, as well as enterprise and supplier development.

Nevertheless, Transnet issued a global request for proposals (RFP) on July 13 for a two-year rail supply contract, arguing that the two-year period was the minimum lead-time required for a brownfield rail manufacturing investment.

“This will ensure security of supply of rails, and enable Transnet to meet its maintenance schedule and ensure that the rail system is kept safe and reliable,” the company said.

The volume being sought through the RFP is 2 019 km of rail, which will be deployed nationally.

Source: *Engineering News*

seeking legal recourse through the courts and that it and the OEMs would need to present the court with a settlement suggestion.

News publication TimesLive reported in December 2019 that legal representatives of Transnet had served CRRC-E Loco, an entity established through the merger of CSR and CNR, with an order to halt manufacturing of locomotives at its plant in Koedoespoort, Pretoria, pending the outcome of the review application. CRRC-E Loco had told the publication that it had already delivered about 480 locomotives to TFR.

Meanwhile, during the 2019 financial year, TFR had accepted 393 wagons, built by Transnet Engineering (TE), into operation. It invested about R607-million in these wagons, which forms part of a collaboration between TFR and TE for the manufacture of 318 wagons for the iron-ore line and 169 wagons for the GFB.

With regard to its operational and financial performance, subdued customer demand and operational issues resulted in a 4.90% year-on-year decrease in volumes railed to 215.10-million tonnes in the financial year ended March 31, 2019, compared with the 226.30-million tonnes railed in the prior financial year. This contributed to a 0.30% year-on-year decrease in revenue to R43.60-billion, compared with the revenue of R43.70-billion earned in the 2018 financial year.

TFR's performance, however, improved somewhat in the interim period ended September 30, 2019, with volumes railed having increased from 109.20-million tonnes in the six months to September 30, 2018, to 109.30-million for the six months ended September 30, 2019.

Revenues for the interim period also increased by 3.50% to R22.80-billion, compared with R22-billion in the prior comparable period.

Meanwhile, TFR announced in July 2020 that it would introduce a new decentralised operating model, effective August 1, 2020, to improve efficiencies for customers and to ensure a more responsive freight rail network. As a result, it has created six corridors – the North Corridor based in Richards Bay, the Natal Corridor based in Durban, the Cape Corridor 1 based in Saldanha, the Cape Corridor 2 based in Kimberley or Port Elizabeth, the North-East Corridor based in Nelspruit and the Central Corridor based in Pretoria – each with their own localised decision-making structures.

The coal export line

TFR's coal line is used to transport coal from mines in the Waterberg, in Limpopo, and the Highveld region of Mpumalanga, to the Richards Bay Coal Terminal (RBCT), in KwaZulu-Natal, for export.

Coal volumes decreased by 6.50% year-on-year to 72-million tonnes in the 2019 financial year, compared with 77-million tonnes in the 2018 financial year, as a result of low demand, power failures, cable theft, derailments and community unrest.

For the six months ended September 2019, coal volumes increased by 0.60% year-on-year to 35.90-million tonnes, compared with 35.70-million tonnes in the six months ended September 30, 2018, as a result of improved efficiencies and fewer train cancellations.

The iron-ore export line

TFR's 861 km heavy-haul rail line between Sishen, in the Northern Cape, and Saldanha Bay, in the Western Cape, is used to transport iron-ore for export.

Extreme weather conditions, operational incidents and main line speed restrictions contributed to a 0.20% decrease in volumes transported to 58.40-million in the 2019 financial year, compared with the 58.50-million tonnes transported the year before.

For the six months ended September 30, 2019, iron-ore volumes increased by 3% to 31-million tonnes, compared with 30.10-million tonnes in the prior interim period, as a result of increased demand.

Transnet reported in November 2019 that it, in collaboration with the private sector, had improved loading facilities during the interim period ended September 30, 2019, which had contributed to the growth of emerging iron-ore miners.

The manganese export line

TFR is developing its manganese export corridor into its third heavy-haul rail line and it had spent R4-billion on the project by the end of March 31, 2019. TFR expects the country's manganese exports to increase to 16-million tonnes by 2024.

During the financial year, it increased the manganese volumes transported by rail to 14-million tonnes, a 2.20% increase on the 13.70-million tonnes transported the year before.

In the interim period to September 30, 2019, manganese volumes transported by rail increased by 7% to 7.60-million tonnes, compared with the 7.10-million tonnes transported in the prior comparable period. TFR attributed this to increased capacity creation initiatives

As part of these initiatives, TFR set a world record in October 2019 for the longest train, when it transported about 24 000 t of manganese on a 4-km-long train with 375 wagons – 125 of which were carrying manganese. The manganese was transported along the iron-ore rail line.

TFR has, in recent years, concluded contracts with various manganese producers under its manganese export capacity allocation (Meca) programme, which is now in its second phase – Meca 2 – which will run until 2023.

TFR and United Manganese of Kalahari (UMK) signed an R8.50-billion contract in June 2019 as part of Meca 2 for the transport of two-million to three-million tonnes a year of manganese from UMK's operations in the Northern Cape to six export channels.

This was followed by the signing of the tenth and final contract, with Kalagadi Manganese, in September 2019. The contract is valued at R3-billion. Kalagadi Manganese is, however, facing the prospect of being placed under business rescue. Development finance institution, the Industrial Development Corporation of South Africa (IDC), in April 2020 approached the Johannesburg High Court to institute business rescue proceedings against Kalagadi, stating that the business needed to be restructured and a moratorium placed on its debts and liabilities. The IDC said that although Kalagadi was trading, it was in financial distress and unable to service R3-billion in debt to the IDC and R2.90-billion to the African Development Bank.

The Johannesburg High Court, however, in May 2020, struck the IDC's application off the role, stating that the matter was not urgent. It recommended that the parties approach the commercial court for a hearing. Kalagadi welcomed the judgment, saying it provided more time for the parties to continue discussing the restructuring of the business.

The IDC in June 2020 pointed out that the court had not deliberated on the merits of the case and only on the urgency of the matter. At the time, it was planning to pursue the matter further in the court system.

The general freight business

TFR's GFB includes the transport of coal, iron-ore and manganese for the domestic market, as well as the transport of containerised cargo, iron and steel, fertilisers, cement, bulk liquids and automotive products, besides others.

During the financial year ended May 31, 2019, general freight volumes decreased by 6.70% to 84.70-million tonnes, compared with 90.80-million tonnes in the prior financial year, as a result of the weak economic conditions and some operational challenges.

Volumes again decreased in the interim period to September 30, 2019, to 42.20-million tonnes, compared with 43.40-million tonnes in the six months ended September 30, 2018, as a result of the continued weak economic conditions.

PASSENGER TRANSPORT BY RAIL

Passenger Rail Agency of South Africa

PRASA provides commuter rail services in South Africa through its rail division, which operates Metrorail in Gauteng, Cape Town, eThekwini, Port Elizabeth and East London, as well as the long-distance Shosholoza Meyl and Premier Classe that transport commuters between various cities in the country.

The Department of Transport (DoT) states in its Strategic Plan for 2020/21 – 2024/25, published in March 2020, that PRASA's operational and financial performance is in steep decline and that its poor service delivery had resulted in a 60% decrease in paying passengers for Metrorail. The department noted that this was the result of fewer trains being operated, worsening reliability, commuters defecting to other modes of transport and fare evasion.

Further, it said there had been a 90% decrease in long-distance rail passengers.

PRASA notes in its 'Corporate Plan 2021 – 2023' that Metrorail's train trips had decreased from 1.20-million in the 2009/10 financial year to an estimated 505 000 train trips in 2019/20, while its patronage had decreased from 634-million to an estimated 147-million over the same timeframe.

In addition, its long-haul trains have decreased from 6 604 in 2009/10 to about 1 155 in 2019/20, while passengers had decreased from three-million to about 276 400.

The agency concedes that its operational performance has been deteriorating, while revenue has been declining and costs rising. Other areas of concern are the vulnerability of its assets and infrastructure, with vandalism, theft and arson continuing; threats to the safety of passengers and staff; and increased fare evasion.

Covid-19 impact

State-owned Transnet said in May 2020 that measures implemented in South Africa to help curb the spread of the Covid-19 pandemic had impacted negatively on many of its operations, but that some divisions had already started recovering.

By the third week of May, the group's Transnet Freight Rail division was already operating at 87% capacity, compared with 34% at the start of a five-week hard lockdown during which only essential services were allowed to operate.

CEO Portia Derby said all operations were expected to ramp up fully by January 2021. She, however, warned that the group's revenue for the 2021 financial year could decrease by as much as R14-billion as a result of lockdown measures implemented.

Meanwhile, Transnet announced in May that the Transnet Foundation had converted two of its healthcare trains – Phelophepa I and II – into mobile Covid-19 testing stations. The Phelophepa trains have been used since 1994 to provide medical services to underserviced areas across the country and each train has permanent staff of 22 healthcare professionals. Taking into account the Covid-19 healthcare challenge, the trains will this year have dedicated doctors and nurses, with specialist training in Covid-19 testing, on board.

Source: *Engineering News*

The rail agency further notes that ongoing changes to its board of directors in recent years contributed to the challenges it is facing. It points out that there have been two different boards overseeing the entity in the 2016/17 financial year and that that was followed in the 2017/18 financial year by four different boards.

A new interim board had been appointed for 12 months in April 2018 and had its term extended twice to September 2019. Following a review by the DoT and the Government Technical Advisory Centre, Transport Minister Fikile Mbalula decided in December 2019 to dissolve the interim board and place PRASA under administration for 12 months. Bongisizwe Mpondo was appointed as administrator.

In February 2020, he appointed a panel of technical advisers to help him deal with the challenges over the 12-month period.

This was followed, in May 2020, by the appointment of a new executive management team for PRASA. Former Bombela Operating Company CEO Nosipho Damasane was appointed CEO of PRASA Rail; Hishaam Emeran CEO of PRASA Technical; and Neil Roesch CEO of Autopax.

PRASA states that, to provide reliable service to commuters, it needs to have a certain number of train sets in the correct 12-coach configuration, as well as reliable infrastructure to safely transport commuters.

By December 2019, PRASA had only 91 train sets available for service, representing 34% of the 273 train sets it needs.

PRASA states that 67 train sets can be recovered if the procurement of critical maintenance components is able to proceed, but notes that this has been problematic as a result of procurement issues. Two interventions are under way to try to overcome the component maintenance issue. PRASA says it is recovering 951 mission critical components, valued at about R580-million, from various service providers, while it has also received approval from the National Treasury for a R539-million deviation to release 4 548 components from various PRASA depots for repair. These actions are expected to help the agency reduce the number of coaches that are out of service.

PRASA plans to enter into long-term supply contracts for various maintenance components and services to avoid future stock-outs. It states that a tender process to identify a suitable service provider for this general overhaul programme will be completed by the end of the 2020/21 financial year.

In addition to measures to maintain existing rolling stock, PRASA is also procuring new rolling stock and undertaking other modernisation programmes to improve its service delivery.

Security measures

With escalating criminal activity threatening its assets, the Passenger Rail Agency of South Africa's (PRASA's) Business Intelligence Unit continues to work with law enforcement agencies, including the South African Police Service, on continuous surveillance and the monitoring of scrap dealerships near Metrorail operations. In July 2020, these measures contributed to the Metrorail Gauteng Protection Services recovering R1.30-million of feeder wire stolen from PRASA.

Meanwhile, PRASA CEO Nosipho Damasane told *Engineering News* in September 2020 that while Covid-19 had given the rail agency the opportunity to "stop and think" about its service offering and the way forward for the rail entity, it had also left the door open for severe vandalism of its assets during the national lockdown.

"Vandalism at PRASA is a national challenge," he said.

According to Damasane, Transport Minister Fikile Mbalula is engaging with all government departments involved in the security of State assets.

Internally, the agency has insourced its security function to regain ownership of this arm of its operations.

About 3 100 new security officers in various categories have been appointed and are now active at the agency.

"We are buying vehicles and we are going the route of electronic guarding.

"All of this we are rolling out on time, every day, as we have no other option . . . and to make sure that we don't [re]start operations without security.

"Our strategy is one where our biggest investment is in security, followed by infrastructure and followed by operations to service our clients – in that order," Damasane explains.

Source: *Engineering News*

Rail modernisation programme

PRASA's R172-billion, ten-year rail modernisation programme includes a rolling stock fleet renewal programme, perway improvements, a signalling programme, depot modernisation and station modernisation activities.

The rolling stock fleet renewal programme, which will entail the procurement of about 7 224 new coaches, will be rolled out over a 20-year period and at a projected cost of about R123.50-billion.

In the first phase, PRASA had awarded a R59-billion contract to the Gibela Rail Transport Consortium, which includes French multinational Alstom, Umbumbano Rail and New Africa Rail, to manufacture about 3 600 new coaches, or about 600 new train sets, for Metrorail. The first 20 of the X'trapolis Mega train sets were manufactured at Alstom's factory, in Brazil, while the remainder are being manufactured at a new plant built in Dunnotar, in Gauteng, at a cost of R1-billion.

Gibela produced 13 trainsets in 2019/20 and CEO Hector Danisa confirmed in August 2020 that the company was on track to produce about 20 trainsets in 2020/21.

As at March 2020, Gibela had produced 33 of 600 trains. The company will ramp up to full production of 62 train sets a year over the next three years. Danisa told *Engineering News* in January 2020 that there had, however, been some challenges with the local production of the train sets. He noted, for instance, that the car-body shells had taken longer than expected to produce; that settings for the automated car-body shell assembly line had posed some difficulties; and that there had been a bottleneck in the area where the car-body parts were being "married".

Gibela is, meanwhile, also concerned about the potential impact of ongoing vandalism of PRASA's assets. Gibela will have to maintain the trains it delivers to PRASA until 2035. Danisa said that while spare parts were included in the maintenance contract, vandalism and arson were not.

PRASA continues to seek a solution for the shortage of locomotives for its long-haul passenger services. While it has, in recent months, been leasing locomotives on short-term contracts, it states in its 'Corporate Plan 2021 – 2023' that it will, in the medium term, put in place a three-year contract for 18 locomotives, with 12 to be used for normal services and six during the peak periods of April, June/July and December.

It is, however, still dealing with the aftermath of a previous contract to acquire locomotives for the long-haul passenger service after those trains ended up being too tall to operate on portions of South Africa's rail network.

In 2013, PRASA signed a R3.50-billion contract with Swifambo Rail Leasing for the supply of 70 new Afro 4000 locomotives – 50 diesel and 20 hybrid – manufactured by Spanish firm Vossloh España. After the issue of the height of the locomotives came to light, Swifambo delivered only 13 of the 70 locomotives in return for R2.60-billion. PRASA has, however, tried to recoup the money and, in September 2019, the locomotives were put up for auction. Seven locomotives were sold, with the other six having gone up for auction. According to WH Auctioneers' website, bids for the six locomotives will be open until December 1, 2020.

News publication City Press reported in September 2019 that Swifambo had been ordered by the courts to repay the R2.60-billion to PRASA but that its management had argued that the company had been a front during the tender process, that it did not own the locomotives and that Vossloh should repay the funds to PRASA. To ensure the safety of commuters and to improve the rail system performance, PRASA is improving certain depots to accommodate the maintenance requirements of the new trains.

The Wolmerton, Braamfontein and Benrose depots in Gauteng; the Paarden Eiland and Salt River depots in the Western Cape; the Spring Field and Durban Yard in KwaZulu-Natal; and the Port Elizabeth and East London depots, in the Eastern Cape, have been chosen for upgrades as part of the depot modernisation plans.

PRASA states that the depot modernisation will provide maintenance teams with the necessary equipment and facilities to improve throughput and to reduce the time needed to return a train to commercial service. Work at the Wolmerton and Paarden Eiland depots is expected to be completed by 2023.

Meanwhile, signalling infrastructure is essential in avoiding manual authorisations of train movements, which can, in some instances, result in safety incidents. PRASA is therefore, investing significantly in this infrastructure.

In Gauteng, the construction of the Gauteng Nerve Centre (GNC) has been completed and it is operational. PRASA reported that, by March 2020, 85% of the signalling for the province had been completed, with 54 out of 88 stations commissioned and ready to be migrated to the GNC. The full migration is scheduled for completion by November 2021.

In the Western Cape, PRASA is establishing the Western Cape Central Control Centre. By March 2020, overall signalling in the province was 87.43% complete. In KwaZulu-Natal, PRASA is setting up Durban Central Traffic Control, with the overall signalling project in the province at 73%.

In terms of securing its assets, PRASA announced in July 2020 that it would be recruiting 3 100 new static and trains guards, operations monitoring controllers and armed response guards to help protect its rail infrastructure and assets. This includes protecting its trains from being vandalised, as well as preventing the theft of overhead electricity cables that are needed to keep

Gibela has spent R6bn on local procurement since 2014

Train manufacturer Gibela has since 2014 spent R6.40-billion on local procurement, including establishing its Nigel-based manufacturing facility, in Gauteng, in 2016.

Of this, R4.60-billion of procurement spend went to 370 black-owned companies. Of that, R1-billion went to small- and medium-sized enterprises.

According to the company's social-impact report, Gibela is revitalising the South African rail sector by developing local train manufacturing capability and upskilling employees.

The local content spend of R6.40-billion, or 44% local content achievement, is in line with Gibela's contractual commitment with the Passenger Rail Agency of South Africa and involves locally produced components such as cables, interiors, metallics and subsystems.

Further, Gibela has contributed 1.25% towards total economic activity within Gauteng's construction sector and 0.89% within Gauteng's manufacturing sector.

To uplift local communities, Gibela has invested R30-million into maths and science teaching programmes, early childhood development and agricultural schemes.

The agricultural upliftment projects have created 25 permanent jobs and 71 temporary jobs.

The company has also helped to add more than 8 200 jobs to the economy, including 1 631 direct jobs, 2 810 indirect jobs and 3 738 induced jobs.

Through its manufacturing and commercial service to date, Gibela has helped to add more than 5 000 jobs to the economy, including through 913 direct jobs, 1 659 indirect jobs and 2 607 induced jobs.

The company has, throughout its construction, manufacturing and commercial service stages, contributed more than R10-billion to government revenue through taxes and broader fiscal impacts, while the company has added R8-billion to South African gross domestic product (GDP) so far.

The company would have added 11 117 jobs to South Africa's economy by its servicing end in 2035, as well as R48-billion to South Africa's GDP, R61-billion to government revenue and paid R6-billion in salaries and wages.

Source: *Engineering News*

the trains moving. PRASA said the hiring of additional security was also aimed at providing sustainable employment for persons living in communities near its rail network.

Gautrain

The 82-km-long Gautrain rapid rail service connects Tshwane, Johannesburg and Ekurhuleni, in Gauteng. The system is operated by the Bombela Concession Company (BCC) and is managed by the Gautrain Management Agency (GMA). It comprises ten railway stations and operates an additional bus service to transport rail passengers to areas surrounding its railway stations.

During the financial year ended March 31, 2019, the Gautrain recorded a 7% year-on-year decrease in rail passenger trips and a 17.10% year-on-year decrease in bus passenger trips. The GMA attributed the decreases in passenger trips to lengthy strikes by bus drivers in May 2018 and by operator staff in July and August 2018, as well as slow economic growth.

The decrease in passenger trips, however, has a significant financial implication. The GMA, which is an entity of the Gauteng provincial government, is obligated to pay the BCC a guaranteed patronage fee should actual revenue earned be below the minimum required total revenue agreed to in the concession agreement between the GMA and the BCC. In the 2019 financial year, the guaranteed patronage fee paid by GMA to the BCC increased to R1.67-billion, from the R1.57-billion paid in the 2018 financial year.

Although it is the global norm for governments to subsidise public transport systems, the guaranteed patronage fee payable for the Gautrain service has been a contentious issue since it started operating, given that it is able only to provide a service to limited areas within the province and that it is largely considered not to be available to the poor.

The GMA noted in its 'Annual Report 2019', published in August 2019, that it had identified opportunities to help it achieve the desired growth in revenue and user numbers, as well as to increase the size of the system.

The first opportunity would be to expand the system through acquiring pre-owned additional rolling stock, additional signalling and track work and a larger depot for maintenance, as well as creating additional parking and implementing modernised fare collection systems.


GMA CEO William Dachs

New CEO

Gauteng Public Transport and Roads Infrastructure MEC Jacob Mamabolo announced in January 2020 that Gautrain Management Agency (GMA) COO William Dachs had been appointed to succeed CEO Jack van der Merwe. Van der Merwe retired, effective February 29, 2020. He, however, remains interim CEO of the Gauteng Transport Authority, which is mandated to coordinate the planning and integration of all public transport operations in the province.

Prior to stepping down as GMA CEO, Van der Merwe reflected on some of his experiences during the 20 years he headed up the project – from starting, to building and running the project. In a February 2020 interview with *Engineering News*, he said it was important to appoint people with the right skills, rather than those with connections, to get a big infrastructure project like the Gautrain built. He also emphasised the importance of countries investing in infrastructure, stating that it creates a ripple effect. To that end, he emphasised the importance of proceeding with the proposed extension of the Gautrain, noting that public transport could help to reduce congestion and pollution and also contribute towards driving better service delivery from public transport system operators.

Source: *Engineering News*

As part of these plans, the GMA in October 2019 implemented the functionality for passengers to use contactless bank cards to pay for their Gautrain rail, parking and bus fares.

As a result, Gautrain users can now pay these fees using the dedicated Gautrain cards, their tap-and-go-enabled credit, debit or

Gautrain passenger trips			
Service type	**2018/19**	**2017/18**	**Difference (%)**
Rail	13.97-million	15.02-million	–7%
Bus	3.98-million	4.80-million	–17.10%

Source: Compiled from Gautrain Management Agency Annual Report 2019 cheque cards or their DoT-issued cards for use on the A Re Yeng, Rea Vaya and MyCiTi bus-rapid transit systems.

With regard to the acquisition of additional rolling stock, the BCC in January 2020 issued a tender for the procurement of five to seven pre-owned trains from the UK for use on the Gautrain system. A second tender was also issued for the local refurbishment of the pre-owned trains when they arrive in South Africa.

Engineering News in January 2020 quoted new GMA CEO William Dachs, who succeeded Jack van der Merwe, as stating that offers were expected to be received by the end of February. He noted that the BCC had found it difficult to locally procure the new trains, as it was uneconomical to produce such a low volume of rolling stock. The BCC had, therefore, decided to buy second-hand trains from the UK, where rail operators were refleeting and, thus, had a number of trains available.

He explained that the specifications of the Gautrain were similar to those of UK rail systems and that the local refurbishment would be of higher value than if new trains were bought. The new trains, which the GMA plans to have operational by 2022 or 2023, would help to ease the congestion on trains during peak hours.

News publication Moneyweb reported in May 2020 that the planned procurement of these trains would be delayed as a

Added value

A study on the socioeconomic impact of the Gautrain, compiled by consulting engineering firm Hatch and published in July 2019, found that the rapid-rail system adds about R6.40-billion a year to the province's economy. It also found that use of the rail system saved commuters a significant amount of time, compared with using their private vehicles for travel.

Further, the study revealed that commercial floor space surrounding the ten Gautrain stations had increased by about 1.60-million square metres since 2010 and that the median sales value per square metre of office space in areas surrounding the stations had increased by about 45% since 2010, compared with the 22% increase of other office buildings in Gauteng. The value of retail space surrounding the stations had increased by 32%, compared with a contraction of 10% in other areas, while the value of residential space surrounding the stations had increased by 52%, compared with 34% in other areas.

Hatch determined that further investment in the system, including through the proposed expansion, would further increase the socioeconomic benefits of the Gautrain system. The study stated that the proposed expansion, which it expected would cost about R110-billion, would add about R5-billion a year to Gauteng's gross domestic product (GDP) during construction and R12.44-billion a year to the province's GDP when operational.

Source: *Engineering News*

Gautrain

result of restrictions implemented to curb the spread of Covid-19. Dachs told the publication that the procurement process for the trains would potentially be completed only in October 2020. While the trains had initially been expected to arrive in South Africa in December 2020, that date may be extended as a result of the Covid-19-related restrictions.

The GMA is aiming to increase the Gautrain's ridership by 2.50% a year, but expects this will be difficult, owing to the country's low economic growth. There is also concern about the impact traffic is having on the Gautrain buses and the time it takes passengers to get to their destination as a result.

Dachs has suggested that the implementation of priority bus lanes could help to overcome this problem, as would the addition of more midi-buses, rather than the large buses being used.

Meanwhile, the second opportunity is the proposed extension of the rail system. A feasibility study has been completed for the Gauteng Rapid Rail Integrated Network (GRRIN) extensions. The GRRIN is expected to be built in five phases over a 30- to 40-year timeframe. It will add about 156 km of rail network and 19 stations to the existing Gautrain network. *Engineering News* reported in July 2019 that the GRRIN is expected to create about 211 000 jobs, while about R79-billion will be spent on local procurement.

The proposed extension, however, remains subject to approval by the National Treasury.

However, Moneyweb reported in May 2020 that the GMA expected construction on the first phase of the expansion to start only towards the end of 2024 and be completed in 2029.

The publication also reported that the GMA was aiming for private-sector funding for the extension to contribute 33% of the project cost, compared with 12% for the existing Gautrain development, but cautioned that this might be a difficult target to reach as a result of the impact of Covid-19 on the South African economy and the private sector.

There are also concerns about whether the domestic construction industry will have the skills and resources to execute the proposed expansion. The construction industry has already been decimated by years of underinvestment in infrastructure and other challenges and is now facing further difficulties as a result of the lockdown implemented to prevent the spread of Covid-19.

As the third opportunity to enhance its revenue-generation, the GMA had, during the 2019 financial year completed the roll-out of information and communication technology connectivity in the Gautrain tunnels, as well as established car rental kiosks and touch screen advertising on train platforms.

Preparing for the future

New Gautrain CEO William Dachs has urged the passenger rail industry to prepare for the future. During a July 2020 webinar to discuss the immediate challenges facing the commuter rail sector amid the Covid-19 pandemic, he said it was important for the sector to ensure it positions itself as a safer, more advanced and functional mode of public transport. He said it was also important for the sector to regain the trust of passengers.

Source: *Engineering News*

Engineering News reported in July 2019 that the GMA was also considering ways of generating nonfare revenue from the rise in property values around future Gautrain stations. The value of properties surrounding the train stations tends to be higher than in other areas as a result of easier access to the stations. The GMA explained, at the time, that, by taxing a portion of the increase in the value of adjacent properties, transit systems could raise funds to help cover developmental costs, as well as operating costs.

Meanwhile, the Gautrain operations were halted in late March 2020, when South Africa entered a Level 5 lockdown to ready the country's health system for the predicted surge in Covid-19 cases. As the lockdown restrictions were eased from early May 2020, the Gautrain resumed operations, except for the airport service, which remained suspended. Trains were allowed to operate between 05:30 and 09:30 and between 15:00 to 19:00 and to operate at a 40% load factor. Gautrain buses were allowed to operate at a 30% load factor.

Towards mid-May 2020, the GMA announced that its operational hours would be extended from 05:30 to 19:00.

In line with health and safety regulations set out by government, all passengers and Gautrain staff had to wear a face mask at all times, while also maintaining physical distancing protocols. All stations, trains and buses would be cleaned and disinfected at intervals throughout the day.

In addition to hand sanitisers made available to passengers and staff, the BCC also acquired disinfecting spray booths for use at the entrance to each of its stations.

The GMA also announced in May 2020 that it would delay its yearly fee increases, which are usually implemented in June, to later in the year when there was greater clarity about when the lockdown regulations in the country would be lifted entirely.

Further, in light of the economic difficulties facing the country, the GMA had also implemented free parking at its stations for all rail users to make its service more affordable.

RAIL SAFETY

The rail industry's safety performance remains of concern. The Railway Safety Regulator's (RSR's) 2018/19 'State of Safety' report, published in October 2019, showed that the number of operational occurrences had decreased by 11% to 3 990 in 2018/19 (2017/18: 4 478).

The biggest number of operational occurrences involved collisions during the movement of rolling stock, at 873 (2017/18: 1 027); fires, at 700 (2017/18: 745); platform-train interchange occurrences, at 624 (2017/18: 744); people struck by trains, at 519 (2017/18: 588); and derailments, at 370 (2017/18: 450).

Although the number of occurrences in each category were lower year-on-year, these figures remain high.

Further, the number of security-related incidents increased by 20% to 9 268 in 2018/19 (2017/18: 7 737). The biggest contributor was the theft of assets, at 6 291 (2017/18: 4 984). This was followed by vandalism, at 1 810 (2017/18: 1 717).

The Western Cape, in particular, has been badly impacted on in terms of vandalism, with the Passenger Rail Agency of South Africa (PRASA) regularly reporting on the impact of such actions not only on its financial performance, but also on its ability to provide a safe and reliable transport system for passengers.

Operational occurrences contributed to 375 fatalities in 2018/19, a 17% year-on-year decrease, but the number of fatalities as a result of security-related incidents increased by 36% year-on-year to 30.

Labour union, the United National Transport Union (UNTU), had throughout 2019 and early 2020 continued to criticise the RSR and PRASA for not doing enough to ensure the safety of those employed in the rail industry, as well as passengers using PRASA's services. The RSR had, in late 2018, already threatened to revoke PRASA's safety operating permit after a number of incidents, but the agency was eventually allowed to continue operating.

However, in February 2020, a collision between one of PRASA's Premier Classe trains and a Transnet goods train in Johannesburg, claimed the life of one passenger and resulted in the injury of four others. UNTU stated at the time that the collision could have been prevented had the RSR not chosen to extend a temporary safety permit to PRASA two weeks prior.

Days later, following the conclusion of a preliminary investigation into the incident, the RSR issued PRASA with a prohibition directive, ordering it to immediately halt all Shosholoza Meyl operations. The preliminary investigation had determined that the PRASA and Transnet trains were being manually authorised at the time of the collision and that the PRASA train had been travelling at 60 km/h at the time of impact – double the 30 km/h it is allowed to travel at during times of manual authorisation.

Unions demand labour representation on new railway regulator's board

In August 2020, Trade unions called on Transport Minister Fikile Mbalula to reconsider his decision to appoint a new board for the Railway Safety Regulator (RSR) without labour representation, despite a standing resolution to include them.

The unions said this decision would make it difficult for workers to hold the board accountable.

The RSR — which has been censured for making a mockery of railway safety — is South Africa's railway industry watchdog mandated to oversee railway safety operations through support, monitoring and enforcement.

The new board includes chairperson Boy Johannes Nobunga, deputy chairperson Yongama Pamla, Sisa Lunga Mtwa, Advocate Nokuzola Gloria Khumalo, Nompumelelo Ekeke, Dineo Mathibedi, Salome Chiloane-Nwabueze, Advocate Frans Johannes van der Westhuizen, and Advocate Johannes Collen Weapond.

However, general secretary of the Federation of Unions of SA (Fedusa), Riefdah Ajam, said the new board was in contravention of a standing resolution signed between the RSR board and the transport ministry three years ago.

The resolution permitted Fedusa and its counterpart Cosatu to have representatives on the board "as direct stakeholders", Ajam said.

Labour representation on the board has helped to bring attention to rail infrastructure, adherence to health and safety protocols, and identifying "challenges on track", among others.

Cosatu national spokesperson Sizwe Pamla said the decision to exclude labour was a "flagrant contravention" of the 2018 agreement signed by the parties.

Pamla called on government to address "this crisis" and ensure labour representatives were appointed to the board with immediate effect.

Mbalula's spokesperson Ayanda Allie-Paine responded at the time that the Department of Transport was finalising the board of the railway safety regulator, would include a representative of organised labour, as had always been the case with previous boards.

Source: BusinessLive

OUTLOOK

South Africa's already strained public funds are now under even more pressure as government has to invest money not only in ensuring there is sufficient capacity in the healthcare sector to treat Covid-19 patients but it also has to invest in an economic recovery plan following the significant impact on the economy, as well as on businesses' and people's livelihoods, of lockdown measures implemented to help curb the spread of the virus.

Public funding for infrastructure will become scarcer than it has already been and this may result in some projects potentially being postponed to a later date. Spending on infrastructure will also be under increased scrutiny to ensure funds are being invested wisely, which is an area some of the State-owned companies involved in the transport sector have struggled with in the past.

In the meantime, various public transport operators are finding it difficult to remain sustainable after having been unable to operate and earn revenues in the early stages of the lockdown, while also having to finance the increased costs of implementing measures to prevent the further spread of Covid-19 among commuters.

The world is also considering how the virus has changed things and what various sectors will look like after the fight against the pandemic has been won. There are, thus, also questions about the future of public transport, not only in South Africa, but also in the rest of the world.

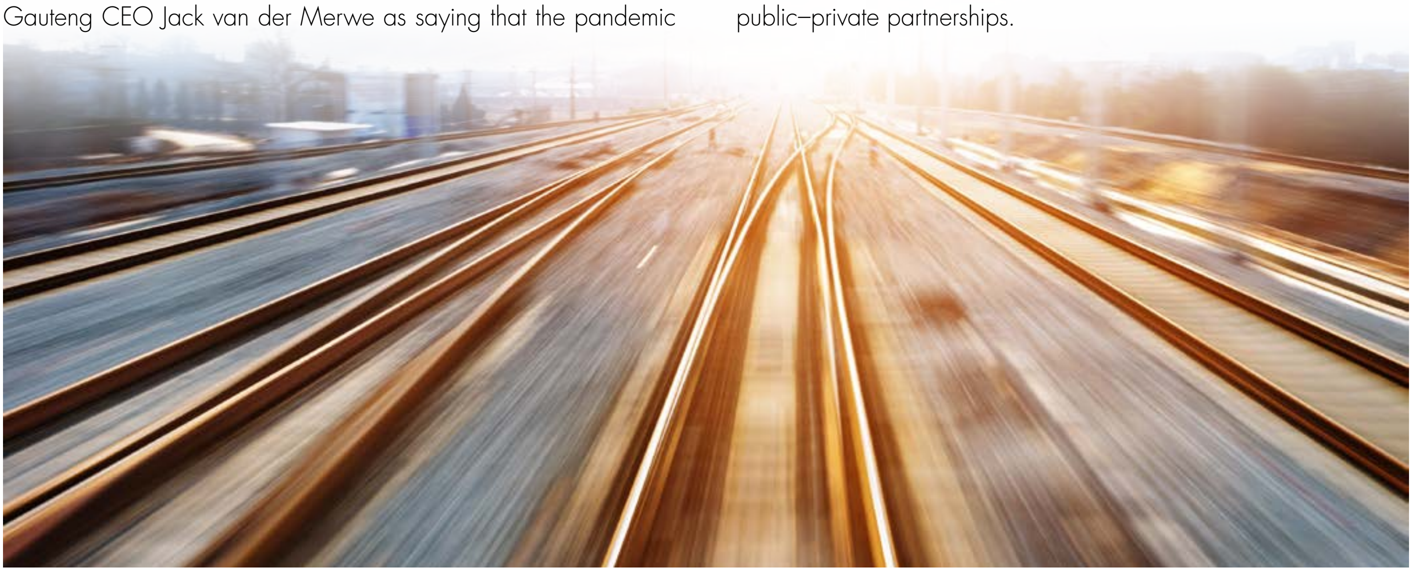
Engineering News in August 2020 quoted Transport Authority of Gauteng CEO Jack van der Merwe as saying that the pandemic may be the "most abrupt shock" to the global economy in recent times and that it is likely to have a lasting impact on the transport sector. The increased costs of measures to help prevent the spread of infections may impact on transport operators for years to come.

Further, he noted that, with the fear of contracting infections on crowded buses, trains or taxis, many people may opt to rather use their personal vehicles or to walk to where they need to go. There is also potential for the work-from-home trend, which was forced on most populations as a result of the pandemic, to continue in future, to become more permanent, with people recognising the time savings of not sitting in congested traffic on their way to the office. This could remove some cars from the roads.

Meanwhile, Van der Merwe said the crisis could also potentially help to accelerate a transition to cleaner and more sustainable transport options.

He also pointed out that a number of transport projects, including the proposed expansion of the Gautrain, the roll-out of intelligent transport systems, the roll-out of new Metrorail infrastructure and the completion of further phases of the Gauteng Freeway Improvement Project, may face delays as a result of scarce funding.

Van der Merwe stated that the transport sector would have to find ways to do more with existing resources and infrastructure and would need to consider funding public transport projects through public–private partnerships.



South Africa's transport sector will have to find ways to do more with existing resources

MAIN SOURCES

Business Insider South Africa. 90% of all truck hijackings involve criminals who have inside knowledge (February 28, 2020).

BusinessLive. Shosholoza Meyl ordered to halt rail operations indefinitely (February 19, 2020).
BusinessLive. Unions demand labour representation on new railway regulators' board (August 11, 2020).
BusinessLive. Fikile Mbalula backs 'long overdue' subsidy for taxi industry (September 14, 2020).

Business Report. Sanral gets R7bn loan from National Development Bank (September 7, 2019).

City Press. Prasa in fight to get ill-fitting locomotives back (September 9, 2019).
City Press. Truck companies need to employ South Africans, say protesting drivers (July 7, 2020).

Competition Commission. Market Inquiry into Land Based Public Passenger Transport Main Report (February 19, 2020).

Department of Transport. Annual Performance Plan 2019/20 (July 2019).
Department of Transport. Strategic plan for 2021/22 - 2024/25 (March 2020).

Engineering News. No longer flavour of the month, SA rethinks its bus rapid transit systems (July 27, 2018).
Engineering News. Gautrain looks at expanding nonfare revenue with Centurion pilot project (July 1, 2019).
Engineering News. Task team to look at future of e-tolling, completion date set for August (July 8, 2019).
Engineering News. Durban rail corridor to benefit most from addition of standard gauge track (July 9, 2019).
Engineering News. Busmark, HySA and partners to roll out first homegrown hydrogen fuel cell bus (July 11, 2019).
Engineering News. Gautrain adds R6.4bn to the Gauteng economy a year, says new study (July 15, 2019).
Engineering News. Afro4000 locomotives going under the online auction hammer (July 25, 2019).
Engineering News. Sanral applies to negotiate with unsuccessful bidders on Mtentu bridge contract (September 11, 2019).
Engineering News. Transnet, Kalagadi cement partnership with R3bn Meca 2 contract (September 17, 2019).
Engineering News. Transnet aims to secure settlements of 'unlawful' loco contracts by end of financial year (September 30, 2019).
Engineering News. BRT operators highlight need for financial sustainability, skills (October 3, 2019).
Engineering News. Gauteng can build an economy around transport, says MEC Mamabola (October 10, 2019).
Engineering News. Leading bus company makes case for greater State support as urbanisation accelerates (October 11, 2019).
Engineering News. Gautrain to accept contactless bank cards from October 31 (October 17, 2019).
Engineering News. Revised taxi recapitalisation programme making 'significant progress' (October 25, 2019).
Engineering News. Maintenance at centre of Sanral's R40bn medium-term project pipeline (November 1, 2019).
Engineering News. Transnet confirms legal review of 10-64 locomotive contracts (November 11, 2019).
Engineering News. Treasury has to change its thinking around public transport, says Van der Merwe (December 5, 2019).
Engineering News. Road freight emissions can be cut by up to 46%, suggests new framework (January 24, 2020).
Engineering News. Dachs takes over as Gautrain boss as Van der Merwe retires (January 29, 2020).
Engineering News. Gautrain tenders for acquisition, refurbishment of pre-owned trains open (January 30, 2020).
Engineering News. New Gautrain boss to plan for capacity increase, end of concession (January 30, 2020).
Engineering News. Gibela to focus on quality, suppliers as it ramps up to full production (January 31, 2020).
Engineering News. PRASA administrator appoints technical advisory team (February 5, 2020).
Engineering News. Investigation under way following fatal rail accident in Johannesburg (February 13, 2020).
Engineering News. The night a Van der Merwe and Ledwaba took gold in London (February 27, 2020).
Engineering News. Cape Town company wants to disinfect taxis with hypochlorous acid system (April 20, 2020).
Engineering News. AfDB signs major loan agreement with SA Taxi (April 24, 2020).
Engineering News. Gautrain reopens with disinfectant spray booths, regular sanitising (May 4, 2020).
Engineering News. DoT unveils plans for new auto terminal at Durban, branch line concessioning (May 12, 2020).
Engineering News. Gautrain delays yearly fare increase owing to Covid-19 (May 13, 2020).
Engineering News. Transnet converts healthcare trains to bolster Covid-19 testing in underserviced areas (May 14, 2020).
Engineering News. Work resumes on N2 Msikaba bridge project (May 25, 2020).

Engineering News. Transnet reports recovery in some units, but still expects big Covid-19 revenue hit (May 26, 2020).
Engineering News. PRASA administrator announces new permanent executive appointments (May 29, 2020).
Engineering News. Covid lockdown pushes back completion dates for N4 projects (July 8, 2020).
Engineering News. Contracted bus sector struggles with high cost of Covid-19 compliance (July 13, 2020).
Engineering News. Commuter rail sector urged to prepare for the future (July 20, 2020).
Engineering News. PRASA to recruit 3 100 additional security guards (July 20, 2020).
Engineering News. Transnet Freight Rail introduces decentralised operational model (July 20, 2020).
Engineering News. Metrorail recovers R1.2m in stolen feeder wire (July 24, 2020).
Engineering News. Taxi assistance approved in principle, says TAG's Van der Merwe (July 24, 2020).
Engineering News. Sanral says it is ready to implement R30bn in projects (August 6, 2020).
Engineering News. Covid-19 to have lasting impact on the transport sector (August 14, 2020).
Engineering News. Covid-19 to take 18% bite from global road freight revenue, says the IRU (August 14, 2020).
Engineering News. Sanral signals intent to support domestic manufacture of rail despite global tender (August 24, 2020).
Engineering News. Gibela has spent R6bn on local procurement since 2014 (August 28, 2020).
Engineering News. Security function now top priority at PRASA, says CEO (September 7, 2020).
Engineering News. One year later and still no clarity on e-tolls, says Outa (September 11, 2020).
Engineering News. Mbalula launches beefed up PRASA protection service (September 16, 2020).

Eyewitness News. Mbalula: taxi industry was on the verge of collapse (July 16, 2020).

Gautrain Management Agency. Annual Report 2019 (August 2019).

Mining Weekly. Transnet signs R8.5bn rail deal with UMK (June 19, 2019).
Mining Weekly. Transnet launches world's longest production train (October 24, 2019).
Mining Weekly. IDC confirms Kalagadi Manganese business rescue application (May 27, 2020).
Mining Weekly. IDC committed to exploring all options to rescue Kalagadi Manganese (June 2, 2020).
Mining Weekly. Kalagadi Manganese welcomes court ruling (June 2, 2020).

Moneyweb. Sanral cancels e-toll tender (March 22, 2020).
Moneyweb. Now is the time for government to announce the end of e-tolls (April 30, 2020).
Moneyweb. Gautrain expansion may only kick off at the end of 2024 (May 10, 2020).
Moneyweb. R2bn Gautrain investment delayed due to Covid-19 (May 18, 2020).

News24.com. Coronavirus: Taxi drivers divided over defying government's lockdown capacity regulations (June 29, 2020).

Passenger Rail Agency of South Africa. Corporate Plan 2021 - 2023 (March 2020).

Railway Safety Regulator. 2018/19 State of Safety (October 2019).

TimesLive. Chinese companies told to stop building Transnet trains (December 17, 2019).

The Citizen. Taxi industry set to bring Gauteng to a grinding halt today (June 22, 2020).

Transnet. Integrated Report 2019 (September 2019).
Transnet. Reviewed condensed consolidated financial results for the six months ended 30 September 2019 (November 8, 2019).

gma.gautrain.co.za
www.reavaya.org.za
www.saboa.co.za
www.transport.gov.za/web/department-of-transport/roads

ROAD & RAIL 2020

The material contained in this report was compiled by Creamer Media (Pty) Ltd's Research Unit, based in Johannesburg, South Africa. It has been compiled from sources believed to be reliable, but no warranty is given regarding the accuracy of such information.

Creamer Media's aim is to present its reports in an impartial, user-friendly format for easy reference. The reports draw on material published over the past 12 months and are a summary of other sources of information published in *Engineering News* & *Mining Weekly*, as well as of information available in the public domain. The report does not purport to provide analysis of market trends.

This report is intended to be a source of information for subscribers to Creamer Media's *Research Channel Africa* and Creamer Media's *MiningWeekly.com* Research, and is not to be reproduced or published for any other purpose. In particular, the report may not be republished on any other websites and it may not be reproduced or redistributed in any manner.