

South Africa Yearbook 2015/16

Transport



The Constitution identifies the legislative responsibilities of different levels of government with regard to airports, roads, traffic management and public transport. Transport is a function that is legislated and executed at all levels of government. In addition, for transport functions at national level, most of the implementation takes place in public entities that are overseen by the Department of Transport (DoT), each with a specific delivery mandate.

The 1996 *White Paper on Transport* defines the different subsectors in the transport sector. Broadly, these are the infrastructure and operations of rail, pipelines, roads, airports and harbours, as well as the cross-modal operations of public transport and freight. The DoT is responsible for the legislation and policies for all these subsectors.

The DoT's strategic goals are to:

- ensure an efficient and integrated infrastructure network that serves as a catalyst for social and economic development.
- ensure a transport sector that is safe and secure.
- improve rural access, infrastructure and mobility
- improve public transport systems
- increase the contribution of the transport sector to job creation
- increase the contribution of the transport sector to environmental protection.

Sound and solid transport infrastructure remains crucial to generating economic growth, alleviating poverty, reducing inequality and increasing domestic and international competitiveness.

Transport infrastructure and services support economic growth and development by connecting people and goods to markets. The development and maintenance of an efficient and competitive transport system is a key objective of the National Development Plan (NDP) and of Outcome 6 (an efficient, competitive and responsive economic infrastructure network) of the 2014 – 2019 Medium Term Strategic Framework (MTEF).

To support this objective over the medium term, the DoT will focus on maintaining the national and provincial road networks, upgrading rail infrastructure and services, and expanding road based public transport.

The implementation of transport functions at the national sphere takes place through public entities as well as strategies that are overseen by the department.

The DoT's effort to make transport the heartbeat of the economy continues.

The department will implement the Maritime

transport policy to unlock the country's maritime potential and support trade imperatives.

The department was finalising the National Transport Master Plan (NATMAP). It will constitute a long-term plan to position transport as an enabler for social and economic development by rolling out infrastructure and services that respond to the needs of all South Africans and ensure the country meets its millennium development goals (MDGs).

NATMAP will focus on integrated transport planning to ensure that the different modes of transport complement each other.

NATMAP and the NDP, which sets out critical national policy goals to be achieved by 2030. Both call for implementing the user-pay principle in a manner that does not crush the working class and poor people. Within the prevailing economic climate, the fiscus alone is not able to finance the infrastructure backlog in South Africa.

Legislation

For the cross modal functions of public transport and freight, the guiding documents are the National Land Transport Act, 2009 (Act 5 of 2009), the public transport strategy and the national freight logistics strategy.

The DoT is further guided by the following legislation and policies:

- The Transport Laws and Related matters Amendment Act, 2013 (Act 3 of 2013) aims, among other things, to amend the Cross-Border Road Transport Agency to collect toll on behalf of the South African National Roads Agency (Sanral).
- The National Land Transport Act, 2009 (Act 5 of 2009) clarifies the concurrent roles and responsibilities of the different spheres of government in relation to public transport. It also consolidates public transport planning, service delivery, regulation and monitoring in the municipal sphere, establishes the national and provincial public transport regulators, and enhances overall transport regulatory functions.
- The incorporation of the Shosholozza Meyl train service and the Autopax long-distance bus services into Passenger Rail Agency of South Africa (Prasa) was finalised in the Legal Succession to the South African Transport Services Amendment Act 2008, (Act 38 of 2008).
- The National Road Traffic Amendment Act, 2008 (Act 64 of 2008) and the Cross-Border Transport Amendment Act, 2008 (Act 12 of 2008) allow for better road-traffic enforcement and improved cross-border regulation.

- The pilot project for the implementation of the Administrative Adjudication of Road Traffic Offences (Aarto) Act, 1998 (Act 46 of 1998), a demerit point system for traffic offences, has been rolled out in the municipal areas of Tshwane and Johannesburg. The system is expected to be extended to all municipal areas following the establishment of the Road Traffic Infringement Agency (RTIA), which will administer the system.
- The Civil Aviation Act, 2009 (Act 13 of 2009), was promulgated to harmonise and rationalise safety and security legislation for aviation to ensure compliance with International Civil Aviation Organisation (ICAO) standards.
- The Air Service Licensing Amendment Act, 2008 (Act 21 of 2008), addresses corporate governance issues relating to the Air Services Licensing Council. The department plans to implement the airlift strategy and improve aviation safety and compliance with the standards set by the United States of America (USA) Federal Aviation Administration's international aviation safety assessment, and by the ICAO, an organ of the United Nations (UN).
- The Road Accident Fund (RAF) Amendment Act, 2005 (Act 19 of 2005), came into effect in August 2008 with the publication of regulations guiding, primarily, the assessment of injuries. The Act creates an equitable, affordable and sustainable system for victims of road accidents and their families. In November 2009, Cabinet approved the policy to provide benefits to road-accident victims as a form of social security and to move away from the current fault-based systems.
- The RAF (Transitional Provisions) Act 2012, (Act 15 of 2012) provides for transitional measures regarding certain categories of third parties whose claims were limited to R25 000 under the RAF Act, 1996 (Act 56 of 1996) prior to 1 August 2008.
- In May 2014, the DoT published a revised version of the Road Accident Benefit Scheme (RABS). The Bill proposed that the Road Accident Benefit Scheme Administrator replace the Road Accident Fund. The new regulations, rules and forms were drafted to enable a better understanding of how the proposed scheme would operate in practice. The RABS Bill provides for a new no-fault benefit scheme and a new Administrator called the Road Accident Benefit Scheme Administrator (RABSA), which will replace the current Road Accident Fund and compensation system administered by it. The RABS

Bill forms part of an initiative to replace the third party compensation system currently administered by the RAF with a new scheme that is reasonable, equitable, affordable and sustainable.

Budget

Highlights of the 2015/16 financial year included transport and logistics infrastructure accounts for nearly R292 billion over the next three years.

By mid-2016, Transnet was in the process of acquiring 232 diesel locomotives for its general freight business and 100 locomotives for its coal lines. R3,7 billion was allocated to upgrade the Moloto Road, R30 billion for provincial roads maintenance, R18 billion for bus rapid transit projects in cities and refurbishment of over 1 700 Metrorail and Shosholozo Meyl coaches.

In the 2015/16 financial year, the department's budget was R53,7 billion, a 6% increase in real terms compared to the 2014/15 financial year. Government has made an unprecedented commitment to high levels of funding over the next MTEF period, with the budget expected to increase to R59,3 billion or (11%) by 2017/18.

The breakdown of the budget was as follows:

- road infrastructure at R22,7 billion
- rail at R18,3 billion
- public transport at R11,5 billion
- civil aviation at R149 million
- maritime at R111 million.

Road infrastructure damaged by disasters would be rehabilitated at a cost of R647,9 million over the medium term, through an additional allocation to supplement the reprioritisation in the provincial roads maintenance grant. Overall, spending on transfers in the Road Transport programme was expected to increase to R25,3 billion in 2017/18.

The programmes of the DoT are mainly implemented through the 13 transport public entities as well as provinces and municipalities, making transfers and subsidies the largest expenditure item in the budget.

Role players

The DoT has established 12 public entities to deliver on certain elements of government's operational activities, namely the Airports Company South Africa (Acsa), Air Traffic and Navigation Services (ATNS), the Cross-Border Road Transport Agency (CBRTA), Prasa, the Ports Regulator, the Railway Safety Regulator (RSR), the RAF, the RTIA, the Road Traffic Management Corporation (RTMC), the South African Civil Aviation Authority (SACAA), the South African Maritime Safety Authority

(SAMSA) and Sanral. These entities report to the Minister of Transport. Commercial role players include Transnet, South African Airways (SAA) and SA Express (SAX).

Airports Company South Africa

Acsa is regulated in terms of the Airports Company Act, 1993 (Act 44 of 1993) and the Companies Act, 1973 (Act 61 of 1973), and is listed as a schedule 2 public entity in terms of the Public Finance Management Act, 1999 (Act 1 of 1999). The company was formed to own and operate the nine principal South African airports, including the three main international gateways of OR Tambo International, Cape Town International and King Shaka International airports.

OR Tambo International Airport is the main international air gateway into South Africa and the Southern African Develop Community (SADC) region. The airport processes almost 20,4 million passengers and over 224 000 aircraft a year.

In 2016, O.R. Tambo International Airport was awarded fourth place in the Best Airport ACI-ASQ Awards for Middle East and Africa.

Cape Town International Airport in the Western Cape has developed a strong regional presence through established business networks and partnerships. It handles an annual passenger throughput of over 9,6 million people and more than 100 000 aircraft.

Cape Town International Airport was awarded second place in the Best Airport ACI-ASQ Awards for Middle East and Africa.

King Shaka International Airport, located to the north of Durban, is a greenfield handling over 4,9 million passengers and nearly 50 852 aircraft.

In 2013, 2015 and 2016, Skytrax awarded King Shaka International Airport the prestigious "Best Airport in the World Handling Under 5 Million Passengers" title. The airport was also awarded fifth place in the Best Airport ACI-ASQ Awards for Middle East and Africa.

Acsa aims to provide safe and secure services and infrastructure for passengers and airlines to transport people and goods. It plans to achieve this through the effective use of existing airport infrastructure and infrastructure improvements.

Over the MTEF period, the company plans to refurbish runways, taxiways and aprons at all airports, realign the runway at Cape Town International Airport and build additional remote aprons at OR Tambo International Airport. These investments are expected to allow for an increase in the number of aircraft arriving at airports from 278 451 in 2015/16 to 301 255 in

2018/19, and allow for more than 22,3 million passengers departing from airports operated by the company in South Africa by 2018/19.

The company employs about 3 300 personnel; this number was expected to remain constant over the medium term, although expenditure on compensation of employees was expected to increase from R989,2 billion in 2015/16 to R1,3 billion in 2018/19 at an average annual rate of 8,7%.

South Africa's complete airport network consists of 135 licensed airports, 19 military airports and up to 1 300 unlicensed aerodromes.

The following domestic interventions and expansion of its footprint around South Africa was planned for 2016/17:

- the takeover of management services of Mthatha
- the compilation of Wonderboom airport security manual
- the acquisition of additional land at R236 million for Cape Town International Airport's future expansion
- the injection of R1,3 billion into airports for refurbishment and design planning
- the creation of 25 000 jobs for terminal and runway expansion projects at Cape Town and OR Tambo International Airports.

Acsa will spend R7,6 billion on infrastructure improvements at major international airports over the next three years.

TEXT BOX

As part of the DoT's contribution to the 2015 Nine Point Plan, with specific focus on addressing South Africa's energy challenges, Acsa and Prasa invested in the following projects:

- the 750 kilowatts George Airport solar plant, costing R16 million
- the Kimberley and Upington Airports Solar Plants, both 500 kilowatts, are completed and ready for commissioning
- planned installation of solar panels in all South African airports – which will be propelled by more investment in airport infrastructure and the finalisation of the National Airports Development Plan
- Wolmerton, one of Prasa's biggest railway depots in Gauteng after Braamfontein, houses the new rolling stock and trains that have been received as an output of the Gibela contract. In March 2016, a R23 million rand 1 MW solar plant was successfully completed to power this facility.

These projects will go a long way in contributing to the 42% target of South Africa's power needs through Renewable Energy Sources by 2030.

In September 2015, the Mafikeng Airport in the North West went back to being fully operational, with regular flights to OR Tambo International Airport and Pilanesburg Airport. This formed part of the provincial government's broader plan to reposition, rebrand and renew the province with special focus on Mahikeng as the capital city.

SA Express scheduled flights from Mahikeng to Pilanesburg and OR Tambo International Airport three times a week; on Mondays, Wednesdays and Fridays.

Air Traffic and Navigation Services

The ATNS was established in terms of the Air Traffic and Navigation Services Act, 1993. Its mandate is to provide safe, orderly and efficient air traffic navigational and associated services to the air traffic management community. It does this on behalf of the state and in accordance with the ICAO standards and recommended practices, and the South African civil aviation regulations and technical standards.

The company's strategic goals are to:

- provide safe, efficient and cost effective air
- traffic management solutions and associated services
- expand the company footprint to cover Africa and the Indian Ocean region.

In 2015/16, the ATNS celebrated 23 years of providing safe air navigation service to 10% of the world's airspace.

ATNS has also adopted the promotion of mathematics and physical science as its flagship project, aimed at increasing the pool of potential candidates who can be attracted and trained as the Air Traffic Controllers. Since its inception in 1993, the company has renewed the majority of the national communication, navigation, surveillance and air traffic management infrastructure.

ATNS trains air traffic controllers from South Africa, Africa and the Africa-Indian Ocean area.

South Africa is one of the 36 council members of the ICAO Council, serving under Part II and is committed to regional aviation safety, security and environment issues.

Cross-Border Road Transport Agency

The CBRTA was created to regulate cross border road transport through advising, facilitating and law enforcement.

The CBRTA is playing a major role in promoting economic development within the SADC through facilitating access to cross-border markets and improving the regulatory environment for trade and transport.

Cross-border road transport is regulated through multi- and bilateral road transport

agreements, concluded with various SADC member states and in line with the stipulations of the SADC Protocol on Transport Communication and Meteorology.

The CBRTA is positively positioned to aid the South African economy by facilitating the movement of greater numbers of goods and passengers, and harmonising standards with neighbouring countries, thus increasing the value of trade between South Africa and the SADC.

Passenger Rail Agency of South Africa

Prasa's mandate is contained in the Legal Succession to the South African Transport Services Amendment Act, 2008.

The Act requires the agency to, at the request of the DoT, provide rail commuter services within, to and from South Africa in the public interest. In consultation with the DoT, it also provides for long-haul passenger rail and bus services within, to and from South Africa. The agency leverages off its assets to generate income, and to have due regard for key government social, economic and transport policy objectives.

The agency's strategic goals are to:

- invest in new capacity such as modern trains, signalling and telecommunications systems, infrastructure, transit-orientated developments, new generation stations, access control and other operating systems
- unlock the value of assets, such as the telecom network and the property portfolio
- effect key operational efficiencies for improved service delivery
- modernise operations in critical areas such as ticketing, cabling, booking systems and energy regeneration.
- achieve financial sustainability through improved revenue generation.

Prasa owns 2 280 km of South Africa's rail network and uses some of the 22 000 km of rail track under the control of Transnet. It has 585 train stations and a total fleet of 4 735 coaches, with an overall staff complement of 18 207.

The NDP acknowledges that the Gauteng-Durban corridor is vital to the future of the national economy, and should be designated as a national competitiveness corridor. It accounts for about 46% of gross domestic product and would build on the DoT's 2050 Vision for the Durban-Gauteng freight corridor. The corridor is to be integrated as part of the anticipated transnational Durban-Dar es Salaam corridor.

According to the NDP, by 2030, the Durban-Gauteng-Free State logistics corridor should exemplify how to strengthen and optimise

freight corridors. As the corridor that handles most of the country's high-value freight, it is the first priority. It is also the most strategic corridor to achieve a shift of freight from road to rail.

In support of this, Transnet will revive and open some key railway lines, such as the Mthata-Amabhele line, Sterkstroom-Maclear line, Cookhouse-Blaney line, Stormberg-Rossmead line, Rossmead-Klipplaat line, Klipplaat-Port Elizabeth line and Alicedale-Grahamstown line.

South Africa is improving passenger rail services by overhauling its fleet of passenger trains. This is in line with the NDP and the country's infrastructure investment plan to upgrade key infrastructure.

The planned rail upgrades will restore the sector's safety and reliability, and will not only improve the lives of commuters, but encourage the use of public transport.

Rail infrastructure investment is being prioritised to ensure it becomes the backbone of the country's passenger transport system. The Public Transport Strategy details the country's move towards a high-quality Integrated Rapid Transport Network, which includes taxis, buses and trains at its heart. Prasa will over the next 10 years acquire 600 new commuter trains (3 600 coaches); over time Prasa plans to upgrade 7 224 coaches; the delivery of trains will commence in the 2015/16 fiscal year.

The revitalisation of the passenger rail system will run parallel with the country's drive to shift the transport of freight from road to rail. Transnet is investing R205 billion in its rail infrastructure, making its freight rail division the fifth-largest in the world.

In March 2013, Transnet announced a project involves the acquisition of 1 064 locomotives – 599 electric and 465 diesel – for FFR's General Freight Business unit by 2018.

Contracts for the project have been awarded to consortiums led by four major international locomotive manufacturers – General Electric (GE), China North Rail (CNR), China South Rail (CSR) Zhuzhou Electric Locomotive and Bombardier Transportation (BT).

GE South Africa Technologies will supply 233 diesel locomotives; CNR Rolling Stock South Africa 232 diesel locomotives; CSR Zhuzhou Electric Locomotive 359 electric locomotives; and BT South Africa 240 electric locomotives.

The contracts have strict local-content requirements of 40% each, with only 70 locomotives to be internationally produced. The remainder would be produced at Transnet Engineering's Koedoespoort and Durban facilities, in Gauteng and KwaZulu-Natal respectively.

One-hundred-and-forty-eight locomotives was expected to be delivered in 2016, with 492 in 2017 and 424 in 2018.

The group asserts that the locomotives will have 55% local content, making them the "most African" locomotives of their kind.

In total, the localisation elements are expected to contribute over R90 billion to the economy and create about 30 000 jobs.

Furthermore, as part of the revitalisation of the passenger rail system, operational subsidies of R13,5 billion for Metrorail and Shosholoza Meyl would be transferred to Prasa over the medium term. This would subsidise over 500 million passenger trips per year in 6 metropolitan cities, and 700 000 long-distance passengers.

Government will be spending in the region of R51 billion on new rail rolling stock and R4 billion on new hybrid locomotives in the next five-year period. To date, Prasa has taken delivery of 13 of the 70 new locomotives.

The DoT's intensive rail modernisation programme provides uncontested evidence of unprecedented potential job opportunities, localisation and industrialisation.

This is done with strong and developmental variables, such as the inclusion of women, youth and people living with disabilities.

Led by Prasa, the rail modernisation programme is poised to deliver the following tangibles:

- A R13,5-billion subsidy in the medium term for Shosholoza Meyl and Metrorail, with major spin-offs of 500 million passenger trips in six metro areas, and 700 000 long-distance passengers
- the construction of a more than R1-billion train manufacturing factory in Nigel, employing about 1 500 people, 99% of whom are South Africans, 85% historically disadvantaged individuals and 25% women
- the replacement of obsolete signalling and development of new signals at a cost of R13,2 billion, which will greatly improve safety and make rail transportation an experience to cherish
- this signalling programme translates into 762 jobs, with another 150 for engineers and artisans
- the Gauteng nerve centre in Kaalfontein, which was handed over in October 2015, will act as the signalling control hub of Prasa's passenger rail network in Gauteng
- some 1 000 jobs from the Motherwell and another 325 from the Greenview-Piensaarspoort rail extensions
- a further 2004 jobs from Metrorail and a

1 005 more from Shosholozza Meyl improved services and station upgrades.

National Ports Regulator

The NPR was established in terms of the National Ports Act, 2005 (Act 12 of 2005).

Its primary function is the economic regulation of the ports system, in line with government's strategic objectives to promote equity of access to ports and to monitor the activities of the Transnet National Ports Authority (TNPA).

In accordance with this mandate, the NPR performs certain functions and activities including:

- regulation of pricing and other aspects of economic regulation
- promotion of equity of access to ports facilities and services
- monitoring the industry's compliance with the regulatory framework
- hearing any complaints and appeals lodged with it.

In addition, the NPR is a key component of the ports regulatory architecture envisaged in the National Commercial Ports Policy.

The TNPA is the largest port authority in Africa. It owns and manages ports at Richards Bay, Durban, East London, Port Elizabeth, Mossel Bay, Cape Town, Saldanha and Ngqura.

The TNPA provides suitable infrastructure as a conduit for the country's imports and exports. Besides being the port landlord, it also has a control function, which includes:

- providing vessel-traffic control and navigational aids
- licensing and leasing terminals to operators
- monitoring the performance of port operators
- ensuring the orderly, efficient and reliable transfer of cargo and passengers between sea and land.

Based on the White Paper on the National Commercial Ports Policy (2002), the vision for South African ports is to become a system of ports, seamlessly integrated in the logistics network, that is jointly and individually self-sustainable.

The NPR functions with certain statutory and non-statutory committees that concentrate on aspects of its mandates. The NPR is an independent regulator, within the context of the prevailing policy and regulatory framework and it is funded by fiscal allocation from national government.

Railway Safety Regulator

The Railway Safety Regulator is the custodian of railway safety in South Africa.

Its function includes:

- issuing and managing safety permits
- conducting inspections and audits
- investigating railway accidents
- developing regulations, safety standards and related documents which form the basis of the regulatory regime
- issuing notices of non-conformance and non-compliance
- imposing penalties for non-compliance with the Act and safety standards adopted by the board of directors of the RSR.

The RSR is central to the safety of both passengers and the environment in the railway industry, and to that end has taken a bold stand to adopt the vision "Aspiring to achieve Zero Occurrences". While collisions still remain a challenge, in 2015/16 the number of collisions between trains declined by 44% from 2014/15

Road Safety and Road Accident Fund

With road safety being a challenge, the department is working on education, engineering and awareness campaigns to reduce the carnage on South African roads. Fatalities and critical injuries mean more claims against the RAF. As government continues to shape the basis for its CSSS plans, there is an increased need for the RAF to fulfil its socio-economic mandate, while remaining financially sustainable, and being a customer-centric organisation.

The mandate of the RAF is derived from the RAF Act of 1996 as the payment of compensation for loss or damage wrongfully caused by the driving of motor vehicles in South Africa. The socio-economic mandate of the fund is to reintegrate victims of road accidents into society from a health and economic perspective, and to protect wrongdoers and their families from financial ruin. The fund delivers on this mandate by:

- paying the medical and related costs required to restore road accident victims to health
- compensating the victim/s or their dependants for income or support lost as a result of the accident
- indemnifying the wrongdoer from liability
- paying general damages in instances where

The Chekicoast annual road safety arts competition hosted by the South African National Roads Agency Limited (SANRAL) aims to encourage learners to think about road safety and to express their thoughts on responsible road behaviour through creativity. The competition is part of SANRAL's broader awareness programme to stimulate awareness and influence safe behaviour at an early age. (DoT)

a person suffers a serious injury in a road traffic accident

- paying funeral expenses to families when a person dies as a result of a road traffic accident.

The fund's strategic goals over the medium term are to:

- develop a legislative dispensation that is aligned with the principles of social security
- ensure that the organisation is solvent, liquid and sustainable by 2020
- ensure that the organisation is customer centric, operationally effective and efficient by 2017.

The key objectives of the RAF Road Safety Strategy are to reduce the high rate of road accidents by becoming proactively involved in activities aimed at addressing road-safety behaviour and promoting road-safety principles and effective law enforcement. The RAF's Road Safety Strategy also creates a platform to support the RAF core business, since post-crash care is one of the pillars prescribed by the Global Road Safety Commission. It aims to:

- increase awareness of the RAF's business and service offering by conducting ongoing campaigns
- create a platform for all transport industry stakeholders to assist the victims of road accidents and their family members
- enhance the overall business strategy by identifying key stakeholder groups and developing effective stakeholder engagement channels to reach target audiences in a proactive manner.

The RABS Bill, which provides for the establishment of a new administrator, the Road Accident Benefit Scheme Administrator (RABSA), to replace the current RAF, was published for public comment in 2016. Consultations sessions were held throughout the country with various stakeholders. The Bill proposes a comprehensive social security safety net scheme that is not fault-based.

It will allow expanded access to much needed benefits to road users. These include the public and private transport passengers; widows,

In 2015, the Road Traffic Management Corporation (RTMC) sent 160 traffic officers "back to school" to improve road safety and the quality of traffic officers who enforce the law on South Africa's roads.

The four-month up-skilling programme was held in Heidelberg in Gauteng and focused on critical skills such as the examination of vehicles, the law, advanced driving, firearm handling and communications, among other things.

The officers had their first certification ceremony in December 2015.

orphans and many other dependants, previously and currently excluded by virtue of fault.

Road Traffic Infringement Agency

The RTIA mandate is predicated on the objective of decriminalising road traffic infringements and dealing with them through administrative justice processes, thereby freeing the courts to deal with more serious crimes, including excessive speeding and driving under the influence.

The RTIA's objectives include:

- administering the procedures to discourage the contravention of road traffic laws and to execute the adjudication of infringements
- enforcing penalties imposed against people contravening road traffic laws
- providing specialised prosecution support services
- undertaking community education and community awareness programmes to ensure that individuals understand their rights and options.

The pursuit of this mandate entails the management and rollout of the Aarto Act, 1998, which includes the implementation of the driver points demerit system and rehabilitation programmes.

In 2016, the RTIA underwent a rebranding process to reposition itself as a unique major player and an independent adjudicator of traffic infringements. The new corporate brand will formalise the RTIA as the home of the Aarto system, where motorists are educated and empowered on how to query and manage their Infringements.

In 2015, Cabinet approved the introduction of the Aarto Amendment Bill, which amends the Aarto Act, 1998. The Aarto Amendment Bill aims to increase the efficiencies of the Aarto process that will address shortcomings that were identified in the pilot sites, thereby paving the way for a smooth national final rollout process.

The introduction of the Aarto Act, 1998 and the points demerit system is aimed at inducing voluntary compliance to road traffic laws on the country's roads. This process further requires active involvement of motorists in dealing with outstanding traffic infringements.

Road Traffic Management Corporation

The RTMC is responsible for coordinating road-traffic management across the three spheres of government. The core mandate of the corporation is to improve traffic-law compliance and reduce road fatalities.

In line with the UN MDGs and the Moscow

Declaration on Road Safety in 2009, which calls for a Decade of Action for Road Safety, the corporation set itself goals over the medium term to reduce the road fatality rate by 25%. This objective would be achieved by:

- enforcing driver and vehicle fitness requirements
- coordinating effective prosecution of moving traffic violations
- implementing the national traffic law enforcement code.

The RTMC's Road Safety Advisory Council was launched in June 2015.

The council will meet quarterly to provide inputs into the strategic direction, oversight and critical assessment of proposed road safety initiatives and campaigns.

It's aim is to:

- identify policy needs, engineering, public education, enforcement and community engagements measures to deliver:
 - safer roads
 - safer travel speeds
 - safer vehicles
 - safer drivers
 - overall safe road users
- recommend to the CEO of the RTMC, the Shareholders Committee and relevant bodies the process that should be taken to implement those measures
- evaluate the effectiveness of those measures
- report to the CEO of the RTMC on its operations and achievements.

As signatories to the UN Decade of Action on Road Safety, the RTMC rolled out the following interventions in 2016:

- the National Road Safety Strategy
- the traffic officers training programme
- the harmonisation of traffic law enforcement
- the anti-corruption programme.

In addition, a series of Provincial Youth Summits on Road Safety was implemented in May 2016, culminating in a National Youth Summit on Road

Safety in June 2016, when all these provincial commitments was consolidated into a national programme. This progressive youth formation led to a social media movement where the phrase “#BeingSafelsCool” was coined.

South African Civil Aviation Authority

SACAA is mandated with controlling, promoting, regulating, supporting, developing, enforcing and continuously improving levels of safety and security throughout the civil aviation industry.

SACAA presented the revised Cross-Functional Accident Reduction Plan (CFARP) aimed at reducing accidents in the general aviation sector, in a coordinated manner.

The new CFARP features the following:

- in-depth statistics gathered, however a number of accident investigations remain open to complete the analysis.
- although not yet comprehensive, industry activity is being captured by the SACAA to inform future strategies
- expanded scope of stakeholder consultation prior to the finalisation of the strategy
- more in-depth experience in dealing with accidents

The revised CFARP still seeks to improve pilot competency development within the training environment with the authority intensifying its oversight role over pilot training schools.

Additionally, SACAA is considering the introduction of a standardised induction programme for all student pilots. The induction would ensure appropriate induction of prospective pilots, leading to the adoption of positive attitudes and discipline.

South African Maritime Safety Authority

SAMSA and the DoT are working on mobilising the maritime sector, organising its industries and drawing the attention towards what the sector can contribute to the achievement of government's social and economic goals.

SAMSA has successfully pulled together elements of the sector and created a cohesive sense of the boundaries and drivers of the country's performance, with regional and international positioning options.

The maritime economic sector is of central and strategic importance to the National Growth Path (NGP), the BRICS bloc and South Africa's influential role within the African Union (AU), India-Brazil-South Africa bloc and the SADC.

The widening trade balance is to no small measure because of a lack of focus on shipping logistics and maritime transport. South Africa is the only country in all these partnerships that

In July 2015, the South African Civil Aviation Authority (SACAA) issued the first pilot's licence for remotely piloted aircraft systems (RPAS).

Nicole Swart became the first person in South Africa, Africa and in most parts of the world to receive such a licence, as many countries are still striving to come up with regulations to administer RPAS.

RPAS are aircrafts that can fly without a pilot on board and come in all sorts of shapes and sizes. RPAS can be controlled remotely by an individual on the ground or from another aircraft. Traditionally, remotely piloted aircraft systems were used primarily in military operations; however, they can also be used for many other purposes outside of the military.

The Vulindlel'eJozi programme launched in June 2015, in partnership with Samsa and Operation Phakisa, is designed to empower the youth with entry-level job training and placement in various sectors, online further education and entrepreneurship skills development.

By April 2016, 15 124 young people had directly benefited from various opportunities created through the Vulindlel'eJozi programme.

At the same time, the programme also opened doors to maritime career opportunities for 10 Orange Farm youths, who will pursue career skills development in maritime economic sector jobs such as fishing, ship-building, marine conservation, cargo handling or the leisure sector.

The 10 youths had reached the final stages of training in swimming and hospitality under the Vulindlel'eJozi programme and had already been through comprehensive medical examinations and a series of interviews with MSC Cruises – one of the most prestigious operators in the world.

The aim was to expand opportunities to as many as 200 000 youths.

has no focused shipping and maritime transport sector policy and strategy and owns no ships.

By August 2015, three cargo vessels were sailing the country's flag, while the applications for an additional 12 ships was under consideration.

The increase in South Africa's registered commercial cargo vessels is a strategic move to expand both training opportunities for the country cadets as well as business trade opportunities. Through SAMSA the department continued investing in intelligent surveillance breakthrough technologies in ship tracking and maritime traffic management.

In the two years since the launch of Operation Phakisa, the country increased its focus on the opportunities provided by its more 3 000 km of coastline.

SAMSA struck a partnership with the Nelson Mandela Metropolitan University and the Department of Higher Education in a National Cadetship Programme. This has resulted in 124 cadets being placed on 18 partner vessels.

South African National Roads Agency Limited

South Africa has the tenth largest road network in the world – 750 000 km. Sanral is responsible for the national road network, which is 21 403 km.

Out of these, 18 283 km (85%) are non-toll roads and 3 120 km (15%) are toll roads.

Sanral's main strategic goal is to provide effective strategic road infrastructure to facilitate development, commerce, mobility and access.

Its functions include:

- being responsible for proclaimed national roads

- maintaining, upgrading, operating, rehabilitating and funding the national roads
- levying tolls to service toll roads
- managing concessionaires
- advising the Minister of Transport on road-related matters
- creating public value.

Sanral was allocated R1,4 billion over the medium term in terms of toll roads. R27,4 billion was allocated to strengthen and improve the national non-toll-road network.

Sanral's biggest project in 2016 was the Moloto Road/R573 development – a short- to medium-term road upgrade plan at a cost of R3,7 billion.

Other projects for 2015/16 included the following:

- the commencement of road construction of the N2 Wild Coast, from East London to Mtamvuna, with seven medium to big bridges and two mega bridges
- an Environmental Impact Assessment of the N3 De Beers Corridor to explore other alternative engineering solutions to protect and grow the economic viability of Harrismith and surrounding areas
- the construction of N1/N2 Toll Highway, which created an 5 000 jobs, 72% thereof in the low-income stream, with 600 direct jobs yearly, and 80% maintenance work for local sub-contractors
- the Ventersburg-Hofontein N1 upgrade, costing R600 million
- rehabilitation of the N1 Hofontein-Kroonstad interchange at a cost of R560 million, for completion in February 2018
- a R422-million Umdloti-Tongaat interchange, which employed 334 locals at R46,5 million, trained 90 locals at R117 million, and gave opportunities to 12 black owned SMMEs to the value of R53 million.

One of the highlight's of 216 was the completion

History was made in 2016 in South Africa with the successful qualification of the country's first three black women as commercial cargo vessel Master Mariners or Ship Captains.

Tshepo Motloutsi, Thembela Taboshe and Pretty Molefe received their colours as Master Mariners in March and April 2016, respectively.

A Master Mariner or Ship Captain is the professional qualification required for someone to serve as the person in charge or person in command of a vessel of more than 3 000 gross tons.

Captains Motloutsi and Taboshe were at the time employed by the South African Maritime Safety Authority as ship surveyors in Durban, while Captain Molefe was with the National Ports Authority.

Sanral received among the highest accolades awarded by the South African Institution for Civil Engineering (SAICE) for two major road development projects in KwaZulu-Natal.

The Umgeni Road Interchange upgrade project included the building of four new road bridges and two pedestrian bridges, the widening of Umgeni Road/M19 and the construction of ramps on to the freeway.

The Umgeni project won the top accolade given by the KwaZulu-Natal branch of SAICE and the prestigious Fulton Award from the Concrete Society of Southern Africa.

The Candella Road Project was celebrated by SAICE in the Transportation category. The project formed part of Sanral's "green roads" initiative, designed to reduce the long-term environmental impact of road construction.

of the N7 upgrade between Vanrhynsdorp and Citrusdal.

This 133-km stretch of road is a key section of the N7, the major economic artery serving the West Coast, parts of the Northern Cape and Namaqualand (and linking South Africa and its northern neighbour Namibia) and was completed at the end of 2015.

The upgrade is part of a phased approach to the improvement of the N7, stretching from Vanrhynsdorp in the north as far south as Melkbosstrand. It should be completed in 2017 at an estimated total investment of R4,3 billion.

Major improvements included the widening of the road from 6,6 m to 12,4 m.

Some 440 jobs were created, of which 120 are permanent and 320 were temporary. An amount of R240 00 was invested in the training of 267 workers.

Transnet Limited

Transnet is a focused freight-transport and logistics company wholly owned by the South African Government.

It comprises the following operating divisions:

- Transnet Freight Rail
- Transnet Rail Engineering
- Transnet Port Terminals
- Transnet Pipelines
- TNPA.

In 2014, Transnet and the South African coal unit of the mining company BHP Billiton agreed to a 10-year contract to export coal by rail. The agreement with BHP was a massive boost for Transnet's capacity expansion programmes on the export coal line. The agreement enabled Transnet to add nearly 10 Mt in capacity on the line, from an initial 73 Mt to 81 Mt over the next seven years. The agreement equates to a contract value of approximately R2,4 billion a year and R24 billion over the 10-year period.

In 2014, Transnet announced plans to

acquisition 1 064 locomotives from four original equipment manufacturers, including General Electric. An initial funding guarantee of R6-billion was obtained from USA export credit agency, US-Exim for the funding of diesel locomotives the company is buying from General Electric (GE). This was a massive thumbs-up from the international investor community, affirming Transnet's creditworthiness and South Africa's attractiveness as an investment destination. The guarantee is mainly intended for GE's share of the locomotives – which is 233 locomotives as well as other acquisitions from the manufacturer.

The locomotives are part of Transnet's locomotive fleet renewal programme – a key element of the company's seven-year R312 billion investment programme.

In March 2015, Transnet announced a combined R13-billion funding for the locomotive acquisition programme. The funding was raised in two agreements with various financial institutions in the country as well as others from Canada and the USA. In the same month, Transnet completed assembling 95 electrical locomotives as part of its long-term fleet renewal programme. Eighty-five of the locomotives were assembled in South Africa.

At least 65% of the R2,7-billion contract value of the project had been committed to local supplier development. A total of 190 people were trained in China and 260 were employed in assembling the locomotives.

In June 2015, it was announced that the China Development Bank would provide a \$2,5 billion (R30 billion) loan facility to Transnet to fund the acquisition of locomotives from China South Railway and China North Railway. The acquisition of locomotives from China South Rail and China North Rail forms part of the locomotive acquisition programme.

The two Chinese locomotive original equipment manufacturing companies would be responsible for delivering 591 locomotives over the next four years.

Also in June 2015, Transnet signed a R2,8 billion loan with Germany's KfW Development Bank to fund part of the locomotive acquisition programme. The proceeds of the loan will fund the acquisition of 240 electric locomotives Transnet will build with Bombardier in its manufacturing facilities in Durban, KwaZulu-Natal.

South African Airways

SAA is the leading carrier in Africa, serving 26 destinations across the continent, as well as major destinations within South Africa and

internationally from its Johannesburg hub at OR Tambo International Airport and is a member of the largest international airline network, Star Alliance.

SAA's core business is the provision of passenger airline and cargo transport services together with related services, which are provided through SAA and its four wholly owned subsidiaries: SAA Technical; Mango, its low-cost carrier; Air Chefs, the catering entity of SAA; and South African Travel Centre.

SAA's long-term Turnaround Strategy is a three-phase implementation approach with continuous and cyclical monitoring and review over a 20-year period.

One of the key elements of the strategy was increased focus and emphasis on governance and accountability. SAA believes these will go a long way in restoring the airline's reputation in the global markets and among its stakeholders.

This makes SAA one of the world's leading carriers in the areas of environmental responsibility and sustainability.

In January 2015, the SAA became the first airline globally to install the Satellite Authorisation System (SatAuth) that allows for secure credit-card transactions anywhere in the skies.

SAA installed the device on one of its Airbus A340-300 aircraft at the SAAT maintenance facility in Kempton Park, Johannesburg.

The system also provides pin-point accurate aircraft tracking services for operational purposes. It will allow for secure credit card transactions at any point and real-time positioning of any flight, anywhere, impacting fuel saving interventions in-flight as well as providing full visibility of actual flight paths versus planned routing at any time. SatAuth, the first product of its kind, was developed in South Africa.

SAA is planning to install SatAuth across its entire long-haul fleet over time.

In January 2015, the Minister of Finance approved an additional guarantee of R6,488 billion for SAA, taking the total guarantees granted to the airline to R14,4 billion.

In May 2015, SAA signed a MoU with the Department of Trade and Industry to develop and support inclusive supplier sourcing and procurement. Successful implementation of the three-year SAA Supplier Development Programme will see up to 50% of all consumable supplies sourced from empowered enterprises by the end of 2018.

SA Express

SAX is a domestic and regional passenger and cargo carrier established on 24 April 1994.

Although the airline is operationally independent of SAA, its flights are incorporated within the strategic alliance with Airlink and SAA.

SAX became the first airline in the country to adopt a new method of taxiing after landing that burns less fuel and cuts fuel emissions.

This simple but unusual method of using only one engine to taxi off the runway to the terminal after landing, cuts the amount of fuel burned by an average of 20 ℓ on every landing.

A flight from Johannesburg to Bloemfontein typically uses 1 000 ℓ of fuel, so saving 20 ℓ is a reduction of 2%, helping the airline to become more cost-efficient.

Programmes and projects Road Transport Management System (RTMS)

The RTMS is an industry-led voluntary self-regulation scheme that encourages consignees, consignors and road transporters to implement a management system that preserves road infrastructure, improves road safety and increases productivity of the logistics value chain. This scheme also supports the Department of Transport's National Freight Logistics Strategy.

The system's key components are load optimisation, driver wellness, vehicle maintenance and productivity. It is designed to show transport companies how to take greater corporate responsibility for road safety.

A national RTMS steering committee is responsible for the promotion and administration of the RTMS in South Africa. It comprises individuals representing major industries and aligned stakeholders within the country.

Road safety and road infrastructure are public concerns subject to strict regulation by government. Overregulation, road deterioration and high accident rates pose a significant threat to the long-term sustainability and global competitiveness of the road logistics value chain.

This prompted users of road haulage (consignors and consignees) and providers of road haulage (hauliers) to jointly develop strategies aimed at protecting the road network, improving road safety and transport productivity for the benefit of the country's citizens and the industry itself.

The RTMS is a self-regulating scheme with standard rules that aim to become the business norm, supporting the principles of good corporate governance and ensuring that no one gains an unfair advantage by poor compliance to transport regulations.

Furthermore, industry recognises its critical role in the economy's growth. Efficient movement of

goods between a country's centres of production and its shipping ports boosts competitiveness in international markets.

National Transport Master Plan

The long-term vision of NATMAP 2050 is to sustain South Africa's projected growth and focus on integrated transport planning to ensure that the different modes of transport complement each other.

Government policies, plans and programmes, including the NDP and the NGP, enjoin the nation to create a social contract to help propel South Africa to a higher developmental trajectory, as well as build a more cohesive and equitable society.

The transport sector is critical to realising the implementation of the 2030 vision of advanced economic development, job creation, growth, and provision of equitable access to opportunities and services for all, while fostering an inclusive society and economy.

Public Transport Strategy

South Africa is on its way to becoming the first country in Africa to have rapid public transport networks. Such networks will not only change the face of the country, but will boost economic development, job creation and tourism.

South Africa's Public Transport Strategy, which comprises a multibillion rand transport infrastructure plan, is set to entirely reshape travel in South Africa. At the core of the plan is a high-quality integrated mass rapid public transport network that includes rail, taxi and bus services. The strategy aims to accelerate the improvement in public transport by establishing integrated rapid public transport networks (IRPTNs), which will introduce priority rail corridors and Bus Rapid Transport (BRT) systems in cities.

The Public Transport Strategy is expected to improve public transport services for more than half the country's population.

The long-term goal of the strategy is to have 85% of a metropolitan city's population within 1 km of the network, and provide a transport service that is clean, comfortable, reliable, fast, secure, safe and affordable.

As part of government's commitment towards rural development, the S'hamba Sonke Programme addresses road maintenance on secondary roads and rural roads, with particular emphasis on repairing potholes, using labour-intensive methods of construction and maintenance.

Electronic National Traffic Information System (eNaTIS)

eNaTIS provides for the registration and licensing of vehicles. It manages and records applications for and authorisation of driving and learner's licences.

It is also a law-enforcement tool used to ensure that the details of stolen vehicles are circulated and prevents irregular and fraudulent re-registration of such vehicles.

The system delineates the lifecycle of a vehicle, from the factory floor to the scrap yard.

It is compulsory for all new motor vehicles and motor vehicles requiring a police clearance to be microdotted. The registration of a motor vehicle introduced onto the eNaTIS by the manufacturer, importer or builder is only allowed if the microdot information was loaded onto the system.

The DoT and the South African Police Service (SAPS) would enforce the requirements through eNaTIS.

In November 2016, the Constitutional Court ordered control of the eNatis Traffic Management System be handed over to the RTMC.

S'hamba Sonke Road Maintenance Project

The S'hamba Sonke (meaning "walking together") programme was launched by the DoT in 2011 to address the backlog in road repairs. The programme, through the Provincial Roads Maintenance Grant, consists of three budget components. The largest enables provinces to expand their maintenance activities. The other components allow provinces to repair roads damaged by floods and cover the cost of rehabilitation work created by coal haulage activities in Mpumalanga and Gauteng.

A new formula to allocate funds is being applied to all provinces. It is based on extent; condition; topography; road traffic and weather conditions. These factors reflect the different costs of maintaining road networks in each province.

The grant has an allocation of R27,6 billion over the MTEF, of which R9,8 billion was allocated in 2015/16.

The DoT, through the Rural Roads Asset Management Systems grant, supports local government in improving the planning and budgeting of rural roads infrastructure. The grant funds the collection of accurate data on the condition and usage of rural roads in line with the Road Infrastructure Strategic Framework.

Scholar transport

In recognition of the challenges confronting learners who attend school far away from their

The lives of 1 500 learners in Westonia Local Municipality area were changed for the better on 25 June 2015 when Gauteng Department of Roads and Transport MEC Ismail Vadi accompanied by Westonia Executive Mayor, Councilor Nonkoliso handed over bicycles to pupils who live more than 4 km away from their respective schools as part of the Shova Kalula National Bicycle Programme.

homes, Cabinet approved the Learner Transport Policy in May 2015.

In May 2015, Cabinet approved the Learner Transport Policy. Its aims are to:

- improve access to quality education by providing safe, decent, effective, and integrated sustainable learner transport
- improve access to quality education through a co-ordinated and aligned transport system
- improve planning and implementation of an integrated learner transport service
- manage and oversee the implementation of an integrated learner transport service
- ensure an effective management of learner transport system
- provide for a safe and secure transport environment for learners through co-operation and collaboration with law enforcement authorities.
- improve access to quality education by providing safe, decent, effective, and integrated sustainable learner transport;
- improve access to quality education through a coordinated and aligned transport system;
- improve planning and implementation of an integrated learner transport service;
- manage and oversee the implementation of an integrated learner transport service;
- ensure an effective management of learner transport system; and
- provide for a safe and secure transport environment for learners through co-operation and collaboration with law enforcement authorities.

The 2015/16 budget for the programme was R2,3 billion.

Non-motorised transport

The promotion of NMT is mainly aimed at increasing transport mobility and accessibility, mainly in rural areas. The DoT has broadened its Shova Kalula Project into a more comprehensive NMT undertaking that incorporates, among other things, cycling and animal-drawn carts.

The Shova Kalula (“Pedal Easy”) National Bicycle Programme aims to improve mobility and access to basic needs as well as social and economic opportunities for people especially in rural, remote and poorly resourced areas,

including learners. Since the introduction of Shova Kalula, the DoT, in partnership with provinces, municipalities and private sector, has distributed more than 177 310 bicycles to destitute learners, who travel long distances to their respective schools.

The project forms part of government’s action programme and is expected to contribute to its antipoverty strategy and second-economy interventions. It is believed that these initiatives improve rural communities’ mobility and access to economic opportunities.

The department aimed to distribute a million bicycles countrywide by 2015.

The Shova Kalula Project also incorporates microbusinesses, which sell, repair and maintain bicycles to ensure the project’s sustainability.

In February 2016, Department of Environmental Affairs and KfW German Development Bank launched the Second Phase of the Non-Motorised Transport Programme as part of South Africa’s National Climate Change Response Policy, which sets the country’s vision for an effective climate change response and the long-term transition to a climate resilient and low-carbon economy and society.

Phase 1 of the programme was initiated in 2011 and focused on developing bicycle routes, parking facilities and rental stations with a view to promote non-motorised transport. The outcome is to reduce carbon emissions, improve air quality; and advocate behavioural change towards a cleaner healthier lifestyle.

Given the success of Phase 1, the DEA secured a grant of €5 million to finance a five-year NMT Phase 2 from KfW Development Bank, within the framework of the German-South African bi-national Financial Cooperation.

Phase 2 will comprise of the extension of the existing bicycle networks, to contribute towards efficient intermodal transportation networks within the cities. It will further include associated services such as the promotion of SMME development through the establishment of bicycle empowerment centres.

Taxi Recapitalisation Programme

The TRP is an intervention by government to bring about safe, effective, reliable, affordable and accessible taxi operations by introducing new taxi vehicles designed to undertake public transport functions in the taxi industry.

The TRP is not only about scrapping old taxi vehicles, but also about how best to help operators to benefit constructively through empowerment. The compulsory requirements

are also meant to ensure passenger comfort.

Through the TRP, government has ensured the following changes:

- introduction of safety requirements for passengers
- comfort for passengers by insisting on the size and number of seats
- promotion of accessibility on the size and number of seats
- branding and colour coding of taxi vehicles so that legal taxis can be identified and differentiated from illegal ones, and so that members of the public can easily identify a taxi vehicle.

By June 2015, the DoT had scrapped 61 254 old taxis with a total payment of R3,4 billion for scrapping allowances.

Resources

Roads

National roads

Government is responsible for overall policy, while Sanral is responsible for road-building and maintenance.

The DoT continues to improve the road network by ensuring that it is well maintained and safe.

A new national roads plan was developed, acknowledging the importance of roads to the economy.

Between 2010 and 2015, R75 billion was allocated for road infrastructure, maintenance and upgrading; with an additional R3 billion budgeted for Extended Public Works Programme access roads, to alleviate traffic congestion.

As part of rural development, roads in five rural development nodes – Magaliesburg, Winterveld, Hammanskraal, Rust de Winter and Bantu Bonke – were upgraded.

Provincial roads

Provincial governments are responsible for planning, constructing and maintaining roads and bridges, except those falling under Sanral or local governments. The DoT helps provincial and local governments to improve and develop the state of their roads.

In 2016, the provincial roads maintenance grant allocated R32,5 billion to rehabilitate road infrastructure.

Municipal roads

The construction and maintenance of most roads and streets within the municipal boundaries of cities and towns is the responsibility of the municipality concerned.

Toll roads

The toll-road network comprises about 19% (3 120 km) of the national road grid. Sanral manages some 1 832 km of these toll roads.

In its endeavour to continue the expansion and maintenance of the comprehensive national road network, Sanral will continue the selective expansion of toll roads.

About 1 288 km of the tolled sections of national roads have been concessioned to private companies to develop, operate and maintain.

In March 2016, the upgraded N12 freeway was reopened. The freeway was upgraded at a cost of R485 million. It entailed the rehabilitation and upgrading of the N12 from Eldorado Park to the North West border, with the entire section of the road developed into a dual carriageway.

The 20-month long project involved the resurfacing of the freeway, clearing of drainage structures, replacing missing steel grids, reinstatement of road markings, erecting new road signs and replacing guard rails.

The N12 freeway serves as a critical freight link between Gauteng and the North West Province, including the Western Cape. It also services the mining, agriculture and tourism sectors.

The project had a strong economic empowerment component with over 350 workers, particularly women and youth, as well as more than 20 local sub-contractors from communities which are near the route.

In mid-2016, the N2 Wild Coast Toll Road Project announced a revised route, spanning 410 km from East London to the Mtamvuna River Bridge.

The greenfields portion of the road will be a 112-km stretch between Ndwalane outside Port St Johns and the Mtamvuna River between Mzamba and Port Edward. It will include two mega-bridges over the Mtentu and Msikaba River gorges. The cost of building these bridges will be about R3,5-billion and construction was scheduled to begin in 2017. Construction of roads to the bridge sites would start in later 2016. Also included in the project are seven other major bridges, three interchange bridges and new roads. Construction on the greenfields portion of the road should start in the second half of 2018.

By mid-2016, the R396-million, 80-km upgrade of the N1 highway between Pretoria and Bela-Bela was 80% complete.

The project is scheduled for completion by the end of 2017, with R123 million to be spent in the final phase. The upgrade would increase the design life of the road by ten years.

Bakwena is also fully rebuilding 167 km of single carriageway on the N4 between Rustenburg and the Lobatse border post between Botswana and South Africa. The project has a budget of R1,22 billion. Work is scheduled to be completed by mid-2018.

Other upgrades on the 395 km of network under Bakwena's control include adding 70 km of dual carriageway on the N4 between Pretoria and Rustenburg in a R1.5-billion project. Bakwena has already added 35 km of dual carriageway on the N4, with the upgrade to be completed by 2020/21.

Bakwena is also spending R230-million on selected plaza and interchange upgrades.

Rail

Gautrain

The Gautrain is an 80 km-long mass rapid transit railway system that links Johannesburg, Pretoria and OR Tambo International Airport.

It was built to relieve traffic congestion in the Johannesburg-Pretoria traffic corridor and offer commuters a viable alternative to road transport, as Johannesburg had limited public transport infrastructure.

In October 2013, the Gautrain Management Agency proposed the development of seven new rapid rail routes along identified "high-mobility corridors" in Gauteng, which will be promulgated under the province's 25-year Integrated Transport Master Plan.

The proposed extensions, would include a link from the existing Sandton station to Randburg; a link from Ruimsig to the Samrand station; a link from the Samrand station to Tshwane East; a link from Rhodesfield to the East Rand Mall; a link from Naledi to Ruimsig; and a link from Mamelodi to Tshwane East.

The possible rapid rail extensions follow from the Gauteng 25-Year Integrated Transport Master Plan. This plan will ensure integration of transport with spatial patterns as well as the integration between various transport modes to transport people effectively.

The Gautrain ferries 52 000 people a day (including weekends) or 1,2 million people a year.

The Gautrain celebrated its fifth anniversary in June 2015. It had reached a milestone of 50-million passenger trips over the five years, as well as 300 000 train trips and an approximate 1,5-million bus trips.

Future plans were announced that included about 200 km of new railway line and 18 new stations. Among these are new tracks between Mamelodi, in the east of Pretoria, and Soweto, in the south-west of Johannesburg.

In February 2016, Johannesburg launched an EcoMobility World Festival, which led to an increase of 7,7% in the number of passengers travelling on the Gautrain.

On the first day of the festival, the Gautrain recorded its highest Monday passenger trip count with an average of 60 120 passengers using the service on the day, compared to the normal 55 800 average Monday passenger trips.

Bus services increased by 512 passenger trips with an average of 21 076 passengers using the bus service on the day. A total of 2 934 non-train users were also recorded on buses.

Moloto Rail Development Corridor

The Moloto Rail Project's main objective is to ensure that passenger rail as the backbone of an integrated multi-modal transport system using proven state of the art rolling stock and equipment. In addition this rail project would serve as a catalyst for economic development initiatives within and around the Corridor resolving challenges of safety, efficiency, reliability, affordability and overall integration with other public transport services.

The Moloto Development Corridor has its main objective to increase speed for buses from 70 km/h to 120 km/h and from 160 km/h to 200 km/h for standard gauge trains, thereby reduce travel time for commuters. This part of government's policy to develop an inter-modal transportation solution and involves the following catalytic projects:

- 13 new train stations
- Koedoespoort Rapid Rail alignment (117 km of dual track)
- modal integration points
- surface 240 km of feeder routes
- Tshwane Bus Rapid Transit
- new dual 67 km carriageway from Siyabuswa to Moloto
- Mamelodi East and Greenview Pienaarspoort alignment.

Civil aviation

South Africa's nine major airports are:

- OR Tambo International in Gauteng
- Cape Town International in the Western Cape
- King Shaka International in KwaZulu-Natal
- Bloemfontein International in the Free State
- Port Elizabeth International in the Eastern Cape
- Upington International in the Northern Cape
- East London Airport in the Eastern Cape
- George Airport in the Western Cape
- Kimberley Airport in the Northern Cape

Through the launch of the Pilot Cadet Training and Development Programme for those who had been previously disadvantaged the three state-owned airlines – SAA, SAX and Mango – will strengthen their role as engines of economic growth in the developmental state, and as leaders in the transformation of the aviation sector.

Airlift Strategy

The Airlift Strategy introduced structured regulatory measures for increasing tourism growth for South Africa. In particular, this strategy is based on aviation policy directives and contributes to the county's growth by:

- aligning with the Tourism Growth Strategy and industry
- prioritising tourism and trade markets
- unblocking obstacles to growth through regulatory mechanisms, and bilateral and multilateral air-services negotiations.

The overall objective of the Airlift Strategy is to increase aviation's contribution towards sustainable economic growth and job creation. This requires the creation and maintenance of an enabling framework, within which both suppliers and consumers of air-transport services may exercise reasonable flexibility and choice.

The strategy enhances the prospects of South Africa as a preferred air-travel destination and synchronises the basis for bilateral air-services negotiations with other priorities.

The strategy also provides specific guidelines for various unique markets, with emphasis on the needs of intra-African air services, and aims to improve the regulation of particularly the supply-side of air-transport services.

The department also developed the Airlift Implementation Plan, which provides a clear framework and capacity targets to be met.

Airlines

Several domestic airlines, as well as a number of smaller charter airline companies, operate in South Africa. SAA, British Airways (BA)/Comair, SAX, SA AirlinK and Inter-Air operate scheduled air services within South Africa and the Indian Ocean islands.

In addition to serving Africa, SAA also operates services to Europe, Latin America and the Far East. Other airlines operating in the country are Kulula and Mango. Scheduled international air services are also provided by Air Afrique, Air Austral, Air Botswana, Air France, Air Gabon, Air Madagascar, Air Malawi, Air Mauritius, Air Namibia, Air Portugal, Air Seychelles, Air Tanzania, Air Zimbabwe, AirlinK Swaziland,

Alliance Express, BA, Cameroon Airlines, Delta Airlines, El Al, Egyptair, Emirates, Ethiopian Airlines, Ghana Airways, Iberia, KLM, Kenya Airways, LAM Mozambique Airlines, LTU International Airways, Lufthansa, MK Airlines, Malaysia Airlines, Martinair Holland, Northwest Airlines, Olympic Airways, Qantas, Royal Air Maroc, Saudi Arabian Airlines, Singapore Airlines, Swissair, Taag, Thai International, Turkish Airlines, Uganda Airlines, United Airlines, Varig, Virgin Atlantic, Yemenia, Zambian Air Services and Zambian Skyways.

Freight transport Ports

Along its 3 000km-long coastline, South Africa has eight commercial seaports: Richards Bay, Durban, East London, Ngqura, Port Elizabeth, Mossel Bay, Cape Town and Saldanha.

South Africa is situated on a major sea route, which facilitates the safe and secure movement of about 500 Mt of crude petrochemical sea trade. This represents over 30% of the world's petrochemical production, on board over 5 000 tanker voyages of very large crude carriers per year.

The nine commercial ports are crucial to South Africa's transport, logistics and socioeconomic development. About 98% of South Africa's exports are conveyed by sea.

The Port of Durban is the busiest container terminal in Africa and the second busiest in the southern hemisphere following Melbourne, Australia. Over 4 000 commercial vessels called at the port's 57 berths in 2015. The Ports Authority alone employs 6 200 people at the Durban Port, with an estimated 30 000 people employed indirectly.

Richard's Bay is the busiest port in South Africa by tonnage and is one of the top two coal handling ports in the world. Richard's Bay focuses on bulk cargo handling while the Durban Port focuses on general cargo. It has also been earmarked for expansion projects with R3,7 billion had been set aside for mobile and quayside equipment, as well as weighbridges. Safety-critical, environmental and legal compliance projects would also be carried out.

Cape Town, located at the southern-most point of Africa, is ideally positioned as a hub terminal for cargo to South America and the Far East. West/East Africa cargo has grown substantially, making the Cape Town Container Terminal the terminal of choice for trans-shipment cargo. The terminal handles 3 161 vessels per year for a gross tonnage of 44 501 297.

The Port Elizabeth Container Terminal is one of the three specialised container-handling facilities

along the South African coastline. The terminal currently handles 1 271 ships with a total gross tonnage of 25 756 823. Transnet relocated the export manganese facility from Port Elizabeth to a new two-berth facility at the Port of Ngqura by 2015/16.

Pipelines

South Africa consumes about 25 billion litres of petroleum products a year.

Transnet Pipelines transports almost 50% of all refined petroleum products in the country for the emerging and major oil companies of South Africa. The Tarlton storage and distribution depot is a vital conduit in the supply of fuel to Botswana. Transnet Pipelines plans to enhance this service.

Transnet Pipelines transports all the crude requirements for the inland refinery at Natref, from where almost 70% of their refined products and 80% at Secunda are transported through the pipeline network to the final markets.

Transnet Pipelines owns, maintains and operates a network of 3 000 km of high-pressure petroleum and gas pipelines.

Investment in the pipeline sector is ongoing. Construction on a R5,8 billion fuel pipeline between the Mozambican Port of Matola in Maputo and Kendal in South Africa started in 2009. The 450-km pipeline transports up to 3,5 Ml a year and is expected to prevent potential fuel shortages in South Africa.

The pipeline facilitates the importation of petrol and diesel from Mozambique, which has extensive natural gas and coal reserves, but no oil reserves. Of the pipeline's total capacity of 3,5 Ml of fuel and diesel, a maximum of 1,5 Ml is diverted to Mbombela. The remainder is transported to Kendal.

More than 60% of South Africa's liquid-fuels demand lies within the Durban-Johannesburg corridor. The Durban-Johannesburg pipeline is no longer adequate for the transportation of the required volumes of petroleum products from the coast to the inland regions.

The multiproduct pipeline, being constructed at a cost of R23 billion between Durban and Johannesburg, will replace the existing Durban-Johannesburg pipeline.

Freight

Africa's road access rate is only 34% compared with 50% in other geographical zones. Yet roads remain the dominant mode of transportation, accounting for more than 90% of passenger and freight transport in Africa, compared with around 50% of freight in Europe.

Government will also review its rail investment programme to accelerate the shift of freight transport from road to rail.

Transnet will invest about R63 billion in the freight rail system by 2020. For its part, organised business will continue to promote greater use of rail freight by companies.

Transnet Freight Rail (TFR)

TFR is the largest division of Transnet. It is a world-class heavy haul freight rail company that specialises in the transportation of freight.

The company is proud of its reputation for technological leadership beyond Africa as well as within Africa, where it is active in some 17 countries.

TFR has positioned itself to become a profitable and sustainable freight railway business, assisting in driving the competitiveness of the South African economy.

The company is made up of the following six business units:

- Agriculture and Bulk liquids
- Coal
- Container and Automotive
- Iron Ore and Manganese
- Steel and Cement
- Mineral Mining and Chrome

Forming an integral part of the southern African economy, Transnet:

- moves 17% of the nation's freight annually
- exports 100% of the country's coal
- exports 100% of the iron ore
- 30% of the core network carries 95% of freight volumes
- has annual revenues of over R14 billion
- will invest R35 billion in capital over the next five years
- has 38 000 employees countrywide.

The company maintains an extensive rail network across South Africa that connects with other rail networks in the sub-Saharan region, with its rail infrastructure representing about 80% of Africa's total.

Maritime

Marine transport encompasses all forms of transport by sea, intermodal links and inland ports. It serves a large degree for the freight market, and in the South African context offers no significant passenger-carrying ability.

The DoT is responsible for South Africa's maritime administration and legislation, which SAMSA controls on its behalf in terms of the SAMSA Act of 1998.

The broad aim of SAMSA is to maintain the safety of life and property at sea within South

Africa's area of maritime jurisdiction, and to ensure the prevention of marine pollution by oil and other substances emanating from ships.

The Department of Environmental Affairs (DEA) is responsible for combating pollution and uses Kuswag coast-watch vessels to perform this function. SAMSA is responsible for introducing and maintaining international standards set by the IMO in London, with respect to:

- ship construction
- maritime training and training curricula
- watch-keeping
- certification of seafarers
- manning and operation of local and foreign ships
- maritime search-and-rescue
- marine communications and radio navigation aids
- pollution prevention.

SAMSA has an operations unit, a policy unit and a corporate support division to handle all financial, human resources, and information technology issues.

Other functions include registering ships, establishing a coastal patrol service and managing marine casualties and wrecks.

SAMSA is steadily improving its capacity to monitor safety standards of foreign vessels. Numerous ships calling at South Africa's major ports are inspected, and those not complying with international safety standards are detained until the deficiencies are corrected.

The South African Marine Corporation, Unicorn Lines and Griffin Shipping are South Africa's predominant shipping lines. Their fleets of container, oil tanker, general cargo and bulk cargo vessels operate not only between South African ports and as cross-traders to other parts of the world.

In 2016, the TNPA announced the completion of South Africa's first tug boat, named Mvezo. There are eight more tug boats to be built as part of Operation Phakisa.

In late 2015, South Africa was elected to the 20-member "Category C" Council of the International Maritime Organisation (IMO).

Deputy Minister of Transport Sindisiwe Chikunga led the country's delegation to the 29th session of the IMO Assembly in London, UK.

South African Maritime Training Academy (SAMTRA)

The SAMTRA at Simon's Town in the Western Cape provides advanced training to the broader maritime sector, including the merchant navy, harbour-craft operations, the fishing industry and the South African Navy.

The South African Merchant Navy Academy, General Botha, established at Granger Bay, is integrated with the Cape Peninsula University of Technology, with a similar training facility at the Durban Institute of Technology.

Deck and engineering students and officers complete their academic training at the Cape Peninsula University of Technology and the Durban Institute of Technology, while lower classes of certificates are offered at the Training Centre for Seamen, situated in the Duncan Dock area in Cape Town. This training institution also caters for deck, engine-room and catering department ratings.

SAMSA is responsible for setting all standards of training certification and watch-keeping on behalf of the DoT, while the Maritime Education and Training Board is responsible for accrediting all maritime courses.

Other maritime training organisations offer a wide range of courses that have been developed within the South African maritime industry. These are situated mainly in the ports of Cape Town and Durban and, to a lesser degree, Port Elizabeth.

As part of an initiative to reduce the vacancy rate of at least 45 000 jobs in the maritime industry, 12 FET colleges across the country started to offer courses aimed at equipping young people for a career in the industry.

The FET colleges will meet at least 80% of the industry's skills demands, producing artisans such as riggers, welders and boiler makers. Annually between 1 200 and 1 600 students enter the maritime industry after completing their studies.

Through its involvement in the AU, South Africa was leading the development of an integrated African Maritime Strategy.

In September 2016, SAMTRA, together with the Cape Peninsula University of Technology, hosted the International Navigation Simulator Lecturers' Conference (INSLC 19) – the first ever INSLC conference to be hosted in Africa.

Public transport

The DoT continues to administer subsidies for buses and other subsidised forms of public transport.

This includes world-class airports, upgraded train stations, refurbished coaches and luxury buses, taxis and IRPTNs such as the BRT System.

Integrated public transport networks Bus Rapid Transport

The Tshwane Rapid Transit (A Re Yeng) started operating in 2014.

All A Re Yeng buses are equipped with free wi-fi on the trunk route, full air conditioning, low-floor technology which supports Euro V emission levels, vehicle stability and a cashless automated electronic system that is fully monitored by camera and sensors. The buses are operated by qualified former taxi drivers recruited from the various taxi associations in the City.

The A Re Yeng bus project will be rolled out in phases, culminating in the construction of 80-kilometre long dedicated lanes. The route will comprise 51 bus stations that stretch from Soshanguve to Mamelodi, passing through the city centre and surrounding suburbs.

The City of Tshwane's launch follows on Johannesburg's Rea Vaya and Cape Town's MyCiti Integrated Rapid Transit systems.

The City of Johannesburg's Rea Vaya bus system route was operational in October 2013.

The route runs from Soweto and passes through Noordegeseig, New Canada, Pennyville, Bosmont, Coronationville, Newclare, Westbury, Westdene, Melville, Auckland Park and Parktown, and it links to the CBD.

By June 2015, Rea Vaya buses carried an average of 37 579 passengers each working day.

The GO!Durban system was launched in 2015. Once completed, the GO!Durban will see minibus vehicles collect people from residential areas to transfer stations where they will get buses to their preferred destinations.

About R20 billion set aside for transformation of Durban's public transport system was expected to connect 600 000 commuters across the city to nine public transport corridors by 2027.

In mid-2016, the first phase of Ekurhuleni's Harambee BRT service was implemented.

Harambee aims to connect the nine Ekurhuleni towns of Benoni, Germiston, Springs, Kempton Park, Edenvale, Nigel, Brakpan, Boksburg, and Alberton. Harambee's 56-km trunk route from Tembisa in the north to Vosloorus in the south will be built in phases, and started with the section from Tembisa via Kempton Park to OR Tambo International Airport.

All the South African BRT systems will expand in phases over the next decade.

Infrastructure development

It is the mandate of the PICC to oversee the implementation of infrastructure projects that stimulate social and economic growth.

South Africa's infrastructure plans include economic and social infrastructure that will unlock key mineral resources and exports. The PICC coordinates this infrastructure plan.

In July 2014, the Minister of Transport

unveiled the final design of Prasa's new, modern and safe commuter train, which boasts the latest technology the rail industry has to offer throughout the world. This was part of Prasa's massive rail revitalisation programme.

This is milestone in government's commitment to build infrastructure that will stimulate the economy and support local procurement.

The first new Prasa trains were set to enter service in October 2016, running between Pretoria and Pienaarspoort. The second line to introduce the new trains would be the Pretoria-Saulsville line, followed by the Pretoria-Johannesburg line.

Gibela is supplying Prasa with 600 new trains in a R59-billion deal, with the first 20 trains imported from Brazil and 580 to be built at a plant currently under construction in Dunnottar, on the East Rand. Gibela has also signed a 19-year maintenance and technical support programme with Prasa.

Rail

The DoT has embarked on a process of developing an all-encompassing national rail transport policy which will cover freight, long-distance passenger and commuter rail.

Prasa is at the forefront of government efforts to transform public transport in South Africa, with rail services forming the backbone of the network. Prasa's main responsibility is to integrate inter-modal facilities and services into public transport solutions that optimise the performance of the whole transport system.

The main thrust of the rail policy will focus on investment and new modern technology. It will address the regulatory framework required, particularly economic regulation, infrastructure and operations. It will also make proposals regarding the investment required to restore rail to its rightful place in the country's economy.

By 2020, existing logistics corridors are expected to be expanded upon and new corridors will have been established. A world-class export-oriented rail manufacturing sector and 6 405 km of rail are expected to have been replaced for the general freight, coal and ore lines, increasing the rail network capacity by 149,7 Mt.

The Durban-to-Gauteng Corridor is the busiest corridor in the southern hemisphere, both in terms of value and tonnage. It also forms the backbone of South Africa's freight transportation network.

Ports

Transnet Port Terminals is expected to spend R33 billion over the next six years on upgrading

and expanding South Africa's ports, as part of a massive state-led infrastructure drive aimed at boosting the country's economic growth.

The expansion projects will see major increases in the container-handling capacity of the ports in Durban, KwaZulu-Natal and Ngqura outside Port Elizabeth in the Eastern Cape.

Durban Container Terminal's Pier 1 will see its capacity grow 1,2 million 20-foot equivalent units (TEUs) by 2016/17, while its Pier 2 capacity will expand to 3,3 million TEUs by 2017/18.

Over the next 20 years, Transnet Port Terminals, which operates 45 cranes in seven ports across the country, will buy 39 new ship-to-shore cranes.

The Ngqura Container Terminal, which has been earmarked as a trans-shipment hub, will be expanded from 800 000 to two million TEUs by 2018/19.

Container capacity is also being created in other terminals, such as the Durban Ro-Ro and Maydon Wharf Terminal, through the acquisition of new equipment, including mobile cranes and various infrastructure upgrades.

The port is said to be the deepest container terminal in sub-Saharan Africa and will accommodate the new generation of giant container ships that regularly visit the country's shores.

Given its positioning and size, the Ngqura Trade Port will go a long way in boosting South Africa's trade with other countries in the region and is expected to support the country's new growth path. The planning of the Ngqura has been integrated with that of the Coega Development Zone.

The bulk handling capacity at Ngqura, Richards Bay in KwaZulu-Natal, and Saldanha in the Western Cape will also come in for major expansion.

Safety-critical, environmental and legal compliance projects are also in the pipeline. Some R1,2 billion will be spent on creating new capacity, including new storage areas, at Richards Bay. Transnet is also pursuing the re-engineering of the port to create additional capacity for bulk products at the terminal.

Saldanha's iron-ore bulk facility, which has undergone significant expansion in recent years, will be further expanded, taking its capacity to 82 Mt a year.

Additional manganese capacity will be created by the proposed relocation of the 5,5 Mt a year export facility in Port Elizabeth to a new two-berth manganese facility at the Port of Ngqura, boosting capacity to 12 Mt a year from 2016/17.

Safety of travellers

Arrive Alive

Government's Arrive Alive Road-Safety Campaign has become an important part of the DoT's road safety projects and awareness efforts, especially during critical periods for road traffic management such as Easter and the December holidays.

At the end of 2015, it was announced that the RTMC could not use the Arrive Alive campaign anymore, as it had been registered as a brand. The safety campaign remains in place, operating under the name 365 Days of Road Safety Programme, which would focus on creating awareness all year round.

The goals of the campaign are to:

- reduce the number of road-traffic accidents in general, and fatalities in particular, by 5% compared with the same period the previous year
- improve road-user compliance with traffic laws
- forge improved working relationships between traffic authorities in the various spheres of government.

The campaign emphasised that the reduction in road deaths was urgent and non-negotiable.

The RAF pays out about R15 billion to victims of road accidents every year.

UN Decade of Action for Road Safety 2011 – 2020

South Africa is a signatory to the UN Decade of Action for Road Safety 2011 – 2020. The UN General Assembly resolution proclaiming a Decade of Action for Road Safety 2011 – 2020 was tabled by the Government of the Russian Federation and co-sponsored by more than 90 countries.

The initiative aims to save lives by halting the increasing trends in road traffic deaths and injuries world-wide.

It is based on the following pillars:

- Pillar 1 – building road safety management capacity
- Pillar 2 – improving the safety of road infrastructure and broader transport networks
- Pillar 3 – further developing the safety of vehicles
- Pillar 4 – enhancing the behaviour of road users
- Pillar 5 – improving post-crash response.

As part of the Decade of Action for Road Safety 2011-2020 campaign, government is targeting the reduction in fatalities by 50% in 2020.

South Africa's efforts are focused on four key areas:

- fatigue or driver fitness
- drinking and driving
- use of seat belts
- pedestrian safety.

A key aspect of the integrated Road Safety Management Programme is increasing pedestrian safety. In planning and design, Sanral provides for interventions such as traffic calming, safe stopping areas for public transport, and pedestrian bridges. The DoT also engages communities adjacent to national roads to find solutions to pedestrians' needs.

To contribute to safety on the roads, Sanral has developed a database of projects that need to be implemented in areas that are hazardous to pedestrians. The solutions range from pedestrian bridges, pavements, road safety education and traffic calming measures.

When it comes to managing safety on freeways, Sanral's incident management system, supported by central coordination centres, embraces interaction between emergency services and law enforcement agencies on all declared national routes.

Passenger rail safety

The National RSR Act, 2002 (Act 16 of 2002), is the enabling legislation for setting up the independent RSR, reporting and accountable to the Minister of Transport. The mandate of the RSR is to:

- oversee safety in railway transport, while operators remain responsible for managing the safety of their operations
- develop an appropriate regulatory framework through the development of regulations and standards for safe railway operations
- monitor and ensure safety compliance by conducting audits, inspections, safety assessments and occurrence investigations
- collect and disseminate information relating to safe railway operations
- promote the harmonisation of the railway safety regime of South Africa with SADC railway operations
- promote improved safety performance to support the use of rail.

In pursuance of this mandate, the RSR has, in collaboration with the railway industry and the South African Bureau of Standards (SABS), developed a series of standards to ensure a common and consistent approach to railway safety in areas such as safety management, technical and operational requirements, and the management of human factors.

A key to the successful regeneration of the railway system in South Africa, and indeed the

subregion, is the interoperability of the railways.

This implies consistent standards and common usage of technology where railway infrastructure is used by more than one operator.

The RSR and the railway industry continue to collaborate in developing the overarching broad technical and operating standards.

The need for harmonisation of safety standards within the SADC region is of strategic importance. The RSR is facilitating efforts to adopt and align the current railway safety standards by regional railway operators through the Southern African Railway Association (Sara).

Since the RSR's creation, there has been increased awareness of safety in railways, improvements in safety management and accountability, and standardisation of safety management systems among railway operators in South Africa and regional railways operating into South Africa.

The permit system employed by the RSR ensures the standardisation of safety management systems.

Through its Sara membership, the RSR plays a leading role in regional safety issues. The RSR played a central part in developing the Regional Safety Policy Framework and safety standards and in updating the Handbook on the Transportation of Hazardous Materials by Rail.

Since the reintroduction of the railway police, there has been a significant drop in crime on trains and at train stations.

Maritime safety

An estimated 7 000 vessels pass around South Africa's coastline annually, of which many are laden tankers carrying in excess of 30 Mt of crude oil. South African weather conditions present regular challenges to vessels, often resulting in distress calls to the Cape Town-based Maritime Rescue Coordination Centre (MRCC).

Piracy constitutes a serious challenge to the development and stability of the SADC member states, given the importance of the region's international seaborne trade and its vital contribution to regional food-stocks and economic development.

Threats of piracy are of particular concern to the SADC, whose coastline and shipping lanes are extremely vulnerable to maritime crime. As the SADC's coastal area does not fall within patrol areas of the international antipiracy forces, the SADC will have to take responsibility for its own maritime security.

The threat around the Horn of Africa and SADC waters detrimentally affects the SADC's trade and economy.

The SADC's Maritime Strategy entails a regional partnership with all member states contributing within their means. Not all members necessarily have the essential maritime and military capabilities, but they still contribute in other ways by providing land-based equipment such as radar and soldiers to patrol coastlines and islands.

The SADC has established robust rules of engagement for antipiracy, which are largely consistent with those of other regions and task forces.

Regarding the legal framework, SADC member states are expected to:

- ratify or accede to international maritime conventions/treaties/regimes and the incorporation of these into their national law
- put in place comprehensive legal regimes at national level, consistent with international law, to prosecute pirates
- stop the practice of "catch-and-release" of pirates since it allows experienced pirates to execute more sophisticated acts of piracy
- strengthen and harmonise regional and domestic legal frameworks for arrest, awaiting trial detention, prosecution and imprisonment or repatriation of pirates
- take responsibility for its own maritime security in cooperation with other regions, task forces, navies and role players.

The MRCC enables South Africa to exercise its responsibilities to the international community by employing state-of-the-art search-and-rescue infrastructure and services.

South Africa has a well-established pollution prevention strategy, and is ready to respond in case of threats to the environment or to provide assistance to vessels at risk.

South Africa acts in terms of the Indian Ocean Memorandum of Understanding (MoU) on Port State Control and has a similar agreement with the states of West Africa in the form of the Abuja MoU.

Search and rescue services

The Southern African Search and Rescue (Sasar) has been in existence since 1957. It was formalised through the enactment of the South African Maritime and Aeronautical Search and Rescue (SAR) Act, 2002 (Act 44 of 2002). The Act gave the organisation a statutory mandate to coordinate all SAR activities within South Africa's area of responsibility.

South Africa is responsible for a huge SAR area, representing about 10% of the globe and about 28,5 million km² in total. To manage this vast area, the South African area is divided into

the aeronautical and maritime SAR areas.

The aeronautical SAR region covers Lesotho, Namibia, South Africa and Swaziland, and associated flight information regions.

The maritime SAR area stretches about halfway between South Africa and South America on the western side, and about halfway between South Africa and Australia on the eastern side. It also borders on Namibia, Angola, South Africa and Mozambique on the northern side and then extends to the South Pole.

Relevant operational structures and substructures were established for Sasar to execute its mandate successfully.

The Aeronautical Rescue Coordination Centre (ARCC) and the MRCC are the primary structures responsible for the execution of Sasar's statutory mandate. The ARCC and the MRCC are based at the ATNS and SAMSA.

SAR only works when several countries and all stakeholders collaborate across borders. This culture of collaboration dates back to 1959 when the Convention on International Civil Aviation first made provision for cooperation between states.

According to this provision, states will individually or in cooperation with other states, arrange for the establishment and prompt provision of SAR services within their territories to ensure that persons in distress get assistance.

Regional cooperation also uses scarce resources and helps nations to avoid duplicating efforts and facilities.

Through this collaboration, services are provided for poor states in a uniform way across a wide area. Collaboration also reduces the overall cost of SAR operations.

The SADC approached the ICAO and the IMO to fund the training requirements identified for the region.

In collaboration with the DEA, the DoT is also planning to create SAR capacity in the Antarctic region.

The DoT, the South African National Defence Force, Telkom, Portnet, SAMSA, SACAA, ATNS, SAPS, the Independent Communications Authority of South Africa, SAA and the Department of Cooperative Governance are members of Sasar and contribute their services and facilities.

Voluntary organisations such as the 4x4 Rescue Club, the Mountain Club of South Africa, Hamnet (the national amateur radio emergency communication network) and the National Sea Rescue Institute are also members of Sasar.

The ARCC Centre is an operational facility of Sasar that promotes the efficient organisation

of search and rescue services and coordinates aeronautical search and rescue operations. This plays a significant role in improving the safety of South African airspace.