a) Road and street networks are managed in accordance with approved access management guidelines.

b) Where new residential areas, streets and roads are developed, these are managed in active partnership with the relevant departments to find the optimal mix and balance between road reserve, the services network and appropriate settlement density.

c) Roads and streets can influence the urban quality of the surrounding areas and must be integrated with surrounding land use towards creating liveable environments.

d) Access roads must be holistically planned with new land use developments.

e) Road safety concerns must be managed when informal or formal settlements develop adjacent to higher order roads, as these roads are not currently designed for high levels of pedestrian activity.

f) Road safety considerations must be applied to rural roads that continue through villages with appropriate speed reduction measures, sidewalks and pedestrian crossing opportunities.

g) Road safety considerations for vulnerable road users must be taken into account in the planning of new roads, human settlements, public facilities and generally all developments, as well as when improvement of existing roads are undertaken.

h) Integration with all sectors are undertaken to achieve optimal integration with the road network, surrounding land use, infrastructure development and transport operations.

Policy Statement 13. New roads and the management of existing roads must be based on sound sustainable transport, spatial and development planning principles.

a) New roads must be planned, designed and constructed in accordance with sustainable transport and spatial planning principles taking into consideration the needs of all users.

b) New roads must be subject to a needs and desirability study as part of an overall Integrated Transport Network.

c) In congested areas, new roads and road capacity improvements must be constructed as part of a congestion management strategy, and must consider travel demand management principles in order to utilize existing road infrastructure more effectively.

d) In congested areas, traffic signal coordination and other travel demand management strategies are used to improve overall traffic management.

Policy Statement 14. Where appropriate and safe the principles of universal design must be followed in the design of roads and streets.

a) Facilities for people with special categories of need must be incorporated into the design and construction of new roads, where appropriate and safe to do so, to enable people to live and move independently. People with special categories of need include the following:

- People with disabilities - defined in the National Land Transport Act as people with a physical, sensory or mental disability, which may be permanent or temporary. This category includes the very young (usually taken as children between the ages of 0-14), and is therefore a broader definition than most other definitions of disability.
- The aged (or elderly people) - People over the age of 55 usually fall in this category.
- Pregnant women - usually considered as women in their last three months of pregnancy.
- Those who are limited in their movements by children - men and women with small children also have specific access needs that public transport systems need to cater for.

b) Whilst not formally contemplated in any current Departmental legislation, it is important to note that the following categories of passengers also have special categories of need:
- Life cycle passengers - these are customers who have additional transport needs by virtue of the fact that they happen to be in a particular stage of the human life cycle.
- Signage passengers - People who are unable to read or who are unable to understand the language used on the signage, including tourists.
- Female passengers - whilst safety and security affects all passenger groups and both genders, it should be noted that female passengers (together with people with disabilities) are particularly at risk of crime and abuse.
- Load carrying passengers - people carrying bags, luggage, or goods of a size that means that they benefit from accessibility features. This is important to people on low incomes in South Africa. People travelling with bicycles are generally also included in this category.

c) As part of ongoing road improvement projects, principles of universal design should also be incorporated, where appropriate and safe. The regulations prepared by the South African Bureau of Standards for Tactile Indicators\(^{37}\) and for the Application of the National Building Regulations\(^{38}\) shall apply.

d) Sidewalks, footpaths and cycle ways must be provided along all urban roads and streets, excluding freeways.

**Policy Statement 15. All Road Authorities will develop a ‘green’ road network, which conforms to the principles of sustainability.**

a) The DoT commits to developing a comprehensive set of minimum ‘green road norms and standards’, which are defined as planning, design, construction and maintenance best-practices, intended to develop road infrastructure that is more sustainable than current industry standards. Best practices in sustainability will include environmental, social and economic considerations, as described in detail in the ‘Approach to Sustainability in Roads’.

b) These norms and standards are used to define the parameters of a green road rating tool for new and rehabilitated roads. Benchmarks, which clearly define the incremental improvements in sustainability of road infrastructure as well as guide project teams (e.g. owners, designers and builders) in the process of implementation and aligned reporting must be developed. These benchmarks must be developed so that both high volume and low volume roads can be evaluated in terms of sustainable best practices.

c) The DoT will prescribe the conditions for which a self-assessment or an independent external certification is to be undertaken. When undertaken, the level of sustainability will be reported per identified road, based on the clearly defined benchmarks.

d) All Road Authorities will be responsible for implementing new and rehabilitated roads that meet the minimum prescribed norms and standards and, as part of overall roads management processes, existing roads are prioritised and upgraded to meet minimum green road norms and standards.
5.3 TECHNICAL CAPACITY

Road Authorities require a diverse range of professional and technical skills in order to function effectively, yet often they do not have the appropriately skilled and experienced staff. It is clear that a national guideline and staffing strategy for Road Authorities is required.

Road Authorities currently outsource the design, construction, monitoring and quality control of road infrastructure, including support services such as materials management and laboratory testing. The private sector's participation in roads infrastructure implementation is vital and forms part of an overall infrastructure delivery strategy.

In response to this growing need for the development of technical skills at Road Authorities, policies are developed in support of the implementation of an Infrastructure Delivery Support Management System (IDMS) for Road Authorities. The aim of the IDMS is to build the capacity to support improvement in the planning, procurement and management of infrastructure delivery at the provincial level. With the support of this system, the roads sector will be staffed with appropriately skilled, competent, qualified and experienced people who are professionally registered in their respective professions, where necessary in certain posts.

5.3.1 Policy Statements to improve technical capacity

Policy Statement 16. The Road Authorities employ appropriately skilled, competent, qualified and experienced people, and attract and attain civil engineering professionals in key positions.

a) The Roads Division of each Road Authority should be managed by an engineer or technologist with sufficient experience in key performance areas, and who is registered with the Engineering Council of South Africa (ECSA) and the South African Council for Project & Construction Management Professions (SACPCMP), as required and where applicable.

b) It is acknowledged that there is a need for staff with a variety of skills and all these staff should have professional registration with the appropriate Body or Association in their field of expertise.


d) All staff that performs Monitoring, Oversight and Inspectorate functions should be trained and registered as experts on the relevant ISO Standards in line with their prescribed duties.

e) New staff members should preferably meet these requirements before they are employed.

f) Through the implementation of an IDMS, the organisational structure for the technical staff required to fulfil the mandate of a Road Authority is identified and filled with appropriately qualified staff. This could include professional staff practicing in the built environment, as required. Through the implementation of this process, existing staff without the appropriate experience and qualifications will be affected, and this will have to be managed in accordance with South African labour laws.
g) The national DoT’s role of strategic oversight, compliance monitoring, policy development, data collection, monitoring and evaluation will be strengthened through the development and implementation of the IDMS.

h) The DoT will liaise with the Department of Public Service and Administration and motivate for a review of the OSD requirements, which can be implemented uniformly across all spheres of Government to enable attraction of professional staff to Road Authorities.

Policy Statement 17. The DOT in partnership with Provinces and Local Governments leads and guides the development of technical skills and professional registration within the Roads Sector.

a) The DoT in partnership with Provinces supports and facilitates the development of technical capacity in all aspects of roads delivery. The Human Resources Development Strategy is currently being developed by the DoT and provides the framework for this skills development.

b) The DoT encourages regional support between Road Authorities, which includes assistance and mentorship where necessary.

Policy Statement 18. The DoT, in partnership with Provinces, and its agencies, supports and develops struggling Road Authorities.

a) The DoT and Provinces encourage regional support between Road Authorities, which includes assistance and mentorship where necessary. The existing regulatory framework, through the Municipal System Act, National Land Transport Act and the Constitution, defines this level of assistance to be provided between organs of state.

b) The DoT endorses RISFSA’s recommendations for the development of service delivery entities for roads maintenance, if proven to be feasible for a particular Road Authority.

Policy Statement 19. The DoT, in partnership with National Treasury and Provinces, supports the role of the private sector in roads delivery in terms of Public Private Partnerships (PPP).

a) Road Authorities procure appropriately skilled and qualified services providers within the framework of the Public Finance Management Act\(^40\) and the Preferential Procurement Policy Framework Act\(^41\) to provide required services to the roads sector.

b) The DoT, together with Road Authorities and National Treasury, supports private sector involvement in road management, maintenance and construction within the various provincial and local authorities.

c) Consultation engineering and construction firms undertaking public sector road design, construction and maintenance projects must create training and skills development opportunities for public sector staff, where required.

d) Performance monitoring is applied to all service providers to the Roads Sector.

5.4 EMPLOYMENT CREATION

The road transport industry is able to contribute toward job creation by employing labour-intensive construction and maintenance methods. As South Africa’s road network includes both paved and unpaved roads, the construction, operation and maintenance of roads, footpaths, sidewalks and cycle ways by
labour-intensive methods can deliver employment to many under-developed and under-serviced communities.

Construction and maintenance activities within the road infrastructure sector can also be leveraged to facilitate skills development amongst individuals employed within the industry, particularly within the technical fields. The South African White Paper on Creating an Enabling Environment for Reconstruction, Growth and Development in the Construction Industry\(^4\) expresses a clear vision for public-sector service delivery aimed at optimising job creation opportunities through labour-intensive construction\(^5\). Thus, labour-intensive construction can be realised in the delivery of infrastructure development, which is technically and economically feasible.\(^4\)

5.4.1 Policy Statements to promote Employment Creation

Policy Statement 20. Increase employment opportunities in the roads sector

a) In line with the Expanded Public Works Programme (EPWP) Infrastructure Sector and S’hamba Sonke Programme (SSP), labour-intensive technologies and methods of construction and maintenance must be employed when maintaining and constructing road infrastructure. The focus of the EPWP and SSP is on provincial (secondary) roads and rural roads. This approach should also be extended to municipal roads.

b) Labour-intensive methods of construction and maintenance, where cost, time and quality are not compromised, must not only provide short- to long-term employment to local unemployed people, but must also provide some form of training and skills development, which can equip locally unemployed people for the labour market.

c) Labour-intensive methods must not compromise the quality of road construction of the Strategic Road Network.

d) Employment-creation efforts within the road infrastructure sector must focus on the creation of multi-faceted employment opportunities, including casual, temporary and permanent employment, for semi- and unskilled-individuals operating at the elementary skill level.\(^4\)

e) The skills shortage within the road infrastructure sector, particularly with regards to technical expertise, must be addressed through the inclusion of at least one junior/ candidate specialist(s) in the construction and maintenance of road infrastructure. This may be facilitated through an internship, learnership, or apprenticeship for the duration of the activity concerned.

f) The DoT must develop monitoring and reporting systems to assist all spheres of government in order to create and sustain effective labour-intensive maintenance methods.

g) The role of local communities in roads construction projects is supported by Road Authorities. Possible mechanisms include the use of local labour and the temporary employment by the contractor (through the provisions of the contract) of a community liaison office.
Policy Statement 21. Prioritise employment creation in rural areas.

Rural unemployment is especially concerning. As such, secondary and rural roads development must support efforts to provide employment opportunities to rural communities, especially in marginalised areas.

5.5 RESPONDING TO USER NEEDS

As the road networks are being used by a multiple of users, the way roads infrastructure is managed should be aligned with the needs of the users of the roads. In response, policies have been developed that attempts to address the infrastructure needs of these users of road infrastructure. Integration with various sectors affected by roads management is a sound strategy to promote a more sustainable roads management environment.

5.5.1 Rural Access

Rural access, or the lack thereof to economic and social opportunities, has been identified in planning documentation as a weakness of the South African economy. The developmental challenges are especially relevant in rural South Africa. The lack of adequate access is especially relevant in rural South Africa with concerns around health, education, employment levels and economic activity being raised. Rural areas with typical long distances between towns or between farming communities and educational/economic/social opportunities face access and mobility challenges. This is a stumbling block for social and economic development of rural communities.

For rural communities to flourish socially and economically, rural communities need well-maintained access roads and transport services. Furthermore, road maintenance and construction initiatives in rural communities, and associated employment opportunities, should involve/target rural communities.

The DoT’s Strategic Plan has identified improvement to rural access, infrastructure and mobility as one of its strategic goals. Many opportunities have also been identified in the Rural Transport Strategy to address transport needs within rural communities which has been designed around two strategies; namely the provision of rural transport infrastructure and rural transport services. Policies have developed for roads infrastructure to ensure this alignment to the developmental requirements for rural South Africa.

5.5.2 Policy Statements to address needs in the rural areas

Policy Statement 22. The DoT recognises the role of roads in the rural economy.

a) The DoT recognises the role that rural road maintenance and construction play along the provincial roads, as a tool to improve overall social and economic development of rural areas.

b) The DoT uses the Access Road Development Plan (ARDP) as a tool to support the implementation of rural access road development across South Africa.

c) Institutional arrangements amongst national, provincial and local authorities, as well as relevant stakeholders, are strengthened to allow for collaborative planning and implementation in rural environments.
Policy Statement 23. The DoT improves rural access to opportunities.

a) Rural roads, paths and pedestrian bridges form part of an overall concept of road infrastructure to improve rural access.

b) Animal-drawn transport is an important element of rural transport.

5.5.3 Public Transport

The roads sector has to mirror the sustainable transport philosophies underpinning public transport delivery to encourage effective delivery of public transport. Accordingly, road planning, design and construction should support public transport implementation and operations.

5.5.4 Policy Statements to respond to the needs of Public Transport users

Policy Statement 24. The DoT and all Road Authorities support and adopt a sustainable transport approach.

a) Roads management and infrastructure implementation support a sustainable use of road space, where greater emphasis is placed on the role of public transport.

b) Public transport facilities are incorporated in the planning, design and implementation of new roads, or when existing roads are maintained or upgraded.

c) In metro areas, roads and public transport infrastructure must support urban densification strategies.

d) Public transport routes are to be properly maintained, especially in rural areas.

e) Public transport requirements are to be considered within Pavement Management Systems (PMS) or Road Asset Management System (RAMS).

f) Minibus-taxi ranks and other public transport facilities must be developed for all users (vehicles and passengers) of the facility and be universally accessible where appropriate and safe.

Policy Statement 25. Public transport is integrated with other modes, town planning and roads.

a) Human settlement planning, road network development and public transport provision are all to be integrated.

b) Integrated Public Transport Networks (IPTNs) are to be appropriately planned around the operational needs of the various towns and cities, and not only focus on large-scale and expensive BRT implementation.

c) Walking, cycling, public transport, universal access considerations and roads planning must be integrated as part of an overall transport system.
5.5.5 Freight Movement

Freight efficiencies must be maximized with the ultimate aim of achieving a modal shift that reflects an optimal balance between rail and road freight and in doing so, limit the deterioration of roads. The characteristics of certain goods (in terms of mass and volume) and the distances involved make rail transportation more efficient than road transportation. These goods include for example bulk commodities such as coal, chrome and manganese, automotive parts and components, and containers.

As elements of road freight operations has a significant impact on road safety and overall pavement conditions, policies are proposed that supports the enforcement of all applicable provisions of the existing legislation (NRTA) to improve the efficiency and operational safety in the road transport sector. Policies in support of truck stop facilities on major freight corridors also improve driver behaviour and road safety.

5.5.6 Policy Statements to address the needs of the Freight Sector

Policy Statement 26. The DoT supports a freight modal shift from road to rail.

a) The DoT supports and encourages the role of market forces in determining which commodities will be moved on the road and which will be moved on rail, based on the efficiency considerations of each respective mode.

b) The freight modal shift from road to rail encapsulates inter-regional freight transport throughout the SADC region. Where possible, rail-friendly goods currently transported inter-regionally from South Africa’s sea and inland ports are shifted onto the inter-regional rail network.

c) The consolidation of freight, where appropriate, and the investment in freight consolidation facilities is promoted through the use of logistics hubs that are strategically located based on current and future land-use and spatial development.

Policy Statement 27. The DoT engages with the road freight industry about aligning market cost of road freight activities with the true cost.

a) The DoT will formulate a framework for the road freight industry to align the market cost of road freight activities with the true cost thereof in order to ensure that the road freight industry costs are commensurate with the impact of road freight activities on the existing network.

b) The DoT supports the creation of a single transport economic regulator for the transport sector, which will oversee aspects related to pricing in the road freight industry.

c) The DoT supports the enforcement of a set of minimum standards for the road freight industry.
Policy Statement 28. The DoT supports the implementation of truck stops along the road network.

a) Truck stops on the existing road network are promoted based on a needs and desirability basis, and adhere to existing operational and engineering guidelines as set out by the relevant Road Authorities.

b) These truck stops are aligned with the spatial and development plans and frameworks of the areas affected. It also serves as an opportunity to maximize local socio-economic development opportunities in local communities.

c) The implementation of truck stops is underpinned by comprehensive economic and financial feasibility analyses.

Policy Statement 29. The DoT supports overloading control initiatives.

a) The DoT supports the combination of strategically placed weighbridges, managed by competent authorities throughout the road network. Voluntary compliance and self-regulation are supported along with other overloading control interventions.

b) Government will review and improve enforcement of all provisions of the existing legislation (NRTA) to improve efficiency in the law enforcement operations.

c) The DoT continues to support research and implement programmes that will improve the efficiency and operational safety in the road transport sector.

d) The DoT continues to support self-regulation and voluntary compliance by the freight transport industry through partnerships with industry role-players.

e) The DoT supports the use of technology to monitor overloading control.

f) The DoT supports the process of operator registration for RTQS implementation and actively engages the industry about auditing, certification, and quality assurance.

g) The DoT supports the process of operator registration in terms of the NRTA as part of the official transport regulatory framework and to support the improvement in quality of all aspects of freight and passenger transport operations.

h) The DoT will engage with the transport industry and actively address the regulatory framework for transport operations to ensure operator compliance with regards to vehicles, drivers, offences, and operational issues such as overloading to reduce the damage to roads, and improve the overall quality of transport operations.

i) The DoT supports the control measures placed on consignors and consignees to ensure overloaded vehicles are not dispatched or received in order to protect the road infrastructure and ensure safer vehicles.

Policy Statement 30. The DoT supports the integration of freight movement with other transportation modes.

a) An integrated approach is required between road infrastructure and how it relates to other transportation modes, such as ports and rail, in parallel with the approach of the Strategic Infrastructure Projects and the National Infrastructure Plan. Joint and coordinated planning at a strategic level
between Road Authorities and other transport modal authorities must be strengthened and encouraged.

b) Inter-modalism, primarily between road and rail, and the strengthening of key logistic corridors, nodes and links, must be encouraged and promoted to strengthen the linkages throughout the national logistics chain and align the road sector with future economic development initiatives within the country, particularly in the green- and blue-economy fields.

Policy Statement 31. The DoT promotes the right mode used for the right commodity.

The appropriate modal allocation must be applied to ensure certain goods and services are transported using the appropriate mode.

Policy Statement 32. The DoT promotes the use and analysis of statistics in the management of roads.

a) In order to protect and maintain the existing road infrastructure network throughout the country, the Road Authorities need to understand the movement of freight on existing road network. Therefore, the analysis of data to support intelligent decision-making must be implemented.

b) The road freight industry should be encouraged to supply the relevant Road Authorities with information related to freight movements along the road infrastructure network on a regular basis in order to allow the Road Authorities to make intelligent analysis possible.

c) The collection and analysis of more detailed information regarding freight movements, such as weight and content, which should extend across other policies and strategies relating to the road freight industry, must be encouraged.

d) As part of promoting and strengthening integrated cross-border freight movement, SADC-based freight operators must be encouraged to provide more detailed information with regards to freight.

Policy Statement 33. The DoT promotes technology and innovation in the road freight industry.

a) The policy supports the identification of specific routes and corridors that accommodate new and advanced technologies related to freight movement on the road, so as to minimise the negative impact of such technologies on other parts of the existing road network.

b) Road infrastructure operation and maintenance should be cognisant of technological developments in the road freight industry and should take a measured and considered approach to the adoption of such technologies in the future.

c) Technological advancements and innovation in the road freight industry are to be encouraged and supported by the relevant Road Authorities, which should lead to improvements in the efficiency of freight movement on the road network, provided that such technological advancements and innovation do not harm the existing road network or impede the ability of the relevant Road Authorities to protect and maintain the existing road network.

5.5.7 Regional Integration within SADC

Regional integration implies the planning, construction and maintenance of roads infrastructure across countries of the Southern African Development Communities (SADC). The Regional Indicative Strategic
Development Plan (RISDP)\textsuperscript{46} is a comprehensive development and implementation framework guiding the Regional Integration agenda of SADC over a period of fifteen years (2005-2020)\textsuperscript{47}. It was designed to provide clear strategic direction with respect to SADC programmes, projects and activities in line with the SADC Common Agenda and strategic priorities, as enshrined in the SADC Treaty of 1992. SADC developed the Regional Infrastructure Development Master Plan\textsuperscript{48} as a strategic framework guiding infrastructure development in Southern Africa.

At present, most Member States of SADC maintain dedicated road agencies, while substantial improvements are underway for regional railways and air transport. In particular, three primary corridors – the North-South Corridor running north from Durban, South Africa; the Maputo Corridor running through Mozambique, and the Dar-es-Salaam Corridor in Tanzania – are the focus of most development. As these development corridors connect shipping ports to areas of industrial productivity, much infrastructure has been supplied by the private sector through public-private partnerships and user-pays principles. This system has proven effective, enabling road and railway development to commence where government intervention had previously stagnated.

All road users traveling across borders should encounter similar standards along the road network within the SADC region. Through achieving this, the efficiencies and management of freight movement within the region is improved. This is further supported by the Border Management Agency Bill\textsuperscript{49} which is also tasked, amongst others, to coordinate with other organs of state, through the principles of cooperative governance, the functions performed by these organs of state, in respect of border management generally; and provide an enabling environment to facilitate legitimate trade.

5.5.8 Policy Statements to improve regional integration within the SADC region

Policy Statement 34. The DoT and other relevant departments facilitate regional development through more efficient movement of goods and people.

a) Regional development is fostered through strategic partnerships between international cooperating partners and regional stakeholders.

b) Compatible policies, legislation, rules, standards and procedures are implemented in order to facilitate the integration of regional transport networks. The RTMC Act\textsuperscript{11} provides for a partnership with the private sector on road traffic matters. Section 2 of the Cross-Border Road Transport Act caters for cross-border agreements and committees. The legislation is in place to give effect to the policy statement.

Policy Statement 35. The DoT and SANRAL improve the border approach roads.

a) As border approach roads will form part of the Strategic Road Network and become the responsibility of SANRAL. These roads must be improved and properly maintained to facilitate improved movement of goods and people across South Africa’s borders.

b) In planning and operating border approach roads, Road Authorities will consider the role of border posts as one-stop service facilities and provide the necessary access and facilities in support thereof.

c) Border approach roads will also accommodate the movement of pedestrians across the borders of South Africa and where practically possible, make the border posts universally accessible.
6 ROAD SAFETY

6.1 BACKGROUND

South Africa has one of the highest road death rates in the world with a reported road death rate of approximately 25.2 per 100 000 people in 2016\textsuperscript{50}.

In 2010, the governments of the world declared 2011–2020 as the Decade of Action for Road Safety. The goal of the Decade of Action is reduce road traffic fatalities and serious injuries by 50% from the 2010 baseline, saving an estimated 5 million lives over the period. A Global Plan of Action was developed to guide countries so that their actions could holistically support the overarching targets identified. Within the legal constructs of national and local governments, countries are encouraged to implement activities according to the five pillars mentioned, namely:

- Road Safety Management
- Safer Roads and Mobility
- Safer Vehicles
- Safer Road Users
- Post-crash response

Currently most road safety action plans are being developed in alignment with the United Nations Decade of Action requirements and various initiatives have been established because of it.
6.2 EXTENT OF CRASHES AND FATALITIES IN SOUTH AFRICA

South Africa had 14 071 fatalities in 2016 according to the RTMC.

Vulnerable road users, namely pedestrians and cyclists made up 41.6% of the fatalities during 2016, with 5,410 pedestrians and 451 cyclists killed in crashes.

Road users between the ages of 24 and 35 are the most at risk, with this age group representing 27% of the pedestrian and 35.7% of the driver fatalities in 2016.

Human factors represented 77.5% of the contributing factors to the 11,676 fatal crashes reported in 2016, while vehicle factors and road and environment factors represented 6% and 16.5% respectively.

The following graph, Figure 1 below, indicates the fatalities recorded by the RTMC from 2001 to 2016.

![Figure 1: Fatalities per Year](image)

The number of major, minor and damage only crashes, which are indicated as 40,117, 132 609 and 648, 560 respectively in the year 2015 in the “Cost of Crashes in South Africa” report by the RTMC in collaboration with CSIR\(^5\) is an estimation only, calculated by using historical data.

In the above-mentioned report the total cost of road traffic crashes on South Africa’s road network for 2015 amounted to an estimated R142.95 billion - equating 3.4 per cent of GDP.

6.3 PREVIOUS ROAD SAFETY STRATEGIES AND POLICIES

Several road safety strategies and actions have been undertaken in the last 20 years. These strategies have been summarised in the report by the Department of Transport that was submitted to the United Nations in November 2015\(^6\). The different strategies are listed here, with a summary thereafter.

- 1991 Road Safety Strategy
- 1996 Road Traffic Management Strategy
- National Road Safety Strategy – 2006 Onwards
• Road Safety Summit in 2013

The issues from the above road safety strategies can be summarised as follows:

• All the previous strategies in essence state the same actions to be taken. There is a repeat of the basic elements, namely engineering, education and enforcement.
• The various specific strategies mentioned were all focused at addressing one of the many elements of road safety to reduce the number of crashes and fatalities. The general view is that the targets set, such as halving of fatalities, or reducing it by 10% per year, were unrealistic, given the resources.
• From the different strategies that were compiled every 5 years, with the exception of 2010, when the UN Decade of Action was adopted, there is no clear thread running through to provide a long term view.
• Too little attention is given to the detail of whether previous strategies were effective, and there is a need for more secondary indicators. Traffic offences are monitored, but there is not a national monitoring programme of speeding, and the non-payment of traffic fines is a serious issue.
• The quality of available human resources was not addressed in the strategies. The importance of experienced, skilled people was never raised in these strategies, and it is regarded as one of the key elements required to ensure the successful implementation thereof. This is applicable to all areas, namely education, engineering and enforcement, and especially with regards to the management and leadership on a national level to implement the road safety.

6.4 ROAD SAFETY PROBLEM STATEMENT

This section provides an overview of the problems in road safety in South Africa. It is a summary of the main problems identified in the previous policies and strategies, although some problems are described in more detail in the different implementation areas provided later.

• There is in general a limited understanding of the complexity of the road safety problem in South Africa. South Africa is a diverse society, with many social differences, different levels of road user education, high levels of corruption and an ageing vehicle fleet. In order to address road safety problems, a long term view as well as a multidisciplinary approach and exceptional, consistent leadership over a long period is required.
• The total number of crashes is a key statistic that needs to be verified – without accurate data on all crash types (not only fatal crashes), the extent of the road safety problem will remain unclear. As only a relatively small percentage of vehicles in SA are insured, many crashes are not even reported for insurance purposes.
• The lack of good quality crash data makes it difficult to accurately estimate the extent of the problem. The location and type of crashes are generally not reported well, making the implementation of specific solutions in specific locations difficult. A study conducted in 2014 revealed that some provinces do not keep proper databases. Officials report crashes using their own systems, but these are not correlated in a central database per region. There is a need for traffic departments, SAPS, emergency services, public hospitals, the Road Accident Fund (which spends more than R30 billion per annum in post-crash care and rehabilitation), private institutions such as towing services, private ambulances, insurance companies, private hospitals and others to include their data to correlate with the provincial and then national data.
• There is the risk that the problem is significantly larger than currently assumed, and an investigation regarding the extent of underreporting is needed.
• The problem with crash data also arises from the Accident Report Forms, which are often completed inaccurately, making it difficult to derive some data. There is therefore a need to train the people in completing the forms accurately and to do quality control when capturing the data.
• The 2010 target to halve fatalities in ten years was unrealistic. A more realistic reduction per year of 4% will result in a total reduction of 33% over 10 years, or say a reduction of 470 fatalities per year.
• Many policies and strategies have been developed in the past with limited effective implementation. The poor implementation record is most likely due to lack of leadership, ineffective management structures, not employing the suitable resources, limited funding and a culture of corruption in law enforcement and other areas.
• Road safety education is fragmented, lacks coordination and quality control. Proper road safety education and awareness will lead to the development of responsible citizens and responsible road users. This is the major problem that needs to be addressed in order to change the long term road user culture in South Africa.
• The existing driver training and testing is of poor quality and is further weakened by high levels of corruption. The K53 driver licence is in the process to be reviewed. The use of technology in driver testing to curb corruption, is lacking.
• Vehicle roadworthiness is a problem, with corruption reportedly high at vehicle testing centres and driver testing centres.
• The implementation of AARTO by RTIA, given the approval of the AARTO Amendment Act, will address some of the challenges faced with effective law enforcement. The points demerit system is to be pursued and fully implemented.
• Limited funding for road safety needs to be addressed to improve road safety efforts.
• Inadequate mechanisms to evaluate effectiveness of road safety programmes such as among others awareness campaigns, to ensure maximum benefit and return on investment.

6.5 AIMS OF THE ROAD SAFETY POLICY

The aims of the road safety policy are as follows:

• Identifies the role-players that need to be involved in addressing road safety.
• Ensures a common understanding by all road safety role-players of the problem, the approach to be adopted to address the problem, and the way forward.
• The roles and responsibilities of all role-players are defined and are understood.
• The relationship between the road safety policy and a more detailed implementation strategy is outlined.
• Provides clear policy directives for the national road safety strategy.
• Provides guiding principles for the Road Safety Strategy process towards building and strengthening the human resources and management capacity at a technical level for effective implementation of road safety activities, as well as the adoption of international standards and practices for traffic and crash data collection and management.
• Improve the data collection process to ensure the quality meets international standards.

6.6 GUIDING PRINCIPLES FOR THE DEVELOPMENT OF A ROAD SAFETY POLICY

In the road safety environment, there have been several key concepts developed to assist in simplifying the problem and to make it more understandable.
These include the 4E's (Education, Enforcement, Engineering and Evaluation), the Five Pillars of the UN and most recently the concept of a Safe systems approach. The safe systems approach refers to a holistic approach to road safety where all elements of the road, the environment in which the driver is trained and tested, as well as the vehicles, are considered as a system that needs to function as one. In this policy a set of guiding principles have been developed, as outlined below, followed by nine policy statements. Each of the policy statements contains several detail statements that need to be developed into more detail as part of the road safety strategy and subsequent action plans.

Figure 1 provides an overview of the relationships between the different concepts.

![Diagram of 4E's, 5 Pillars of the UN, and Road Safety Policy Statements]

**Figure 2: Development of the Policy Statements of the Road Safety Policy**

### 6.7 ROAD SAFETY IMPLEMENTATION AREAS – POLICY STATEMENTS

The policy has been aligned largely with the five pillars of the decade of action. The following sections provide the policy statements in the different implementation areas.

#### 6.7.1 Policy Statements to improve Road Safety Management

**Policy Statement 36.** To achieve the goal of reducing crashes, injuries and fatalities, institutional structures are needed.

a) Management should ensure the utilisation of the limited resources - human, financial and others - by proper planning and coordination of activities.

b) An extensive number of role-players need to be coordinated, including inter alia the following:

- Department of Transport
- Road Traffic Management Corporation
- Road Traffic Infringement Agency
- Cross Border Road Transport Agency
- Road Accident Fund
• South Africa National Road Agency Limited
• Engineering Departments (Provinces and Municipalities)
• Provincial Departments of Community Safety (usually incorporates Road Safety)
• Metropolitan Police Departments and Municipal Traffic Departments
• Emergency Services departments (Fire and Ambulance)
• Department of Health (Hospitals and Pathology services / Morgues)
• Department of Basic Education
• Insurance Industry
• Private Hospitals
• Private Ambulances
• Private vehicle towing and recovery services

c) In order to coordinate and manage the actions required from the many role-players listed above, will require an institutional structure that is inclusive and where all road safety actions can be coordinated.

d) The DoT should provide the policy directives in the Road Safety Structure. The RTMC, as the lead agency, should play the coordinating role and ensure duplication is minimised. At present the RTMC is the lead agency, but the DoT also coordinates certain actions, while RTIA and the RAF also have their own road safety actions.

e) The management structure shall be constituted as follows:

f) It shall consist of the following:

• National Road Safety Steering/Coordinating Committee (RTMCC)

Role: Implement the policy and strategy. Collate the data from the provinces and municipal structures, evaluate, give guidance and ensure knowledge sharing between implementing authorities take place. The committee shall meet on a monthly basis and consists of officials employed full time with responsibilities in the road safety field. The coordination of national research efforts will be conducted.

Members:
  o RTMC – Chair / Lead agency
  o Department of Transport
  o SANRAL (Engineering and Education)
  o RAF
  o SAPS
  o Department of Education
  o Heads of Departments of the Provinces
  o SALGA
  o STATS SA

Each member of the coordinating committee must be assigned a role and responsibilities in line with their core expertise. The RTMC as the lead agency must coordinate the division of responsibilities to avoid duplication and to ensure the effective use of limited resources.

• Provincial Road Safety Steering/Coordinating Committee

Role: Coordination of the preparation of a road safety plan per province and for every large municipality or metro in the province. The road safety plan must have three elements:
Identification of all hazardous locations based on existing knowledge, crash statistics, etc. Define safety preliminary plans for these hazardous locations with an estimated budget.

A structured plan for road safety education in schools must be compiled with an improvement map and database of all schools, and an ‘educate the educator’ programme per province. The target must be to reach every learner at least once a year. Existing resources must be combined and a plan with the requirements for training material must be compiled.

Members:
- Provincial and Metropolitan Municipality Engineering Department - Professional Engineer
- Provincial and Metropolitan Traffic departments
- Emergency services Department
- SAPS
- Provincial Department of Education

- National Task Teams

Role: National task teams can be established to address specific topics, do research or to address specific policy issues, for example:
- Research
- Engineering
- Systems and Technology
- Standards, and
- Other topics to be identified

Members: Identified as required, including people with specific expertise, or professional service providers as required.

6.7.2 Policy Statements to address the role of Law Enforcement

Policy Statement 37. Law enforcement actions should be aimed at addressing road user behaviour. Law enforcement should be an adequate deterrent to encourage road users to obey the law.

a) The national database with hazardous locations should be used as the base for identifying areas where law enforcement should be done. The type of law enforcement action should be determined based on what will be required to reduce crashes in these locations.

b) Using available speed data from probe vehicles and other measurements, should determine which routes have speeding (where the operational speed exceeds the posted speed limit by say 20%) and to develop specific speeding programmes for those routes.

c) Locations with high pedestrian / alcohol related crashes should be identified in every province, and specific programmes focused on pedestrians should be developed. Pedestrians account for 40% of fatalities and require specially designed programmes.

d) Zero tolerance zones should be implemented per province. A minimum of two hazardous locations or routes in each province should be identified, where ‘Zero Tolerance Zones’ should be implemented. Strict law enforcement will be applied in these zones to ensure that drivers adhere to the traffic laws.
The purpose of the zero tolerance zones will be to develop a culture of adherence to traffic laws, which can be extended to other roads and will have a lasting impact on road user behaviour.

e) The statistics from law enforcement actions should be presented to the National Road Safety Steering/Coordinating Committee on a quarterly basis, to identify where changes and improvements should be made in the programmes.

f) The national contravention register exists on the eNaTIS for all AARTO infringements and offences. With the roll out of AARTO on a national level, this central database of drivers and their offences should be used to identify repeat offenders.

g) The law enforcement fraternity must be professionalised, using the guidelines by the RTMC.

h) Measures should be implemented to reduce corruption.

i) The database of vehicle roadworthy test centres (private and public), exists in eNaTIS. This should be kept up to date and regular inspections should be conducted to (a) ensure high standards of tests and (b) to reduce corruption.

j) Vehicle roadworthy test centres should be monitored, and technology such as cameras and voice recording devices should be used to monitor officers and reduce corruption.

k) Government shall continue to support the expansion of self-regulation in the heavy vehicle transport industry through partnership with industry, SABS, SANAS, SAATCA, Transport Agencies and the CSIR to implement the following and other relevant South African National Standards:

- SANS 1395 (Road Transport Management Systems)
- SANS 39001 (Road Traffic Safety Management Systems)
- SANS 10187 - Part 1 to 9 (Requirements and recommendations for load securement on vehicles)

l) Overloading control with the necessary law enforcement actions should be increased on all the major heavy vehicle transport routes.

6.7.3 Policy Statements to improve the Collection of Crash Data.

Policy Statement 38. All crashes should be reported and accurately captured.

a) To improve the collection of all crash data, the process for capturing crash data must be reviewed. The data flow from the crash scene, involving all possible role-players right up to the national data base need to be outlined and accepted by all.

b) The standard data fields in the Accident Report Form need to be reviewed and an electronic form should be developed.

c) Quality control of captured crash data, in the form of a team of people verifying the data should be designed into the system.

d) The crash data collection should be electronic, and web based and should be based on a standard data protocol, allowing seamless data integration from various existing databases in the municipalities and provinces.
e) The crash data must comply with the international standard by including fatalities resulting from injuries within 30 days after the crash.

f) Crash data should be made available to stakeholders for their own specific analysis. This will assist to improve their own effectiveness in road safety measures.

g) Crash data should be analysed and discussed per province on a quarterly basis with the relevant role-players in order to address hazardous locations, determine necessary actions and to review the quality of the data collection process.

6.7.4 Policy Statements to minimize crashes as far as possible from an engineering perspective

Policy Statement 39. A database of all hazardous locations in South Africa must be developed.

a) Engineering standards should constantly be reviewed and improved to ensure that appropriate designs be implemented to reduce the risk of crashes.

b) There should be coordination on engineering standards between all levels of Government, and coordinating bodies such as COTO should play an important role in improving road safety.

c) The National Traffic Engineering Technical Committee (NRTETC) which is a sub-committee of the NRSSC which membership represents all road authorities should establish a national database of hazardous locations.

d) The hazardous locations should direct all road safety efforts i.e. enforcement, engineering and education by all related agencies and authorities to the most hazardous locations.

Policy Statement 40. Road Safety Audits (RSA) for new projects should become compulsory on all road projects and engineers need to be trained and to develop experience in road safety audits.

a) A RSA is a proactive measure with proven international success. Crash prevention via RSAs is considered an important aspect of proactive road safety management. South Africa recognized the need for implementing this road safety tool by compiling the updated South African Road Safety Audit Manual[53].

b) The manual aims to assist road authorities to conduct RSA for new road projects and road safety appraisals for existing roads to and network level assessments towards identifying potentially hazardous locations to plan remedial measures to minimize crashes on the road network. The RTMC as mandated by the RTMC Act to coordinate road infrastructure assessments in South Africa is in the process to establish a road safety auditor registration body through the Engineering Council of South Africa; this process should be concluded. The Road Safety Audit Manual (RSAM) published by the RTMC in 2012 should be reviewed and then updated. The updated Road Safety Audit Manual will be published by the RTMC as part of the Technical Methods for Highways (TMH) documents which will make the RSAM a compulsory document to be used by all roads authorities.

c) Speed limits on roads should be tested against the operational speeds, and changes to speed limits should involve a multi-disciplinary team of traffic law enforcement personnel, engineers and other relevant disciplines, applying the policy on the setting of speed limits.
d) Speed law enforcement actions need a strategic review, as it should not happen in isolation from other actions. It should not be done to earn income for a municipality, but should be focused on improving road safety.

6.7.5 Policy Statement to address the road user culture in South Africa

Policy Statement 41. Road safety education for learners should be structured and should be incorporated into the curriculum.

a) There are existing agreements between the Department of Transport and the Department of Education - this need to be further developed and supported by implementation of structures and budget.

b) The approach of ‘train the trainer’ should be followed, where national, provincial and local road safety officials should train educators in each school. The educators follow a programme to provide each of the 12.5 million learners with at least one road safety learning opportunity per year.

c) The road safety programme should be monitored on a national and provincial level, with quarterly reports on the schools and learners trained. This should be reviewed by the national road safety coordinating committee.

Policy Statement 42. Corruption has been reported widely in the driver testing environment and specific and strict measures need to be implemented.

a) The K53 driver licence test should be redesigned and focus should be placed on using technology to train and test drivers.

b) A curriculum for driver training should be developed and driving schools should be regulated. Regular testing of trainers at driving schools must take place and inspections are required – which must include retraining and testing of trainers as well as examiners.

c) Vehicle testing centres must be better monitored and controlled by implementing measures such as time restraints to act against perpetrators and/ or the owners of testing stations, the implementation of electronic testing procedures and compulsory photos of vehicles that are tested.

d) The professional qualifications of vehicle testing examiners need to be reviewed and an accredited course needs to be developed.

e) Standards for the testing equipment required for vehicle testing will have to be implemented. Regular roadworthiness testing for all vehicles over a specified age or kilometre reading must be implemented.

6.7.6 Policy Statement to improve research being undertaken on road safety

Policy Statement 43. A national coordinated research programme should be developed for road safety involving the universities, research institutions, private industry, the relevant government agencies, insurance companies and other relevant stakeholders.

a) The research should assist in monitoring progress and should provide feedback and guidance for the overall management of the road safety programme.
b) The National Road Safety Steering/Coordinating Committee should coordinate the road safety research initiatives. Research topics must be identified, prioritised, and budgeted for on an annual basis.

6.8 ROAD SAFETY POLICY IMPLEMENTATION FRAMEWORK AND WAY FORWARD

The proposed new structures for the management of road safety, comprising of the National Steering/Coordinating Committee, the Provincial Committees and Task Teams to execute specific actions, should form the basis for the implementation of the policy. These are similar to existing structures, but the aim is to have a more coordinated, teamwork focused approach, with measurable targets, regular meetings and strong leadership.

These committees should be established, and responsibility for the different aspects outlined in the policy should be assigned. The policy address a range of multi-disciplinary aspects, and it will take a special coordination effort to ensure the policy statements are converted into actions.

In order to implement the Road Safety Policy, it will be necessary to obtain buy in from all the stakeholders. Given the extent of the measures proposed on a policy level, it will require extensive consultation, training and leadership to take a new direction.

South Africa has one of the highest road death rates in the world with a reported road death rate of approximately 23.5 per 100 000 people in 201454.

In 2010, the governments of the world declared 2011–2020 as the Decade of Action for Road Safety. The goal of the Decade of Action is to stabilize and reduce the increasing trend in road traffic fatalities, saving an estimated 5 million lives over the period. A Global Plan of Action51 was developed to guide countries so that their actions could holistically support the overarching targets identified. Within the legal constructs of national and local governments, countries are encouraged to implement activities according to the five pillars mentioned, namely:

- Road Safety Management
- Safer Roads and Mobility
- Safer Vehicles
- Safer Road Users
- Post-crash response

Currently most road safety action plans are being developed in alignment with the United Nations Decade of Action requirements and various initiatives have been established because of it.
This NMT chapter forms part of the Roads Policy for South Africa prepared by the DoT. It provides a framework guiding all aspects around NMT planning and implementation in South Africa including such areas as institutional relationships, governance, infrastructure, road safety and funding. The main purpose of the chapter is to provide a common reference position for all government authorities and agencies to deal with NMT in a cohesive manner so that everyone can take the required actions toward jointly realising the country’s long-term vision for NMT.

It is accepted that NMT is an important potential transport solution for our country. NMT has many health and economic benefits, but the fact that it has zero carbon emissions aligns well with the global call for climate change. NMT is a viable and sustainable alternative to the use of private vehicles, but has been fraught with various challenges that have inhibited its widespread roll-out countrywide. A range of definitive actions will need to be taken at various levels of government to ensure NMT achieves its rightful status in South Africa’s transport system.

Active transport or non-motorised transport (NMT) is a term typically used in South Africa. It refers to all forms of movement that does not rely on an engine or motor for mobility. Walking and cycling are more common forms of NMT but it also includes other transport options such as pedicabs, roller-skates or in-line skates, skateboards, wheelbarrows, push carts and non-powered scooters. Animal-drawn or animal-powered vehicles (ADV) as well as people with special needs are also included in this NMT definition55. People with special categories of need include the following56:

- People with disabilities - defined in the National Land Transport Act1 as people with a physical, sensory or mental disability, which may be permanent or temporary.
- The aged (or elderly people) - People over the age of 55 usually fall in this category.
- Pregnant women - usually taken as women in their last three months of pregnancy.
Those who are limited in their movements by children - men and women with small children also have access needs that public transport systems need to cater for.

Whilst not formally contemplated in any current Departmental legislation, it is important to note that the following categories of passengers also have special categories of need:

- Life cycle passengers - these are customers who have additional transport needs by virtue of the fact that they happen to be in a particular stage of the human life cycle.
- Signage passengers - People who are unable to read or who are unable to understand the language used on the signage, including tourists.
- Female passengers - whilst safety and security affects all passenger groups and both genders, it should be noted that female passengers (together with people with disabilities) are particularly at risk of crime and abuse.
- Load carrying passengers - people carrying bags, luggage, or goods of a size that means that they benefit from accessibility features. This is important to people on low incomes in South Africa. People travelling with bicycles are generally also included in this category.

In addition, eco-mobility modal options are also included into this definition of NMT. These refer to transport options that are:

- Integrated with public transport
- Socially inclusive
- Environmentally-friendly
- They are right sized for their purpose,
- Energy source sustainable
- Produces zero emissions
- Preferably they are powered by renewable energy sources such as solar, wind or bio-energy from waste
- NMT vehicles are deemed to not exceed a top-speed of 35 kilometres per hour

Government is committed to a modal shift away from single occupancy private vehicles and towards developing NMT as a desirable mode of travel. NMT or active transport is good for the economy, the environment and everyone’s health or social well-being. The NMT chapter provides a common, integrated basis for the long-term development and implementation of NMT policies amongst various sectors and levels of government. It serves to:

- Raise awareness for NMT as a sustainable mode of transport
- Emphasise NMT on the political agenda and show Government’s commitment for NMT
- Articulate a vision and objectives to ensure co-ordinated actions amongst the different departments and private sector partnerships
- Provide a basis for consistent evaluation and monitoring of the successful implementation of NMT policy by all spheres of government
- Help leverage funding for NMT
- Help set standards and develop quality criteria around NMT
7.1 POLICY AND LEGISLATIVE FRAMEWORK FOR NMT

The summary of NMT policies and legislation for South Africa provide a framework guiding the planning, design and safety of NMT facilities and activities. These include the following:

- The Constitution of the Republic of South Africa, 1996\textsuperscript{5}
- White Paper on National Transport Policy, 1996\textsuperscript{17}
- National Land Transport Strategic Framework, Draft 2015\textsuperscript{57}
- Public Transport Strategy and Action Plan, 2007\textsuperscript{58}
- Rural Transport Strategy for South Africa, 2007\textsuperscript{59}
- NMT Facility Guidelines, 2016\textsuperscript{60}
- National Land Transport Act 5 of 2009 (NLTA)\textsuperscript{71}
- The National Road Traffic Act 93 of 1996 (NRTA)\textsuperscript{Error! Bookmark not defined.}
- National Road Traffic Regulations, 2000 (NRT Regulations)\textsuperscript{61}
- Administrative Adjudication of Road Traffic Offences Act 46 of 1998 (AARTO Act)\textsuperscript{12}
- National Building Regulations and Building Standards Act 103 of 1977\textsuperscript{62}
- South African National Roads Agency Limited and National Roads Act 7 of 1998 (SANRAL Act) and other roads legislation\textsuperscript{10}
- National Environmental Management Act 107 of 1998 (NEMA)\textsuperscript{63}
- National Heritage Resources Act 25 of 1999\textsuperscript{64}
- South Africa’s Universal Access Regulations\textsuperscript{65}
- The White Paper on National Climate Change Response, 2011\textsuperscript{66}
- Municipal By-Laws

7.2 WHY DO WE NEED NATIONAL POLICY ON NMT?

A policy on NMT provides a common, integrated basis for the long term development and implementation of NMT policies amongst various sectors and levels of government. It serves to:

- Raise awareness for NMT as a sustainable mode of transport
- Emphasise NMT on the political agenda and show Government’s commitment for NMT
- Articulate a vision and objectives to ensure co-ordinated actions amongst the different departments and private sector partnerships
- Provide a basis for consistent evaluation and monitoring of the successful implementation of NMT policy by all spheres of government
- Help leverage funding for NMT
- Help set standards and develop quality criteria around NMT.

7.3 NMT VISION AND OBJECTIVES

The vision for NMT in South Africa is as follows:

\textit{Our vision is for non-motorised transport (NMT) to be accepted and valued as a sustainable transport alternative within both urban and rural South Africa, where NMT is materially contributing to the mobility needs, economic vibrancy and social health of our communities.}