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Department:  
Transport  
**REPUBLIC OF SOUTH AFRICA**

# **DRAFT ROADS POLICY FOR SOUTH AFRICA**

March 2017

## FOREWORD



The core responsibility of South Africa's National Department of Transport is to support the development an efficient, integrated transport system, through putting in place appropriate policies, regulations and models that are both implementable and sustainable by our Road Authorities, within all three spheres of Government.

Road Authorities in South Africa have the obligation to provide a reliable, effective, efficient and integrated transport system that supports the sustainable economic and social development objectives of the country. All Road Authorities also have an obligation to plan, design, construct and maintain the road network, to protect the public investment in the road infrastructure, to ensure the continued functionality of the transportation system, and to promote the safety of traffic on the road network.

The proposed *Roads Policy for South Africa* sets out the strategic position of National Government on all matters relating to road regulation, roads infrastructure, road safety road funding and Non-motorised Transport (NMT). It does not attempt to address operational matters, except for road safety (which requires a systems approach and thus operational matters are also considered).

With mounting concerns over climate change and air pollution, the role of roads needs to shift away from serving predominantly private vehicles and road-based freight, toward

supporting more integrated mobility systems centred on walking, cycling, public transport and freight via rail or sea. In light of this, South Africa needs to ensure that its roads policies make best use of infrastructure budgets to further economic, social and environmental goals simultaneously.

Our country's National Development Plan (NDP) (2013) identifies road infrastructure as a key driver of the South African economy. For this reason, our road network must be developed and maintained in such a way that it supports our national development objectives. In addition, our roads must be managed as assets, and placed in the hands of the appropriate Roads Authority. Our roads must be safe, provide a high level of service at a cost our nation is able to afford, accessible for all users, and maintained in a good condition.

This Roads Policy is the first of its kind in South Africa. Although a series of transport and roads strategies and plans have been developed since 1994 (in particular the White Paper on National Transport Policy), the management of the roads environment and its users has not been fully addressed within an overarching national policy for roads. This Roads Policy therefore provides the necessary overarching framework to ensure that South Africa's roads are better managed, safer, and includes all modes, **to deliver a sustainable approach to roads** management.

I hereby present the proposed Roads Policy for South Africa and now look forward for robust engagement with the various stakeholders. I trust that through their inputs and participation, the development of the Roads Policy can be finalised and tabled at Cabinet for approval and implementation.

**Ms. Dipuo Peters, MP**

**Minister of Transport**

## ACKNOWLEDGEMENTS



The Department of Transport would like to thank the our Political Leadership, all Provincial & Local Government Road Authorities, the various Transport Agencies, South African Local Government Association, Municipalities and the members of Roads Coordinating Body, Non-Motorised Transport National Steering Committee, Road Safety Technical Committee, National Transport Forum, Legislation Technical Committee, Inter-Provincial Planning & Policy Committee, Road Incident Management Systems Committee, the National Treasury and various other government departments, other stakeholders and individuals for their contributions towards the development of the Roads Policy for South Africa. Without their support and involvement, the compilation of the Roads Policy for South Africa document would not have been possible.

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## PREAMBLE



### ROLE OF ROADS IN THE SOUTH AFRICAN ECONOMY

In its commitment to move South Africa forward, the Government of South Africa has embarked on a process of radical economic transformation<sup>1</sup>, which seeks to further transform an economic system impeded by the inhibiting trinity of unemployment, poverty and inequality. The radical economic transformation agenda is therefore an attempt to improve both the quality and equality of the economy that will ensure equal opportunity across the social spectrum. Such an ideal, however, hinges upon key prerequisites, such as road infrastructure, which allows individuals and communities to overcome geographical and social barriers to opportunity. Typically markets can be inaccessible for rural communities and the poor. Sometimes people reside in areas far removed from central business districts (CBDs), and the jobs therein. Radical economic transformation is therefore about modernising South Africa's economy to bring it in line with the ideals of the Constitution<sup>2</sup>,

Freedom Charter<sup>3</sup>, and the National Development Plan (NDP)<sup>4</sup>. It is in this context that the Roads Policy for South Africa draws both inspiration and direction.

Modern economies – characterised by inter-regional value chains – depend on infrastructure that supports an efficient production and exchange system. One of these key infrastructure elements is the road network, which not only provides access and mobility to people and communities, but also facilitates economic and but also facilitates economic and social linkages, and economic development and growth<sup>5</sup>.

South Africa faces many developmental obstacles, including infrastructure bottlenecks, and economic and social challenges such as unemployment, poverty and inequity. South Africa's Gross Domestic Product (GDP) expanded on average by 2.66% per annum over the period 2006-2013 whereas the NDP targets an annual growth rate of 5.44% per annum. The size of the transport sector relative to the

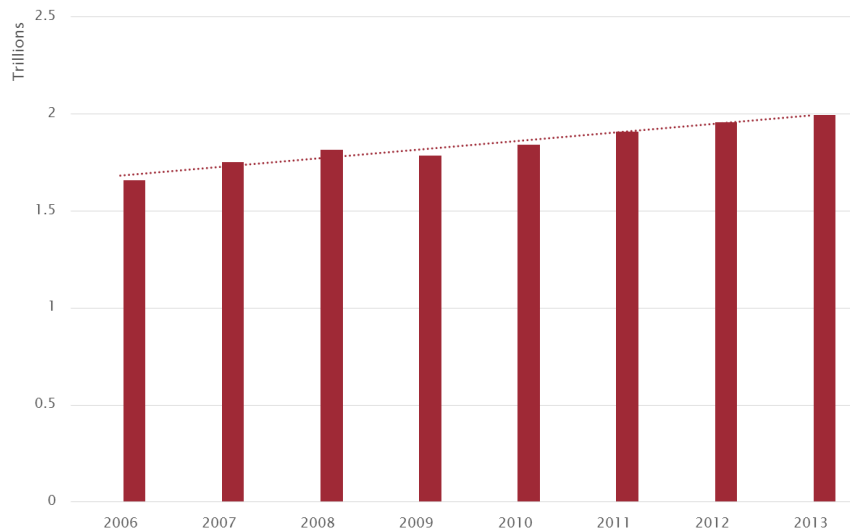
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economy was estimated to be approximately 5.5% in 2013 and this sector's contribution to employment creation is approximately 4% in 2013.<sup>6</sup>

economic growth in South Africa. Roads infrastructure is able to deliver a higher economic return on investment than any single other type of infrastructure<sup>7</sup>.

Economic infrastructure, including South Africa's road network, is one of the key levers for



## SA GDP (Constant 2005 Prices) Performance 2006–2013

GDP expanded (on average) by 2,66% over period, below requirements of 5,44% in NDP.

*Source: Quantec Easydata, 2014*

Road transportation is an important industry in the country's national economy, yet various challenges inhibit the sector's further contribution to South Africa's economic and social development objectives. One such challenge is the roads infrastructure backlog, where the increased use of roads, low levels of investment and poor maintenance has led to higher transportation costs and transport bottlenecks. Poor road safety levels on South Africa's roads, including road safety concerns for non-motorised transport (NMT) users, are also adding to higher transportation costs.

As one response to these challenges, the South African Government has reaffirmed its

commitment to develop the country's infrastructure base. This commitment is reflected in a number of strategies and plans, in particular the NDP, which places economic infrastructure at the heart of economic and social development. This Roads Policy for South Africa is a further key tool in accelerating economic growth towards accomplishing the objectives of the NDP.

## ROLE OF THE DEPARTMENT OF TRANSPORT

The Strategic Plan for the Department of Transport (DoT)<sup>8</sup> states that the DoT is responsible for conducting sector research;

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formulating legislation and policies to set the strategic direction of sub-sectors; assigning responsibilities to public entities and other levels of Government; regulating through setting norms and standards; and monitoring implementation. The DoT has a stated policy intention that to 'radically transform the transportation sector, reprioritisation of resources must be enhanced; localised skills development interventions must be fast-tracked; and there must be a move towards industrialisation and beneficiation across the Transport Sector. There is a need for greater integration of efforts across all spheres of Government as well as in transport agencies in order to support the country's overall economic growth targets.'

The Roads Branch was established to develop and manage an integrated road infrastructure network; regulate road transport; ensure safer roads and to monitor and to oversee the performance of the road agencies.

As part of the broader service delivery implementation strategy within the roads environment, the following key agencies were established by the DoT:

- South African National Roads Agency SOC Ltd (SANRAL) is responsible for and was given power to perform all strategic planning with regard to the South African national roads system, as well as the planning, design, construction, operation, management, control, maintenance and rehabilitation of national roads for the Republic, and is responsible for the financing of all those functions in accordance with its business and financial plan, so as to ensure that the national goals and policy objectives concerning national roads are achieved<sup>9</sup>.
- The Road Traffic Management Corporation (RTMC) was established to<sup>10</sup>:
  - strengthen the cooperation and coordination between the national, provincial and local spheres of government in the management of road traffic,
  - enhance the overall quality of road traffic management and service provision and, in particular, to ensure safety, security, order, discipline and mobility on the roads,
  - maximize the effectiveness of provincial and local government efforts, particularly in road traffic law enforcement,
  - create business opportunities, particularly for the previously disadvantaged sectors,
  - supplement public sector capacity,
  - guide and sustain the expansion of private sector investment in road traffic management.
- The Road Traffic Infringement Agency (RTIA) was established by Section 3 of the Administrative Adjudication of Road Traffic Offences Act, 1998. The main objectives of RTIA are to<sup>11</sup>:
  - administer procedure to discourage traffic contraventions and support adjudication of infringements
  - enforce penalties imposed against persons contravening road traffic laws
  - encourage the payment of penalties imposed for infringements
  - undertake community education and awareness programmes
- The Cross-Border Road Transport Agency (CBRTA), whose mandate is to regulate access to the market by the road transport freight and passenger industry in respect of cross-border road transport by issuing of permits, and to facilitate the unimpeded flow of passenger and freight movements by road across the borders of South Africa to contribute to the social and economic

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development initiatives as announced by Government.<sup>12</sup>

Taking into account the concurrent responsibilities as per the provisions in the Constitutional and the legislative mandates, it must be noted that the DoT is held accountable for road infrastructure planning, maintenance, development and for the monitoring and evaluation of the socio-economic impact of road infrastructure projects to ensure that the roads are accessible and safe for all users. With regards to review of management and administration of agencies, the policy shall address the gaps, with regards, the responsibilities of the Department of Transport as per the requirements of the respective Acts (founding legislation of the various Agencies).

## **POLICY INTENT VS SOUTH AFRICA'S REALITY**

### **OVERVIEW OF REALITY**

The development orientation of South Africa's national policies is to rectify the injustices and imbalances of the past, thereby providing restitution to the millions of South Africans who were marginalised and excluded from economic participation and advancement. There are a myriad of policies in this regard, each of which seeks to contribute to the objectives spelled out in the Constitution, as well as the goals embodied in the more recent NDP<sup>4</sup>. However, there still remain challenges in many areas of the road transport sector, which impede economic development and welfare gains.

Significant change and investment in the transport sector will no doubt contribute to correcting this historical imbalance, in particular, through meeting the mobility needs of South Africans effectively connecting people, markets and resources.

The current road transportation environment comprises both positive and negative elements. On the positive side, South Africa has a

relatively robust, extensive and functional road infrastructure network. The road transport network contributes towards economic and social development goals. On the negative side, there are significant financial, institutional, physical and human challenges.

The review of the roads environment in South Africa<sup>13</sup> indicated the following:

- Although the national road network is in a satisfactory condition<sup>14</sup>, the overall road maintenance backlog, including those of SANRAL, provinces and municipalities, is increasing<sup>15</sup>.
- Government has limited funds from the national fiscus to meet the road maintenance burden, as well as the increased demand for the expansion of the road network, due to increased number of vehicles and new, rapidly expanding towns and cities. This contributes to road congestion, higher vehicle operating costs, and a reduced level of service across extensive portions of the road network.
- SANRAL was established as an agency of the DoT tasked with the responsibility to taking charge of the financing, management, control, planning, development, maintenance and rehabilitation of the South African national roads system<sup>9</sup>. As confirmed recently in the Review of the Whiter Paper on Transport Policy<sup>14</sup>, the national road network is in a satisfactory condition, but funding for the expansion of the network is a concern.
- In response to growing congestion and the need for road network improvements, SANRAL has introduced e-tolling to fund network improvements as part of the Gauteng Freeway Improvement Project (GFIP). Although tolling of the national roads has become common-place, e-tolling as part of the GFIP has experienced significant civil opposition.
- There is now a growing recognition that roads are no longer reserved for motorised

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vehicles only, but for all users including public transport and NMT users. This brings about conflicting mobility and accessibility expectations, especially in urban environments. Walking is a significant commuting mode and cycling has not yet increased significantly, but NMT facilities are limited.

- In order to promote sustainable forms of transport, government has introduced integrated rapid public transport networks (IRPTNs) in all major towns and cities in South Africa. The implementation of these IRPTNs places significant demand on the national fiscus.
- The bulk of all freight is conveyed by road, which contributes to poor road safety and the excessive freight volumes on the road compound the road maintenance backlog. Overloading remains a challenge and existing law-enforcement strategies are ineffective and therefore unable to arrest the negative impact of overloaded vehicles on the road network.
- The poor standard of many provincial and local roads are a concern and the road maintenance backlog is growing every year. This is compounded by limited funds as well as a reduced focus on maintenance and limited skills in the public sector. Many municipalities and provinces lack the skill, capacity and funding to efficiently manage local road networks.
- Access to rural areas is limited while rural road infrastructure and corridors are neglected due to limited funds, lack of skills in some areas and the prioritisation of other social needs over roads. Furthermore, some rural areas are still attempting to address the inadequate road network provision in the previous homelands.
- In an environment already constrained by limited funds for roads construction and maintenance, the situation is exacerbated by maladministration and corruption<sup>16</sup>.

- Growth in private vehicles and freight is increasing at a rapid rate and outstripping the supply and availability of roads, leading to growing congestion in major urban areas.
- South Africa has one of the highest road crash fatality rates in the world which negatively impacts the broader economy.

From an institutional road management perspective the Road Infrastructure Strategic Framework for South Africa (RISFSA)<sup>18</sup> has made some recommendations to improve the planning and coordination of road management. A road agency model for provinces and local authorities has been proposed, as well as a functional road classification system, with the associated ownership and responsibility in terms thereof. However, the provinces and local municipalities are grappling with the consequences of the shortage of appropriate skills in this sector. Without significant interventions to improve the skills and capacity within the roads management sector, the human resources required are not available at all levels of government and particularly at local authority level. The lack of resources, capacity and skills has occurred to the extent that SANRAL has been involved in maintenance of access roads, provincial roads as well as the construction of some NMT facilities.

Institutional incapacity can undermine local government and severely impact the road network. Minister Pravin Gordhan has advocated a Back-to-Basics approach<sup>16</sup> to support struggling municipalities, focusing on putting people first, delivering basic services, good governance, sound financial management and building capacity.

The challenges above have two key economic impacts, namely:

- Firstly, the cost of transportation on the road network is increasing, and is already above the optimal level. This is due to increased congestion on major routes, the poor road

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condition and the user-pay principle being applied. These factors can eventually reduce consumer welfare, especially amongst the poor.

- Secondly, poor linkages between road corridors and poor access to roads in rural communities contribute to limited accessibility and entrenchment of historical spatial concerns. Rural communities have difficulty in accessing services, markets and products located outside their community, while individuals residing in previously-disadvantaged communities need to spend large amounts of resources (time and money) travelling to cities in order to access important services and employment opportunities.

These challenges reduce the economic development potential of the country and entrench the developmental challenges of weak economic growth, high unemployment, poverty, and growing inequalities across income groups.

## GUIDING POLICY FRAMEWORKS

The DoT is charged with providing safe, reliable, effective, efficient, affordable and integrated transport services that best meet the needs of passengers and freight users as encapsulated in the Strategic Plan of the DoT<sup>8</sup>.

The recent development of the NDP in 2013<sup>4</sup> identified the creation of workable urban transit solutions, the strengthening and optimisation of freight corridors and the provision of long-distance passenger transport solutions. Furthermore, the NDP states that rural access and mobility has key policy and planning priorities. Accordingly, the development of a Roads Policy for South Africa should consider the following:

- Social issues (this relates to the role of roads in providing access to social facilities and amenities),

- Economic issues (this relates to the role of roads in terms of job creation and providing linkages to economic opportunities),
- Environmental issues (this relates to the environmental impacts of roads as well as mitigation measures).

Although a series of transport and roads strategies and plans have been developed since 1994, in particular the White Paper on National Transport Policy of 1996<sup>17</sup>, the management of the roads environment and its users has not been fully addressed within an overarching national policy, specifically focusing on roads infrastructure, road safety and NMT users. In the absence of such a national policy, relevant authorities have followed the strategic direction of the following guiding frameworks, strategies, policies and legislation:

- The Constitution of South Africa<sup>2</sup> outlines the responsibility for roads at the various spheres of government.
- The White Paper on Transport Policy<sup>17</sup> noted that 'fragmentation' was an issue and identified the 'coordination of infrastructure planning for all modes of transport' as a means to respond to this concern. It also identified road safety as a particular focus area that requires attention in all areas of transport management.
- The RISFSA<sup>18</sup> of 2006 provided the framework for the management of roads infrastructure. It is noted that not all of the recommendations have been implemented to date. A review of the RISFSA recommendations is therefore included in this policy.
- In May 2012, the S'hamba Sonke Programme<sup>19</sup> (SSP) was developed as a response to RISFSA recommendations regarding the backlog in roads maintenance, the poor state of rural access roads, and the administration of the Provincial Road Maintenance Grant (PRMG).

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- Road safety initiatives have been guided by the Road Traffic Management Cooperation (RTMC) and the United Nations Decade of Action 'Five Pillars for Road Safety'<sup>20</sup> (road safety management, safer roads and mobility, safer vehicles, safer road users and post-crash response).
- A Draft Policy on NMT was developed by the DoT in 2008. Although not yet approved, it has provided a framework for NMT implementation.

## REVIEW OF RISFSA RECOMMENDATIONS

The Road Infrastructure Strategic Framework for South Africa (RISFSA<sup>18</sup>) of 2006 provided the framework for the management of roads infrastructure.

### *Institutional Arrangements*

RISFSA recommended the establishment of a Roads Coordinating Body (RCB) to lead and coordinate the development of standards and policies, to review and normalise roads proposals and to administer the allocation of road funding. The DoT and Department of Local Government (DPLG) were to provide technical support to the RCB.

Roads service delivery at the various spheres of government should be undertaken by service delivery entities at national, provincial and municipal spheres of government. As RISFSA mentioned that municipal road service delivery is specifically problematic, it recommended that the conceptual delivery model for municipal roads and streets receive attention.

The only progress made to date on these recommendations has been the establishment of the RCB to coordinate roads management at provincial and national road level. The delegation to SANRAL as the agency responsible for national roads happened prior to this and still continues. Limpopo Province and some metros have also established roads agencies.

### *The Road Network*

RISFSA recommended that a functional road classification system be adopted in South Africa, and that the RCB allocates the administrative responsibility and delivery functions for these roads. Further, it is recommended that financial allocations be tailored to this classification system.

Subsequently, a methodology for undertaking the functional road classification has been developed by the Committee of Transport Officials (CoTO) and this has been implemented by the provinces. However, no guidance has been developed as to the roles and responsibilities of the different spheres of government, once the functional classification of roads has been undertaken.

### *Information Systems and Decision Support*

RISFSA emphasised the importance of an information system and decision support, and recommended that inter- and intra-information systems be implemented at provincial and local authority level.

Through the RCB and the SSP, SANRAL is collecting information on road network conditions from the provinces, in order to monitor and report on road conditions. Discussions with SANRAL confirmed that information on the road network conditions of a number of municipalities is not available. However, a process has commenced to implement Rural Road Asset Management Systems (RRAMS) to develop a comprehensive road condition databases.

### *Road Condition*

RISFSA recommended the Visual Condition Index (VCI) as an indicator of network performance, and proposed that no more than 5%-10% of the road networks should at any point be indicated as in a 'poor' or 'very poor'. It further recommended that current and new funding scenarios should be reviewed by the

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RCB to reduce the maintenance backlog on non-tolled roads.

Although the RCB is monitoring the VCI of all provincial and national roads, information prepared by CoTO on the 2013 road conditions confirms that South Africa is a long way from achieving the required minimum of 5%-10%. It is the international norm that no more than 10% of the higher order network in a country should be categorised as being of 'poor' or 'very poor' condition. For the lower-order roads a higher percentage is acceptable as it is not economically feasible to maintain all roads in a country at the 10% norm.<sup>21</sup>

National government has made conditional grant funding available for the maintenance of the provincial and national road networks through the PRMG and SSP.

## *Funding Sustainability*

RISFSA recommended that certain investigations had to be undertaken. This includes the following:

- Quantify the additional funds required for a satisfactory transport system for South Africa for DoT, provinces and municipalities,
- Investigate tariff charges on motor vehicle road users,
- Investigate other possible funding streams,
- Review existing toll road strategy/ approach,
- Development of government policy on tolling of roads.

Unfortunately not much progress has been made in undertaking these studies. However, CoTO has commissioned a study to determine the extent of the backlog.

## *Human Capital*

RISFSA noted that skills development in the engineering sector is essential, and more specifically in the roads sector.

The lack of technical capacity, especially at local authority level, remains a critical shortcoming in the delivery of roads in the country. As a result, the DoT, through the RCB, has developed a strategy for the development of human resources in the road sector.

## **REVIEW OF DRAFT NMT POLICY**

The Draft NMT Policy<sup>78</sup> was developed in 2007 and developed policy directives for Animal-drawn transport, cycling, walking, eco-mobility and innovative solutions. Various progressive actions resulted from this initiative, which are briefly discussed hereafter.

The Pedestrian and Bicycle Facility Guideline of 1997 was reviewed and updated which resulted in the compilation of the NMT Facility Guideline which was finalised in 2015.

The roll-out of refurbished bicycles at schools across the provinces in South Africa has been ongoing since the early 2000's and is known as the Shova Kalula roll-out. The objectives of the program were as follows:

- Promotion of cycling as a low-cost mobility solution, which would improve rural accessibility / urban mobility to basic services including access to educational centres.
- Improved access to quality education by low cost, affordable and effective NMT services.
- Promotion of small business development and job creation through the establishment of maintenance systems and programme.

The initial target was to distribute 1 million bicycles by 2010, but by 2014 only 95 000 bicycles were distributed nationally.<sup>22</sup>

Through the White Paper on Transport Policy's<sup>17</sup> directive for the transport environment to be inclusive for all users, a significant emphasis was subsequently placed on the accommodation of people with special needs in the transport environment and system. This has resulted in

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an approach of universal access design to the transport environment which also addresses the access requirements of users of NMT forms.

NMT facilities have also been implemented as part of the roll-out of BRT systems in the major cities across South Africa in accordance with the recommendations of the Public Transport Strategy.

Although the draft NMT Policy has provided the policy framework for many NMT initiatives across South Africa, the reality is that NMT, although a dominant mode, is not receiving adequate attention in the transportation system. NMT facilities are not always continuous, sometimes of poor quality and not aligned with travel desire lines, viewed as unattractive mode and is unsafe.

## **REVIEW OF LEGISLATION, WITH REGARDS TO ROAD REGULATION.**

The National Road Traffic Act, 1996, (Act 93 of 1996) (NRTA), serves to provide for road traffic matters, which shall apply uniformly throughout the Republic and for matters connected therewith. In general, this is a good and needs to be enforced. However, there are inadequate provisions in the NRTA, with regards to the driving school industry. Therefore it has not been possible for the Minister to promulgate regulations that can be implemented to regulate and effectively manage the Driving School Industry. This has to be addressed.

## **REVIEW OF ROAD SAFETY INITIATIVES**

Several road safety strategies have been compiled in the last 20 years in South Africa. When studying and comparing the various road safety strategies, some conclusions can be made, but it has not resulted in a significant improvement of the road safety statistics in South Africa. The following is an extract from the Minister's Media Briefing dated 17 February 2017, that confirms the above statement and

outlines the plans going forward to address Road Safety in South Africa.

*"I commend the National Anti-Corruption Unit of the RTMC in collaboration with the SIU and all Law Enforcement Agencies for their efforts to ensure that we eliminate unethical traffic officers who solicit bribes from motorists. We are also made making strides in dealing with crime and corruption at the Driver Licence Testing Centre (DLTC) and the Private Testing Centres, particular issues relating to issuing of fraudulent drivers licences and roadworthy certificates. Endeavours will be vigorously pursued to cancel all fraudulently issued*

*Ladies and Gentlemen, what stands out between the outcomes of these periods, notwithstanding the fact that the Festive Season is longer than Easter Period, is that the Festive Season 2016/17 was marked by a number of internal challenges which need to be addressed before this year's Easter Period. Key among the challenges were:*

- *A gap in supervision caused by cost containment measures*
- *After-hours and weekend operations were affected by lack funding for overtime.*
- *Some provinces experiences challenges with necessary resources such as vehicle availability*
- *There was flagrant deviation from the approved festive season plan which affected visibility of the traffic officers on the roads and led to abdication of responsibility for prioritization of major routes.*

*This state of affair confirms that the massive fragmentation within the road traffic and law enforcement leads to inconsistency and lack of uniformity in the manner in which road traffic and law enforcement is carried out.*

*It compels us to move with speed in implementing the decisions we took in Mangaung in August 2015 to work towards*

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*harmonisation and integration of the traffic law enforcement to impact on this situation and make South Africa's roads safer.*

*I have therefore appointed an independent committee, to be known as the national traffic law review committee, to:*

- Conduct a comprehensive assessment of the traffic law enforcement fraternity, identify areas for review and develop a consultative strategy draft document on traffic law enforcement.*
- Consider constitutional mandate and related legislative imperatives pertaining to the law enforcement environment and ensure integration, harmonisation and alignment of various functions.*
- Develop a blue print for the future design of the Traffic Law Enforcement, provide for adequate resource framework, provide guidelines for streamlining of training framework and determination of relevant appropriate qualifications for Traffic Law Enforcement.*
- Provide and develop benchmarks of best practices in law enforcement in order to compete and operate favourably within Regional and International Context and*
- Review the current environment and consider Traffic Policy that supports the priorities identified by Government and simultaneously review and confirm Traffic Law Enforcement Mandate with related functions and level of effect and structure amongst other tasks."*

At a Global level, there has been a greater focus on road safety in the developing and middle income countries. In 2010, various governments met to discuss the international road safety crisis of the world and declared 2011–2020 as the Decade of Action for Road Safety. The goal of the Decade of Action is to stabilise and reduce the increasing trend in road traffic fatalities, saving an estimated 5 million lives over the period. A Global Plan of Action

was developed to practically guide countries so that their actions support the overarching target<sup>20</sup>.

The Road Traffic Safety Management System (ISO39001) was developed as one of the key instruments to support the implementation of the Decade of Action Global Road Safety Plan through having a 3<sup>rd</sup> party certification against ISO39001 for all organizations that interacts with the road traffic system who are serious in achieving their goals to Road Safety Management. The requirements in ISO 39001 include development and implementation of an appropriate RTS policy, development of RTS objectives and action plans, which take into account legal and other requirements to which the organization subscribes, and information about elements and criteria related to RTS that the organization identifies as those which it can control and those which it can influence. South Africa has started implementing the Road Transport Management System (SANS1395) within the freight industry in support of ISO39001. There is huge potential for full scale national rollout of ISO39001 where various Government Departments and the private sector organisations can be targeted and for an immediate need to have ISO39001 User Specific Implementation Manuals developed to cover the following industries and sectors:

- RTMC & Traffic Authorities (Government)
- Transportation - Dangerous Goods & Chemicals Industry (incorporate SQAS)
- Road Authorities and Road Agencies (Government)
- Emergency Response Services (Government & Private Sector)
- Government Fleet
- Driver Testing Centers (Government)
- Vehicle Testing Centers (Government & Private Sector)
- Freight (Operators, Consignees/ors)
- Cross Border Transport Operators (for OCAS project)

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- Public Transport Operators (Buses)
- Public Transport Operators (Taxis)
- Public Transport (metered taxis & Uber taxis)
- Training Service Providers (e.g. Dangerous Goods and Driving School Industry).

ISO39001 addresses all five Pillars of the Decade of Action Global Road Safety Plan and for its successful implementation requires support from all sectors of Government and shall be led by the Department of Transport through the Road Traffic Management Corporation (RTMC). Training on the awareness and implementation and monitoring of this standard is required for all key staff within the road safety environment. There is a need for Government to put all key staff members responsible for management and oversight responsibilities through a capitation process towards obtaining professional registration as Road Infrastructure Safety Asses's and Road Safety Practitioners.

## **REVIEW OF THE TECHNICAL NORMS, MANUALS, STANDARDS AND GUIDELINES APPLICABLE TO THE ROADS SECTOR.**

The custodianship for the development, maintenance of National Standards is the South African Bureau of Standard (SABS).

Agrément South Africa is responsible for the assessment and certification of innovative non-standardised construction products, systems, materials, components and processes, which are not fully covered by a SABS or code of practice

The custodianship for the development and maintenance of technical manuals, norms and guidelines has traditionally been with the Committee of Land Transport Officials (COLTO), which subsequently changed to the Committee of Transport Officials (CoTO). These technical manuals, norms and guidelines that have been developed to guide the planning, design, construction and management of roads are not

readily available and not always applied across all spheres of government in a uniform way by both private sector and public sector.

All documents contribute to some Goal with different focus areas.

### ➤ **Contractual Specifications**

- General Condition of Contracts published by COLTO (now COTO)
- General Condition of Contracts published by the International Federation of Consulting Engineers (FIDIC)

### ➤ **Technical Specifications**

- COLTO Specifications
- The TRH Series of Documents
- The TMH Series of Documents
- The UTG Series of Documents
- SANRAL Specifications
- Other Documents / Developed by Industry

### ➤ **Laboratory Specifications**

- Standards published by the SABS
- Focuses on materials & test procedures, etc.

### ➤ **Other Documents**

- Provincial or Municipal
- International specifications, literature and publications

There is need for the National Department of Transport to build capacity and allocate sufficient resources and budgets to fulfil its mandate to keep the technical manuals and guidelines update to date and to support industry to review and approve or endorse any relevant documents being developed within the private sector. The Department requires to have an on-going marketing and aware programme to ensure these documents are that are prescribed for use by all Road Authorities are used in uniform and standard way. The introduction of the concept of having a "minimum level of service" can thus be realized.

## **SUSTAINABLE APPROACH TO ROADS MANAGEMENT**

## ROADS POLICY FOR SOUTH AFRICA



### POLICY DEVELOPMENT PROCESS

The key stakeholders developing Government's position on roads management include the various national Departments, transport agencies, provincial Departments of Transport, municipalities, and private sector stakeholders.

An initial round of stakeholder consultation<sup>23</sup> took place in the form of questionnaires and bi-lateral interviews with key role-players. In addition, a review of relevant legislation, policies, strategies and planning documentation provided an overview of the current situation with respect to the roads sector, including the management and operation of the road network in South Africa. After a Draft Roads Policy was developed, it was presented to participating government officials in a round of provincial consultation sessions as well as discussion sessions with key role-players. The consultation process involved tabling the proposed policy to technical and political (Transport MINMEC)

stakeholders including the DGs Forum, wherein it was resolved that the policy can be tabled at Cabinet for consideration and approval to gazette it to seek public comments / inputs before finalisation of a White Paper (Roads Policy for South Africa).

### VIEWS EXPRESSED BY STAKEHOLDERS

Stakeholders are not unanimous in supporting the development of a Roads Policy – some argue that existing documents such as the Road Infrastructure Strategic Framework for South Africa (RISFSA) and the S'hamba Sonke Programme (SSP) are sufficient, but have not been effectively implemented. The concern raised was that additional policies may contribute further red tape or onerous layers of legislation based on the view that policies and legislation should be enabling rather than controlling.

### SUSTAINABLE APPROACH TO ROADS MANAGEMENT

All authorities consulted agreed that a Roads Policy for South Africa should not further inhibit the implementation of other strategies and policies. At the same time, however, authorities desired a change in legislation pertaining to the planning, management, operation and implementation of road infrastructure. The road infrastructure legislation needs to achieve more efficient and successful implementation.

## **SUSTAINABILITY - AN UNDERPINNING PHILOSOPHY TO THE ROADS POLICY**

The long-term sustainability of South Africa's future is dependent on our ability to redress our actions and reduce the harmful impact we have had thus far on the world we live in. It is essential that these actions be undertaken holistically so that environmental considerations, social development as well as economic efficiencies are addressed in an integrated manner.

Roads and transport can make a significant contribution to sustainability initiatives within South Africa because 'how or where' transport infrastructure is constructed, maintained and managed has a profound impact on our environment, communities and economy. Transport is responsible for 27% of the final energy demand in South Africa with petroleum products representing 97% and electricity representing only 3% of the energy used in the transport sector<sup>24</sup>. It is noted that in 2012, 61% of national logistics costs (about 12% of GDP) and 9% of national CO<sub>2</sub> emissions were caused by road transport<sup>25</sup>.

A legacy of poor spatial planning within the country has resulted in a growing dependence on road infrastructure that supports cars and an increasing number of private single occupancy vehicles. These in turn bring more road fatalities, traffic congestion, greenhouse gas emissions, air pollution and a mushrooming

demand for more fossil fuels. Furthermore, the lack of more sustainable public transport and non-motorised modes of transport inhibits access to employment opportunities and key services, directly affecting poverty, inequality and the pursuit of improved living standards amongst South Africa's poorest.

It is indisputable that we must ensure a move towards more sustainable practices within roads and transport. Therefore, the Roads Policy for South Africa has adopted a holistic approach which acknowledges sustainability as an underpinning and integral philosophy.

## **THE SUSTAINABILITY FRAMEWORK FOR ROADS**

This philosophy of sustainability is aligned with the existing suite of acts, policies, strategies and frameworks that have been developed to drive sustainability in South Africa. Some examples include:

- The National Framework for Sustainable Development in South Africa calls for 'Efficient and sustainable use of natural resources, socio-economic systems that are embedded within, and dependent upon, ecosystems and human needs, enhanced systems for integrated planning and implementation and economic development via investments in sustainable infrastructure and human settlements'<sup>26</sup>. While, Section 24(b) of the Constitution<sup>2</sup> of the Republic of South Africa states that 'everyone has the right to have the environment protected for the benefit of present and future generations, through reasonable legislative and other measures'.
- South Africa's Intended Nationally Determined Contribution Discussion Document<sup>27</sup> has benchmarked total annual Greenhouse Gas (GHG) emissions to be in the range of 212 to 428 Mt CO<sub>2</sub> equivalents by 2050, having declined in absolute terms from 2036 onwards.

## **SUSTAINABLE APPROACH TO ROADS MANAGEMENT**

- The South African Green Economy Modelling Report<sup>28</sup> has established a process for local government to draw lessons on best practice in green economy initiatives and benchmark their performance.
- The White Paper on Energy Policy (1998)<sup>29</sup> states that: 'Government will ensure that the necessary resources are made available to establish structures, systems and legislation to facilitate the specification, collection, storage, maintenance and supply of energy data, and energy-related data, according to the requirements of integrated energy planning and international standards'.
- The Energy Efficiency Strategy (2005)<sup>24</sup> calls for fee rebates on vehicles dependent on varying energy consumption, efficiency labels on motor vehicles and the presentation of emission standards for vehicles to the general public. All of these should also be included in roadworthiness certificates.
- The Industrial Policy Action Plan<sup>25</sup> has called for GHG mitigation options that have been identified and analysed to be combined to construct Marginal Abatement Cost Curves (MACCs) for key sectors and subsectors.
- The Public Transport Action Plan<sup>83</sup> has called for 'built local transport capacity for planning, monitoring, regulation and network management, in turn, helping municipalities to develop strategic integrated network plans, operational plans, travel demand management plans, and electronic fare collection plans in conjunction with the Transport Education Training Authority (TETA), Transport Centres of Development and other Institutions of Higher Learning'.

## IMPLICATIONS FOR THE ROADS POLICY FOR SOUTH AFRICA

South Africa's national sustainability goals support the design, development and maintenance of sustainable road infrastructure in the country as a crucial component of a more

sustainable economic system. Policy statements must therefore prioritise resource efficiency, integrated planning (e.g. integrated transport infrastructure with land use management) and economic development (e.g. sustainable employment opportunities). Implications for the Roads Policy to be aligned with sustainable objectives include inter alia the following key actions:

### *Integration of roads planning with land use planning*

In order for future road development to be not only sustainable but effective, all planning must consider the relevant context. For example, infrastructures requirements and maintenance strategies will be informed by very different needs found in rural areas, compared to the needs found in urban areas. In addition, integrated transport modes enhancing rural-urban linkages should be improved to ensure reliable and efficient access to commercial and public services, and increase productivity of industry (e.g. agricultural distribution). This context is very important in ensuring an effective service is provided.

Furthermore, it is important that road network planning is integrated with the appropriate government planning processes at all levels, and in particular spatial planning and land use management. This will ensure that future road networks do not compromise valuable natural ecosystems, and that various social considerations can be included, such servicing future development and safety aspects.

### *Protection of 'green' systems*

Although roads play a vital role in the economy and mobility for South Africa, this can come at a cost to the environment in terms of the following elements:

- Deteriorating air quality, global warming and noise pollution from rapidly growing vehicle volumes.

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- Pressure on scarce fossil fuels due to the construction of road infrastructure, the growing production and use of motorised vehicles.
- Growing congestion due to increased demand for travel.
- Adverse impacts on bio-diversity and ecosystems due to an expanding road network.

Environmental preservation must be a key theme in the Road Policy. Road systems must make efficient use of land and other natural resources (e.g. energy, asphalt, gravel, and water) while ensuring the preservation of vital habitats and other requirements for maintaining biodiversity, not only during construction but also during the operational and maintenance phase.

The re-establishment of ecological functioning corridors must be taken into consideration when infrastructure is being upgraded. This must also be taken into account in the planning of new infrastructure.

The minimisation of waste, water, heat and energy requirements is critical in the construction and maintenance of road infrastructure. This includes the sustainable sourcing of materials, resources and labour to reduce costs and life cycle emissions.

Transport infrastructure must respect natural water systems. This requires appropriate network planning, as well as designs to reduce negative impacts on this vital ecosystem (i.e. water sensitive design or sustainable urban drainage).

Transportation is a major contributor to greenhouse gas emissions. It is therefore important that the roads industry take measures to actively reduce emissions as it expands networks. This may be through the following possible approaches:

- Retrofitting of renewable energy power sources.

- Use of innovative road construction materials.
- Improved network planning and the promotion of mass transport options.
- Promotion of more efficient, ultra-low emission and alternate energy vehicles. These could be for both private vehicles as well as freight vehicles particularly within congested urban centres.
- The support for new alternate fuel vehicles in the market.
- The provision of capital investment into new vehicle technologies, in the form of grants or incentives to promote sea and rail freight, as alternative freight modes.

## *Sustainable modes of transport*

Mobility of the public is a vital component of ensuring that the public has access to opportunities. Ultimately roads contribute to the social and economic sustainability of the country. If access and mobility is in place for communities it automatically affords the public improved exposure to health care, education, employment and other opportunities.

The integration of more sustainable transport modes such as public transport, walking and cycling must be included as a key tool. Identifying ways to improve the operational efficiency of existing road infrastructure such as signal timing, road capacity enhancements, travel demand management (TDM), High Occupancy Vehicle (HOV) lanes and car-pooling can also be considered. The focus must be on ensuring that road infrastructure makes provision for and promotes integration of more sustainable modes of transport. Further, the policy must move towards improved coordination with land-use to reduce the number of trips generated.

A reduction of dependence on motor vehicles will also show a resulting reduction in the negative impacts thereof, such as air pollution, energy consumption and traffic congestion. This

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includes the introduction of mechanisms such as congestion tolling to discourage the use of private vehicles, Intelligent Transport Systems (ITS) to improve efficiencies of existing transport networks and constructing low carbon road infrastructure such as bus lanes, railways and NMT.

## *Roads aimed at achieving social equality and organisational integration*

All South Africans are entitled to affordable access to other people, places, goods and services. Road and transport systems provide a mechanism to ensure social, inter-regional and inter-generational equity, by providing all road related aspects that meet the basic transportation related needs of all people.

Therefore, the development of road networks must promote community connectivity and respond to mobility needs. This will be facilitated through the development of functional road networks that include synergistic connections between nodes of economic opportunity, especially with non-motorised and public transport systems. These points of connectivity may include informal trading areas, centers of job availability, education and health care nodes.

This level of social and physical integration should be established and promoted through participatory planning. Roads are the responsibility of various bodies, and spheres of government, at varying scales and locations. In addition to this, the people affected by road plans must be included in the planning and decision-making process. Therefore, a transparent approach is proposed for planning and decision-making, which includes all spheres of government and road users.

## *Employment and economic growth initiatives.*

Roads play a significant role in sustainable economic growth and job creation for South Africa. Policy provisions must support NDP

objectives and maximise opportunities for employment, especially for the unemployed, the youth and the socially marginalised in national development plans. For example, opportunities for job creation within the road sector (infrastructure construction and maintenance) have been identified in the SSP. Opportunities can also be created in the motor vehicle manufacturing sector. It would also entail investment and research into new business opportunities in renewable, sustainable fuel and alternative power sources for private vehicles.

Without key road linkages remote rural communities would be isolated and marginalised from employment, services and other opportunities. The Roads Policy for South Africa therefore must recognise the important role roads play in rural economies. .

Regional and international trade initiatives which support overall South African Development Community (SADC) protocols must be supported and facilitated.

## *Adequate funding and effective expenditure in roads*

Lack of funding is a challenge facing all road authorities in South Africa. Typically the extent of funds raised from traditional rates and taxes is inadequate to cover the onerous requirements to maintain existing or construct new links in the strategic road network, other transport infrastructure or operations. Although fuel, sales and other taxes have been successfully used to raise additional revenue for the national fiscus, roads still need to compete with other national social priorities.

There is a growing awareness that the fuel tax as a steady form of income is unsustainable. Relying on the fuel tax is problematic since it assumes increased traffic volumes will equate to an increase in income. Not only is this assumption in contradiction to the argument of promoting environmental sustainability i.e. reducing travel demand and improved fuel

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consumption through new vehicle technologies or TDM interventions, but it also places government in the precarious position of having to provide additional road infrastructure for the ever-growing traffic volumes. Typically there has been a gradual slippage in the overall condition of road network due to insufficient funds and support the need to explore alternative sources of funding for roads and transport such as congestion pricing, tolling, freight distance charging, etc.

Funding and ensuring effective expenditure are imperatives to sustainability within the roads sector.

## ASSESSING SUSTAINABILITY PERFORMANCE

Monitoring and assessment of our success in achieving sustainability objectives as part of roads and transport is critical. Through this monitoring the roads industry's progress along the path of sustainability can be tracked. Through assessment, lessons learnt may be used to guide the industry towards desirable outcomes. Therefore, the Roads Policy should include the following:

- Enhancing cooperation amongst all spheres of government to steer relevant industries towards more holistic, pertinent and responsible practice.
- The design and development of measurement and reporting based tools for the easy identification of problem areas and potential solutions.
- A monitoring, evaluation and reporting tool that:
  - Robustly and comprehensively monitors and evaluates investments in infrastructure, and its social, economic and environmental impact.
  - Robustly and comprehensively monitors and evaluates investments

and designs for integrated transport systems across the country, and its social, economic and environmental impact.

- Accounts for all sector variables, such as actual economic and sector growth in the transport sector, thus enabling energy usage data to be normalised against representative data, which describes the sector activity over time.

## VISION AND OBJECTIVES

The vision of the Department of Transport is:

***'Transport, the Heartbeat of Economic Growth and Social Development!'***

The strategic goals of the DoT's Road Transport Programme are as follows<sup>30</sup>:

- An efficient and integrated infrastructure network that serves as a catalyst for social and economic development.
- A Transport Sector that is safe and secure.

The vision for the Roads Policy for South Africa is

***'to allow the development and management of a road network that is safe for all its users, well-maintained and serves as a catalyst for social and economic development.'***

The Roads Policy for South Africa has the following broad objectives:

- Provide an over-arching policy that covers all aspects of the roads sector, and which is adopted and applied to all three spheres of government,
- Prescribe national principles, requirements, guidelines, frameworks and national norms and standards, which must be applied

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uniformly by all three spheres of government,

- Offer clear guidance about which sphere of government is responsible for specific duties that relate to roads,
- Offer clear guidance about compliance requirements for the Roads Policy for South Africa,
- Stipulate sanctions for non-compliance with the Roads Policy for South Africa,
- Identify and implement institutional reform regarding governance structures in the road sector,
- Determine financial options for investments in the roads sector, and provide the enabling mechanisms for project implementation.

## **EXPECTATIONS OF THE ROAD AUTHORITIES FROM THE ROAD USERS AND GENERAL PUBLIC (REF: DRAFT ROAD ASSET MANAGEMENT MANUAL, MARCH 2013.)**

- Maintaining the condition of road assets to their required level of service;
- Balancing the timing of investments and the long-term responsibility to taxpayers through lifecycle costing;
- Minimising the likelihood of being injured or killed, or experiencing property damage, when using the road transportation system (safety);
- Enhancing mobility by reducing the time it takes to travel from origin to destination, taking into consideration link availability, obstructions, congestion, etc.;
- Enhancing accessibility by improving the ability of landowners to reach their land, and travellers to reach their destinations, on the public road network;
- Improving reliability by reducing variation in origin-destination trip times due to congestion, incidents and road closures;
- Providing comfort and convenience to transportation system users;

- Reducing the effect of the transportation system on the environment;
- Minimising risk, which also includes preventative actions to reduce the potential impact of extreme events and their effects on the facilities, and the effects of facility damage on the public.

**The PROBLEM STATEMENT** for the roads sector can be summarised as - ***the need to improve the governance, administration and efficiency of Road Authorities (National, Provincial and Local Government) in South Africa to address:***

- The planning, design, construction and maintenance the road network, to protect the public investment in the road infrastructure, to ensure the continued functionality of the transportation system and to promote the safety of traffic on the road network by introducing “minimum level of service” requirements i.e. maintenance of the roads as a service delivery obligation.
- Improve access and mobility of excluded groups and communities in terms of accessing opportunities through overcome spatial and geographic barriers
- Improve road safety to ensure that reliable, effective, efficient and integrated transport infrastructure and services shall be provided.
- For better cross-sectional alignment and integration across national departments, enhancing cooperation amongst all spheres of government; to steer relevant industries towards more holistic, pertinent and responsible practice.
- For the design and development of measurement and reporting based tools for the easy identification of problem areas and potential solutions and a monitoring, evaluation and reporting system that:

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- Robustly and comprehensively monitors and evaluates investments in infrastructure, and its social, economic and environmental impact.
- Robustly and comprehensively monitors and evaluates investments and designs for integrated transport systems across the country, and its social, economic and environmental impact.
- To establish effective and efficient road funding models to finance road projects at sustainable levels;
- To ensure efficiency in expenditure of road construction and maintenance budgets;
- To ensure a standard of supervision, monitoring, evaluation and reporting on the quality and impact of road construction and maintenance projects.

## OBJECTIVES OF THE ROADS POLICY OF SOUTH AFRICA

- Alignment with **national developmental priorities**;
- Provide an **over-arching policy** that covers **all aspects of the road sector** and **applies to all three spheres of government**;
- Prescribe national principles, requirements, guidelines, frameworks and national norms and standards - applied uniformly in provinces and municipalities (**level of service**);
- Determine **responsibilities, applicability and scope**
- Identify and implement **institutional reform** regarding governance structures in the road sector;

- Determine **financial options** in the road infrastructure investments, road safety, law enforcement and **enabling mechanisms** to implement programmes and projects;
- **Policy certainty** with clear and concise regulatory framework for roads;
- **Integration of plans** for stream-lined and integrated service-delivery;
- Increased jobs and skills development;
- Integration of **NMT as a recognised mode** in the transport system;
- Clear **national directive on how to tackle road safety**;
- Directives, with regards, **Monitoring, Evaluation & Reporting**

## DESIRED OUTCOMES OF THE ROADS POLICY FOR SOUTH AFRICA

When the Roads Policy for South Africa is effectively implemented, it is expected to result in the following:

- Improved infrastructure;
- Sustainable roads;
- Increased accessibility in all areas, including the SADC Region;
- Safer roads;
- Streamlined and regulated freight movement to support the recommendations and/or prescripts of the National Freight Logistics Strategy<sup>31</sup> and the National Rail Policy<sup>32</sup> (i.e. the move of certain freight from road to rail),
- On-going revision and of technical guidelines and keeping it up to date with latest technology and best practices;
- Clarity of roles and responsibilities across the various spheres of government and agencies,
- A possible greater role for municipalities within the roads management environment,

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- The creation of more jobs in the roads sector without compromising on quality of the infrastructure;
- The development of technical expertise within delivery authorities/ entities,
- Improved skills and greater development of skills within the roads sector,
- Increased funding with improved levels of governance and level of service,
- Infrastructure and maintenance standards that recognise NMT as an essential mode in the transport system,
- A systems approach to road safety,
- Support for the full scale rollout of Transport Management Systems (National Standards)
- Increased accessibility in urban and rural areas,
- Policy certainty with a clear and concise regulatory framework,
- Integration with other sectors using roads,
- Improved regional integration within SADC,
- Integration of plans for a more stream-lined and integrated service-delivery approach,

## OVERVIEW OF THE ROADS POLICY

South Africa is experiencing many challenges within the roads sector currently and the aim of the Roads Policy for South Africa is to, amongst others, provide a regulatory framework for a coherent and uniform response across all spheres in government to respond to the issues experienced.

As raised in various consultation sessions undertaken as part of the development of the Roads Policy, the institutional relationships between the various Road Authorities play a significant role in the functioning of the road management environment. Although these roles and responsibilities are defined in the South African Constitution<sup>2</sup>, the way in which road management works in practice is not always clear, including ownership and overlapping mandates. A major concern is also the extent of un-proclaimed roads. Currently an estimated

131 919km of all roads (estimated at 750 000km) in South Africa are un-proclaimed.

In response, the DoT, in partnership with Road Authorities, shall develop guidelines that can be used to assign roles and responsibilities to various Road Authorities at the various spheres of government to ensure that any particular road is incorporated into the asset register of the appropriate Roads Authority, within the prescripts of legislation processes to be followed and taking into account the capacity of the affected Roads Authority to perform its functions. This process may result in the downstream devolvement of roads towards reducing and eliminating un-proclaimed roads and providing clarity on road ownership and mandates.

South Africa is currently experiencing a growing road maintenance backlog nationwide resulting in deteriorating road networks. This is further exacerbated by officials not applying various technical manuals, norms and standards uniformly and the declining technical skills level in the public sector. In support of an approach to sustainability within the roads management sector, South Africa is charged with developing a more 'green' road network, integrated with land use in urban areas to encourage the development of more sustainable urban forms. Although the desire to include sustainability considerations within the roads sector is evident, it is not supported by clear guidelines towards implementation.

The Roads Policy promotes compliance with CoTO technical policies and standards and charges all Road Authorities to maintain the integrity of the road reserve. This requires the development and arresting of the decline of technical skills in the public sector. Policies are proposed to address this challenge and promote the professionalisation of engineers and engineering technologists within management levels at Road Authorities. Due to an increased responsibility for sustainable road management,

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policies are also introduced in support of sustainable transport philosophies.

Road users are reliant on a safe and efficient road network. Roads must be developed and maintained taking into consideration the marginalisation of rural communities due to the state of access roads. Public transport users using buses and taxis are also reliant on a sound road network and the implementation of the Public Transport Strategy<sup>83</sup> also requires roads to be developed and maintained to further the use of public transport.

Freight is a major economic contributor to the South African economy and requires an efficient transport system. This is adding to congestion in urban areas and is a significant contributor to road safety concerns on major freight routes across South Africa. The Freight Logistics Strategy of South Africa<sup>31</sup> is currently being reviewed and the way roads infrastructure is managed should support this.

*Currently over 88% of total tonnage of freight is moved via road in South Africa which amounts to 70% tonne-km per year<sup>33</sup>.*

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.

South Africa also forms part of the SADC region. As a signatory to the SADC Protocol<sup>34</sup> South Africa has a responsibility to maintain and support efficient movement of goods and people across South Africa's borders. Policy proposals have also been made on how to maintain the efficient movement of goods and people across South Africa's borders through promoting uniformity in roads infrastructure development, improving the quality of the approach routes to border posts and promoting road safety.

Road safety has reached catastrophic proportions in South Africa with an estimated 13 000<sup>35</sup> traffic fatalities per annum of which pedestrian fatalities account to approximately half of all road fatalities.

*South Africa, which has with 25.1 fatalities per 100 000 population one of the highest road traffic fatality rates in Africa, is one of the 182 member states that supports the United Nations Decade of Action for Road Safety<sup>35</sup>.*

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 crime and corruption and an ageing vehicle fleet. Road safety requires a long term view with a multi-disciplinary approach and exceptional, consistent leadership over a 20 to 30 year time period.

In 2010 the governments of the world declared 2011–2020 as the Decade of Action for Road Safety<sup>20</sup> and countries are encouraged to implement activities according to five pillars, namely:

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

The Roads Policy also proposes road safety policies to be aligned with the Decade of Action for Road Safety.

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

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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.

Policies in support of furthering NMT have been developed to raise awareness for NMT as a sustainable mode of transport. The inclusion of these policies emphasises NMT on the political agenda and shows Government's commitment for NMT. It also articulates a vision and a set of objectives to ensure co-ordinated actions amongst the different departments and private sector partnerships and can provide a basis for consistent evaluation and monitoring of the successful implementation of NMT policy by all spheres of government. These policies will also help leverage funding for NMT and set standards and quality criteria.

Monitoring and evaluation is a thread throughout the NDP as it aims to build a capable and developmental state in South Africa. To this end, the National Policy Evaluation Framework<sup>36</sup> proposed to institutionalise evaluation in Government and has identified processes, roles and responsibilities for undertaking this.

As part of a more sustainable approach to roads management, performance evaluation, especially in meeting sustainability targets, has been identified as a focus area in the Roads Policy.

Various acts, both national and provincial, will have to be amended to accommodate the legislative amendments that are needed to give effect to the road infrastructure policy statements. A Legal Recommendations Report was prepared, which recommended the formulation of an overarching Road Management Act<sup>37</sup>. This alternative proposes to draft a stand-alone act that will accommodate all the provisions required and still comply with the provisions of the Constitution. Uniform legislation creates a better understanding of the

tasks, duties and structures created by such legislation, and ensures that all relevant organisations understand the terminology and the legislation in the same way. Conflicting legislation is minimised and one point of reference can be used for all the requirements.

## SCOPE OF THE ROADS POLICY

The Roads Policy for South Africa sets out the strategic position of National Government on all matters relating to road regulation, road infrastructure, road funding, road safety and NMT. Accordingly, this policy has a particular focus and does not attempt to address traffic management and operational matters which are typically addressed in the National Roads Traffic Act<sup>38</sup> (NRTA) where applicable.

This policy applies to all public roads in South Africa that are managed by Road Authorities. While there are roads and streets in South Africa that are planned, financed, constructed, owned, managed and maintained by parties other than road or local authorities, road users expect the same standards and are less concerned with which authority manages which road. Accordingly, it should be applied by private road owners as well. Where applicable, the National Road Traffic Act<sup>38</sup> still applies.

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## 1. ROADS INFRASTRUCTURE



The mobility of people and goods is dependent on the efficient use of existing road infrastructure, and the modernisation and expansion of road infrastructure to meet the future demand for transport services efficiently and cost-effectively. Adequate road infrastructure is a fundamental precondition for transport systems and one key component in ensuring social well-being.

**Institutional relationships, the roles and responsibilities** that result from these, and the **technical skills** required to perform these roles, have a significant impact on the way in which roads are managed in South Africa. In addition, **employment creation** is a national priority of the South African Government, and the roads sector is committed towards achieving this goal.

### **POLICY FOCUS AREAS**

***INSTITUTIONAL RELATIONSHIPS AND  
ROLES AND RESPONSIBILITIES***

***MANAGEMENT OF ROADS  
INFRASTRUCTURE***

***TECHNICAL CAPACITY OF THE ROADS  
SECTOR***

***EMPLOYMENT CREATION***

In order to accelerate economic growth and accomplish the objectives of the NDP<sup>4</sup>, the road transportation sector and specifically road infrastructure development must be regarded as a priority. The RISFSA and SSP Program guidelines were developed to align road infrastructure management and investment with South Africa's strategic economic goals. This Roads Policy for South Africa is a further key

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tool in accelerating economic growth towards accomplishing the objectives of the NDP.

## INSTITUTIONAL RELATIONSHIPS

### CONCERNS AND THE INTENT OF POLICY STATEMENTS

The institutional relationships between the various Road Authorities play a significant role in the functioning of the road management environment. This issue was raised in various consultation sessions undertaken with stakeholders during the development of the Roads Policy for South Africa<sup>23,39</sup>.

Although these roles and responsibilities are defined in the South African Constitution<sup>2</sup>, the way in which road management works in practice is not always clear, the ownership is also not clearly defined and there are overlapping mandates.

A major concern is also the extent of un-proclaimed roads. Currently an estimated 131 919km of all roads (estimated at 750 000km) in South Africa are un-proclaimed<sup>40</sup>.

In an important attempt to resolve this issue, RISFSA<sup>18</sup> has recommended the uniform proclamation and reclassification of the South African road network, together with a streamlined assignment of roles and responsibilities. A methodology for the functional classification of roads has been developed; Road Classification and Access Control Manual (TRH26). Although the functional classification has in fact taken place, the actual devolvement of roads has not taken place.

The intent of the policies is to create an institutional environment where institutional relationships are clearly defined, and the roles and responsibilities of each authority are unambiguous. It is also expected that municipalities play a greater role in roads delivery in line with their constitutional

mandates. However, a coordinated approach is required to assist dysfunctional and non-performing municipalities and Road Authorities to fulfil their mandates. As opposition to devolution has been experienced in the past and has also been expressed in consultation sessions<sup>39</sup>, planning for devolution has to take place within a defined medium to long-term framework. A performance-based approach to roads management is also introduced, aligned with National Treasury's (NT) requirements and in support of sustainability goals of monitoring and evaluation.

### POLICY STATEMENTS

*The Department of Transport and Road Authorities undertake the functional classification as a matter of priority.*

- The DoT in partnership with Provincial Road Authorities will continue to support Local Government Road Authorities as they complete the RISFSA road reclassification process according to the Road Classification and Access Control Manual (TRH26).

*The Department of Transport will ensure that the roles and responsibilities of the various Road Authorities and other relevant institutions are clear and unambiguous.*

- The DoT, with the assistance of the Provinces and SANRAL, will review the existing Strategic Road Network as identified in the Road Network Incorporation Report<sup>41</sup> and consider the following:
  - Changes to the function of certain roads,
  - Inclusion of strategic national and provincial public transport routes and interchange opportunities,
  - Changes to significant SADC road corridors and
  - Inclusion of regional routes within provinces providing economic and social connections.

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As part of this process the Roads Needs Study<sup>42</sup>, which was completed in the 1980s, must also be considered.

Current legislation defines national roads as roads that are defined and declared as such; provincial roads are roads that are defined and declared as such and all other remaining roads are municipal streets. The DoT, in partnership with Road Authorities, will assign roles and responsibilities as set out in










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- **Table 1.**
- All un-proclaimed roads must be assigned to either Local Authorities or to Provinces depending on the functional classification and road significance until all is eventually reduced and eliminated.
- Eventually, provinces will be responsible for provincial roads, local authorities will be responsible for local roads and streets and SANRAL for the Strategic Road Network, the Primary Road Network and the approach routes to border posts and ports.
- The devolvement of roads from authority to authority must be undertaken only when the recipient authority has sufficient capacity and expertise to fulfil the mandate.
- Devolvement to SANRAL will be undertaken in accordance with the stipulations of the SANRAL Act<sup>9</sup>.

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**Table 1: Current and proposed roles and responsibilities for roads and streets**

		Current road owner	Proposed owner
<b>SANRAL</b>	Current national road network		SANRAL
	Remaining Strategic Network (after reviewed)		SANRAL
<b>Provinces</b>	Primary Network		SANRAL
	Portions of provincial roads within metropolitan boundaries		Metros
	Portions of provincial roads within local authority boundaries		Provinces
	But portions of provincial roads within local authority boundaries that have skills and capacity to manage their own network		Local Authorities
<b>Metros &amp; Local Authorities</b>	Approach roads to border posts and ports		SANRAL
<b>Other government departments and state-owned entities</b>	Approach roads to border posts and ports		SANRAL
-	Un-proclaimed roads		Assigned to provinces and local authorities depending no functional classification and significance of road.

Note:

These roles and responsibilities for various roads were proposed and discussed at a special meeting of the RCB on 8 December 2015.

*The Department of Transport will introduce performance management in the roads sector.*

- The DoT will develop a Performance Management Framework with minimum road service standards, Key Performance Indicators (KPIs), benchmark levels and appropriate targets for the various types of Road Authorities, aligned with current norms and standards and the KPIs adopted by the Department of Planning, Monitoring and Evaluation.

- The various types of Road Authorities will develop their own Performance Management Plan, implement it and monitor their performance in road service delivery.

*The Department of Transport will ensure that the devolvement of roads is planned for and undertaken in a sustainable manner.*

- Devolvement must be planned for, budgeted for and implemented in line with local and regional development initiatives.

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- Where devolvement is opposed by one authority, the authorities will act in accordance with the principles of cooperative governance. Existing legislative processes and recourse to resolve issues must only be undertaken as a last resort.

*All Road Authorities will act in accordance with and promote cooperative governance between the various spheres of government responsible for roads management.*

- An approach of integrated planning and stakeholder consultation must be applied to national and provincial roads traversing local authorities and roads masterplanning for these roads must be aligned with local authority planning.
- In the event that provincial and national roads planning cannot be aligned with local authority planning, the higher-order Road Authorities roads planning will prevail, subject to the application of existing regulatory processes.
- In an attempt to coordinate activities amongst Road Authorities and to enable effective maintenance and coordination, the principles of cooperative governance must be applied.
- The Roads Coordinating Body (RCB) will continue to fulfil the coordinating function as advised by RISFSA. Similar structures must be established to facilitate coordination and integration at provincial levels.
- An Integrated Roads Planning Committee must be established at provincial level to coordinate roads planning, upgrades and maintenance, programming and funding cycles, and to integrate roads, public transport and NMT upgrades and maintenance in the provinces.

*The Department of Transport and Road Authorities will undertake roads service delivery through either roads departments at provincial governments or local authorities or through roads service delivery entities or agencies.*

- The DoT will support Road Authorities if they decide to implement service delivery agencies or to fulfil their road service delivery mandate within the structures of a provincial or local authority roads department.
- Road Authorities must, where required, investigate local, context-specific road maintenance service delivery models, where an alternative approach is required to improve roads service delivery.

## **POLICY IMPLICATIONS**

In the event of any devolvement of roads to local authorities will have significant implications for the roles and responsibilities of Road Authorities, particularly in respect of funding allocation, relationships, and technical capacity. Local authorities will need support in terms of staffing, project implementation, and procurement. The devolution of roads will also have political implications.

The requirement in the SANRAL Act stating that a written request from the Premier of a Province to declare a road a national road must be received, could become a bottleneck in the effective establishment and management of the Strategic Road Network. However, this impasse must be resolved using firstly; the principles of cooperative governance and thereafter, existing legislative provisions should only be applied as a last resort.

Furthermore, in as much as there is a requirement for authorities to apply principles of cooperative governance, integrated planning and to undertake stakeholder consultation, it is highly likely that authorities will not be able to align the management of the road network across institutional boundaries. In the event of

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this occurring, existing legislative processes that allow for the management of these, should be followed.

Road Authorities must have sufficient capacity to fulfil their mandate either through the provision of regional assistance or external entities, within the existing regulator frameworks. The performance management approach might pose some challenges to struggling Road Authorities.

The Legal Recommendations Report also states that 'existing legislation already cater for the responsibilities of the provincial authorities but a general overarching act allowing for clear structure and the explicit description of the various responsibilities for Road Authorities will create legal certainty and address the areas where overlaps in duties are experienced'<sup>37</sup>.

The planning for devolvement of roads must target a medium to long-term framework and not aim for short-term unrealistic expectations. However, where it is deemed a priority, these roads should be devolved.

## **MANAGEMENT OF ROAD INFRASTRUCTURE**

### **CONCERNS AND THE INTENT OF POLICY STATEMENTS**

Funding allocated to roads does not adequately address the road infrastructure needs of Road Authorities at present. This has resulted in a significant and growing road maintenance backlog nationwide. This sentiment has repeatedly been raised during consultation sessions undertaken and is also reflected in the deteriorating state of the road network<sup>43</sup>.

Although the condition of the provincial and SANRAL's road network can be reported on, this is not the case for municipal roads and streets. Information is either not collected or data collection methodologies are not uniform which does not support wider reporting on municipal roads and streets. A process has commenced

to implement Rural Road Asset Management Systems (RRAMS) in all Road Authorities to develop a comprehensive road condition database which should assist in providing overall condition reports.

The custodianship for the development and maintenance of technical manuals, norms and guidelines has traditionally been with the Committee of Land Transport Officials (COLTO), which subsequently changed to the Committee of Transport Officials (CoTO). These technical manuals, norms and guidelines that have been developed to guide the planning, design, construction and management of roads are not readily available and not always applied across all spheres of government in a uniform way by both private sector and public sector. Recently, various documents were reviewed and updated and new technical manuals were developed by SANRAL and the industry. However, these documents have not yet been officially approved and released.

An overall lack of integration between transport, land use, engineering services and human settlement planning (particularly social housing) is also reflected in the urban form of cities and towns across South Africa.

The roads industry in South Africa consists of Road Authorities, road designers, material suppliers, and road builders, amongst others. While existing policies in South Africa mandate more sustainable approaches to road infrastructure, there is no formalised system in place to guide the industry at the project implementation level. For example, there are no localised green road norms and standards or a localised industry-accepted green road rating tool. This is causing challenges in implementation of best-practices for not only Road Authorities, but also road designers and builders<sup>44</sup>.

Concerns about the management of level crossings have also been raised, with increasing

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numbers of fatalities and other incidents at this interface between the rail and the road network. It is estimated that there are more than 4000 railway crossings in South Africa. Although level crossings in urban areas generally close with an automated boom when trains approach, crashes and fatalities still occur due to negligent driver behaviour. In rural areas, the level crossings are not always properly managed with signage and road markings<sup>45</sup>.

In order to address these concerns the relevant authorities must have a single, consistent approach to manage all roads and streets in the country. It is also necessary for Road Authorities to be 'informed clients' displaying technical excellence.

In support of a sustainable approach to the management of roads infrastructure, integrated planning must be the norm for transport, land use, engineering services and human settlement development (including social housing). Roads should also be managed, constructed and maintained applying an approach to sustainability.

It is also necessary for the DoT in partnership with the Department of Corporate Governance and Traditional Affairs (COGTA) to provide ongoing technical support and assistance to local authorities. The DoT will also take responsibility for the research, updating, ratification, warehousing, awareness and distribution of road infrastructure technical guidelines to the users both within Government and the private sector.

The Railway Safety Regulator (RSR), Transnet, Passenger Rail Agency of South Africa (PRASA) and Road Authorities must apply integrated planning and coordination at the level crossing road and rail interface in an attempt to improve the management of rail level crossings in South Africa and minimise the horrific crashes that can occur at these locations.

## POLICY STATEMENTS

*The Department of Transport and all Road Authorities promote compliance with CoTO technical policies and standards.*

- All Road Authorities comply with the CoTO standards and norms for road planning, design, construction and maintenance, as well as the operational management of the roads, which is included as part of the Technical Recommendations for Highway (TRH) and Technical Methods for Highways (TMH) suite of documents, as well as those that might be developed thereafter.
- Where required, current road design guidelines should be reviewed and updated in support of Transit Orientated Developments (TOD), public transport needs, universal access requirements and NMT goals.
- Road Authorities might also develop their own technical specifications, where required and where the expertise exists, which are aligned to these national guidelines.
- The RCB is mandated by CoTO to review and officially approve all technical manuals, norms and guidelines, including the endorsing of any relevant industry produced guidelines, at a technical level. Thereafter, the DoT publishes and releases these technical manuals, norms and guidelines, except those documents that were developed by the industry.
- The DoT assumes responsibility for the development of a web-based data management support system for the processing, management and warehousing of RAMS data.
- Road users experience the same road standards throughout South Africa through the uniform application of CoTO technical policies and standards.

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*All Road Authorities apply Road Asset Management principles within the roads sector.*

- Roads are to be maintained based on asset preservation and sound asset management principles (TMH22).

*SANRAL will maintain the Strategic Road Network at a desired level of quality to ensure that the various developmental needs (social and economic) of the country are met.*

- A certain level of mobility is maintained on the Strategic Road Network, with due consideration for the accessibility requirements of local communities. In these instances the recommendations contained in the TRH26: Road Access Guidelines, or any other approved local access management plan, will apply. In some areas, this will require the investigation of by-passes around town centres to maintain a certain level of mobility, based on sound economic and social feasibility assessments. In the absence of by-passes local authorities must ensure that the agreed level of mobility is maintained.
- Regular maintenance of roads forming part of the Strategic Road Network must be undertaken to maintain the road network at an acceptable condition.
- As recommended by RISFSA<sup>18</sup> no more than 5%-10% of the road networks should at any point be indicated as in a 'poor' or 'very poor' condition using the VCI as an indicator of network performance.

*All Road Authorities will maintain roads and streets under their jurisdiction at an acceptable level.*

- Road Authorities must undertake regular road maintenance to ensure roads and streets are maintained at an acceptable level.
- As it is not economically feasible to maintain all roads and streets at the same level as the VCI of the higher-order network, a

minimum target must be developed for roads and streets that do not form part of the Strategic Road Network.

*All Road Authorities maintain the integrity of the road network and the road reserve*

- All authorities strive to maintain the integrity of the road reserve, to ensure that future network development is not compromised, and that services are able to be located and accessed appropriately.
- Roads masterplanning must be undertaken as part of an integrated transport and land use planning process. Roads masterplans must be included in Integrated Transport Plans (ITP) of Planning Authorities and approved as part of the approval of the ITP<sup>108</sup>.
- Authorities must act timeously to avoid formal or informal settlement within road reserves.
- Authorities must liaise with tribal authorities where relevant to ensure that road reserves and alignments are protected and to avoid formal/ informal settlement of potential road reserves in tribally-owned land/ community-owned land.
- Services installed in a road reserve must be installed with the approval of the local authority, in the form of a wayleave. The DoT's directives for trenching and ducting in the roads and the road reserve in the form of TRH27 South African Manual for Permitting Services in Road Reserves<sup>46</sup> must be applied. This includes the rollout of Information and Communications Technology (ICT) Infrastructure.
- The DoT must liaise with other authorities and ensure that regulatory frameworks dealing with the installation of utilities and services in the road reserves do not compromise the roads sector's ability to appropriately manage road reserves.
- Technology is used to improve the operational management of the roads environment and for law enforcement.

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- Level crossings are managed jointly between Road Authorities (outside of the rail reserve), the Railway Safety Regulator (RSR), the Passenger Rail Agency of South Africa (PRASA), and Transnet Freight Rail (TFR), where applicable, in accordance with the safety recommendations of the Railway Safety Regulator, regulations of the Road Traffic Act and the South African Road Traffic Signs Manual.
- A strategic abnormal load road network must be identified, declared and managed in accordance with the stipulations of TRH11-Dimensional and Mass Limitations and other requirements for Abnormal Load Vehicles<sup>47</sup>.
- 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.
- Integration with all sectors are undertaken to achieve optimal integration with the road network, surrounding land use, infrastructure development and transport operations.

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

*All Road Authorities promote the integration of roads with land use and developmental objectives.*

- Road and street networks are managed in accordance with approved access management guidelines.
- Where new residential areas, streets and roads are developed, these are managed in active partnership with the departments of Human Settlement Planning, to find the optimal mix and balance between road reserve, the services network, and appropriate settlement density.
- Roads and streets can influence the urban quality of the surrounding areas and must be integrated with surrounding land use towards creating liveable environments.
- Access roads must be holistically planned for with new land use developments.
- 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.
- Road safety considerations must be applied to rural roads that continue through villages with appropriate speed reduction measures, sidewalks and pedestrian crossing opportunities.
- 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.
- New roads must be subject to a needs and desirability study as part of an overall Integrated Transport Network.
- 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.
- In congested areas, traffic signal coordination and other travel demand management strategies are used to improve overall traffic management.

*In the design of roads and streets the principles of universal design must be followed, where appropriate and safe.*

- 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<sup>48</sup>:

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- People with disabilities - defined in the National Land Transport Act<sup>108</sup> 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.
- 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.

- 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<sup>49</sup> and for the Application of the National Building Regulations<sup>50</sup> shall apply.
- Sidewalks, footpaths and cycle ways must be provided along all urban roads and streets, excluding freeways.

*All Road Authorities will develop a 'green' road network which conforms to the principles of sustainability.*

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.
- 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'.
- These norms and standards are used to define the parameters of a green road rating tool for new and rehabilitated roads. Benchmarks must be developed, 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. These benchmarks must be developed so that both high volume and low volume roads can be

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evaluated in terms of sustainable best practices.

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

## POLICY IMPLICATIONS

The approval of the technical guidelines by RCB on behalf of CoTO is a matter of priority and should be addressed urgently. As the technical documents are not approved, road authorities are not compelled to adhere to it.

The responsibility for the processing, management and warehousing of RAMS data requires investment in Information Technology Systems and appropriately skilled/experienced staff with the associated operational budget.

Appropriate budgets and expertise is required for the DoT to take greater responsibility for the research and distribution of publications (norms, guidelines and standards). A rigorous procurement strategy must be in place to source the appropriate experts as and when required.

The integration of roads and transport with land use requires a complete shift in the manner in which projects are implemented, funding streams are made available and institutional structures established.

Designing and constructing new roads in line with sustainable transport, spatial planning and

management principles will have significant implications for future environment and communities. However, this is likely to be at a cost, since it will require additional budget, skilled resources and more specialised implementation processes.

Universal design is critical in making roads accessible for all. However, this also has an impact on budgetary and skills requirements. Even if new roads are implemented with universal design principles, retrofitting existing infrastructure is likely to be possible only over the longer term.

## TECHNICAL CAPACITY

### CONCERNS AND THE INTENT OF POLICY STATEMENTS

The NDP Diagnostic Report of 2011<sup>51</sup> concluded that three major factors drive uneven performance on service delivery, one of which was a capacity and skills deficit in the public sector. The Report noted that the public service faced a severe shortage of staff and specialised skills, especially in health, policing, infrastructure planning, engineering, finance and information technology. This adversely affected not only front line service delivery, but also long-term planning and coordination. CoGTA has identified that one third of municipalities get the basics right, one third is functional, and one third is dysfunctional<sup>52</sup>. This institutional incapacity, amongst other reasons, has led to challenges in terms of service delivery.

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. In addition, the national and provincial government's staff retention strategy – known as the Occupation Specific Dispensation (OSD) – has been unevenly adopted by national and

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provincial authorities, does not apply to local authorities, and also does not refer to Professional Engineering Technologists.

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. However, during consultation some roads officials have mentioned that the outsourcing of certain elements of roads design, maintenance and construction, is limiting the development of in-house technical skills within the public sector. It also limits the training opportunities available for junior technical staff within the public sector.

In response to this growing need for the developing 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. This has also been implemented at the Department of Education and Housing previously as confirmed in discussions with NT.

The aim of the Infrastructure Delivery Management Support (IDMS) is 'to build the capacity to support improvement in the planning, procurement and management of infrastructure delivery at the provincial level.'<sup>53</sup> With the support of this system, the roads sector will be staffed with appropriately skilled, competent, qualified and experienced people that are professional registered in their respective professions, where necessary in certain posts.

## POLICY STATEMENTS

*The Road Authorities employ appropriately skilled, competent, qualified and experienced people, and attracts and attains civil engineering professionals in key positions.*

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

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*The Department of Transport in partnership with Provinces lead and guide the development of technical skills and professional registration within the Roads Sector.*

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

*The Department of Transport, in partnership with Provinces, and its agencies, supports and develops struggling Road Authorities.*

- 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 define this level of assistance to be provided between organs of state.
- 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.

*The Department of Transport, in partnership with National Treasury and Provinces, supports the role of the private sector in roads delivery.*

- Road Authorities procure appropriately skilled and qualified services providers within the framework of the Public Finance Management Act<sup>54</sup> and the Preferential Procurement Policy Framework Act<sup>55</sup> to provide required services to the roads sector.
- The DoT, together with Road Authorities and National Treasury, supports private sector

involvement in road management, maintenance and construction within the various local authorities.

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

## **POLICY IMPLICATIONS**

Many of the policy responses to concerns about technical capacity have implications for incumbents who are currently inappropriately skilled or qualified. Retraining, or transfer, needs to be dealt with sensitively. Where redeployment of professionals across government departments is an option, the social implications of this response must be considered and such redeployment must always be voluntary.

Regional support needs to be viewed against the roles and responsibilities enshrined in the Constitution, although the National Land Transport Act's (NLTA) clause 12 does make provision for provinces and municipalities to enter into an agreement to jointly exercise their powers and functions with respect to land transport. This clause could be extended to roads management.

## **EMPLOYMENT CREATION**

### **CONCERNS AND THE INTENT OF POLICY STATEMENTS**

The issue of unemployment is particularly severe in South Africa with an official national unemployment rate of 25.5% as of the third quarter of 2015 based on figures supplied by Stats South Africa<sup>56</sup>. Such a high rate of joblessness, especially amongst young South Africans, feeds into other socio-economic

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challenges such as poverty and inequality. Another important factor contributing to unemployment is that of skills. Therefore, the objective of job creation and skills development is high on the agenda of the South African Government.

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-served 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<sup>57</sup> expresses a clear vision for public-sector service delivery aimed at optimising job creation opportunities through labour-intensive construction<sup>58</sup>. Thus, labour-intensive construction can be realised in the delivery of infrastructure development which is technically and economically feasible, as advised by the Construction Industry Development Board (CIDB).<sup>58</sup>

## POLICY STATEMENTS

*Increase employment opportunities in the roads sector*

- In line with the Expanded Public Works Programme (EPWP) Infrastructure Sector and 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.

- 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.
- Labour-intensive methods must not compromise the quality of road construction of the Strategic Road Network.
- 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 (NQF Level 1-3).<sup>59</sup>
- 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) (NQF Level 4-10) 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.
- 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.
- The role of local communities in roads construction projects are 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.

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*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.

## **POLICY IMPLICATIONS**

While the Roads Policy for South Africa is not intended to solve the unemployment crisis in the country, it is expected to speak to the economic and socio-economic priorities of Government given the current development landscape. Thus, the Roads Policy for South Africa does look at ways to improve the contribution of the sector to the national socio-economic development project through the creation of employment opportunities.

## **RESPONDING TO USER NEEDS**

Road users are reliant on a safe and efficient road network. Roads must be developed and maintained taking into consideration the marginalisation of rural communities due to the state of access roads. Public transport users using buses and taxis are also reliant on a sound road network and the implementation of the Public Transport Strategy<sup>83</sup> also requires roads to be developed and maintained to further the use of public transport.

Freight is a major economic contributor to the South Africa economy and requires an efficient transport system. 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.

## **POLICY FOCUS AREAS**

**RURAL ACCESS**

**PUBLIC TRANSPORT**

**FREIGHT MOVEMENT**

**REGIONAL INTEGRATION WITHIN  
SADC**

## **RURAL ACCESS**



## **CONCERNS AND THE INTENT OF POLICY STATEMENTS**

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.

The DoT is undertaking an investigation into the accessibility of social facilities in rural areas. The initial findings are contained in the Draft Access Road Development Plan (ARDP) Report<sup>60</sup> of

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2016. The ARDP aims to assess the accessibility of social facilities in rural areas through assessing the link between the social facility and the nearest access road.

During rainy seasons some rural communities are cut off due to flooding and are completely excluded from participating in the mainstream economy.

At present, rural access is not necessarily being prioritised through the Equitable Share Allocation. Although the MIG is available for municipal infrastructure, the allocation for roads is not prioritised.

Policies developed for roads infrastructure recognises the role of roads infrastructure management in the development of rural areas in South Africa. 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<sup>61</sup> 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.

## POLICY STATEMENTS

*The Department of Transport recognises the role of roads in rural economy.*

- 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.

- The DoT uses the ARDP as a tool to implement rural access roads across South Africa.
- 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.

*The Department of Transport improves rural access to opportunities.*

- Rural roads, paths and pedestrian bridges form part of an overall concept of road infrastructure to improve rural access.
- Animal-drawn transport is an important element of rural transport.

## POLICY IMPLICATIONS

Currently various national social and economic priorities are competing for an increased funding allocation from the national fiscus. In an environment where funds are limited, prioritisation in favour the Strategic Road Network must be undertaken due to the significant consequences to the country's economy. Rural roads that do not form part of the Strategic Road Network will be adversely affected through such a prioritisation, but access for rural areas can still be facilitated by low-cost paths and other forms of NMT infrastructure. These rural roads can also be addressed through consideration of the DoT's Draft Access Road Development Plan.

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## SUSTAINABLE APPROACH TO ROADS MANAGEMENT

## PUBLIC TRANSPORT



### CONCERNS AND THE INTENT OF POLICY STATEMENTS

Currently road networks do not necessarily support public transport implementation and operations. In the past, the road network was traditionally planned to meet the needs of private vehicles and freight, resulting in a lack of/ limited public transport facilities and prioritisation. In certain cases the condition of the road network also limits public transport services. Typically in some areas taxi ranks are designed around the operational needs of public transport vehicle fleets and not necessarily designed around the needs of passengers. All of these concerns impact the quality of public transport services and networks.

The intention of policies developed for the roads sector is 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.

### POLICY STATEMENTS

*The Department of Transport and all Road Authorities support and adopt a sustainable transport approach*

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

- Public transport facilities are incorporated in the planning, design and implementation of new roads, or when existing roads are maintained or upgraded.
- In metro areas, roads and public transport infrastructure must support urban densification strategies.
- Public transport routes are to be properly maintained, especially in rural areas.
- Public transport requirements are to be considered within Pavement Management Systems (PMS) or RAMS.
- 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.

*Public transport is integrated with other modes, town planning and roads.*

- Human settlement planning, road network development and public transport provision are all to be integrated.
- 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.
- Walking, cycling, public transport, universal access considerations and roads planning must be integrated as part of an overall transport system.

### POLICY IMPLICATIONS

The integration of public transport infrastructure delivery and NMT facilities with that of roads master planning is to be considered within the ITP frameworks to ensure the delivery of a holistic roads network.

The PMS (which was previously used to prioritise road maintenance) or RAMS (which is currently being implemented) will need to consider public transport, walking and cycling

## SUSTAINABLE APPROACH TO ROADS MANAGEMENT

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requirements as part of the informants in the prioritisation process.

Roads prioritised through the PMS or RAMS in the larger cities are not necessarily aligned with the roll-out of the Integrated Rapid Public Transport Networks (IRPTNs) in these cities.

One of the most pressing issues facing the freight industry is that there is a lack of policy or regulation for achieving an optimum split between road and rail transportation. As a result, there has been an exponential growth in road freight transportation, resulting in excessive freight volumes currently being transported on the South African road network. The 10th Annual State of Logistics Survey Report indicates that over 88% of freight is moved via road in South Africa<sup>33</sup>. Further, the report highlighted an ever-increasing logistics costs in relation to GDP. It is estimated that the national logistics costs are 12.8% of the GDP<sup>33</sup> of which transport comprises the largest component of the overall logistics costs.

Intensive use of an ageing and limited road network for rail-friendly commodities is leading to many unwanted consequences on the road network, namely road damage, shortened lifespan, congestion, poor road safety, and higher carbon emissions.

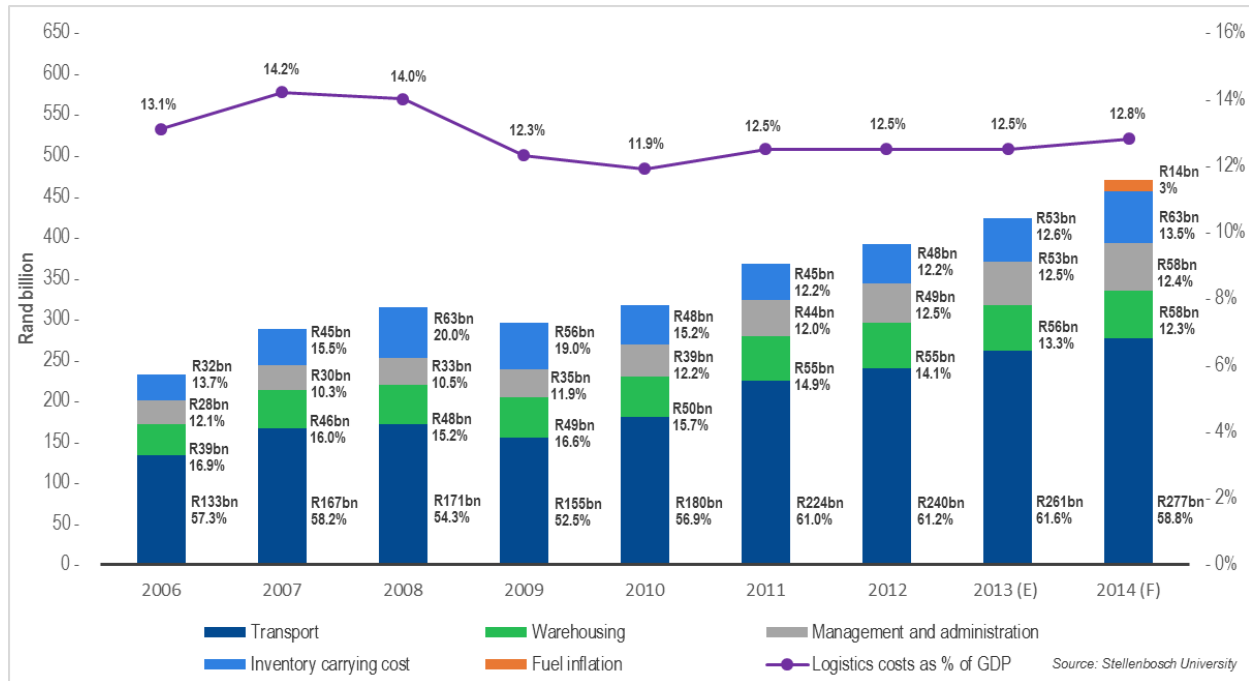
## FREIGHT MOVEMENT



## CONCERNS AND THE INTENT OF POLICY STATEMENTS

## SUSTAINABLE APPROACH TO ROADS MANAGEMENT

# Department of Transport



Total national logistics costs and the components from 2006-2014, Source: 10<sup>th</sup> Annual State of Logistics Survey, 2013

Many heavy-haul vehicles (HHVs) on the road network also cause other negative externalities: reduced road safety, increased congestion and higher emissions<sup>62</sup>. Moreover, the overloading of vehicles has a significant implication on the road condition and the road network overall<sup>63</sup>. Therefore there is a need to shift heavy cargo and other rail-friendly freight onto the rail network.

Despite ongoing efforts by Traffic Law Enforcement Authorities, the effects of unsafe transport practices continue to be a major problem on South African roads. Overloading causes premature road deterioration and, together with inadequate vehicle maintenance, high levels of driver fatigue and poor driver health care programmes, contributes significantly to South Africa's poor road safety record.

Self-regulation has been implemented in the HV industry, but the DoT has expressed concerns about potential non-compliance to certification

and auditing requirements and there is lack of real time access to the self-regulation project data for Government. Furthermore, the Road Traffic Act makes no provision for self-regulation.

The overloading of freight vehicles contributes to a rapid deterioration in road conditions, and also diminishes road capacity and safety<sup>64</sup>.

Policies are being proposed that aims to maximise freight system efficiency and reduce the rate at which the road network degrades. Ultimately with the aim of achieve a modal shift that reflects an optimal balance between rail and road freight. 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

## SUSTAINABLE APPROACH TO ROADS MANAGEMENT

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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.

## POLICY STATEMENTS

*The Department of Transport supports a freight modal shift from road to rail.*

- 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.
- 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.
- 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.

*The Department of Transport engages with the road freight industry about aligning market cost of road freight activities with the true cost.*

- 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.
- 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.

- The DoT supports the enforcement of a set of minimum standards for the road freight industry.

*The Department of Transport supports the implementation of truck stops along the road network.*

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

*The Department of Transport improves on overloading control initiatives.*

- 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.
- Government will review and improve enforcement of all provisions of the existing legislation (NRTA) to improve efficiency in the law enforcement operations.
- The DoT continues to support research and implement programmes that will improve the efficiency and operational safety in the road transport sector.
- The DoT continues to support self-regulation and voluntary compliance by the freight transport industry through partnerships with industry role-players.

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- The DoT supports the use of technology to monitor overloading control.
- The DoT supports the process of operator registration for RTQS implementation and actively engages the industry about auditing, certification, and quality assurance.
- 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.
- 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.
- 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.

*The Department of Transport supports the integration of freight movement with other transportation modes and roads.*

- 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.
- 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.

- The establishment of truck stops on major road freight routes must be supported.

*The Department of Transport 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.

*The Department of Transport promotes the use and analysis of statistics in the management of roads.*

- 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.
- 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.
- 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.
- 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.

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*The Department of Transport promotes technology and innovation in the road freight industry.*

- 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.
- 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.
- 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.

## **POLICY IMPLICATIONS**

A modal shift of rail-friendly road freight to the rail sector can lead to a decline in the negative externalities caused by conveying such freight on the road network. This can improve the quality of the road network and ease pressure on road maintenance budgets.

A modal shift will lead to a short-term economic cost in terms of lost jobs and GDP, as the road freight industry has a larger economic footprint than the rail freight industry in the current economic system. However, when viewed through a long-term lens, the total logistic cost savings (efficiency gains) and reduced negative externalities as a direct result of a more balanced freight transportation system, will be

greater than the short-term cost, leading to a net-positive economic impact.<sup>65</sup>

Imposing higher user-pay charges on HVs would align the current market cost of using road infrastructure with the true cost (where current market cost is substantially below true cost) leading to a more efficient price and more efficient road sector in that more resources will be generated from HVs. However, the road freight lobby group is an influential lobby group in South Africa and significant opposition to these approaches can be expected.

A more integrated transport network will remove obstacles between different transport modes and improve the efficient flow of resources between modes, thereby reducing the burden on the road network for the bulk of freight conveyance in South Africa.

## **REGIONAL INTEGRATION WITHIN SADC**

### **CONCERNS AND THE INTENT OF POLICY STATEMENTS**

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)<sup>66</sup> is a comprehensive development and implementation framework guiding the Regional Integration agenda of SADC over a period of fifteen years (2005-2020)<sup>67</sup>. 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<sup>68</sup> as a strategic framework guiding infrastructure development in Southern Africa.

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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. Challenges remain for the roads infrastructure sector.

- Rural areas with much of the region's population still struggle with accessibility issues.
- The variation in funding levels across local governments, provinces and SADC countries result in inconsistent road conditions and road quality.
- The land ownership, institutional mandates and relationships between various agencies and local authorities also hampers the management of the approach routes to border posts.

The policies developed for the road infrastructure sector to facilitate improved transport across SADC countries have the strategic intent that 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<sup>69</sup> 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.

## POLICY STATEMENTS

*The Department of Transport and other relevant departments facilitate regional development through more efficient movement of goods and people.*

- Regional development is fostered through strategic partnerships between international cooperating partners and regional stakeholders.
- Compatible policies, legislation, rules, standards and procedures are implemented in order to facilitate the integration of regional transport networks. The RTMC Act<sup>10</sup> 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.

*The Department of Transport and SANRAL improve the border approach roads.*

- 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.
- 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.
- 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.

## POLICY IMPLICATIONS

## SUSTAINABLE APPROACH TO ROADS MANAGEMENT

Within South Africa it is proposed that the approach routes to border posts be owned and managed by SANRAL with the responsibility of improving and maintaining these roads at an acceptable standard.

## 2. ROAD SAFETY



### BACKGROUND

South Africa has one of the worst road death rates in the world with a reported road death rate of approximately 23.5 per 100 000 people in 2014.<sup>35</sup>

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 Action<sup>20</sup> 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.

### AIMS OF THE ROAD SAFETY POLICY

The aims of the road safety policy are as follows:

- There are several policies and strategies developed on national, provincial and municipal levels with varying impacts. It is important that the Policy provide an understanding of the road safety problem in South Africa.
- 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.

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- 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 updating and revising of RTMC's national road safety strategy (currently being developed) as well as implementation of sustainable programmes that are aligned to the United Nations Decade of Action Plan.
- Provides clear and 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.

## METHODOLOGY AND RELATIONSHIP BETWEEN POLICY AND STRATEGY

A multi-disciplinary approach is required in order to reduce crashes and fatalities on South African roads which encompasses several role-players. The road safety policy was developed using the following methodology:

- Review available documentation and results of previous consultations with road safety stakeholders.
- Host workshops with relevant stakeholders to identify road safety issues and obtain input from as many possible role-players.
- Develop a draft policy for further review and input.
- Prepare a final road safety policy for implementation.

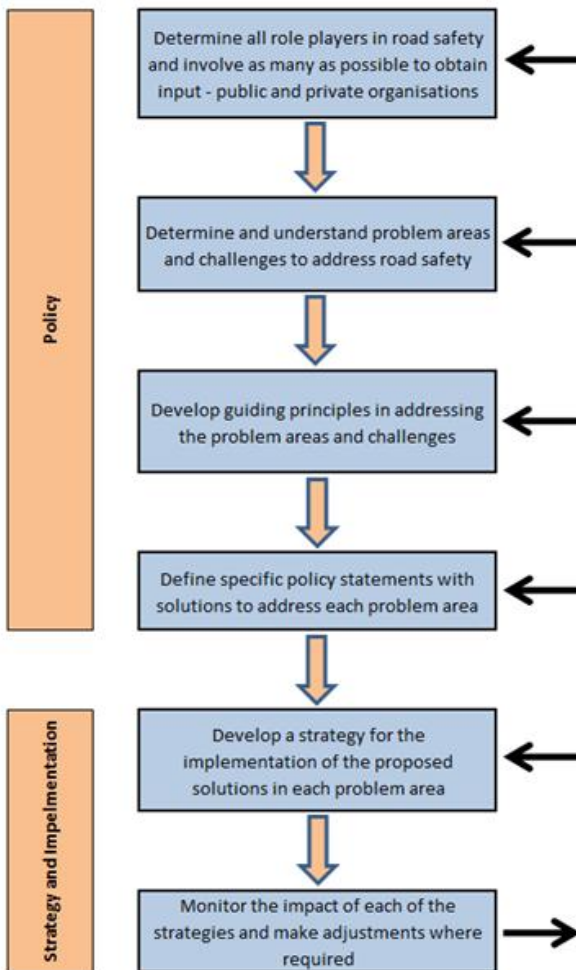
As mentioned above, the objectives of this policy is to provide an understanding of the challenges of addressing road safety in South Africa and to provide a high level framework to address these issues. Thereafter a detailed implementation strategy must be developed where the issues identified in the policy are addressed, with detailed action plans.

Currently DoT is responsible for the development of a Road Safety Policy and the RTMC is responsible for the development of a Road Safety Strategy. It is however evident that the development of both should be an interactive process, and the implementation thereof will be even more integrated. The proposed institutional structure in this policy aims to improve this integration between not only these two important role-players, but others as well.

Monitoring of progress of the various actions implemented, providing feedback and amending the policy and strategy where required, are critical elements of the overall process to ensure that the objectives are met.

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## EXTENT OF CRASHES AND FATALITIES IN SOUTH AFRICA

South Africa has 13 000 fatalities per annum<sup>35</sup>, as reported by the RTMC to the WHO in 2015, but it is most likely under-reported as it excludes injured persons passing away within 30 days after a crash.

There is no certainty on the actual number of crashes, as some estimates are around 500 000 crashes per year, whereas the latest report from the RTMC indicated almost 950 000 crashes per year.

Based on the latest available statistic on injuries, during 2007 a total of about 60 800 persons were seriously injured and required

hospitalization. The RAF expenditure is about R30 billion per annum in post-crash care and rehabilitation<sup>70</sup>.

Estimates of the total cost of crashes vary, with estimates by the DoT in the order of R300 billion per annum<sup>71</sup>. This supports a large economically unproductive industry of medical care facilities, emergency services, vehicle repair and an insurance industry – amongst others - money that could have been applied more productively in the economy. Over and above the cost, the trauma is impossible to quantify.

It is therefore very clear that South Africa faces a large road safety challenge that needs to be addressed.

## PREVIOUS ROAD SAFETY STRATEGIES AND POLICIES

Several road safety strategies have been compiled in the last 20 years. These strategies have been summarised in the report by the National Department to the United Nations. The summaries are repeated here, with summarised comments.

### *1991 Road Safety Strategy*

Since about the 1950's, road safety promotion efforts in South Africa concentrated mainly on the proven 3E's approach - Education, Enforcement and Engineering. The 1991 Strategy expanded on the number of issues that had to be addressed as follows:

- Road traffic legislation.
- Driving licence testing centres and driver testing requirements and procedures.
- Vehicle registration and licencing procedures,
- Vehicle testing stations and vehicle roadworthy testing requirements and procedures,
- Road traffic information systems,
- Road traffic safety awareness, education and communication,

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- Roads and traffic engineering,
- Road traffic law enforcement and adjudication of offences,
- Road traffic incident management systems,
- Road safety data collection, analysis and reporting.

## *1996 Road Traffic Management Strategy*

Following on a two day road safety summit lead by the Minister of Transport in July 1996, the 1996 strategy was developed which included basically most of the issues of the 1991 strategy with the addition of the following:

- The establishment of a lead agency to manage and oversee the promotion of road safety, which lead to the introduction of the Road Traffic Management Corporation Act in 1998 and the establishment of the Corporation.
- The introduction of a points demerit system for traffic offenders, which lead to the introduction of the Administrative Adjudication of Road Traffic Offences Act (AARTO) in 1999 and the establishment of the Road Traffic Infringement Agency (RTIA).
- The introduction of the Arrive Alive road safety project on 1 October 1996.

The successful Arrive Alive project, which received dedicated attention during the first 5 years, was aimed at promoting road traffic safety throughout South Africa and to reduce road crashes, fatalities and injuries through:

- Increased traffic law enforcement targeting traffic offences that mainly contribute to the occurrence of crashes and the severity thereof,
- Improved road traffic safety awareness by means of communication and education programmes, and
- Conducting annual road traffic offence surveys with the view to collect, analyse and report on information related to the

effectiveness of law enforcement and communication and education interventions with the view to monitor the increases and decreases in the level of lawlessness on the roads, particularly those offences targeted by the law enforcement and communication projects.

## *The Road to Safety 2001-2005*

The Road to Safety was developed and launched by the Minister of Transport in November 2001<sup>72</sup>. The Road to Safety identified six interlocking and overlapping focal areas requiring intervention in terms of both systems and structures. These are the following:

- Road environment quality,
- Driver fitness,
- Vehicle fitness,
- Pedestrian safety and fitness (safe road usage by pedestrians),
- Reform of regulatory and monitoring institutions and
- Targeted communication campaigns to challenge public attitudes and behaviour, supported by private sector sponsorship; practical road safety training in schools and tertiary institutions; community road safety forums and programmes.

## *National Road Safety Strategy – 2006 Onwards*

The critical targets set in the 2006 strategy that was approved towards the end of that year were the following:

- Reduction in number of crashes, measured in number of deaths per 100 million kilometres travelled, at the 88 identified most hazardous locations on the rural road network where the highest number of road deaths occur.
- Reduction in the number of fatalities and serious injuries throughout South Africa. Millennium Development Goal target – halve by 2014, i.e. 10% reduction per annum<sup>73</sup>.

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- Improved deployment of traffic personnel, particularly at hazardous locations – where the highest concentration of crashes take place.
- Deployment of technology to increase performance rates of officers and encourage compliance.
- Improvement of reporting procedures, from 60% for all crash categories (fatal, major, minor and damage only) to 100% by 2008.
- Improved levels of compliance to road traffic rules by at least 10% per annum, measured in the Annual Offence Survey.
- More drivers and vehicles legally registered and licenced, to ensure compliance rate of 95% by 2010.
- Decrease in the number of un-roadworthy and unlicenced vehicles to ensure 95% compliance by 2010.
- Compliance with road traffic legislation. Officers to check licences, lights, brakes and tyres as well as for substance abuse. The use of pocket computers for officers is the driving element in this area. The target is a 10% increase in compliance.
- Reduction in rate of pedestrian deaths by 5% per annum, with a target of 25% of total fatalities by 2010 and 15% by 2014.

Various specific interventions to achieve the set targets were listed under implementation priorities as follows:

- Management and Coordination
- Institutional Reform
- Road Environment
- Driver Fitness
- Vehicle Fitness
- Pedestrian Initiatives

This strategy has not yet been officially approved by the Minister and is therefore only considered to be a draft document.

The Draft Road Safety Strategy focuses on better utilisation of human and financial resources across spheres of government to

address road deaths. Based on the five pillars of the Decade of Action, inter alia, the following actions have been identified:

- Every province, district municipality and local municipality must report every month on the number of road crashes occurring in their area, what the causal factors were and how to address these.
- Improving the data capturing and reporting on road fatalities and injuries.
- The South African Police Service SAPS (Division: Visible Policing) has developed a 10-year Road Crime Crash Combating Strategy for the Make Roads Safe Campaign. It comprises five strategic functional areas, namely high-visibility patrols, intelligent Road Policing, improved service delivery through attendance, crime scene investigation, and recording of road crashes and non-serious crashes
- Create multisectoral (interdepartmental) and multidisciplinary (involving both government and nongovernment stakeholders) partnerships and ensure institutionalization of such partnerships.
- Ensure funding is sufficient for implementation by dedicating 10% of infrastructure spending to road safety and partnering with the private sector through sponsorship or public private partnerships where appropriate to assist resourcing and implementation.
- Ensure that road safety education forms part of the life skills curriculum at schools. Further, that every Grade 11 learner will have a learner's licence and every 18-year-old a driving licence.
- Develop a system that produces responsible drivers to contribute safety to road users. To address this, a newly-introduced standardised learner driver training programme pilot project (2012) has been implemented in four provinces with the aim of enforcing high quality driver education. This project is a collaboration effort between

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National and Provincial Departments of Transport, and the Department of Basic Education.

South Africa has joined the International Road Traffic and Crash Database Group (IRTAD) in 2012, which will additionally assist with establishing efficient and effective road safety management<sup>74</sup>. As part of the (twinning) programme work, the IRTAD Group has engaged in a strategy to assist low- and middle-income countries to set up or improve safety data collection and analysis systems. Twinning between RTMC and the respective Swedish Transport Agencies started in 2013. Experts from both countries are currently developing the scope of the project for the next three years. The FIA Foundation is contributing financial support for this twinning project.

## *Road Safety Summit in 2013*

A National Road Safety Summit was held in October 2013 to inform the South African Road Safety Strategy to go forward. Under the theme “Together Championing Road Safety 365 days” the summit looked at legislative amendments aimed at improving road safety – through adopting the traffic law enforcement code, addressing road infrastructure and encouraging conduct that promotes road safety.

## *Summary of previous Road Safety Strategies*

Based on the review of the previous road safety strategies, the following conclusions can be made:

- 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.

## **GENERAL PROBLEM STATEMENT - ROAD SAFETY IN SOUTH AFRICA**

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 crime and corruption and an ageing vehicle fleet. In order to address road safety problems, a long term view as well as a multidisciplinary approach and

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exceptional, consistent leadership over a long period of about 20 to 30 years is required.

The lack of good quality crash data is a limiting factor to identify the correct numbers of injuries and fatalities. 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 keep no proper databases. Fatalities from injuries within 30 days after crashes are not reported. There is the risk that the problem is significantly larger than currently assumed – estimates range from 20% to 30% higher numbers.

The current target to halve fatalities in ten years seems unrealistic given the current state of the national road safety effort. A realistic and achievable road safety target needs to be set.

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, as well as funding. 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 needs to be reviewed, together with the use of technology in testing to reduce corruption.

Vehicle roadworthiness is a problem, with corruption also high at testing centres.

The implementation of AARTO has stalled for many years, nullifying the potential positive impact it can have. The implementation of AARTO by RTIA is currently awaiting the approval of the AARTO Amendment Act<sup>71</sup>, which will address some of the challenges that limited the implementation thereof. As soon as the Amendment Act is promulgated, the plan is to implement AARTO nationally. Some challenges are expected to remain, including the accuracy of data from the electronic national administration traffic information system (eNaTIS), as well as resources and possible court challenges. However, AARTO with its points demerit system is to be pursued and fully implemented.

Although there has been a change to a '365 day' approach, there is still an unnecessary high focus on the two holiday seasons with limited sustainable road safety actions during other periods.

The required levels of funding to improve road safety need to be addressed. Emphasis should further be placed on the evaluation of the effectiveness of road safety actions, such as, for example, awareness campaigns, to ensure maximum benefit for the money spent.

## **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, 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

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this policy a set of guiding principles have been developed, as outlined below, followed by nine policy statements. Each of the policy statements contain 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.

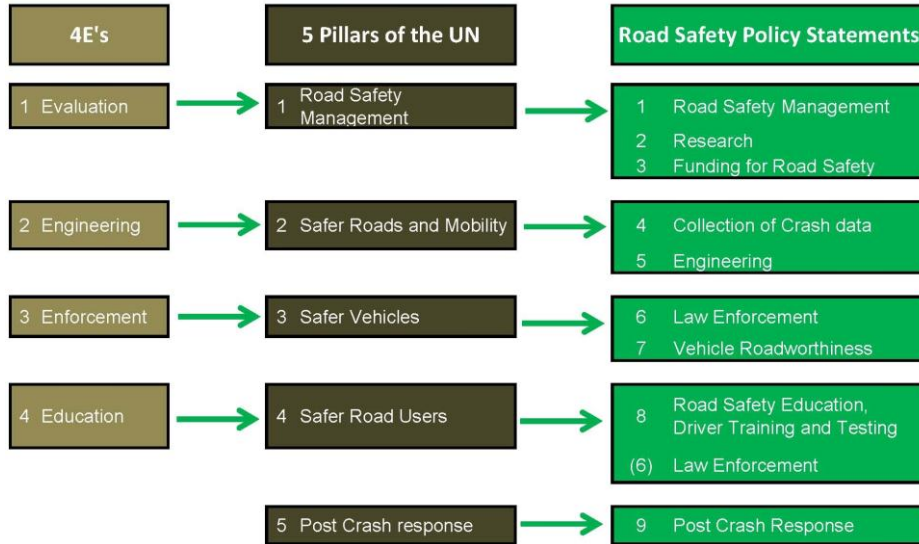


Figure 1: Development of the Policy Statements of the Road Safety Policy

Following an assessment of the problems in road safety, and in order to develop the policy statements, the following guiding principles are laid down:

**Change is required:** Every new policy or strategy creates an expectation that the fatalities and injuries will decrease. There has been too little focus on the real problems and the implementation plan. A different mindset is required to change the way officials in road safety are thinking.

**Political will:** Without long term political will to make a change, there will be no improvement in road safety. Political will is present, but need to be made visible by example by means of driving actions and by ensuring SAPS and traffic officers set an example by obeying traffic laws. Political will implies funding, appointing the right champions, following the policy and strategy with a long term focus.

**Face the facts:** Crash data is poor. The numbers are not critically reviewed and not accurate. Certain provinces do not keep proper record and therefore the national figures are questionable. The focus needs to shift from trying to find a downward trend in fatalities, to really reporting the facts.

**Engineering:** Safe design for all road users must be improved. More focus must be given to pedestrians and cyclists, and road safety audits of designs must be legislated. A database of all hazardous locations in all Road Authorities must become a compulsory requirement, with a prioritised implementation plan.

**People:** Appoint the right people. Change structures to be group based rather than rely on individuals in order to improve cooperation. Integrate the actions of the different entities. Professionalism needs to be improved by appointing qualified professionals on all levels to assist in guiding the road safety actions.

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**Eradicate Corruption:** Corruption takes place on all levels as admitted by all role-players involved, and adequate evidence exists. Corruption is present in issuing of driver licences, vehicle road worthy certificates and fines that are not enforced for transgressions. Fighting corruption starts by appointing ethical individuals, improved training, providing oversight (probity marshals) and zero tolerance disciplinary measures.

**Long term view:** A realistic target must be set – ‘Halving fatalities in 20 years’ is a more realistic target, but still a daunting challenge. Given the complexity of the problem, and the need to implement a sustainable solution that lasts longer than political terms, a 100 year plus view needs to be taken. Effective implementation should focus on halving fatalities and injuries in the first 20 years.

**Structured Education:** There is too much emphasis on short term campaigns - Easter weekend, Transport month and December holidays. A structured approach to ensure educated, well trained and tested road users must be implemented from school level through driver training and testing. Road safety education must reach all learners in schools regularly. The implementation of a pedestrian licence for school children to promote awareness and responsible citizens is proposed.

**Measure more, report often:** More indicators such as learners educated, driver licences awarded, number of speeding offences, seat belt and illegal overtaking actions must be reported. Fatalities, injuries, the number of crashes and the cost of road crashes need to be reported. Reporting must be done independently and regularly (quarterly), the numbers should not be delayed for political approvals.

**Technology:** Technology must be used in learner education, training of drivers, including the revision of the K53 test, testing of drivers, monitoring of law enforcement, use of ITS

technology (CCTV, average speed over distance, etc.) and application of handheld devices and body cameras for traffic officers.

## ROAD SOUTH SAFETY MANAGEMENT

### PROBLEM STATEMENT

One of the problems that came out clearly in all the discussions and workshops that were held, is the lack of leadership in road safety and a lack of coordination between the role-players. The different entities currently have their own agendas and do not coordinate their road safety actions during the planning stage. This needs to be addressed, otherwise it will continue to hamper the implementation of any policy or strategy.

There is duplication of some functions and activities between the DoT, the RTMC and the RAF.

The coordination and quality control of road safety education needs to be provided with clear direction from a National level, with proper management and control on a provincial level.

There is limited coordination between engineering and law enforcement activities.

The national road safety effort can in general be described as fragmented, with different levels of Government and different regions each pursuing their own goals.

### DESIRED OUTCOMES

The road safety effort in South Africa will be managed efficiently, with a long term goal of eradication of crashes, injuries and fatalities.

All levels of government and all role-players should fulfill coordinated tasks that form part of the larger strategic plan to improve road safety.

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The structures that are in place to coordinate the national road safety effort, will allow the development of people, continuous critical review and measurement of the effectiveness of actions and policies.

## POLICY STATEMENTS

In order to achieve the goal of reducing crashes, injuries and fatalities, the complete road safety effort in South Africa will need strong leadership over a long period of time - the next 20 to 30 years. This leadership will be required on a political, managerial, technical, social and legal level. A desired outcome is therefore to identify the required leadership requirements, develop and maintain it to ensure the expected reduction is achieved and that it is sustainable.

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

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
- SANRAL
- 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

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.

The structure should also outlive the tenure of individuals - it must provide a solid basis from where all actions are coordinated. 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.

The management structure proposed, has three elements, consisting of the following:

- A National Road Safety Coordinating Committee
- Provincial Road Safety Coordinating Committee
- National Task Teams

### *National Road Safety Coordinating Committee*

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:

- RTMC - Chair
- Department of Transport
- SANRAL (Engineering and Education)
- RAF
- SAPS
- Department of Education
- Other

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The proposed structure is similar to the previous Road Traffic Management Coordinating Committee (RTMCC), which is at present not functional in all provinces. This however, has to be revived and restructured to effectively manage and monitor road safety actions in South Africa.

The roles and responsibilities of every member of the National Coordinating Committee need to be clearly defined and agreed to avoid duplication and to ensure the effective use of limited resources.

## *Provincial Road Safety 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 Engineering Department - Professional Engineer
- Provincial and Metropolitan Traffic departments
- Emergency services Department
- SAPS
- Provincial Department of Education
- other

## *National Task Teams*

Role: Address specific topics to resolve within a given time frame, where national input is required, for example:

- Research
- Crash data collection
- New K53 Driver licence
- Road Safety Education
- Setting of Speed limits
- Review of AARTO
- Technology against corruption
- other

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

## **POLICY IMPLICATIONS**

The proposed management structure is not new, and the aim is not to limit the legislated functions of any of the entities involved. The aim is to address the fragmented approach and to remove the barriers to effective cooperation there seems to exist between the different entities.

The effective implementation of the proposed management structure will imply a will to improve the current situation and a willingness to change from all the parties involved in the national road safety effort.

The proposed coordinating bodies will imply that existing officials, who are currently tasked with road safety, operate in a more coordinated way and provide assistance to each other, sharing information and work together to achieve a national target.

## **LAW ENFORCEMENT**

### **PROBLEM STATEMENT**

The largest problem in law enforcement is the extent of corruption. This is recognized in all

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previous policy and strategy documents, and has been confirmed by the RTMC and other role-players in workshops held for the development of this policy. The number of traffic officers that are available to do enforcement is also limited, as they are required to do other duties as well.

Law enforcement is a critical element in improving road safety, as it is the major controlling force to ensure proper driving behaviour. If this fails, all other actions become almost meaningless. A driver getting a licence without being properly tested, a speed fine that is not issued but replaced by a bribe of R100, etc., - all works to create a road user culture that will continue to result in the high fatality rate that South Africa experiences.

Speed enforcement often forms the bulk of law enforcement, but no adequate data is available in South Africa to prove that speeding results in the most crashes - for example 40% of fatalities are pedestrians. More effort should be placed on a wider range of law enforcement measures than just speeding.

Lack of proper law enforcement is evident in the roadworthiness of heavy vehicles - in roadside surveys conducted by the CSIR and Fleetwatch, it was found that 70% of heavy vehicles are not roadworthy. The same applies to illegal driving schools, road users that pay bribes to traffic officers during road blocks, etc.

Public transport vehicles, including buses and taxis, present high risk road safety challenges. The vehicles are often not roadworthy and the drivers not well trained, or drive without the relevant professional driver permits.

The other challenge in law enforcement is developing programs that are not focused on generating income (from fines), but on addressing specific road safety related issues, such as speeding, driving under the influence of alcohol, pedestrians crossing a dangerous road

while under the influence of alcohol, children being buckled up in child restraints, etc. This will be a major shift from current practices and will require high level intervention.

The lack of human resources in law enforcement has been identified as one of the main problems.

## DESIRED OUTCOMES

Law enforcement actions should be aimed at addressing road user behaviour. The aim should not be to generate fines, but law enforcement should be an adequate deterrent to encourage road users to obey the law.

The law enforcement fraternity should have very low levels of corruption. (It is unrealistic to assume that there will be zero corruption). There must be zero tolerance for corruption - once identified, persons involved should be disciplined severely.

Law enforcement actions, such as speed enforcement, road blocks for road worthiness, seat belt monitoring and other actions, should be located and designed based on a scientific approach and in conjunction with other disciplines. Areas where speeding occur, especially at hazardous locations, should for example be targeted for speed enforcement.

## POLICY STATEMENTS

The design of law enforcement programmes should be further developed to include a scientific approach, whereby crash data and other data is used to develop specific law enforcement programmes.

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.

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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.

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.

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.

The statistics from law enforcement actions should be reviewed by the proposed national road safety coordinating committee on a quarterly basis, to identify where changes and improvements should be made in the programmes.

A national central database of drivers and their offences should be developed, where an officer on the road can immediately assess if a driver has outstanding fines.

A review of the available human resources for law enforcement per province should be done and where necessary, additional personnel should be appointed.

Measures should be implemented to reduce corruption. This should include the implementation of body cameras on traffic officers to monitor behaviour, and the use of probity marshals during road block type

operations. The probity marshals should oversee law enforcement actions to prevent bribery of officials.

Screening tests of traffic officers and continued training should be carried out to identify individuals that are prone to corruption.

A database of vehicle roadworthy test centres (private and public) should be developed and regular inspections should be conducted to (a) ensure high standards of tests and (b) to reduce corruption.

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.

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 South African National Standards:

- SANS 10399 (Quality Management Systems - Requirement for bus Operators)
- 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)

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

Public transport vehicles - buses and taxis - should be tested regularly for roadworthiness and the fitness of drivers. A national programme should be developed to monitor all vehicles, and the results of the law enforcement actions should be monitored annually to make improvements where necessary.

## **SUSTAINABLE APPROACH TO ROADS MANAGEMENT**

## POLICY IMPLICATIONS

The law enforcement fraternity is a key element in improving road safety. The measures proposed will be met with resistance as it is normal that there will be resistance to change in the status quo. Strong leadership and discipline should however prevail. The implication is a clean-up of the law enforcement fraternity by addressing the bad elements.

Appointing additional human resources to improve law enforcement will have a cost implication.

Improved monitoring of law enforcement officials using technology, will have a cost implication, but is seen as a necessary cost to reduce corruption.

## COLLECTION OF CRASH DATA

### PROBLEM STATEMENT

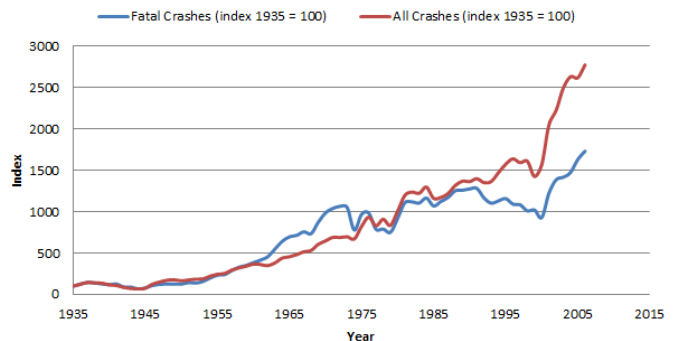
The quality of crash data in SA is poor. This was found in a study done for the National Department of Transport on 'Road Freight Accidents' in 2014<sup>75</sup>, and is also confirmed in the report compiled for the United Nations on the Decade of Action.

In order to provide a general understanding of the extent of the road safety issues in SA, some of the key available statistics are provided below.

The total number of crashes is not accurately known at present. In the UN Decade of Action report, the last estimate by the DoT was 947 000 crashes per year in the year 2007. In the 2001 to 2005 Road safety document, the total number of crashes was estimated at 512 000.

The 947 000 crashes per year seems high. A graph was prepared where the crashes and fatal crashes in the UN Decade of Action report was

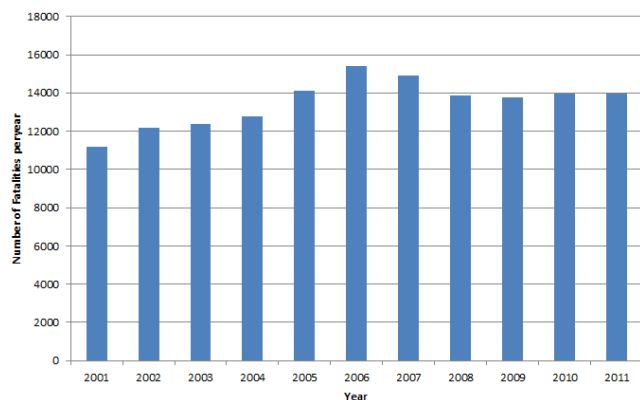
normalised, using an index of 100 in 1935. This shows a sharp increase from about 2000, and the data need to be considered carefully.



### Total Crashes and Fatal Crashes – Compared to Index

The total number of crashes is a key statistic that needs to be verified. The number of fatalities arising from crashes and occurring within 30 days after the crash, are currently not included in the official statistics. The current annual fatalities per year is around 12 000 per year, and if the fatalities resulting from injuries within 30 days after the crash are added, this can be significantly higher.

The following graph indicates the fatalities recorded by the RTMC from 2001 to 2011.



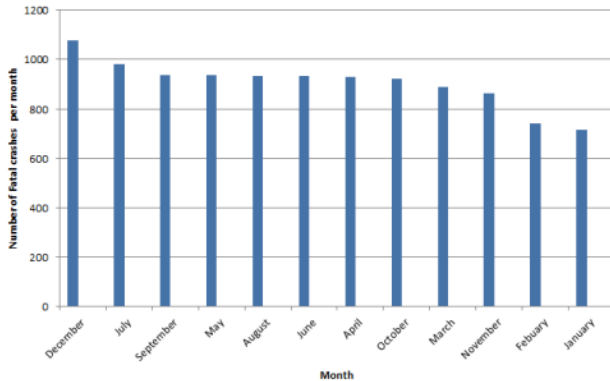
### Fatalities per Year

The graph indicates that the highest number of fatal crashes (not fatalities) occur in December,

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most likely also because the total travel in the month of December is higher than in any other month. It is interesting to note that April, which is generally perceived as a month with a high number of crashes, is only the seventh highest. This confirms that a '365 day' approach should be followed in road safety, rather than focusing on the two major holiday periods only.



## *Fatal Crashes per Month - Ranked Monthly Average for Ten Years 2001 To 2011*

The correct number of crashes is one challenge experienced with data availability, the other include the type of crash and the location of the crashes. The Accident Report Forms are often completed inaccurately, making it difficult to derive this information when capturing the data. There is therefore a need to train the people filling in the forms and to do quality control when capturing the data.

A relatively small percentage of vehicles in SA are insured, and thus crashes are in many cases not even reported for insurance purposes.

Officials report crashes in 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, 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.

At present there are three provinces that do not keep accurate databases of crash data at all. This makes the data that is presented on a national level questionable.

The major problem is that the recording process needs to be resolved. There has to be responsibility at a low level (SAPS office, Traffic department office, etc) where the officials have to be trained on how to store the data, assign a unique identification number for every crash and to undertake quality control.

## **DESIRED OUTCOMES**

All crashes, be it damage only, with injuries or with fatalities, should be reported. The location, type and other data required in the Accident Report Form should be accurately captured.

Processes should be in place to ensure that all roads from all levels of Government are covered, and that quality control of the captured data is done.

The vision is to have crash data with a 90% plus confidence level.

## **POLICY STATEMENT**

The process for capturing crash data must be reviewed before any software is developed. 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.

The standard data fields in the Accident Report Form need to be maintained, but an electronic form should be developed to improve areas such as the location and the type of crash. Every crash should have a unique identification number for cross-reference purposes. Additional data such as the condition of the vehicle in terms of roadworthiness should be captured. The SAPS forensic reports that are compiled when fatalities occur should be made available for comparison and analysis, in a format where

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identities of persons and vehicles remain undisclosed.

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

The crash data collection should be electronic and web based, but should be based on a standard data protocol, allowing every region to develop their own system. A single national software platform is not required.

The crash data must comply with the international standard by including fatalities resulting from injuries within 30 days after the crash.

Crash data reports should be available real time or within a week, on a national level.

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.

The data must be made available to all stakeholders for their own specific analysis. This will assist to improve their own effectiveness in road safety measures.

Suitable equipment must be provided in every SAPS office or Traffic Department office, or other crash reporting stations, where crash data can be logged and uploaded immediately.

Private stakeholders and companies that also record crash data and injuries should officially be made part of the process, including insurance-, vehicle towing- and private ambulance companies, private hospitals and others.

## **POLICY IMPLICATIONS**

A national task team must be appointed to review the crash reporting system and to

streamline the process in order to adhere to the policy statements above.

The cost for the review and development of the system, and the required hardware and software need to be determined for budget purposes.

This is seen as the responsibility of the proposed National Task Team.

## **ENGINEERING ACTIONS**

### **PROBLEM STATEMENT**

South Africa has approximately 750 000 km of roads, on which an estimated 500 000 to 950 000 crashes occur annually with the resulting estimated 12 000 fatalities each year. Accurate statistics on the causes of crashes, related to road design is not available, but it is assumed to account for 15% to 20% of crashes, based on international available statistics.

The design of roads, facilities for public transport and non-motorized users, therefore need to be performed to ensure the highest standard of road safety.

### **DESIRED OUTCOMES**

The road environment and road design has an important impact on road safety. All roads have the risk that a crash will occur, but this need to be minimized as far as possible from an engineering perspective.

The vision is to have a database of all hazardous locations in South Africa, and to address these in a systematic and prioritized way, to ensure that the best possible engineering standards are met on all roads, given the available budget.

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

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

## POLICY STATEMENT

### *Database of hazardous locations*

A national data base, that is GIS based, of hazardous locations, should be developed. The database should be compiled on a provincial level by the proposed Provincial coordinating committee, and an engineer per province needs to be tasked to collate the information. The hazardous locations can initially be based on the knowledge of local stakeholders, given the current lack of reliable crash data.

A process need to be developed where the national database is prioritized and where money is allocated to improve the hazardous locations. A significant budget amount should then each year be allocated by the DoT, to address the hazardous locations with the highest priorities.

### *Road Safety Audits*

A Road Safety Audit (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<sup>76</sup>. The manual aims to assist road authorities to conduct RSA for new road projects and road safety appraisals for existing roads in order to identify potentially hazardous locations and put remedial measures in place to minimize crashes on the road network. However, this document has not yet been formally approved by the CoTO.

RSAs for new projects should become compulsory on all road projects, for all different levels of government. Engineers need to be trained and develop experience in road safety

audits, and it will also assist in creating a general awareness of road safety in design.

The DoT should become the custodian of the RSA manual and an appointed engineer in the department should coordinate RSAs in the country.

### *Strategic Safety Engineering Programme*

A strategic safety engineering programme is to be designed to address specific road elements, which, based on local and international data, have high crash rates. The programme is then to be implemented on a general basis along a road, regardless of whether there are specific hazardous locations based on crash data, where these road elements are improved to reduce the risk for crashes caused by these road elements.

A typical strategic programme of improvements will typically include the following:

- Access management, ensuring minimum spacing standards between intersections and reducing the number of intersections and accesses on a road.
- Barrier lines - Barrier lines preventing overtaking on road sections with inadequate sight distance, normally over crests and around horizontal curves. A general programme must be implemented to ensure that barrier lines are long enough, well maintained and combined with additional signage and road markings where necessary.
- Pedestrians - The available crash statistics indicate that 40% of the fatalities on South African roads are pedestrians.
- Schools - Safe areas around all schools must be developed where there is high conflict between vehicles and children walking and cycling to the school.

### *Policy for the Setting of Speed Limits*

The DoT has a draft policy for the setting of speed limits. This was developed some years

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back and is based on sound engineering principles. Speed limits are often reduced as a symptomatic measure if crashes occur, but do not always address the real cause. The policy needs to be revised, incorporating the recent changes to speed limits.

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.

Speed law enforcement actions need a strategic review, as it should not happen in isolation from other actions. It should not be done in order to earn income for a municipality, but should be focused on improving road safety.

## POLICY IMPLICATIONS

The collation of data on hazardous locations, for the proposed national database, should be done by existing officials, using existing knowledge of the road network. It should therefore not have a financial implication. The translation thereof into a national GIS database, will however have a cost implication which will have to be quantified.

Implementing road safety audits will require more trained engineers to do the road safety audits, and will have a cost implication on future road and transport facility projects.

The proposed strategic engineering programme should be implemented on a provincial level, and can be combined with the higher order hazardous locations. The implementation will also have a cost implication, but will provide a systematic way of addressing the engineering side of road safety.

## ROAD SAFETY EDUCATION, DRIVER TRAINING AND DRIVER TESTING

### PROBLEM STATEMENT

## SUSTAINABLE APPROACH TO ROADS MANAGEMENT

It is known that most crashes occur due to driver and road users not adhering to rules of the road and due to human error. It is therefore essential that a road safety policy and strategy should focus a significant part of the effort on improving the road user culture in South Africa.

In order to ensure a long term sustainable reduction of crashes and road fatalities, a fundamental mind shift will be required in how learners are educated, driver training and the use of awareness campaigns.



South Africa has approximately 12.5 million learners and 425 000 educators, which are in 25 720 schools<sup>77</sup>.

The implementation of a scientific and coordinated road safety education programme is therefore a complex and immense task that will require careful planning and cooperation of all the stakeholders.

Some of the problems, which have been identified in workshops regarding road safety education, are as follows:

- The schools do not have the material to do proper education of learners.

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- The teachers are not committed to do road safety education, as it does not form part of their evaluations.
- There is limited or no coordination of the education efforts between the Province, the Departments and the Municipalities.
- There is no control on a provincial or national level on the exposure or learning opportunities learners get in terms of road safety.

The result is that learners are not educated as responsible road users, which is what is required in the long term to make a change in the road user culture in South Africa.

Driver training is not regulated and control over driving schools is required. Vehicle testing centres are not regulated adequately and monitored, resulting in an uncontrolled environment with reported cases of corruption where driver licences and vehicle roadworthiness certificates can be bought.

There is no accessible central database of drivers and their offences where an officer on the road can immediately assess if a driver has outstanding fines.

The K53 driver test is more than 25 years old and need to be reviewed as part of an ongoing program of improvement. A new training method and test should be developed to address the problems resulting in the highest number of crashes. Drivers are for example not trained or tested to drive on a freeway, to drive in wet conditions or at night.

The training and testing of drivers of public transport vehicles, including buses and taxis, need specific attention. Advanced training programs with rigorous testing need to be implemented to improve the safety of road based public transport users. Annual or bi-annual testing of drivers need to be implemented.

The testing of public transport vehicles must be improved and must be done more regularly. Technology need to be implemented to ensure that corruption related to the testing of public transport vehicles are controlled.

## DESIRED OUTCOMES

Learners leaving school should have had a learning opportunity every year of their school career, and should be developed into responsible citizens, with a responsible road user culture. This can only be achieved if a long term approach to improving road safety education is implemented.

Road safety education in South Africa should be well coordinated, there should be adequate training material in all schools and educators, trained in road safety education, should be motivated to make a difference.

The number of learning opportunities per school should be monitored and changes should be made regularly to improve education.

Driver training and testing will be of a world class standard, with drivers that are well trained for all the critical driving situations. Drivers should be thoroughly tested.

Corruption in driver testing should be reduced to acceptable levels. Strict disciplinary measures will be taken against offenders.

Enhanced roadworthy testing should be implemented and only vehicles that qualify with prescribed minimum standards should be allowed on the road.

## POLICY STATEMENT

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

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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.

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.

In order to motivate and get the early cooperation and attention of children, learners around 10 years old must be tested in proficiency of certain basic road safety skills, and should be issued with a card that can be in the form of a 'pedestrian licence'. This should act as an incentive and measure to create responsible citizens of the future. The aim of this will be to create a lifelong awareness amongst the children and make them responsible citizens, who will even have an impact on their parents and the way they act as road users.

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

Driver training is not regulated and control over driving schools is required. A database of driving schools, with regular testing and inspections is required – which must include retraining and testing of trainers as well as examiners.

Corruption has been reported widely in the driver testing environment, and specific and very strict measures need to be implemented.

Vehicle testing centres have to 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 of photos of vehicles that are tested.

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

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.

## **POLICY IMPLICATIONS**

The proposed changes to road safety education will require a high level of management and coordination on a national and provincial level. It will also imply a change in mindset of the officials responsible for road safety.

The improved road safety education will have additional cost, especially for learning materials.

The review of the K53 driver training and testing will have a cost and retraining implication. The expected benefit of a revised driver curriculum, will however be beneficial and will have an impact on road safety and driver behaviour.

Improving the vehicle testing centres, implementing additional testing and monitoring of the vehicle test centres, will require additional funding.

## **RESEARCH**

### **PROBLEM STATEMENT**

At present there is limited if any research being carried out on road safety, crashes and related topics.

### **DESIRED OUTCOMES**

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A well-funded and coordinated road safety research programme must exist, that will evaluate the measures implemented to improve road safety, and where new measures will be developed to improve safety and reduce crashes.

## **POLICY STATEMENT**

A national coordinated research programme should be developed for road safety involving the universities, the CSIR, private industry, the relevant government agencies, insurance companies and other relevant stakeholders. The research should assist in monitoring progress and should provide feedback and guidance for the overall management of the road safety programme.

The road safety research initiatives should be coordinated by the National Road Safety Coordinating Committee and there should be a task team that is responsible for coordination.

## **POLICY IMPLICATIONS**

This research programme will require a workgroup, which will coordinate research between the different research bodies. The group must identify topics, set priorities and determine an annual budget for research on road safety.

## **ROAD SAFETY POLICY IMPLEMENTATION FRAMEWORK AND WAY FORWARD**

The effective implementation of the road safety policy will require the dedicated and motivated effort from many role players and individuals.

The road safety challenge is complex and is currently lacking strong leadership and coordinated management.

The proposed new structures for the management of road safety, comprising of the National 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.

Wherever change is required, it should be expected that there will be resistance to the implementation of new proposals. A resilient drive should be developed to improve the current situation, otherwise progress will be hampered. If change is not affected at the top, there will be no change in the behaviour of the individual road user.

The road safety strategy that is currently being developed by the RTMC should be aligned with the road safety policy, and should have action plans that are aligned with this policy. The strategy document of the RTMC should translate the Road Safety Policy into action plans, budgets and time frames.

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## **SUSTAINABLE APPROACH TO ROADS MANAGEMENT**



### **3. NON-MOTORISED TRANSPORT**

#### **SUSTAINABLE APPROACH TO ROADS MANAGEMENT**



This NMT Policy 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 NMT Policy 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.

## DEFINITION OF NMT

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 definition.<sup>78</sup> People with special categories of need include the following<sup>79</sup>:

- People with disabilities - defined in the National Land Transport Act<sup>108</sup> 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.

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- 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.

## WHY ENCOURAGE NMT?

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.

### *Contributing Towards an Effective Economy*

The effective design, construction and maintenance of roads are crucial to a well-functioning and prosperous modern economy. Economic benefits arise from the lower external costs of NMT compared to those associated with motorised vehicles. The economic costs are higher for motorised vehicles as a result of road crashes, the costs required to enforce the motorised road network, impact on road maintenance, etc. NMT is more cost effective in that it is typically utilised at no outright costs to the transport user. If there are costs incurred such as bicycle repair or bike rental these are normally significantly lower than the costs associated with motorised transport such as public transport or private vehicles. NMT can therefore reduce the large proportion of monthly household income currently spent on transport.

In addition, NMT uses valuable road space very efficiently, can ease congestion which has a direct bearing on the cost of time to transport goods or people and ultimately impact the economy positively.

### *A Sustainable Environment*

Encouraging a modal shift to more sustainable modes such as public transport and NMT can have a positive impact on the environment. It can assist by lowering levels of vehicle emissions such as CO<sub>2</sub>. Also, decreasing levels

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of congestion can help to minimise localised vehicle emissions which can help to improve local air quality. The Green Economy Accord calls for, 'reducing carbon-emissions on the roads'<sup>80</sup>. With mounting concerns over climate change and air pollution, the role of roads needs to shift away from serving predominantly private vehicles and road-based freight, towards supporting more integrated mobility systems centred on walking, cycling, public transport and freight via rail or sea.

NMT uses very little energy and resources and in a world where fossil fuels are limited, NMT can play a vital role as a mode of transport serving to reduce CO<sub>2</sub> emissions and therefore contribute to improved air quality overall.

*If a car trip is replaced by a walking or cycling trip, then one saves, on average, approximately 150 grams of CO<sub>2</sub> per kilometre. When one replaces 2000 km of car trips by NMT trips, then one saves 300 kg of CO<sub>2</sub>.*<sup>81</sup>

### *An Improved Quality of Life*

Transport plays an important role in meeting societal needs for connection and mobility in ever-expanding human settlements. In their construction and on-going maintenance, roads and NMT infrastructure provide opportunities to address social challenges like unemployment, community integration and social cohesion.

The quality of life will improve as South Africans more frequently walk, cycle or make use of other NMT modes. Utilising NMT as a daily commute allows people to incorporate regular exercise as a daily activity thus contributing to healthier, more active lifestyles. It also boosts overall mental well-being and serves to create safe, sociable and vibrant communities.

Increased volumes of pedestrians or cyclists can also provide better security as a form of 'passive policing'.

## WHY DO WE NEED A NATIONAL NMT POLICY?

An NMT Policy 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.

## CURRENT STATE OF NMT IN SOUTH AFRICA



### *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<sup>2</sup>
- White Paper on National Transport Policy, 1996<sup>17</sup>

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- National Land Transport Strategic Framework, Draft 2015<sup>82</sup>
- Public Transport Strategy and Action Plan, 2007<sup>83</sup>
- Rural Transport Strategy for South Africa, 2007<sup>84</sup>
- NMT Facility Guidelines, 2014<sup>96</sup>
- National Land Transport Act 5 of 2009 (NLTA)<sup>108</sup>
- The National Road Traffic Act 93 of 1996 (NRTA)<sup>38</sup>
- National Road Traffic Regulations, 2000 (NRT Regulations)<sup>85</sup>
- Administrative Adjudication of Road Traffic Offences Act 46 of 1998 (AARTO Act)<sup>11</sup>
- National Building Regulations and Building Standards Act 103 of 1977<sup>86</sup>
- South African National Roads Agency Limited and National Roads Act 7 of 1998 (SANRAL Act) and other roads legislation<sup>9</sup>
- National Environmental Management Act 107 of 1998 (NEMA)<sup>87</sup>
- National Heritage Resources Act 25 of 1999<sup>88</sup>
- South Africa's Universal Access Regulations<sup>89</sup>
- The White Paper on National Climate Change Response, 2011<sup>90</sup>
- Municipal By-Laws

## *NMT Trips to Work and Education*

Walking is an important mode of transport for many South Africans in that it is often the only option. Research indicates that three million South Africans walk all the way to work while another 5.4 million use public transport, but also walk as part of their trip<sup>91</sup>. Rural provinces have higher percentages of workers that walk all the way. In the Northern Cape, the percentage of workers that walk all the way is 43.4%, while the Eastern Cape, the Free State and Limpopo have well over 30% of workers walking to work all the way. In Gauteng (12.5%) and the Western Cape (17.7%), the percentage of workers that walk all the way to work is significantly less than

in other provinces as there are more travel options (i.e. public transport) available in these provinces. The National Household Travel Survey 2013 revealed that cycling to work increased from 0.8% to 1.3% between 2003 and 2013<sup>116</sup>. Currently, 148 000 people bike to work per day with the rural provinces showing higher percentages, possibly due to the lack of transport options in these areas. The mode choice data for trips to educational institutions show 63% of learners walking the entire distance<sup>116</sup>. The percentage of learners walking all the way to school varies from 43% in Gauteng to 79% in Limpopo, i.e. the more rural a province, the greater the likelihood of learners walking all the way to their educational institutions.

## *Road Safety Challenge in NMT*

South Africa has a road traffic fatality rate of 32 deaths per 100 000 inhabitants. This figure is even made worse by the fact that less than 2% of all registered vehicles in the world are in Africa, which accounts for 20% of global traffic deaths<sup>92</sup>.

Increasing levels of motorisation, high speeds, aggressive driver behaviour, coupled with a lack of NMT infrastructure and incompatible land-use and transport planning are amongst the most probable causes identified in this situation. Furthermore, the vast rural areas, although often not very populated, also carry a high road fatality burden caused by similar issues. Unfortunately, no specific road safety data is available for the rural areas, only for some urban areas.

Statistics around pedestrian fatalities are inconsistent between various sources but are approximately half of the road fatality burden on South African roads. There is an urgent need to improve safety on South African roads. Better education, improved design and strict enforcement of traffic rules are all measures that should be used to increase road safety. There is a relationship between education, income and means of transport. The level of education

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affects the income, which in turn influences choice of transport and the associated road traffic risks<sup>93</sup>. The road safety challenge is complex and requires an extensive multidisciplinary approach.

There is no national coordinated approach to address road safety although the RTMC is mandated to collect and report on crash data. The collection of crash data is a good example where several of the Metropolitan municipalities have no data, the same with some of the provinces.

In general there are several policies and strategies, but little evidence of effective implementation. Legislation and regulations are generally in place. But the problem is around the actual implementation of existing legislation and ensuring the effectiveness of the available legislation because of the high levels of corruption. Adding new legislation to the existing comprehensive set of legislation could be problematic unless there is better coordination with the judiciary to ensure the effective enforcement thereof.

## NMT VISION AND OBJECTIVES

The vision for NMT in South Africa is as follows:

*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.*

The NMT Policy has the following broader objectives:

- A reduction in carbon emissions.
- A safe and comfortable environment for NMT.
- An increase in the modal share of NMT.

- NMT satisfies the mobility needs of rural communities.
- An increase in the affordability of transport modes.
- NMT infrastructure provides for people with special needs.
- NMT modes are affordable and easily accessible.
- Land use responds to the needs of NMT.
- Improved social health and economic opportunities.

Six focus areas have been identified and are used to group the various NMT policies. These work holistically to achieve the overarching vision for NMT in South Africa.

### **POLICY FOCUS AREAS**

***Regulation, Institutional Arrangements and Governance***

***Integrated Transport and Land Use Planning***

***Funding***

***Social Health and Economic Opportunities***

***Road Safety***

***Environmental Sustainability***

**REGULATION, INSTITUTIONAL ARRANGEMENTS AND GOVERNANCE**

**PROBLEM STATEMENT AND ISSUES**

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There is a whole suite of legislation and policies in place that serve as the regulatory framework for NMT in South Africa. This regulatory framework sets out principles that have been incorporated in this NMT Policy. However, having a comprehensive regulatory framework has not automatically translated into effective NMT on the ground. There are a number of reasons that NMT policy and legislation has not been fully enacted. This includes inter alia:

- A lack of capacity to enforce traffic laws and legislation.
- Poor coordination and integration across the various departments and sectors.
- Limited expertise and specialised NMT skills within various transport planning authorities to undertake required planning and implementation.
- A shortage of funding to implement the required NMT awareness campaigns, facilities or infrastructure as well as
- Lack of competence and deficiencies in the current judicial system.

It is therefore essential that these issues be dealt with in order to urgently address the gap between policy and practice.

Institutional structures, duties and responsibilities is another key issue impacting NMT delivery. The lack of appropriate institutional structures and capacity has been impacting the delivery of NMT at various spheres of government across the country. Transport, including NMT is a cooperative governance issue that has to be performed by all three spheres of government and across the various Departments. Collaboration with all relevant stakeholders plays a critical role. In order for DoT to fulfil its mandate to facilitate all modes of transport it will need to review institutional arrangements to implement NMT as part of an integrated transport system.

NMT statistics and data is problematic for most local authorities in South Africa. Little or no data

is currently collected on NMT or the various modes contained within it. NMT counts that do exist are undertaken ad hoc on a project-by-project basis and typically do not offer geographic or regional continuity and are not regularly updated. In order to understand the extent of NMT and to monitor successful implementation it is essential that a formalised system of NMT data collection and analysis be set in place. It is envisioned that standardised data collection be undertaken by all planning authorities and a central database be managed by DoT.

## DESIRED OUTCOMES

- Legislative frameworks and smart incentives to promote uptake of NMT modes and infrastructure.
- The enactment of NMT policy and legislative framework.
- Endorsement and facilitation of the use of NMT modes.
- Enhancement of traffic legislation that recognises NMT as an alternative transport mode.
- User accessible transport modes for special needs users (e.g. the disabled, the elderly, children, pregnant women and adults with prams).
- Appropriate institutional structures at all spheres of government to support the delivery of NMT.

## POLICY STATEMENTS

- All transport authorities must establish a strategy and regulatory framework that will promote NMT usage.
- The DoT must review and assess gaps in NMT legislation and update where required.
- The DoT and other relevant departments must enforce, monitor and update regulatory frameworks. Some examples include:
  - Fault legislation for NMT
  - Animal friendly, health and welfare

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- Vulnerability of pedestrians
  - Regulations to force drivers to stop for NMT users
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- Capacity building must be undertaken at all planning authorities to ensure NMT skills are in place.
  - Regular analysis and collection of NMT data must be undertaken by planning and transport authorities.
  - International research must be undertaken on NMT.
  - The Municipalities must update their traffic by-laws in line with the updated and new regulations that incorporate NMT.
  - The DoT will continue research regarding incorporation of the new innovative technologies that will enhance low carbon transport into the mainstream transport system.
  - The DoT will encourage the use of alternative modes of NMT such as small-wheeled transport and other innovative NMT modes.
  - All spheres of government will be responsible for the monitoring and evaluation of overall NMT Policy performance and to ensure effective policy implementation.
  - Local government will be responsible for monitoring and evaluation of plans and implemented projects related to NMT provision at local levels.

## **POLICY IMPLICATIONS**

Policies on regulation, institutional arrangements and governance will have a major impact on closing the gap between policy and legislative framework and actual implementation of NMT in reality. It will also start addressing the skills and capacity issues within government that is significantly impacting transport and roads delivery.

## **INTEGRATED TRANSPORT AND LAND USE**

### **PROBLEM STATEMENT AND ISSUES**

A large part of South Africa's infrastructure and road network has been constructed subsequent to the invention of the private car. As a result, its towns and cities have largely been designed to facilitate the movement of cars rather than people. Combined with the effects of apartheid-era spatial planning, South Africa's poor face many obstacles in accessing the formal economy without a private car. Overcoming inequality requires that interventions focus addressing access and mobility opportunities for the marginalised. Reducing the dependence on private vehicles requires the provision of alternative modes of transport, and a different approach to spatial planning that reduces distances between residential areas and places of work.

The 2013 Spatial Planning and Land Use Management Act (SPLUMA)<sup>94</sup> provides a coherent legislative framework for regulating spatial planning and land use management in South Africa, based on the spatial vision captured in the NDP. Its development principles include 'spatial justice' to redress development imbalances by improving equitable access, 'spatial sustainability' which promotes socio-economic and environmentally sustainable planning approaches and 'spatial resilience' which allows for ecological systems to replenish and regenerate whilst protecting livelihoods in vulnerable communities<sup>94</sup>. These are interpreted into specific land use planning principles and objectives which have direct bearing on the design of roads, including amongst others the avoidance of sprawl, the integration of public transport, minimisation of habitat fragmentation, conservation of soils, and harmonisation of development with the ecological characteristics of the local environment. These principles now form part of the requirements for Spatial Development

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Frameworks, which are required by all spheres of government to guide development.

Transport planning continues to marginalise ADV in areas where the use of animal transportation is critical. Traditionally transport planning primarily focused on the use of the private car with limited attention or none to public transport and NMT. However, the inclusion of NMT as part of the Minimum Requirements for undertaking ITPs<sup>95</sup> placed renewed emphasis on NMT, including ADV. Nevertheless, the lack of expertise limits the appropriate inclusion of ADV into integrated transport planning.

There are a number of improvements that need to be made to the physical environment to ensure that an 'Integrated NMT Network' is in place. This ranges from the higher level planning to ensure that NMT is coordinated with other sectors and integrated with other transport modes to the more localised design of roads to ensure that NMT has been effectively accommodated in the road space.

Integrated planning plays a key role in the success of NMT provision. Inadequate planning can result in duplication of efforts, incompatible or conflicting projects resulting in inefficiencies around funding and wasteful expenditure.

Current road designs still favour motorised transport often at the expense of NMT users. It is essential to ensure that NMT infrastructure is provided which offers coherent and direct NMT routes as well as that the environments are safe, comfortable and attractive to encourage the use of all modes of NMT.

## DESIRED OUTCOMES

- Integration of NMT into the transport system including transport and spatial planning that result in safe desire lines for NMT particularly pedestrians.

- Development of infrastructure and maintenance standards that recognise NMT as an essential mode of transport.
- Facilitation of NMT as a feeder system to other modes of transport.
- Collaborative, participatory and integrated approaches to national development plans, including the integration of sustainable road and transport infrastructure. Designs of new roads and future developments must prioritise NMT, and implement the NMT Facility Guideline manual<sup>96</sup>.

## POLICY STATEMENTS

- All planning guidelines must support and promote NMT at all spheres of government.
- Appropriate structures are to be put in place by all spheres of government to support the spatial and sectoral integration of NMT.
- All spatial and land use planning must incorporate NMT and TOD principles of mixed development and walk-able environments.
- Existing neighbourhoods must be rehabilitated and retrofitted with NMT infrastructure and facilities.
- Designs of new roads and future developments must incorporate NMT considerations and design philosophy.
- NMT (including ADV where applicable) must be included in ITPs and Provincial Land Transport Frameworks (PLTF).
- Road authorities must assess existing infrastructure to ensure that the quality and needs of NMT improvements are met for both urban and rural environments in line with NMT Facility Guidelines.
- Provinces and municipalities must develop integrated NMT network plans.
- Road authorities must maintain all NMT surfaces to the agreed upon standards.
- NMT maps, signpost and infrastructure must be prepared.

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- Municipalities must provide NMT mode specific support such as:
  - Bicycle parking or bicycle stations
  - Bicycle rental
  - Minimum standards for ADV facilities in accordance with animal welfare and safety requirements
  - Eco-mobility modes
- The DoT must ensure that NMT forms part of the national transport master plan and this will reflect NMT-related needs and constraints.
- The DoT must develop and ensure adequate use of the Walk Hazard Reporting System in order to identify problem areas in walking facilities, walkway designs and maintenance backlogs.

## POLICY IMPLICATIONS

Integration between land use and transport will need to be undertaken at all levels of planning, design and implementation. Better integration and coordination will improve the effectiveness of expenditure as well as the functioning of both rural and urban settlements.

## SOCIAL HEALTH AND ECONOMIC OPPORTUNITIES

### PROBLEM STATEMENT AND ISSUES

South Africa has one of the highest unemployment rates in the world. Approximately 51.5% of South Africa's youth are estimated to be unemployed, while the overall national unemployment rate stands at 25%<sup>97</sup>. Poor and non-integrated road infrastructure limits citizens' ability to access employment opportunities and key services, directly affecting poverty, inequality and the pursuit of improved living standards amongst South Africa's poorest.

There are currently striking inequalities concerning public access to private or public transport modes. Over forty million citizens are

reported to live in households without access to a private vehicle, yet South Africa's poor reportedly commute the longest and pay the most for unsafe, sub-standard transport<sup>98, 99, 100</sup>.

The lack of integrated public transport systems (e.g. road to rail links), NMT infrastructure and extensive sprawl of South African cities combined with the effects of historic apartheid-era spatial planning further exacerbates the problem. The poor are faced with great difficulty in accessing important personal or business related opportunities and services, the disabled are inconvenienced using public transport due to inadequate provisions for their needs, and children are placed at risk without basic non-motorised infrastructure (e.g. pavements)<sup>101, 83</sup>.

South Africa's poor face many obstacles in accessing the formal economy without a private car. Walking, cycling, ADV and other NMT modes can play a significant role in the local economic development of these marginalised communities but the role of NMT in job creation initiatives and business are often overlooked.

Health is a national concern. The World Health Organisation (WHO) reports that 69% of women and 41% of men in South Africa are overweight<sup>102</sup>. This compares with the global average of 51% for women and 47% for men. Non-active transport and sedentary lifestyles are contributing to these high levels of obesity. Being overweight has, according to the WHO, a negative effect on health, leading to reduced life expectancy. NMT as a more active form of transport can contribute to a healthier lifestyle for South Africans.

### DESIRED OUTCOMES

- Empowerment of marginalised groups and promotion of Small, Medium and Macro Enterprises (SMME) through NMT.
- Realise and maximise economic opportunities associated with NMT particularly in poorer communities

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- Reliable, integrated transport modes are provided to improve access to commercial services, increase productivity and enhance rural-urban linkages.
- Promotion of NMT as a reliable, healthy, affordable, accessible and safe transport mode.
- Healthy communities
- Vibrant and socially integrated communities
- NMT as an affordable transport alternative
- Communities that walk and cycle in safe and secure environments

## POLICY STATEMENTS

- The DoT, together with departments such as Local Economic Development and private sector must unlock business and commercial opportunities within the NMT sector to assist with socio-economic development and poverty alleviation. Examples include business opportunities in:
  - Bicycle manufacturing and/or assembling
  - Bicycle empowerment shops
  - Pedi-cabs and rickshaws services
  - ADV support and manufacturing services or equipment
  - Distribution of affordable bicycles
- Promote NMT as an affordable mode of transport
- Liaison with communities to increase awareness of NMT as a healthy mode choice

## POLICY IMPLICATIONS

Investments into affordable, reliable and efficient public and NMT modes are expected to boost the economy (e.g. through greater productivity within workplaces and enhanced connectivity between South Africa's poor and a variety of public and private services). Increased reliability, user access and public safety provisions on public transport infrastructure

combined with fiscal policies that raise the cost of operating a private vehicle are additionally expected to increase usage of public transport systems and instigate more sustainable behaviour change amongst citizens.

Increased use of active transport modes will create healthier vibrant communities with lower obesity rates that are more interactive.

Public investments in road infrastructure will directly contribute to job creation through construction, operation, maintenance and production, and indirectly through improved economic efficiencies. Labour intensive road construction and maintenance projects, particularly those that employ advanced technology also provide an element of training and skills development where local communities/unemployed individuals are taught specific skills in construction, engineering, maintenance and other related trades. Such circumstances empower trained individuals to market new skills for application in other projects and contexts.

## ROAD SAFETY

### PROBLEM STATEMENT AND ISSUES

Road Safety is a serious consideration within NMT since pedestrians, cyclists and other NMT users are the most vulnerable transport users against other higher speed motorised modes. Roads are still largely seen as reserved for motorised vehicles. Thus, pedestrians, cyclists and other NMT users are often perceived as being at fault for being on the roads.

The environment for learners walking to and from school as well as commuters walking to and from work or between towns particularly in the semi-rural and rural areas is not a very safe environment as they travel along roads with operating speeds in excess of 100 km/hr. In some instances the surrounding environment (residential settlements, small business

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developments such as market places, etc.) requires the speed limit and design speeds to be reduced. This provides little safety for NMT users as the travel speeds are still in excess of 50 km/hr (critical speed that influences whether an NMT user will survive a crash with a vehicle) owing to the fact that the road environment accommodates the higher travel speeds.

Gravel roads pose their own threat to the road safety of NMT users due to the dust created on the gravel roads by vehicles. The visibility of the driver and the learner to observe one another is almost reduced to zero on gravel roads.

Lack of education for both the NMT user as well as the vehicle driver significantly contributes to the high levels of road crashes within the NMT sector.

Infrastructure design also needs to be a consideration in road safety in that deficient roadway designs also contribute to crashes.

## DESIRED OUTCOMES

- Safe travel conditions for all NMT users in both urban and rural environments.
- Coordination and integration of road safety aspects including those impacting NMT across government departments, agencies and stakeholders.
- A comprehensive, countrywide and current database of NMT crash statistics to be able to track road safety progress and targets.
- South African citizens that are educated, fully aware and actively taking the appropriate actions toward safety on the roads.
- A network of safe road designs and NMT infrastructure in place.

## POLICY STATEMENTS

- Facilitate interaction between role-players at different spheres of government and community to improve NMT road safety

- Sensitise communities, officials and practitioners about the travel needs of NMT.
- The DoT must ensure that that safer road networks are provided and road safety audits are conducted.
- Update legislation to support enforcement of NMT road safety issues and other penalties to discourage traffic transgressions such as making it compulsory to yield at controlled crossings.
- Prioritise the enforcement of speed limits and other traffic rules aimed at reducing NMT fatalities.
- The DoT, in collaboration with the RTMC, must raise awareness to promote safety and animal welfare amongst the operators
- The DoT and the RTMC must ensure NMT education and awareness is undertaken. For example that operators of animal transportation have the basic knowledge on traffic laws and regulations and road safety education and awareness programmes are included in schools.
- Develop and implement the school zone concept to prioritise learner safety within a given radius around schools.
- Appropriate infrastructure is provided for safe NMT usage.
- Existing legislation is enforced for pedestrians on freeways.
- The DoT must deal with stray animals in accordance with the existing legislation.
- The DoT in collaboration with Department of Agriculture, Forestry and Fisheries and SABS must ensure that ADV meet the minimum safety requirements (including harnessing and visibility).
- The DoT must update the signage system to integrate cycling needs and requirements and the Road Authorities will ensure its adequate implementation.
- The DoT must develop safety gear guidelines in consultation with key stakeholders.
- The DoT must develop a Cycling Protection Charter outlining regulation, training, sales,

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safety requirements, facilities and cyclists' behaviour.

- Develop and implement the school zone concept to prioritise learner safety within a given radius around schools.

## POLICY IMPLICATIONS

The implication of these NMT road safety policies will have an impact on the following:

- The mechanism that crash data is collected, analysed and stored.
- The structures and method that road safety coordination is currently being carried out.
- Existing legislation will need to be reviewed and enforced towards improved road safety.
- Review of road and NMT infrastructure design standards against road safety requirements.

## ENVIRONMENTAL SUSTAINABILITY

### PROBLEM STATEMENT AND ISSUES

Road transport has a significant impact on environmental sustainability. In 2012, 9% of national CO<sub>2</sub> emissions related to road transport<sup>25</sup>. If South Africa wishes to meet its commitment to total annual GHG emissions in the range of 212 to 428 Mt CO<sub>2</sub> equivalents by 2050<sup>27</sup>, road infrastructure and transport must be a central part of the solution.

Transport is also responsible for 27% of final energy demand in South Africa. Petroleum products represent 97% of the energy used in the transport sector, with electricity only representing 3% of usage. The Government of South Africa has additionally failed to provide adequate policy frameworks and incentives, and the infrastructure required to allow non-

motorised transport modes to become viable alternatives (e.g. walking, cycling).

NMT is a viable sustainable transport alternative.

## DESIRED OUTCOMES

- The promotion of NMT infrastructure to promote sustainable, carbon neutral modes of transport (e.g. cycling, walking).
- The construction of low carbon or carbon neutral road and NMT infrastructure.
- The careful consideration of NMT network expansion so as to conserve and promote natural habitats, ecological corridors and water systems, and prevent erosion and flooding.
- The minimisation of waste, water, heat and energy requirements and the local sourcing of materials and resources.
- Maximise the utilisation of recycled construction materials to minimise usage of virgin resources wherever possible.

## POLICY STATEMENTS

- The DoT will implement programmes aimed at reducing greenhouse gas (GHG) emissions by promoting the use of public transport NMT and eco-mobility technologies such as battery powered vehicles and cycles.
- The DoT in partnership with other government departments, private sector and civil societies will establish incentives for research to encourage students and scholars to research and study the role of NMT in climate change.
- Increase awareness and education programmes of transport impacts to the environment.
- Introduce environmental sustainable practices into NMT facility and infrastructure design.

## SUSTAINABLE APPROACH TO ROADS MANAGEMENT

## **POLICY IMPLICATIONS**

The implication of not making sustainable choices to ensure our environmental future is not really an option. We need to move away from the dependency of private vehicles and take the necessary steps to more sustainable modes of transport such as public transport, NMT and other eco-mobility technologies.

These policies impact all government departments, agencies, private sector companies as well as public at large in that it is everyone's responsibility to take the necessary actions to preserve our precious environment.

## 4. FUNDING



### CONCERNS AND THE INTENT OF POLICY STATEMENTS

The lack of funding for road infrastructure implementation and maintenance was a common refrain that was heard when consulting with stakeholders. This was confirmed again South African Road Network Condition and Budget Needs Report that was compiled under auspices of the Roads Coordinating Body (RCB) in 2014 wherein it was emphasised that there is insufficient funding to maintain the existing road infrastructure, not only national roads, and that the value of the backlog amounts to R197 billion<sup>40</sup>.

Provincial roads are funded via two mechanisms; from the Equitable Share Contributions and through grant funding in the form of the Provincial Road Maintenance Grant (PRMG). However, there is a trend in some provinces to reduce their Equitable Share Contributions and they are thus becoming dependent on grant funding to fulfil their mandate for roads.

Local authorities have no dedicated, explicit source of funding for the supply, delivery and maintenance of their municipal road

infrastructure. Instead, road construction and maintenance projects are part of the overall expenditure functions funded mainly through the Equitable Share Contribution based on a non-conditional and pre-determined formula, as well as from income derived from rates and taxes, developers' contributions, and conditional grants, where appropriate.

Without significant investment in roads this significant asset will continue to deteriorate. In total, approximately R73 billion is required over the next five years to sustain the current situation, as well as address the backlog. However, the budget allocation for 2014/15 financial year alone was R34 billion<sup>40</sup>, far short of the required values.

According to the 2014/2015 book year Government collected R47.5 billion from road users as part of the general fuel levy and R7.175 billion from vehicle licence fees, which led to an estimated total income of R54.675 billion<sup>103</sup>.

Governments' expenditure on roads and roads transportation for the same year was R44 billion, consolidated as direct expenditure on road

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maintenance and construction; R4.9 billion on public transport infrastructure (BRT Systems); R7.1 billion on Road Public Transport Operations (Bus Subsidies) and R266 million on Road Traffic Management and Rural Asset Management, which leads to an estimated total expenditure of R56.27 billion.

Funding roads through other possibilities will most likely close the gap between the road budgetary requirements and the available funding. Other funding sources that could be considered include the fuel levy, vehicle licence fees and tolling.

Below follows an extract from SANRAL's investigation into the various funding sources available to finance the funding gap<sup>21</sup>. From this, SANRAL concluded that tolling would be the most feasible option to finance new road infrastructure.

## *Fuel level*

- Advantages

If administered at the national level, the cost of collection will be low and one only needs to track total fuel sales at the exit refineries. Evasion of fuel levies will also be very unlikely at this level. Fuel levies are an existing instrument that is known and accepted to the public but can also encourage road users to move away from fuel which is environmentally beneficial.

- Disadvantages

As soon as provincial or municipal fuel levies are considered, the cost of collection will be higher as deliveries need to be tracked at every service station. It is also regressive as fuel buyers who are living in small remote towns do not necessarily benefit from the upgraded roads, as they contribute through the fuel levy to the maintenance of freeways in major

metropolitan areas that they rarely, if ever use.

Not all road users pay for the use of the roads, only those users that buy fuel contribute to the maintenance and upgrading of major roads. This is becoming a major concern internationally with the trend to alternative energy vehicles like the hybrid and electric vehicles.

Since only fuel buyers pay for maintenance and road upgrades they are not encouraged to use alternative roads or, to use roads at alternative times to help ease road congestion. If users of a road pay to drive on that specific road, drivers who choose not to pay, will drive on alternative roads.

If the road upgrades are funded through a fuel levy, trucks pay proportionally less than private vehicles for the upgrades. However, one heavy load vehicle can cause the same pavement damage as 150 000 passenger cars.

The contribution by means of a fuel levy will vary significantly between different vehicles in the same vehicle class, due to the fuel efficiency of a specific vehicle. People of lower income households typically own older and less fuel efficient cars than those in higher income households. This means that per kilometre travelled, lower income households use more fuel than higher income households and therefore pay more for the road upgrades than higher income households.

As cars become more fuel efficient, the long term trend for the amount of fuel sold decreases, with the net result that revenue from fuel levies will also decrease. This means that the fuel levy would have to be increased to a higher rate as the GDP growth to make up for lower fuel sales and the cost of the upgrades. This will be detrimental to the poor.

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It is impossible to exclude public transport users and the disabled from paying for the upgrade of the roads as there are no differentials between the buyers of fuel. It is argued that a subsidy can be introduced for minibus taxis, but the source of the subsidy and the management of the subsidy is questionable.

## *Vehicle Licence Fees*

- Advantages

The cost to collect vehicle licence fees are reasonably low. There is also a clear distinction between different vehicle classes; implying that the bigger and/or heavier the vehicle the higher the licensing fee.

This is an existing instrument that is already known and accepted by the public and evasion of vehicle licence fees are very unlikely due to active law enforcement.

- Disadvantages

Vehicle licence fees are related to ownership of a vehicle, and does not reflect the actual usage of the vehicle. Accordingly, a vehicle travelling 1 000 km per annum will pay the same licence fee as a vehicle travelling 100 000 km per annum. This will result in, per kilometre travelled, lower income households and pensioners paying far more than higher income households.

## *Tolling*

- Advantages

Tolls represent a fair and precise way of paying for transportation facilities. Users only get charged for the times they actually use the specific facility, thus drivers who use the facility, benefiting directly from the enhanced roadway capacity, while drivers who choose alternate "free" routes also

benefit from the congestion relief offered by the toll facility.

Tolls provide a dedicated, ongoing revenue stream to cover operating and maintenance costs throughout the life of the facility. Mentioned revenue can, for instance, be used to enable construction of transportation facilities that would never be built otherwise from alternative funding sources. The availability of tolls can also accelerate the construction of new transportation capacity and make it available sooner to the public. Using toll revenues to repay funds raised for a specific project distributes the costs over the project's useful life and among all users of that facility.

The use of tolls ensures greater flexibility in and local control over decisions on solving mobility problems as it enables a differential fee for different vehicle classes to be charged. It can be used to manage travel demand and meet environmental requirements.

- Disadvantages

It is perceived that toll fees is a double tax to road users. There is also a perception that the costs of collection is very high.

The SANRAL Act<sup>9</sup> allows SANRAL to declare toll roads and to collect revenue from tolls. Road tolling for SANRAL has become to be a complicated funding mechanism in urban areas and is being challenged by civil society in Gauteng and in the Western Cape. During these legal processes SANRAL has repeatedly cautioned that road conditions will deteriorate more rapidly if dedicated revenue for road improvements cannot be sourced via tolling<sup>104</sup>.

The Gauteng Freeway Improvement Project (GFIP) and E-tolls Report concluded that there is currently no toll tariff review structure or process in place<sup>104,14</sup>. The GFIP and E-tolls Report therefore recommended the

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establishment of a Transport Regulator to oversee and regulate South Africa's toll-road tariffs. As part of the review of the White Paper on National Transport Policy<sup>17</sup>, focusing on an institutional gap analysis, the challenges (capacity and legitimacy) of current regulatory bodies were highlighted and it was proposed that a Single National Transport Regulator (STER) be established.

Over and above the concerns over insufficient funds for roads, various roads officials from local and provincial authorities complained about the complexities of funding reporting requirements, especially when capacity is limited<sup>23</sup>. It was further mentioned that funding cycles are seldom aligned between all spheres of government, and budgets are rarely guaranteed or ring-fenced but subject to national or local priorities instead.

It is fundamental that any road safety policy or strategy requires adequate funding. All available and existing resources, especially in terms of human resources, need to be utilized as efficiently as possible. However, in discussions with road safety officials it became evident that there has been a lack of funding for the implementation of the measures proposed in previous policies and strategies and amongst other elements, are contributing to the state of road safety.

Lack of funding also impedes the successful implementation of NMT. Many of the issues around NMT arise from an inadequate system of roads infrastructure. Typically only portions of the road network are implemented as NMT infrastructure is excluded due to budgetary constraints or traditional funding mechanisms do not address other aspects such as education and awareness.

It is therefore essential that multi-faceted and integrated funding models be explored to support NMT implementation. Where funding is limited, emphasis can be placed on some low-

cost solutions such as bicycle parking, removal of barriers and obstructions.

A sustainable approach to roads management also includes a sustainable financial approach. NT has stated that as there are no additional funds available for roads, funding availability can only be increased through more efficient expenditure in the roads sector. In response to this, policies supporting a performance-based approach to roads management and funding is introduced to improve financial efficiencies and efficacies. NT further advised that authorities should be incentivised to improve their roads management performance<sup>105</sup>.

Policies are also introduced that increases funding levels from a range of alternative funding sources to better match the extent and quality of the roads network required to support the socio-economic growth envisioned in the NDP of South Africa.

Policies are also introduced that enables integrated transport delivery across roads infrastructure, public transport and NMT. It is further proposed that sustainable, alternative funding/revenue sources are identified and applied.

A long term and permanent reduction in fatalities and injuries will only take place with adequate funding. The funds allocated should be managed effectively to ensure maximum benefit.

## **POLICY STATEMENTS - ROADS INFRASTRUCTURE**

*Road Authorities will improve efficiencies in budget expenditure in the road sector*

- Through the concept of having a "minimum level of service" to prescribed, it is hoped that contributions from the Equitable Share received by Provinces and Local Authorities would be increased and spent on road maintenance and related activities.

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- All intervention funds/grants shall be prescriptive to allow for the appropriate and integrated development of roads, public transport and NMT infrastructure.
- National Treasury and the DoT introduce a performance-based approach administering grant funds, continuously monitor performance, and will incentivise performing Road Authorities through access to top-up funding, where performance targets have been met or exceeded.

*Government supports the application of the user-pay principle (for example tolling, congestion charges, weight over distance charging, etc.), where required and adopted.*

- Government supports the application of the user-pay principle in the road sector to ensure quality road infrastructure in support of economic growth.
- Government acknowledges that current funding sources for grants (vehicle licence fees, fuel) are insufficient. Additional revenue streams (mixed sources) must be actively sought. These revenue streams include the user-pay principle, developer contributions / tariffs for roads, public transport and NMT infrastructure; and the use of the road reserve as an income-generating source. This approach is aligned with the GFIP E-Toll Report, which recommended that a hybrid funding option be adopted in Gauteng.
- The function of a Toll Regulator is included as part of the proposed STER. This entity must create an environment of coherence, independence, accountability, transparency, predictability and capacity in the development and approval of annual toll tariffs<sup>106</sup>. The newly proposed RMA, NLTA or a separate act similar to the National Energy Regulator (NERSA) Act<sup>107</sup>, is required to accommodate a STER.

*Government will increase the focus on the maintenance of municipal roads and streets*

- Local authorities undertake road maintenance through the current Municipal Infrastructure Grant (MIG) subject to adopting the COTO business planning guidelines and selecting project using the RAMS as the primary source.

*The Department of Transport supports the role of the private sector within the roads sector to fast-track roads delivery*

- Road Authorities need to consider alternative funding models partnering with the private sector, for construction, maintenance and financing of projects. However this has to be done within the existing legislative parameters.

## **POLICY STATEMENTS - NON-MOTORISED TRANSPORT**

- Include NMT into RAMS database and utilise together with crash data to identify priority maintenance requirements or areas of interventions.
- Utilise MIG funding towards new infrastructure and maintenance for NMT.
- Coordination across sectors and spheres of government to ensure effective of expenditure due to integration of NMT.
- Establish funding for other NMT support mechanisms such as education campaigns and bicycle repair shops.
- The DoT in partnership with other government departments, private sectors and civil societies must include a climate change response into the fiscal budgetary process and so integrate the climate change response programmes at national, provincial and local government and at developmental finance institutions and state-owned entities.

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## **POLICY STATEMENTS - ROAD SAFETY**

In order to ensure the effective implementation of the policies proposed in this document, a detailed budget will have to be prepared with a funding strategy that is sustainable for the next 20 to 30 years.

**Engineering** - Adequate funding will be required for the improvement of hazardous locations. A programme with significant impact needs to be developed, such as spending R500 million per annum at 100 locations country wide to improve hazardous locations.

**Road safety education** – Funding needs to be secured to cover costs for education material. Inter alia, material is required to train educators and to distribute learning material to the learners. In terms of this policy, it forms an essential part of the long term sustainable road safety strategy.

**Crash Data** - Develop and maintain a system and data base to efficiently and accurately record crash statistics. It is evident that the only way to capture crash statistics is electronically and to store it in a central database. This will require funding for IT infrastructure, data capture as well as for the maintenance thereof in the long term. As indicated, provision should also be made for quality control, which will require human resources that are located centrally – which will also require funding in the long term.

**Technology** - It is proposed in this policy that technology be deployed to reduce corruption, such as body cameras for traffic officers, cameras to monitor driver tests, more speed cameras, and other types of technology to improve the current law enforcement practices.

Adequate funding for the above, and other measures, over the next 20 years, will be critical to ensure the successful implementation of this policy and the strategy that will be prepared by the RTMC. The detail costing for the different

actions needs to be included in the strategy developed by the RTMC, so that a 20 year funding plan for road safety can be developed.

The Department of Transport through the RTMC shall lobby and support for road safety budget requests. However, the need to allocate and set aside a budget for road safety programmes and initiatives has to be prioritised by all Road and Traffic Authorities, within existing budgetary constraints.

A dedicated effort need to be made to involve the private sector, to also assist in funding of road safety projects that are part of the larger road safety plan.

## **POLICY IMPLICATIONS**

### *Roads Infrastructure*

The performance-based approach is likely to have significant implications for Road Authorities that do not have the necessary capacity and expertise to facilitate effective expenditure of grant funding. Penalties, such as withholding of funds for road maintenance, will lead to further deterioration of the road network. The stipulation of DoRA with respect to withholding of funds must apply. Furthermore, the newly proposed Road Management Act (RMA) will need to contain a provision on performance-based grants.

The Constitution safeguards the role of provincial and local authorities in determining their own priorities. A specification of a minimum percentage to be spent on road maintenance could be contrary to this independence. Accordingly, a minimum level of service or standard must be prescribed.

The application of the user-pay principle is currently a sensitive issue, and further exploration should be undertaken with the necessary and visible transparency.

The role of the private sector within roads delivery has been questioned through the GFIP

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and City of Cape Town court cases. This will definitely influence business models that will be used in the future between the private and public sector in undertaking Public Private Partnerships.

A STER will require specialist staffing and expertise. Although the intention of this intervention is to create an environment where the private sector, government and road users' views are considered equitably, it could add complexity in the toll tariff review process. At the same time, however, an independent regulator is likely to ensure transparency and provide legitimacy.

### *Non-motorised Transport*

The implication of effective and coordinated expenditure will have a critical impact on NMT delivery in light of limited funding in all sectors.

### *Road Safety*

The road safety measures proposed will require additional funding. Additional dedicated personnel may be required to manage the funding of all road safety actions.

The strategy developed by the RTMC should take the proposals in this policy into account, and a detail funding plan for the long terms should be prepared. To fund the road safety actions for 5 years and then reduce it, will not yield the desired outcomes.

## LEGAL FRAMEWORK



### CONCERNS AND THE INTENT OF POLICY STATEMENTS

Road infrastructure development is the responsibility of different spheres of government. It is governed by the White Paper on National Transport Policy<sup>17</sup>, the National Land Transport Act, Act No. 05 of 2009<sup>108</sup>, the National Land Transport Strategic Framework, the Public Transport Action Plan and the National Road Traffic Act<sup>109</sup>. The National Road Traffic Act in particular has specific regulations that govern NMT behaviour. The SANRAL Act<sup>9</sup>, Public Finance Management Act (PFMA)<sup>110</sup> and Municipal Structures Act (MSA)<sup>111</sup> also impact on road infrastructure development.

Stakeholders have noted that this cumbersome, conflicting and diverse raft of legislation hinders the development, planning, maintenance and operation of roads. The provisions of Section 44, 146 and Schedule 4 and 5 of the Constitution<sup>2</sup>, must be considered as part of any proposal on

possible legislative provisions relating to road infrastructure, as the functional area of roads falls within the ambit of Schedule 5 of the Constitution. However, provincial acts also deal with municipal roads, and by-laws apply specifically to local authorities.

In addition, legislation pertaining to electricity and communications mandates the relevant authorities to develop infrastructure in the road reserve.

The status of guidelines is another concern. While a number of guideline documents concern matters of road building and maintenance, but no legal status is attached to these guidelines. There is therefore no obligation for authorities to comply with the practices described therein.

Various acts, both national and provincial, will have to be amended to accommodate the legislative amendments that are needed to give effect to the road infrastructure policy statements. An alternative suggestion is to draft

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a stand-alone act that will accommodate all the provisions required and will comply with the provisions of the Constitution. Uniform legislation creates a better understanding of the tasks, duties and structures created by such legislation and ensures that all relevant organisations understand the terminology and the legislation in the same way. Conflicting legislation is minimised and one point of reference can be used for all the requirements. A Legal Recommendations Report was which recommended the formulation of an overarching Road Management Act<sup>37</sup>.

Although road safety is a mandated function for various spheres of government, and the RTMC is mandated through the RTMC Act<sup>112</sup> to form a partnership with all spheres of government and the private sector to enhance road traffic management activities, this has not resulted in a significant improvement in the management of road safety matters. Consolidated legislation in this regard is considered necessary to achieve the road safety objectives of Government. The proposed act will set out certain rights and duties of road users and will be applicable across all the roads in South Africa.

In developing a stand-alone act general principles applicable to road management will be included. The roles, functions and powers of a road authority will be set out. Codes of Practice to provide practical guidance in relation to road management will be incorporated in the Act. It must further allow for the declaration and discontinuance of roads. Classification of roads and the re-allocation of management responsibility will form part of the legislation. Provision will be made for a road authority to keep a register of public roads in respect of which the road authority is the coordinating road authority.

The construction, inspection, maintenance and repair of public roads will be managed in terms of the Act. The proposed Act will also provide for issues relating to civil liability arising out of road

management. Enforcement mechanisms on all the matters regulated by the Act will be included as well, to ensure compliance with the legislation.

Provisions in existing legislation will also be deleted or amended as part of the new proposed Road Management Act to ensure conflicting or ambiguous provisions do not remain in place.

It is the Roads Policy's intent that clear legislative provisions must be developed to ensure that road infrastructure development is not affected by the provisions in other acts. Furthermore, the division of responsibilities between national, provincial and municipal road authorities is clear. Ultimately legislation should be drafted that ensures all the provisions in the road infrastructure policy is enforceable and applied uniformly.

An Act similar to the Road Management Act, 112 of 2004 of Victoria, Australia, is recommended as the best way forward. This Act consolidates all aspects of road use, management, construction, standards and any other matters that assist in a uniform approach by the various levels of government.

## POLICY STATEMENTS

*The Department of Transport will develop an overarching Road Management Act.*

- The DoT will draft an overarching Act that addresses all the aspects of roads management and the standards and minimum requirements for roads and the management thereof in the applicable functional areas. The legislation includes the management of roads in the different spheres of government, and the responsibilities are clearly defined.
- These desired outcomes are included in the legislation to deliver a comprehensive act that covers all matters relating to road management.

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## IMPLICATIONS

The relevant legislation must be clear, concise and supportive of the policies developed to design, maintain and expand the roads infrastructure. Fragmented legislation and management result in failed maintenance and high costs, as well as the associated risk where authorities are not clear about their roles and responsibilities. Many legal cases over the years have shown that Road Authorities are indeed held accountable for their maintenance plans and road management procedures - or lack thereof.

South Africa has also experienced a shift in focus over the last few decades, and more emphasis is now placed on the provision of NMT facilities and on road safety. Each of these matters require uniform legislation, and an overhaul of the existing legislation was identified as key in the development of a Roads Policy.



## MONITORING AND EVALUATION



### CONCERNS AND THE INTENT OF POLICY STATEMENTS

As part of a more sustainable approach to roads management, performance evaluation, especially in meeting sustainability targets, has been identified as a focus area. However, in stakeholder consultation sessions, the lack of data and adequate reporting on all elements of roads delivery was raised as a concern. Further, local municipalities were concerned with the administration and capacity requirements associated with reporting.

Government has introduced performance monitoring and evaluation in the public sector, as defined by the Department of Local Government (DPLG), and is a strategic approach to management, which equips leaders, managers, employees and stakeholders with a set of tools and techniques to regularly plan, continuously monitor, periodically measure, and review the performance of the organisation using indicators and targets for efficiency, effectiveness and impact.<sup>113</sup>

The approach of monitoring and evaluation is also a continuous thread throughout the NDP as it aims to build a capable and developmental state in South Africa. To this end, a Department of Performance Monitoring and Evaluation was established in 2010 in order to *'drive a results-orientated approach across the three spheres of government and other organs of state'*<sup>114</sup> and the National Policy Evaluation Framework<sup>115</sup> proposed to institutionalise evaluation in Government and has identified processes, roles and responsibilities for undertaking this.

Currently within the roads environment various forms of data are collected and reported on. This includes amongst others the RAMS processes which have already begun to be implemented across South Africa, historic PMSs, monitoring of provincial and national roads pavement conditions as part of the SSP, traffic flow data, overloading control data road safety statistics collected by the RTMC and the National Household Travel Surveys<sup>116</sup>. Although NMT Plans are to be developed as specified in the NLTA, very little information is available.

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The general feedback received as part of the consultation process<sup>39</sup> indicated that different data and reporting mechanisms are required, which are not necessarily uniform across all spheres of government. Sometimes the data collection processes are duplicated. Further, data collection is hampered by the lack of access to, or the application of, suitable databases and other technology.

The National Treasury has also proposed that a performance-based approach be applied to the road infrastructure conditional grants and that the DoT introduces RAM principles into the roads sector. This requires particular data collection processes for traffic, condition and location of infrastructure, indicators, methodologies and reporting mechanisms as contained in TMH22. (*Refer to Annexure A*).

Overall there is a growing need for appropriate monitoring and evaluation systems, supported by sound data collection methodologies and KPIs. Data collection should be simple, and outcomes- rather than input-based.

Accordingly, policies are proposed in support of the adoption and implementation of a performance-based approach to roads management across all spheres of government.

## POLICY STATEMENTS

*The Department of Transport and Road Authorities will follow and adhere to a performance management approach for roads management and roads service delivery.*

- The DoT must use the RAMS and the various CoTO standards and norms for road planning, design, construction and maintenance, as well as the operational management of the roads, as the basis for performance management in the roads sector.
- The DoT must develop a Performance Management Framework that forms the

basis for Road Authorities to develop Performance Management Plans.

- These Performance Management Plans must ensure that performance management measures are in place to monitor and evaluate the performance of Road Authorities.
- KPIs must be developed to enable performance management. The KPIs must be outcomes-based and support performance management and budget motivations. These KPIs must differentiate between the abilities of the various Road Authorities at different spheres of government.
- The DoT is also responsible for the monitoring and evaluation of Provinces and SANRAL. Provinces are responsible for monitoring local authorities.

## IMPLICATIONS

The adoption of a performance-based approach underpinning road service delivery will have significant implications, as it is not a 'business as usual' approach.

The mandates, roles and responsibilities, and budgets of Road Authorities could be affected if performance targets are not met. However, the creation of an enabling environment within which Road Authorities are able to meet their respective performance requirements will be challenging, as Road Authorities are constrained by limited technical capacity and funding availability. At the same time, National Treasury has reiterated its requirement that struggling Road Authorities should demonstrate sound performance management within the constraints of their available resources.

Further, the acquiring of appropriate monitoring and evaluation technology will involve a significant capital and operational investment. The National Policy Evaluation Framework<sup>115</sup> has indicated that evaluation costs can typically be expected to be 0.1%-5% of an intervention's

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budget, depending on the complexity and size of the project.

## WAY FORWARD



The Draft Roads Policy for South Africa has been presented to internal government stakeholders in the roads, NMT and road safety sectors. All comments received have been reviewed and incorporated in this updated version.

The Draft Roads Policy for South Africa has been presented to CoTO and MINMEC and the DGs Forum. Hereafter it will be submitted to Cabinet to seek approval to publish it in a Government Gazette. Final stakeholder consultations will take place, followed by the finalisation of the Roads Policy for South Africa. Thereafter it will be re-submitted to Cabinet for consideration approval as a White Paper – Roads Policy for South Africa. Upon implementation, the Department shall monitor and evaluate its effectiveness in partnership with the Road Authorities. The policy shall be reaffirmed or reviewed and updated every five years.

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## LIST OF ABBREVIATIONS



AARTO	Administrative Adjudication of Road Traffic Offences	DoT	Department of Transport
ADV	Animal-Drawn Vehicle	ECSA	Engineering Council of South Africa
ARDP	Access Road Development Plan	eNaTIS	Electronic National Administration Traffic Information System
BRT	Bus Rapid Transit	EPWP	Expanded Public Works Programme
CBRTA	Cross-Border Road Transport Agency	FIA	Foundation for the automobile and society
CCTV	Closed-Circuit Television	GFIP	Gauteng Freeway Improvement Project
CIDB	Construction Industry Development Board	GHG	Greenhouse Gas
COGTA	Council of Cooperative Government and Traditional Affairs	HHVs	Heavy-haul vehicles
CoTO	Committee of Transport Officials	HVs	Heavy vehicles
DBSA	Development Bank of South Africa	ICT	Information and Communications Technology
DPLG	Transport and Department of Local Government	IPTN	Integrated Public Transport Networks
DoRA	Division of Revenue Act		

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IRPTN	Integrated Rapid Public Transport Networks	PSC	Project Steering Committee
IRTAD	International Road Traffic and Crash Database Group	RAMS	Road Asset Management System
ITP	Integrated Transport Plan	RRAMS	Rural Road Asset Management Systems
ITS	Intelligent Transport Systems	RCB	Roads Coordinating Body
KPI	Key Performance Indicator	RIMS	Road Incident Management Systems
MIG	Municipal Infrastructure Grant	RISD	Regional Indicative Strategic Development
MINMEC	Ministers and Members of Executive Councils	RISFSA	Road Infrastructure Strategic Framework for South Africa
MRMG	Municipal Road Maintenance Grant	RSR	Rail Safety Regulator
MSA	Municipal Structures Act	RTMC	Road Traffic Management Corporation
MTEF	Medium Term Expenditure Framework	SAATCA	Southern African Auditor and Training Certification Association
NERSA	National Energy Regulator Act	SABS	South African Bureau of Standards
NDP	National Development Plan	SACPCMP	South African Council for Project and Construction Management Professions
NGO	Non-government organisations	SADC	Southern African Development Community
NMT	Non-motorised Transport	SALGA	South African Local Government Association
NLTA	National Land Transport Act	SANAS	South African National Accreditation System
NRSC	National Road safety Council	SANRAL	South African National Roads Agency SOC Limited
OSD	Occupation Specific Dispensation	SAPS	South African Policy Service
PFMA	Public Finance Management Act	SARF	South African Roads Federation
PLTF	Provincial Land Transport Framework	SIP	Strategic Infrastructure Project
PMS	Pavement Management System	STER	Single National Transport Regulator
PPP	Public-Private Partnership	SSP	S'hamba Sonke Programme
PRASA	Passenger Rail Agency of South Africa		
PRMG	Provincial Road Maintenance Grant		
PSCBC	Public Service Coordinating Bargaining Council		

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TDM	Travel Demand Management
TOD	Transit Orientated Development
TFR	Transnet Freight Rail
TMH	Technical Methods for Highways
TRH	Technical Recommendations for Highways

## GLOSSARY



TERM	DEFINITION OR EXPLANATION
<b>Animal-Drawn Transport</b>	A form of transport that is provided by a vehicle or device, using two or more wheels and drawn by one or more working animals such as horse, donkey, ox or mule, designed for transport.
<b>Equitable Share Contributions</b>	The equitable share is an unconditional allocation to the national government, to each of the nine provinces and to local government.
<b>Freight consolidation</b>	Cargo consolidation service provided by a freight forwarder in which several smaller shipments are assembled and shipped together to avail of better freight rates and security of cargo.
<b>Funding cycles</b>	The sequence of activities involved in the process of awarding a grant.
<b>Infrastructure Service Delivery Toolkit</b>	The Toolkit provides a documented body of knowledge and set of processes that represent generally recognised best practices in the delivery management of infrastructure. It is focused on the delivery and life cycle management of South African public sector infrastructure. The target users for this Toolkit include both technical and non-technical managers.
<b>Inter-modal transport</b>	Intermodal freight transport involves the transportation of freight in an intermodal container or vehicle, using multiple modes of transportation (rail, ship, and truck), without any handling of the freight itself when changing modes.
<b>Inter-modalism</b>	Movement of containerized cargo over air, land, or sea through the use of different transport modes (aircraft, truck, rail, boats, ships, barges, etc.) capable of handling containers.

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TERM	DEFINITION OR EXPLANATION
<b>Logistic chain</b>	Logistics management is that part of the supply chain, which plans, implements and controls the efficient, effective forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customer requirements. Logistic chain refers to all successive steps comprising a logistic-process in a particular environment or industry.
<b>Logistics hub</b>	Logistics hubs are generally defined as integrated centres for trans-shipment, storage, collection and distribution of goods.
<b>Modal shift</b>	Modal shift refers to a move away from one form of transport to another. Usually used in the context of sustainable transport planning where a shift towards more environmentally friendly modes (public transport, NMT and rail) is promoted.
<b>Non-motorised Transport</b>	Non-motorised transport or transport by any means other than a motor vehicle including, but not limited to, walking, cycling and animal-drawn vehicles and wheelchairs. NMT infrastructure Includes bicycle paths, walkways, public open spaces and other buildings and structures used or intended for, or to promote NMT.
<b>Occupation Specific Dispensation</b>	In 2007, Occupational Specific Dispensation (OSD) was introduced for public sector employees in South Africa which is unique to each identified occupation in the public service. PSCBC Resolution 1 of 2007 provided the framework for occupational specific remuneration and career progression dispensations to address unique remuneration structures, consolidation of benefits and allowances into salary, frequency of pay progression, grade progression opportunities, career pathing, and required levels of performance (performance based progression). <sup>117</sup>
<b>Rail-friendly commodities</b>	Goods such as bulk commodities including coal, chrome and manganese, automotive parts and components, containers and chemicals are deemed to be rail-friendly due to their mass and volume.
<b>S'hamba Sonke Programme</b>	The S'hamba Sonke programme provides a set of principles to guide the prioritisation of infrastructure investments to maximise the economic impact and development multipliers for maintaining and upgrading South Africa's provincial road network <sup>19</sup> .
<b>Small-wheeled transport</b>	Includes wheeled luggage, walkers, skates, skateboards, push scooter, Segway, handcarts, wheel barrows and wagons. Wheeled luggage increases the amount of baggage that pedestrian can reasonably carry and expands reasonable walking distances.
<b>Travel Demand Management</b>	Transportation Demand Management (TDM) (also known as Mobility Management) is a general term for various strategies that increase transportation system efficiency. It emphasizes the movement of people and goods, rather than motor vehicles, and so gives priority to more efficient modes (such as walking, cycling, ridesharing, public transit and telework), particularly under congested conditions <sup>118</sup> .
<b>Universal design</b>	Universal design is an approach to create an environment that meets the needs of all potential users to the greatest extent possible. Taking into consideration the diverse abilities of individuals, such as agility, balance, cognition, coordination, endurance, flexibility, hearing, problem solving, sensory processing capacity, strength, vision, and walking speed; it emphasises inclusive design that ensures

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TERM	DEFINITION OR EXPLANATION
	participation and access for all <sup>119</sup> .

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## LIST OF STAKEHOLDERS AND PARTICIPANTS



### STAKEHOLDERS INTERNAL TO GOVERNMENT

1. Officials of the Department of Transport
2. Members of the Roads Coordinating Body
3. Officials of the various Provinces
4. Officials of the metros
5. Officials of SANRAL
6. Road Traffic Management Corporation (RTMC)
7. Representatives of the South African Local Government Association (SALGA)
8. Local authorities
9. National Transport Forum
10. National Road Safety Committee
11. National Non-motorised Transport Committee
12. Officials of the CoTO
13. National Road Safety Council.
14. Representatives of the  
Department of Public Works  
Department of Human Settlements  
National Treasury  
Road Accident Fund  
Cross-Border Road Transport Agency

Rail Safety Regulator  
Road Traffic Infringement Agency

### STAKEHOLDERS EXTERNAL TO GOVERNMENT

1. South African Road Federation
2. Roads Pavement Forum
3. Dr Malcolm Mitchell (retired DDG of the DoT)
4. AgriSouth Africa
5. Louis De Waal of the Bicycle Empowerment Network via the National Non-motorised Transport Committee
6. Andrew Wheeldon via the National Non-motorised Transport Committee

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## ANNEXURE A: TECHNICAL MANUALS, NORMS AND GUIDELINES

**Table 1: CoTO TRH Documents**

No	Title
TRH1	Prime coats and bituminous curing membranes
TRH2	Geotechnical and soil engineering mapping for roads and the storage of materials data
TRH3	Design and Construction of Surfacing Seals
TRH4	Structural design of flexible pavements for interurban and rural roads
TRH5	Statistical concepts of quality control and their application in road construction
TRH6	Nomenclature and methods for describing the condition of asphalt pavements
TRH7	Use of bitumen emulsions in the construction and maintenance of roads
TRH8	Design and use of Hot-mix asphalt in pavements
TRH9	Construction of road embankments
TRH10	Design of road embankments
TRH11	Dimensional and Mass Limitations and Other Requirements for Abnormal Load Vehicles (two documents) (Technical Guideline) and Administrative Guidelines for Granting of Exemption Permits for the Conveyance of Abnormal Loads
TRH12	Flexible pavement rehabilitation investigation and design (Bituminous pavement rehabilitation design)
TRH13	Cementitious stabilizers in road construction (Cementitious pavement rehabilitation design)
TRH14	Guidelines for road construction materials
TRH15	Subsurface drainage for roads
TRH16	Traffic loading for pavement and rehabilitation design (To be discontinued once incorporated into new TRH4)
TRH17	Geometric design of rural roads
TRH18	The investigation, design, construction and maintenance of road cuttings
TRH19	Standard nomenclature and methods for describing the condition of jointed concrete pavements
TRH20	Unsealed Roads: Design, Construction and Maintenance
TRH21	Hot Mix Recycled Asphalt
TRH22	Pavement management systems
TRH25	Guidelines for the hydraulic design and maintenance of river crossings: Vol 1: Hydraulics, hydrology and ecology Vol 2: Structural aspects, bridge configurations and foundations Vol 3: Embankment and bank protection Vol 4: Parameters for the design of low-level structures Vol 5: Bridge management of river bridges Vol 6: Risk analysis of river crossing failure Vol 7: Legal aspects
TRH 26	South African Road Classification and Access Management Manual
TRH 27	South African Manual for Permitting Services in Road Reserves

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**Table 2: CoTO TMH Documents**

No	Title
TMH1	Standard methods of testing road construction materials (TMH1 is being converted to SANS3001 and SANS4001. Various SANSstandards have been published)
TMH2	National standard for the spraying performance of binder distributors
TMH3	Specifications for the Provision of Traffic and Weigh-in-Motion Monitoring Service
TMH4	Superseded by TRH17
TMH5	Sampling methods for road construction materials
TMH6	Special methods for testing roads
TMH7	Code of practice for the design of highway bridges and culverts in South Africa, Parts 1 & 2
TMH7	Code of practice for the design of highway bridges and culverts in South Africa, Part 3
TMH8	Traffic and Axle Load Monitoring Procedures
TMH9	Standard Visual Assessment Manual
TMH10	Manual for the completion of as-built materials data sheets
TMH11	Standard Survey Methods
TMH13:	Automated Pavement Condition Measurements
TMH 13: 1	Guidelines on Roughness Measurements
TMH 13: 2	Guidelines on Rut Measurements
TMH 13: 3	Guidelines on Deflection Measurements
TMH 13: 4	Guidelines on Skid Resistance Measurements
TMH 13: 5	Guidelines on Imaging and GPS Measurements
TMH 14	South African Standard Automatic Traffic Data Collection Format
TMH 15	South African Engineering Service Contribution Manual for Municipal Road Infrastructure
TMH 16 (Vol. 1)	South African Traffic Impact and Site Traffic Assessment Manual
TMH 16 (Vol. 2)	South African Traffic Impact and Site Traffic Assessment Standards and Requirements Manual
TMH 17	Volume 1 South African Trip Data Manual
TMH 18	Road Asset Data Electronic Exchange Formats
TMH19	Manual For The Visual Assessment of Road Structures
TMH 22	Road Asset Management Manual
N/A	Proficiency testing schemes for quality control of road building materials

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**Table 3: CoTO UTG Documents**

No	Title
UTG1	Guidelines for the Geometric Design of Urban Arterial Roads
UTG2	Structural Design of Segmental Block Pavements for South Africa
UTG3	Structural Design of Urban Roads
UTG4	Guidelines for Urban Stormwater Management
UTG5	Geometric Design of Urban Collector Roads
UTG6	Guidelines on Maintenance Management for Large Municipalities
UTG7	Geometric Design of Urban Local Residential Streets
UTG8	Guidelines for the Preparation of an Urban Transport Plan First Amendment
UTG9	Guidelines for the Transportation System Management Process
UTG10	Guidelines for the Geometric Design of Commercial and Industrial Local Streets
UTG11	Guidelines for Public Participation in Land Use/Transport Planning

**Table 4: Specifications**

No	Title
	COLTO Standard Specifications for Road & Bridge Works for State Road Authorities
	COLTO General Conditions of Contract for Road and Bridge Works for State Road Authorities
	General Conditions of Contract for Construction Works (Second Edition) 2010
	FIDIC General Conditions of Contract for Works of Civil Engineering Construction (6 <sup>th</sup> Edition)
PG 3/85	Parking standards 2 <sup>nd</sup> edition
PG 2/85	Bus Terminals and Bus Stations: Planning and Design Guidelines by DOT (Metroplan)
RDDA	Route Description and Destination Analysis
CR-96/036	National Guidelines for Traffic Calming
	Non-Motorised Transport Facility Guidelines
TG1	The use of Modified Bituminous Binders in Road Construction
TG2	Interim Technical Guideline: The Design & Use of Foamed Bitumen Treated Materials
	Road Drainage Manual

**Table 5: Road Traffic Signs Guidelines**

No	Title
SADCR TSM Vol. 1	Southern African Development Community Road Traffic Signs Manual
South Africa RTSM Vol. 2	South African Road Traffic Signs Manual
South Africa RTSM Vol. 3	South African Road Traffic Signs Manual

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SADCRTSM Vol. 4

Southern African Development Community Road Traffic Signs Manual

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