National Road Safety Strategy 2016-2030

transport
Department:
Transport
REPUBLIC OF SOUTH AFRICA

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Abbreviations and Terminology

BRICS	Brazil, Russia, India, China, South Africa
COTO	Committee of Transport Officials
CBRTA	Cross-Border Road Transport Agency
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
DLTC	Driver Learner Testing Centre
DoJ	Department of Justice
DoH	Department of Health
DTI	Department of Trade and Industry
eNaTIS	Electronic National administrative Traffic Information System
GDP	Gross Domestic Product
GNI	Gross National Income
ISO	International Standards Organisation
NDP 2030	National Development Plan 2030
DoT	Department of Transport
NMT	Non-Motorised Transport
NRSS	National Road Safety Strategy
NRSCC	National Road Safety Co-ordinating Council
RABS	Road Accident Benefit Scheme
RAF	Road Accident Fund
RTIA	Road Traffic Infringement Agency
RTMC	Road Traffic Management Corporation
SABS	South African Bureau of Standards
SAIA	South African Insurance Association
SALGA	South African Local Government Association
SANRAL	The South African National Roads Agency SOC Ltd
STATSSA	Statistics South Africa
UN	United Nations
UNDA	United Nations Decade of Action (2011-2020)
UNGA	United Nations General Assembly
VRU	Vulnerable Road User
VSL	Value of a Statistical Life
WHO	World Health Organisation

Foreword by the Minister

Road crashes have been identified both globally and domestically as a socio-economic challenge. It is estimated that globally 1,25 million people die annually due to road crashes and a further 50 million people suffer varying degrees of injuries as a result thereof. This has dire consequences on society as it results in an increased burden on the social security and welfare system of a country, with an ever increasing loss of skills and rising costs to the economy. However, of most importance is the loss of lives and the subsequent broken families.

Of all the crashes, human factors accounts for a large percentage, confirming that these crashes are in fact avoidable and preventable. It is our belief that through this National Road Safety Strategy we will be able to change the behaviour and attitude of road users. This will afford us an opportunity to cement the partnerships with all relevant stakeholders in the development and implementation of this strategy. Thus, giving meaning to the axiom that road safety is indeed everybody's responsibility and should be observed all year round.

The inclusion of road safety targets in the Sustainably Development Goals (SDGs) shows acknowledgement of the pandemic and commitment at a global level. However, since the dawn of democracy, our government has put programmes in place that are geared towards improving the socio-economic conditions of citizens of the country. This is evident from the successes that are registered in the implementation of an improved health core, social grants, ssemployment creation initiatives, social housing, etc. All of this could potentially be reversed by the dreadful consequences of road crashes. This strategy is, therefore, part of government's efforts to ensuring a safer, better and secured life for all. With over two thirds of road crashes preceded by a violation of traffic laws, emphasis of the strategy will also be in intensifying law enforcement and strengthening the arm of the law.

This National Road Safety Strategy (NRSS) is a product of both national and international policies on road safety in the development of the strategy, lessons learnt from previous strategies as well as existing international best practices were taken into consideration. This NRSS has a long-term strategic approach to tackling road carnage and is aligned to the National Development Plan (NDP)'s objective of improving the health status of South Africans. The strategy is also aligned with the safe system approach which acknowledges that people will make mistakes and may get involved in road crashes, however the road environment should be forgiving.

As part of the broader implementation the strategy functional governance structures will be established to support and monitor the implementation of the strategy. Emphasis will be places on adopting best practices in road safety management systems and traffic safety management systems such as ISO 39001 for adoption and use by Government Departments, State owned Companies and the Private Sector. Road safety remains a shared responsibility the participation of the broader society in the implementation of the strategy will go a long way in ensuring that we achieve the objectives set out in the strategy.

I urge all South Africans to adopt this strategy as a guiding document to a country free of road crashes. The vigour and enthusiasm with which we displayed when developing this strategy should be translated into action with its implementation. Implementing this strategy will be testimony and in congruence to our commitment of a South Africa with safer roads. One death is one too many and not under our watch shall it be that the road carnage continues unabated. We should all put shoulder to wheel and make this strategy work.

Ms Elizabeth Dipuo Peters, MP

Minister of Transport

Acknowledgements

The development of the NRSS was a collective engagement and consultation between and amongst the transport sector, government institutions and other key stakeholders in the public and private sector, as well as academia. The strategy takes into account all the relevant policies, protocols and other mandates for which the transport sector is responsible. The strategy reflects the strategic outcomes, oriented goals and actions the country seeks to achieve in the reduction of road fatalities, injuries and crashes, thus making the country's roads safer.

Together we can save millions of lives.

Executive Summary

One of the most pressing issues facing modern society today, both globally and particularly within the South African context is road safety. By 2030, road traffic crashes is expected to become the fifth leading cause of fatalities worldwide, overtaking AIDS, tuberculosis, and cancers of the trachea, bronchus, and lungs according to the World Health Organization (WHO)." In South Africa, approximately 23.5 people per 100,000[1] lost their lives on the country's roads in 2014. In comparison, the 2015 WHO Global Status Report on road safety affirms the global average of road fatalities at 17.4[2] per 100,000 and the average for middle-income countries, at 18.4 fatalities per 100,000 population. The significant impact of road carnage on the economy and society at large provides a convincing case for decisive policies and strategies to address the problem.

The high number of Road Traffic Crashes (RTCs) and its associated consequences has a significant impact on the South African society which continues to hamper socio-economic development and impact on the well-being of all South Africans. This impact is measured in terms of human lives lost, 'pain, grief and suffering', as well as an increasing cost to the economy. The extent of the problem is exacerbated when road fatalities and serious injuries are seen in the context of contributing to a significant economic loss for South Africa. People injured or killed on our roads are often the breadwinners of their families and thus vital contributors to the economy at large. The total cost of road crashes on South Africa's road network for 2015 amounted to an estimated R143 billion equating to 3.4 per cent of GDP. The economic and financial analysis emphasises the need to improve road safety in the country to ensure that South Africans live long productive lives and that fiscal resources may be made available to aid the country's further development.

As a participant of the United Nations Decade of Action for Road Safety 2011-2020 (UNDA), South Africa has endorsed the global undertaking to save up to 5 million lives, and contribute to the prevention of up to 50 million serious injuries by 2020. In accordance with this commitment, the NRSS 2016-2030 has been developed, embodying the principles of the Safe Systems approach and giving effect to the five pillars of the UNDA a guiding framework for actions to improve road safety. In accordance with the UNDA, these pillars remain consistent in the NRSS as Road Safety Management, Safer Roads and Mobility, Safer Vehicles, Safer Road Users and Post-Crash Response.

The NRSS has taken into consideration previous efforts made toward addressing road safety problems in South Africa, by carefully reviewing previous road safety strategies developed. The key findings from these strategies highlight a lack of effective implementation, insufficient resourcing, misaligned prioritisation, and lack of broader stakeholder participation among the key issues previously experienced. As such this NRSS focuses on the sequencing of proposed interventions in a manner that is realistic and implementable. In addition, the NRSS acknowledges that a number of

[1]RTMC, *Calendar Report* (2014)
[2]WHO Global status report on road safety (2015)

key institutions were established through previous efforts and that the present task is the effective utilisation of these institutions through the enhancement of coordination and accountability in addressing road safety challenges.

A review of international best practices demonstrates the importance of good institutional strength and a clear approach to improve road safety. Key areas of focus include: educating and training of road users, encouraging good road user behaviour through enforcement, managing accurate and complete data to inform strategy, ensuring road infrastructure and environment must be forgiving and secure.

The vision of this NRSS is to ensure *"Safe and secure roads".* This will be achieved by delivering on the strategic mission to attain a reduction in the number of fatal crashes and serious injuries for all road useers by promoting responsible and safe road user behaviour, providing safe and forgiving road infrastructure, ensuring safer vehicles on South African roads and delivering quality road safety management.

In line with the UNDA the country committed to reduce fatalities by 50%, from the 2010 baseline of 13,967 fatalities to 6,984 which is also supported by the National Development Plan (NDP) which set a target to reduce injuries, accidents and violence by 50% from 2010 levels. The process to develop the strategy did not only focus on global commitments, but also the national commitments. It focussed on evaluating the challenges observed in each of the respective pillars of the UNDA, Strategic Themes emerged that need to be addressed to achieve the desired state for road safety. The key Strategic Themes are:

- Improve coordination and institutional strength
- Improve road safety data systems
- Eliminate fraud and corruption
- Ensure adequate funding and capacity
- Enhance use of technology to protect road users
- Identify and address high risk locations
- Provide a self-explaining and forgiving road environment for all road users
- Enable regular road safety audits on new and existing infrastructure
- Increase vehicle safety standards
- Ensure vehicles on the road network are roadworthy
- Improve road user attitude and behaviour & involve communities in road safety
- Improve enforcement effectiveness
- Increase protection for vulnerable road users
- Increase efficacy of first responses
- Simplify access to post-crash care

In line with the identified strategic themes, the NRSS identifies and outlines a comprehensive list of interventions. In order to ensure resources are used effectively, interventions are prioritised according to the expected impact on the reduction of fatalities and serious injuries as well as the ease of implementation. Interventions delivering both high impact and capable of being implemented with ease are highlighted as first priority.

The phasing of interventions is determined by short, medium and long-term periods. The short-term focuses on effective resourcing, improving institutional strength, implementing monitoring mechanisms and modifying road user behaviour. A focus area of the NRSS is road user behaviour

and as such the strategy has highlighted the requirement for improved education initiatives, increased involvement of communities in road safety and improved effectiveness of law enforcement in order to tackle the issue.

Medium-term interventions aim to address challenges such as the betterment of vehicle safety standards, improvement in road design standards for the protection of all road users, addressing hazardous locations, improving the effectiveness of post-crash response and increasing road safety research relevant to South Africa.

The long-term interventions focus on the adoption of innovative road safety technology and driving institutions to become more proactive in the management of road safety.

Based on the analysis completed there are four critical areas for interventions that come to the fore. These areas are found to be either directly or collectively at the root of the challenges within the road safety environment and are equally the source of the solutions which can mitigate or resolve these challenges. It is therefore necessary to prioritise the interventions which will bring about a change in:

- **Road user's behaviour**, which is seen locally and internationally as the greatest contributing factor to road crashes. Changing behaviour can only be effected by ensuring users are *educated* and *aware of road safety*, *trained* to behave appropriately and effectively *discouraged* from transgressing laws through enforcement. This includes the need to eliminate corruption, reduce incidents of drunk driving, and availing of law enforcement at most critical times when crashes occur.
- With large proportion of deaths on the road being pedestrian related, emphasis needs to be placed on **developing and refining infrastructure design aimed at protecting VRUs** specifically pedestrians.
- The entire strategy hinges on the **effective leadership and governance** to oversee that implementation is completed and operational requirements are effectively addressed.
- **Data and knowledge management** is an enabling element and a major shortcoming in the South African environment. Addressing shortcomings in this space will allow for greater efficiency in the application of resources and better tracking of progress.

1. Introduction

Road safety has become a global issue that ranks as one of the most pressing matters facing society today. South Africa implemented various strategies and campaigns in the past, with varying degrees of success in slowing down the rate of fatalities over time. The objective of the NRSS is to create a safer road environment for all users with a significant reduction in the number of injuries and fatalities due to road crashes.

On a global level, the World Health Organisation (WHO) Road Safety Status Report of 2015 defined the problem of road injuries as a major public health issue. Road fatalities and injuries were projected to be the third leading contributor to the global burden of disease and injury by 2020[3]. Road traffic crashes are now the leading cause of fatalities in developing countries for 15-19 year olds and the second among 5-14 year olds[4].

Low and middle-income countries remain the most affected, because road traffic crashes and injuries are linked not only to the number of vehicles, road conditions and drivers' behaviour and attitude towards road safety, but also to the country's level of economic and social development. The challenges faced by many countries are exacerbated by poor road infrastructure, vehicle types and features, ineffective traffic law enforcement, poor driving practices, corruption and delayed implementation of road safety policies amongst other factors.

South Africa is classified as a middle-income economy[5]. The South African road fatality rate is reported to be 23.53[6] per 100 000 population. In comparison, the 2015 WHO Global status report on road safety, states the global average of road fatalities as 17.4[7] per 100 000 and the average for middle-income countries as 18.4 fatalities per 100 000 population[8].

South Africa's quest for increased and heightened awareness of and compliance with road safety management has been an on-going process with various efforts over the years.

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[3](Murray, et al., 1996)
[4](Peden et al., 2010)
[5]Middle income economies are those with a Gross National Income (GNI) per capita per annum of more than $1,045 but less than $12,763
[6]RTMC, *Calendar Report,* 2014
[7]WHO Global status report on road safety 2015
[8]Values are based on aggregates of regional and global estimates of deaths by road user type for 2013 and earlier years

A major step forward towards improving road safety in Africa was the 2007 African Road Safety Conference held in Accra, Ghana with support from the WHO and the Economic Commission for Africa. The objectives of the conference included reviewing progress made by African countries in improving road safety, advancing the development of national action plans for road safety for countries in the region, and identifying ways of mobilising resources to rapidly improve road safety. The conference led to strengthened resolutions among African countries to address road safety issues as a matter of urgency.

The full scope of the road safety problem was documented in the first global conference for Ministers of Transport which took place in 2009 in Moscow, Russia. This conference outlined the magnitude of the issues and stressed the urgent need for action to help prevent road traffic injuries and fatalities around the world. In 2010, subsequent to the conference in Moscow, the United Nations General Assembly (UNGA) A/64/255, unanimously adopted a resolution calling for a Decade of Action for Road Safety 2011–2020 (United Nations Decade of Action – UNDA).

The UNDA was launched five years ago on 11 May, 2011. The goals were endorsed by more than a hundred governments and member states, including South Africa, with the main aim of "stabilising and reducing" the projected level of global road fatalities by 2020, from the 2010 baseline. Collaboratively, participants to the UNDA are working towards saving five million lives and preventing up to 50 million serious injuries over this ten-year period.

In line with the launch of the UNDA, several countries released national road safety strategies in that same year or updated existing strategies. Some countries set targets for reducing serious injuries alongside their goals for fatality reduction. Based on the UNDA guidelines set out for ambitious yet feasible targets, most countries focused on modifications to quantitative targets, interim targets, sub-targets as well as performance indicators.

UNDA Global Plan and Five Pillars

As part of the UNDA, a Global Plan was developed to guide the implementation of the objectives, and to facilitate coordinated and concerted action. It was recommended that member states develop national action plans for the decade 2011-2020, in order to ensure standardisation, coherence and integration.

Out of the UNDA Global Plan, a guiding framework for actions to improve road safety was devised, referred to as the Five Pillars of the UNDA. In addition to these five pillars, South Africa at the Road Safety Summit 2015, highlighted the importance of legislation and youth (not specifically mentioned within the UNDA activities listing) as critical components unique to the country.

The UNDA Five Pillars aims to support member states in effectively assessing and addressing deficiencies in the respective road safety measures. In Table 1 below, the five pillars are listed complete with their respective elements.

UNDA Five Pillars of Road Safety				
Road Safety Management	Safer Roads and Mobility	Safer Vehicles	Safer Road Users	Post-Crash Response
Monitoring and Evaluation	Road Design (e.g. road function considerations)	Vehicle Standards	Legal Obligations (e.g. blood alcohol level)	Pre-hospital Response (e.g. first response training)
Funding	Road Environment (e.g. stray animals)	Vehicle Features (e.g. seatbelts, airbags etc.)	Fostering Compliance (e.g. Education and awareness campaigns)	Hospital Care
Coordination Mechanisms	Road safety audits	Vehicle Intelligence (e.g. use of technology)	Enforcing Compliance (e.g. speed management)	Trauma care
Data Management	R&D for safe Infrastructure	R&D for Vehicle Safety Technologies	Addressing particular needs of vulnerable road users	Quality Assurance
Knowledge management	Road maintenance	Vehicle Assessments	Positive engagement with road safety	
Advocacy and Partnerships		Vehicle roadworthiness	Youth	
Legislation and Regulation				

Table 1: Summary of Pillar Components (UNDA, 2011) (Road Safety Summit, 2015)

The Safe Systems Approach

A Safe System approach is an approach commonly used to achieve the vision of zero road fatalities and serious injuries and requires that the road system be designed to expect and accommodate human error. Safe System principles require a holistic view of the road system and the interactions between roads and roadsides, travel speeds, vehicles and road users[9].

This is an inclusive approach that caters for all groups using the road system, including drivers, motorcyclists, passengers, pedestrians, bicycle users, commercial and heavy vehicle drivers. Consistent with the NRSS long-term road safety vision, it recognises that people will always make mistakes and may get involved in road crashes, the system however, should be forgiving and in the occurrence of a crash, should not result in death or serious injury.

[9]Australian College of Road Safety

The Safe System approach is consistent with the approaches adopted by the safest countries in the world, many of whom also adopted principles of the UNDA plan. There are several guiding assumptions and principles to this approach:

- **People make mistakes:** Humans will continue to make mistakes, and the road transport system must accommodate these. The road transport system should not result in death or serious injury as a consequence of road error.
- **Human physical frailty:** There are known physical limits to the amount of force our bodies can take before we are injured.
- **A 'forgiving' road system:** A Safe System ensures that the forces in collisions do not exceed the limits of human tolerance. Speeds must be managed so that humans are not exposed to impact forces beyond their physical tolerance. System designers and operators need to take into account the limits of the human body in designing and maintaining roads, vehicles and speeds.

The UNDA five pillars, together with the Safe Systems Approach, formed the basis for the situational and problem analysis which was an important precursor to the development of the strategy.

A Revised Target

Over the years, South Africa has experienced a reduction in road traffic fatalities, with the figures decreasing steadily from 15,419[10] in 2006 to 12,702[11]in 2014. However, reductions in road deaths have not decreased at the rate required for South Africa to achieve an aspirational 50% reduction by 2020 from the 2010 baseline, as set out by the UNDA[12].

In alignment with South Africa's developmental approach, the National Development Plan 2030, seen largely as the country's strategy blueprint, sets national goals and objectives for the country. Chapter 10 of the document, in particular, classifies road crashes as a health issue and sets a target to "reduce injury, accidents and violence by 50% from 2010 levels"[13]. The NDP 2030 also outlines the following matters to be monitored and controlled including:

- Roadworthiness of vehicles;
- Vehicle driver behaviour;
- Alcohol and substance abuse; and
- Weaknesses in law enforcement.

The NRSS has taken into consideration the goals and targets set out by both the UNDA which have been included in the Sustainable Development Goals (SDGs) viz.

- 2020, to halve the number of global deaths and injuries from road traffic accident; and

[10]RTMC, 2014
[11]RTMC, *Calendar Report,* (2014)
[12] WHO, *Decade of Action for Road Safety 2011-2020: saving millions of lives* (2011)
[13]NDP2030: Chapter 10: Promoting Health; Goal 5; Page 334

- 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

And the NDP 2030 in accordance with emphasising ambitious yet feasible target-setting, advocates a long-term trajectory with 2030 as the country's target to reduce road fatalities by 50% from the 2010 baseline.

1.1. Legislative mandates and policies

The strategic framework outlined is informed by and draws from various legislation documents, which includes but is not limited to the:

- Constitution of the Republic of South Africa (Act 108 of 1996)
- National Road Traffic Act (Act 93 of 1996)
- Road Accident Fund Amendment Act (Act 15 of 2001)
- National Road Safety Amendment Act (Act 67 of 1991)
- Road Traffic Management Corporation Amendment Act (Act 24 of 2000)
- Road Accident Fund Commission Act (Act 71 of 1998)
- National Railway Safety Regulator Act (Act 16 of 2002)
- Administrative Adjudication of Road Traffic Offences Act (Act 72 of 2002)
- Cross Border Road Transport Act (Act 12 of 2008)
- The South African National Roads Agency Limited and National Roads Act (Act 7 of 1998), as amended (SANRAL Act)
- National Land Transport Act (Act 5 of 2009)
- Intergovernmental Relations Framework Act (Act 13 of 2005)

The strategy is further informed by departmental and sector plans and policies, which include but are not limited to:

- The White Paper on National Transport Policy 1996
- The 2006 Road Infrastructure Strategic Framework for South Africa
- 2011 National Development Plan 2030 (NDP 2030)
- Public Transport Turn-Around Plan 2015
- National Learner Transport Policy 2015

1.2. Outline of the document

As part of the country's commitment to the UNDA and the NDP 2030, South Africa is obliged to develop a National Road Safety Strategy that is aligned with the goals and targets of both of these key documents. The DoT in collaboration with the RTMC, as the lead agency on road safety and supported by all the other road transport agencies and other relevant public and private stakeholders, are responsible for leading this critical process of strategy development. The NRSS is aimed at addressing this obligation and is supported by Appendix B: Road Safety Strategy Roadmap to assist with the operationalisation of the NRSS. This document is structured along the following chapters as shown in Table 2 below.

Chapter	Description
1. Introduction	Provides an overview of the relevant legislative mandates and policies, the founding principles and assumptions and outlines the document structure.
2. Review of Previous Strategies	Overview of South Africa's previous road safety strategies and lessons learnt.
3. Best Practice Lessons	Reflects on selected international good practice on road safety and identifies relevant insights and interventions.
4. Situational Assessment	Shares the situational analysis, which describes the *status quo* of road safety in the country, identifies key challenges, estimates the economic and financial impact, and highlights emerging strategic themes.
5. Road Safety Strategy 2016 -2030	Outlines the strategic vision, mission, governing principles and targets. This section also includes the prioritisation and phasing of themes with objectives, KPIs and interventions listed per pillar to indicate the actions that are required in delivering the NRSS.
6. Concluding Remarks	Reviews the key outcomes of the document and suggests the next steps in finalising the NRSS.
Appendix A: Best Practice Country Examples	Outlines countries considered as global best practice examples and their relevance to the South African environment.
Appendix B: Road Safety Strategy Roadmap	Outlines the practical components of the implementation of the NRSS. It includes proposed governance structures, prioritisation methodologies and phasing approaches. The document also outlines some of the details for individual road safety interventions identified in section 5.

Table 2: Document Structure Outline

2. Review of previous strategies

2.1. Overview of previous strategies

An overview of previous road safety strategies is included in order to understand previous approaches and to evaluate the extent of their impact. In particular, the following three road safety efforts and strategies have been reviewed in detail, with the aim of extracting key insights and building on their successes and foundations.

	Strategy	Period	Strategic Focus	Intervention measures	Delivery Successes	Delivery Shortcomings
1	**Road Traffic Management Strategy**	1996 -2000	• Quality of road vehicles • Type of road users, drivers and pedestrians • Road traffic operations • Road environment • Interaction of traffic network	• Campaign focus • Increased law enforcement • Adjudication of offences • Enhancement of road user knowledge • Enhancement of road user skills and attitudes • Incident management • Road traffic engineering • Traffic legislation • Information management • Licensing and registration • Road traffic related research and development	• Successful education campaign • Introduction of road safety related Acts - AARTO - RTMC	• Institutions in developmental phase • Infrastructure upgrades • Addressing of driver fitness • Vehicle fitness • Reformation of regulatory and monitoring institutions

	Strategy	Period	Strategic Focus	Intervention measures	Delivery Successes	Delivery Shortcomings
2	**Road to Safety Strategy**	2001 - 2005	• Institutional structure and foundation • Road environment • Driver fitness • Pedestrian safety • Vehicle fitness • Reform of regulatory and monitoring institutions • Communication campaigns on user behaviour	• Standards and rules • Enforcement and Compliance • Education • Institutional reform	• RTMC operationally established • Establishment and operation of the National Call Centre • Appointment of a national enforcement coordinator • SABS inspection of Vehicle Testing Stations	• Partial and delayed implementation • Insufficient skills and personnel • Inadequate enforcement
3	**National Road Safety Strategy**	2006 onwards	• Road safety management • Road environment • Vehicle fitness • Driver fitness • Institutions	• Enforcement • Coordination of government function • Data gathering • Capacity Development	• Increased patrolling of hazardous areas • Improved alcohol testing and prosecution • Mini road blocks and increased enforcement	• Partial implementation of commitments • Inadequate monitoring and evaluation to measure the effectiveness of the initiatives

Table 3: Summary of Previous Strategies

2.2. Lessons learned from previous strategies

Over the years, progress has been made in a number of road safety areas. Specifically, improvements have been made in the framing of the road safety challenges in the country, with an increasingly clearer and more holistic focus. Major themes across all strategies have been aligned to current best practice and a good understanding of the major problems facing road safety has been developed. While the implementation of previous strategies has been limited, recognition must be given to efforts made in the legislative and institutional environment, which have provided a sound foundation for new interventions, such as those proposed in this strategy, upon which to build.

Outcomes from the analysis of previous strategies reveal four key insights that this strategy aims to address. These insights are detailed as follows:

Insights from previous strategies	Associated UNDA Pillar
1. The critical role of stakeholder engagement • Any new strategy needs to clarify the role played by all responsible stakeholders to minimise fragmentation of efforts and contestation of responsibility • Include non-governmental institutions to support and play their part in road safety	• Pillar 1: Road Safety Management
2. Prioritise interventions appropriately • Prioritise and sequence interventions in accordance with capacity to execute • Using data driven intelligence and tailoring to the specificities of the South African context • Increase the focus on the implementation and management	• Pillar 1: Road Safety Management
3. Education of road users • Focus on education of all road users and promote responsible behaviour on the road	• Pillar 4: Safer Road Users
4. Quality of crash data • The collection and management of data needs to be improved to enable the completeness of data to help make interventions more specific	• Pillar 1: Road Safety Management

Table 4: Lessons from Previous Strategies

3. Best Practice Insights

Road safety strategies from seven countries have been assessed in order to extrapolate lessons and insights to assist in the development of the new road safety strategy. This chapter summarises the key insights from each of the best practice strategies. The importance of this exercise is to:

- Benchmark the strategic focus of this strategy with global best practice;
- Consider the successes and shortcomings of previous efforts made in countries with similar road safety environments, in an attempt to learn from; and
- Interrogate the strategic thinking of previous efforts in order to discover solutions that can be adapted and improved on to suit the unique South African context.

The seven countries selected as global examples of best practice were considered based on multiple criteria, the most important being success in their efforts to reduce the number of lives lost on roads. These countries were also leading global examples in at least one or more of the following aspects, which made up the criteria for consideration:

- Road safety management
- Road safety education
- Creating awareness around road safety
- Innovation in solutions to address road safety issues
- Road user focus
- Road design, engineering and environment
- Road safety excellence in a middle income country
- Global recognition for road safety project execution

Refer to appendix A for information further outlining input from each country to this study.

3.1. Insights

The insights and lessons from the reviewed best practice documents are taken from two different perspectives:

1. Those relating to the strategic approach; and
2. Those related to the operational approach (specific interventions).

The table below captures the underlying philosophies and strategic principles of the global best practice strategies.

		Underlying Philosophy	Key Principles
	Description	*The philosophy informs the perspective on road safety. This is used to identify and prioritise interventions*	*Fundamentals which need to be adhered to in developing the road safety strategy*
Best Practice Countries	**Sweden**	• Road designers are ultimately responsible for level of safety in the system	• Traffic system must adapt to users • Amount of trauma the human body can tolerate is the basic parameter • Vehicle speed is the most important regulating factor
	Netherlands	Road safety is about: • Preventing human errors • Ensuring crash conditions don't exceed human tolerance levels	• Functionality of roads • Homogeneity of roads • Predictability of infrastructure to road users • Forgiveness of road environment • Awareness: Users' ability and assess capacity to drive
	Ireland	• Road safety is about planning to contain the defined problems	• Education • Enforcement • Engineering • Evaluation
	Australia	Road safety is the combined effect of: • Speed • Safety of vehicle • Level of protection provided by roads	• Building a national road safety culture • Data driven targets • Safe systems principles • Corporate responsibility • International collaboration
	United Kingdom	• Road safety is about planning to contain the defined problems	• Freedom of local authorities to tailor solutions • People must be inspired to drive local solutions • Introduce new regulation only as last resort • Effective and efficient allocation of resources
	Argentina	• Varied	• Follow World Bank road safety project guidelines • Primary emphasis on empowering lead agency to enable effective delivery of its institutional management functions
	Wales	• Varied	• Support sustainable development • Tackle social disadvantage • Meet equal opportunity obligations

Table 5: Best Practice Philosophy and principles

In the development of this document, further insights were extrapolated relating to the key strategic areas of focus of these best practice examples.

Strategic Considerations	Insights
Underlying philosophy	Clearly define the core question/areas which your road safety strategy needs to address in order to have the desired impact and for it to be successful and sustainable over the long-term.
Road safety is a shared responsibility	The responsibility of road safety belongs to all, but governance and accountability must be assigned to government. Applying this as a principle allows the state to involve corporate organisations, insurance companies and other non-state institutions in the process and establish broad incentives for safe behaviour.
Road safety is a developmental challenge	Particularly in the case of Argentina and Wales, road safety is framed within the developmental context of the country. The strategy should frame its underlying principles within South Africa's development context and the capabilities that exist in it.
Safe system approach	Most countries applied the safe systems approach shifting away from only looking at human behaviour.
Link problems to action priorities	Assess the problem, policies and institutional setting relating to road traffic injury and the capacity for road traffic injury prevention in the country. Link the analysis of the main problem areas directly to the choice of priority areas.
Scientific choice of measure gives legitimacy	If the set of actions chosen is perceived as evidence based, people are more likely to perceive them as legitimate and relevant. The availability of accurate data is however a precondition for this. South Africa needs to prioritise this.
Enable execution	Most countries specified deadlines for the actions proposed. All of them assigned costs and defined sources of funding. Both these examples show the importance of allocating human and financial resources to addressing the problem.
Monitoring and evaluation	An interesting lesson emerging from the UK was the outcomes-based approach taken to monitoring progress. Instead of setting targets related to casualty data (e.g. 10% reduction in number of fatalities), the government defined the desired outcomes (e.g. People training) and measured stakeholders against those outcomes (e.g. number of people being trained). Applying a combination of these mechanisms will assist in evaluating all important areas of the NRSS.

Table 6: Best Practice Strategic Insights

Further analysis of the various action plans reveal the following insights and lessons that can be considered in the development of this document:

Operational Considerations	Insights
Education and training of road users	• Initiate regular campaigns for raising awareness. Campaigns should be frequent, monitored, evaluated, and supported by complementary enforcement measures • Stakeholder mobilisation for road safety education partnerships. The Irish strategy includes commitments to work together with industry and other authorities • Introduce a graduated driver licensing regime drawing lessons from the Australian model
Enforcement of road traffic rules	• Cross border enforcement of traffic laws • Mapping of speeding "black spots" (hazardous locations) to enable effective enforcement of these locations • Education of drivers on considerations when travelling abroad (regarding road rules)
Safe infrastructure	• Road safety audits as part of safe road infrastructure delivery • Junctions turned into traffic circles with the objective of reducing the number of conflict points and vehicle crossing speeds
Using modern technology	• Looking into intelligent traffic management systems that can read the road situation and adapt speed limits accordingly • Automated data gathering and processing, for example automatic detection of speed offenders through radars that can measure a vehicle's speed at some distance, thereby detecting speed offenders even if they slow down just before a camera • Alcohol ignition interlocks; using them to a wider extent to identify repeat offenders
Road safety management	• Establish a lead agency • Empower the lead agency operationally through funding and human resources • Empower the lead agency through legislation, by giving them the authority to fulfil a certain distinct role to which they are accountable

Table 7: Best Practice Operational Insights

4. Situational assessment

In order to develop a relevant and responsive strategy it is important to develop an understanding of the context and provide an evidence-based outline of existing challenges as a key component of the strategy. Therefore, South Africa's positioning and context, in terms of road crash statistics, is detailed as a first step below, followed by a UNDA Pillar-based analysis of road safety challenges in the country. An additional key element that the situational assessment addresses is the economic and financial impact that road crashes, injuries and fatalities have on the broader economy. In understanding and addressing the key challenges, strategic themes have been identified and targeted responses formulated in order to affect the trend with regard to road incidents, fatalities and injuries within the country.

A critical point of consideration in the strategy is the lack of a single data collection and management system in the country resulting in different agencies using different systems to record and manage information. The information and data of the RTMC was utilised as a key informant for this strategy. It is acknowledged that crash data is critical for the establishment of trends relating to fatal crashes and fatalities and is therefore imperative that current available data be used to do so. Data management is a focal issue to be addressed to improve both the quality and management of the data and related information.

4.1. Overview of crash statistics

The crash statistics data was used to create the context for fatal crashes and resulting fatalities, human population growth, vehicle population and driver population. The last three are important indicators to determine the ratios and/or percentages that highlight the severity of the problem. The number of road crash fatalities is one of many indicators used when assessing the state of road safety in a country.

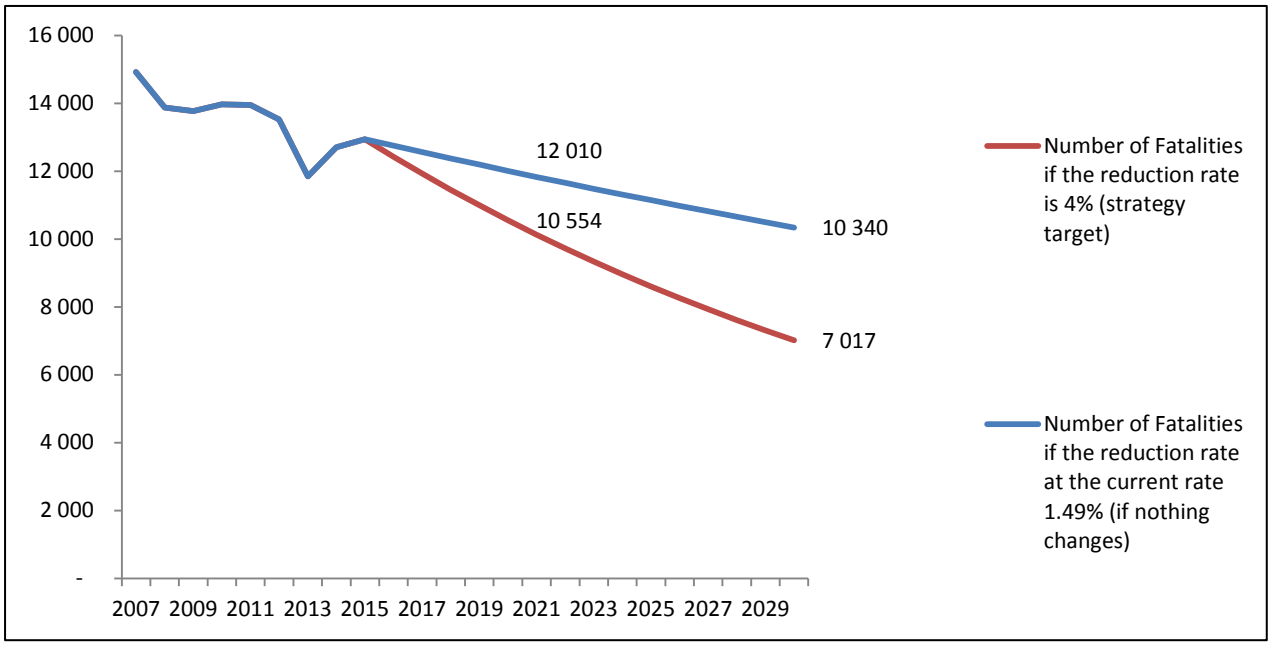


Figure 1: Number of fatal crashes and fatalities (RTMC, 2014)

The information presented shows a decreasing trend in both fatal crashes and persons killed between 2005 and 2013 before reversing in 2014. Figure 1 above represents the three scenarios which are based on the (i) five year trend 2010 – 2015 trend; (ii) 4% estimated decline rate if South

Africa is to decrease the road crash fatalities by 50% from the 2010 base by 2030 (target set by the NDP) and lastly, (iii) based on the 6.7% rate (aligned to the 2011 to 2020 Decade of Action) rate of 6.7%.

Implied therein is a 4% year on year reduction. Therefore, the first challenge for the strategy is to reduce road traffic fatalities by a minimum of 400 fatalities annually. When viewed against the DoT's[14] reduction target of approximately 700 road fatalities annually. The new target and timeframe may represent a more feasible approach to tackling road fatalities specific to South Africa's current situation.

Human population

The South African population has grown steadily at an average of at least 1.4% per annum. Figure 2 presents the annual Human population figures that are used to determine annual fatality rates per 100 000 populations a global comparative measure used to measure a country's road safety performance.

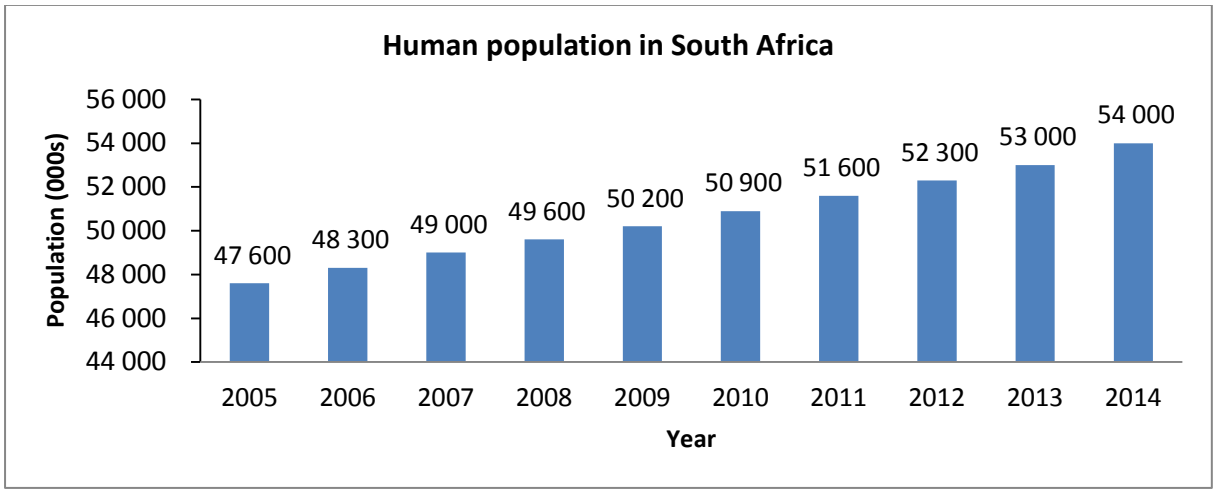


Figure 2: Population growth from 2005-2014 (Statistics South Africa)

Vehicle population

The vehicle population grew by 4.0% annually from the year 2005 to 2014 as illustrated in Figure 3 below. This increase in additional vehicles on the road places additional strain on the road network and increases the likelihood of crashes occurring. The vehicle population may include vehicles that have been written off and which citizens, through unregulated processes, have had an opportunity to purchase, fix and re-register. These vehicles pose a significant risk as they are not subjected to SABS compliance testing.

[14]DoT, *Strategic Plan 2015/16 – 2019/20,* (2015)

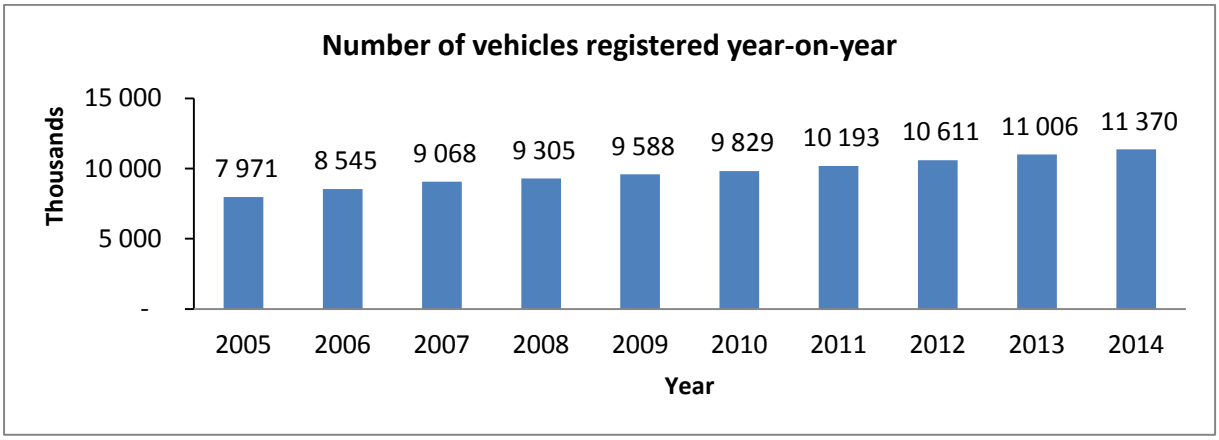


Figure 3: Increase in registered vehicles, 2010-2014 (RTMC, 2014)

Driver population

The rate at which drivers' licences are issued has increased annually by 4.5% between 2005 to 2014. When the increase in drivers' licenses is considered, it is clear that this increase has outpaced that of the population growth. The cause for concern around such growth patterns is not the relative size thereof, but rather the quality of drivers produced by the driver education system given the unregulated driving school sector as well as multiple claims of corruption within the driver licensing sector. Poorly trained drivers undermine any effort to improve road safety in the country.

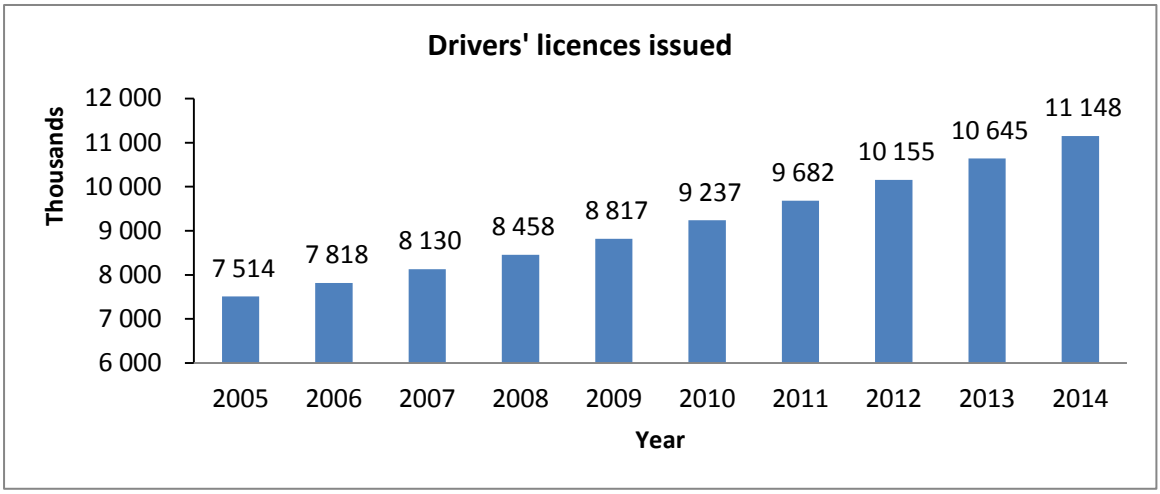


Figure 4: Drivers' licences issued from 2004 to 2014 (RTMC, 2014)

4.2. Causal analysis of fatal crashes

In order to assist with the identification of problems underlying crash rates, analysis of the causes of fatal crashes in particular is useful. Local research conducted by the RTMC determined the following breakdown of crash causes from South Africa's fatal crashes data (RTMC 2014).

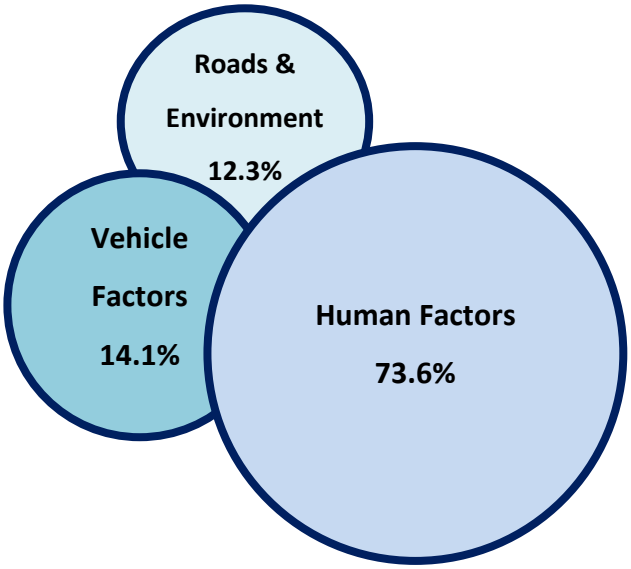


Figure 5: Factor Contribution to Fatal Crashes (RTMC, 2014)

The figures depicted are broadly similar to those found in the UK (87% human error; 2% vehicle defects and 10% road environment)[15] but markedly different from a recent analysis from the US, which indicated that only an estimated 2% of crashes were attributed to both environment and 2% to vehicles with 94% being human error[16]. In the South African analysis vehicle factors featured significantly higher, but this is more likely given the different vehicle standards that apply across the countries considered.

The diagram compares favourably with international trends in terms of weighting of contributory factors, the Safe System approach shifts away from the blame the victim approach. Although it is acknowledged that human factors play a significant role as a contributory factor to crashes, factors such as the road environment begin to play an ever increasing role in influencing road user behaviour and reducing the risk of serious injury and death when crashes occur. It must be noted that there are other elements such as the road environment, which influences road user behaviour and thus conversely also contributes to the reduction of serious injuries and fatal crashes

4.3. Analysis of Road Safety Challenges according to the 5 UNDA Pillars

In order to identify and articulate the major challenges facing road safety in South Africa, within the framework of the UNDA Pillars, the following sources, platforms and engagements were used as the basis for informing these challenges:

- Road Safety Summit 2015 held in Cape Town and convened by the DoT. The delegates at this summit represented stakeholders from across road safety and related sectors. The summit was structured and facilitated to get input relating to the challenges facing Road Safety

[15] UK DFT Reported Road Casualties Great Britain 2014.
[16] Critical Reasons for Crashes Investigated in the National Motor Vehicle Crash Causation Survey 2015

within the country. The record of the summit discussions was a key informant in shaping this section of the document.

- RTMC road safety data and strategic documents relevant to the NRSS.
- Research was conducted to establish other information available and to provide supporting data for the challenges identified at the summit. As far as was possible, anecdotal evidence was not considered in the identification of road safety challenges.
- Furthermore, stakeholder engagement at national and provincial level, together with a stakeholder survey was undertaken to verify the identified challenges. Stakeholder meetings where attended by departmental representatives from all three spheres of government, SALGA, non-government organisations and the private sector.

PILLAR 1: Road Safety Management

In accordance with the UNDA framework, road safety management involves the creation of multi-sector partnerships and the designation of a lead agency with the capacity to develop and lead the delivery of national road safety strategies plans and targets. This is underpinned by data collection and evidential research to assess countermeasure design and monitor its implementation and effectiveness.[17]

The responsibility for road safety is attributed to multiple stakeholders, with direct or indirect accountability. This transcends all spheres of government and a myriad of functional departments and entities, including both public and private organisations, which makes coordination, integration and execution a massive challenge. The Constitution of South Africa (Act of 1996) is the legislative foundation that assigns road safety related functions. Schedules 4A and 4B of the Constitution provides for concurrent mandate at national, provincial and municipal level for functions relating to road safety including public transport, public works, road traffic regulation, regional planning and development and vehicle licensing. Schedules 5A and 5B of the Constitution further indicates areas which are the responsibility of provincial and local government and include provincial planning, provincial roads and traffic, street trading, street lighting and traffic and parking. Other Departments which are pivotal to any road safety strategy include the Department of Basic Education (DBE), Department of Higher Education and Training (BHET), Department of Health (DoH), the South African Police Services (SAPS), Department of Justice (DoJ) and National Treasury. By virtue of the Constitutional mandates of the scope of road safety, the topic is institutionally widespread, even without consideration of the non-governmental environment, thus making it a challenging management task.

It is therefore critical for appropriate cooperative and inter-governmental agreements, formal partnerships and oversight structures to be established, to ensure road safety is dealt with in a cohesive, transversal and integrated manner. This is enabled by the existence of the Department of Co-Operative Governance and Traditional Affairs and legislation in the form of the Inter-governmental Relations Framework Act (13 of 2005)

The importance of driver training and its role in road safety warrants on-going focus particularly from a management perspective. This sector is to a large degree subject to evolution in modern technology, vehicle design, changing road design and driver behavioural patterns all critical areas of

[17]Global plan for Decade of action for road safety 2011-2020

consideration regarding the manner in which drivers are taught and equipped. The current K-53 system being taught to new drivers is deemed out dated and an improved solution must be developed cognisant of the changes due to modernity, and responsive to producing better drivers. Regulation of driving schools and instructors or examiners is a further shortcoming of this sector that requires resolution to ensure improved driving standards and driver capabilities.

The prevalence of fraud and corruption in the road transport sector is well publicised but the detail thereof not sufficiently documented. Former Transport Minister Jeff Radebe acknowledged this issue as a "threat posed towards road safety." In 2012, the RTMC established the National Traffic Anti-Fraud and Corruption Unit to combat acts of fraud and corruption by collaborating with other law enforcement agencies. The mid-term Country Report 2015 to the UNDA indicates that as a result of this unit, several prosecutions for unlawful acts across the traffic environment have been instituted. The report makes further reference to the notion that most criminal activities pivot around illegal and irregular acquisition of learner and drivers' licences as well as irregular acquisition of Roadworthy certificates in various DLTCs.

The effects of fraud and corruption further impact on the manner in which traffic laws are enforced, enabling an environment where traffic law enforcement can be perceived as poor. The issue of suitably qualified traffic officers, the attitude of traffic police towards motorists and the disrespect shown by motorists towards traffic officers are all additional contributing factors to this issue.

The aforementioned challenges to road safety management are often seen as indicators of the need for more stringent control systems and management processes including the improved use of technology.

Summary of challenges under Pillar 1:
Fragmentation in the execution of Road Safety interventions
Lack of cooperation between Government Departments
Limitations in the National Crash Data
Prevalence of fraud and corruption
Constrained resources for road safety strategies
Absence of driving school-legislation
Outdated approach and methodology to driver testing (K53)
Inconsistency in road safety governing norms and standards

Table 8: Key challenges Identified: Road Safety Management

PILLAR 2: Safer Roads and Mobility

The safer roads and mobility pillar focuses on road design and the environment with the intention of protecting users. In line with the Safe System approach, this strategy acknowledges that people will make mistakes. As far as possible, road design must guard against these human errors which result

in fatal or serious injury. This requires, but is not limited to, intelligent and forgiving road designs[18], minimising risks associated with the road environment, identification of hazardous locations through regular road safety assessments of road networks, road safety audits on new and upgraded road infrastructure projects. The different tools are described as follows:

- **A Road Safety Audit** which is a formal and independent safety performance review of a road transportation project by an experienced Road Safety Auditor or Team of safety specialist, addressing the safety needs of all road users.
- **A Road Safety Risk Assessment** which is a methodological approach to assess road safety risk relating to the existing infrastructure. The assessment of risk related primarily to the components of exposure, probability and consequence.

Another key area of focus is research and development to ensure the provision of appropriate road infrastructure solutions for South African road safety challenges. As was seen in **Error! Reference source not found.**, the road infrastructure and environment in South Africa is estimated to have a 12.3% causal contribution to fatal crashes.

Data from the RTMC (2014) provides a further breakdown of this contribution, as reflected in Figure 6. Sharp bends are listed as the leading contributor to fatal crashes under this category. Furthermore, evidence from the Netherlands[19] and Sweden[20]point to road design as a critical determinant of the severity of fatal crashes. In the instances recorded, it would seem to indicate that road design amendments need to focus on managing human error. Physical attributes on roads such as blind rises, blind corners and sharp bends tend to facilitate human error and these need to be addressed.

The data also indicates a need to investigate the extent to which factors such as speed limits are factored into road design, this not discounting that human behaviour remains the leading driving element for speeding. Internationally speed limits have been reduced over the years in line with Safe Systems principles, yet in South Africa no such review has been officially carried out. Furthermore, South Africa has a shortage of road safety engineers – a challenge which might add to the road design issues made apparent in the data. The challenges presented by the road network system cannot be fully addressed without increasing the number of technical specialists in the field of road safety engineering.

Figure 6 (below) indicates wet road surfaces and poor visibility as the second highest factor among the road and environment contributors. This can be addressed through effectively identifying and addressing known hazardous locations.

According to data presented in Figure 6, poor road surface conditions contribute to 8.3% of total accidents; this suggests that there are roads in South Africa where maintenance has not been carried out adequately. According to the DoT, the country currently sits on a road maintenance backlog of

[18]Netherlands and Sweden are global best practice in this regard

[19]Sustainable Safety in the Netherlands, 2006

[20] J.Whitleg and Haq, G. (2006). *Vision Zero: Adopting a target of zero for road traffic fatalities and serious injuries*

37%[21], which will only be cleared at a cost of approximately R197 billion. This alone is a critical challenge within the road and environment pillar.

The safety of both motorised and non-motorised road users is placed at risk due to some road network areas having insufficient lighting and due to poor protection against stray animals wandering onto the road.

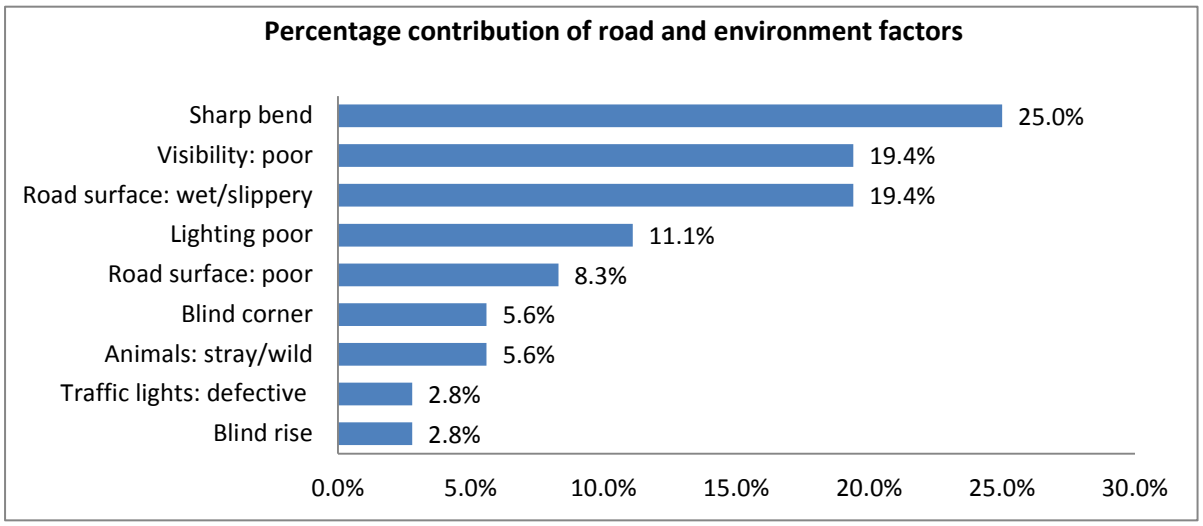


Figure 6: Road and environmental factors resulting in fatal crashes (RTMC, 2014)

It is importance that road infrastructure is designed in such a way that it addresses the needs for vulnerable road users such as pedestrians that account for approximately 40% of all road fatalities.

Summary of challenges under Pillar 2:
Lack of Road Safety Audit Programmes within Road Authorities to proactively mitigate road safety risk associated with the design of new and upgrade projects
Limited local research in the area of safe infrastructure developments and solutions
Shortage of road safety engineering capacity
Continued increase in road infrastructure maintenance funding backlog
Speed limits not tailored to road environment and not aligned to international best practice
Lack of Road Safety Assessment Programmes within Road Authorities to identify high risk and hazardous locations.

Table 9: Key challenges Identified: Roads and Mobility

PILLAR 3: Safer Vehicles

In accordance with the UNDA, a safer vehicle framework encourages the universal deployment of improved vehicle safety technologies for both passive and active safety through a combination of

[21]Committee of Land Transport Officials Research (2014)

harmonised relevant global standards, consumer information schemes and incentives to accelerate the uptake of new technologies.[22]

As is evident from Figure 7, vehicle factors account for 14.1% of road crashes. Vehicle design and roadworthiness should not be discounted as possible triggers for poor driver behaviour subsequently resulting in crashes. Figure 7 reflects the RTMC's 2014 analysis of these particular aspects of fatal crashes. It can be seen that tyres are a major issue as both burst and smooth tyres suggest tyres not being replaced/maintained regularly enough to maintain required roadworthiness standards. To address this and other issues greater emphasis needs to be placed on law enforcement interventions aimed at ensuring that vehicles are roadworthy.

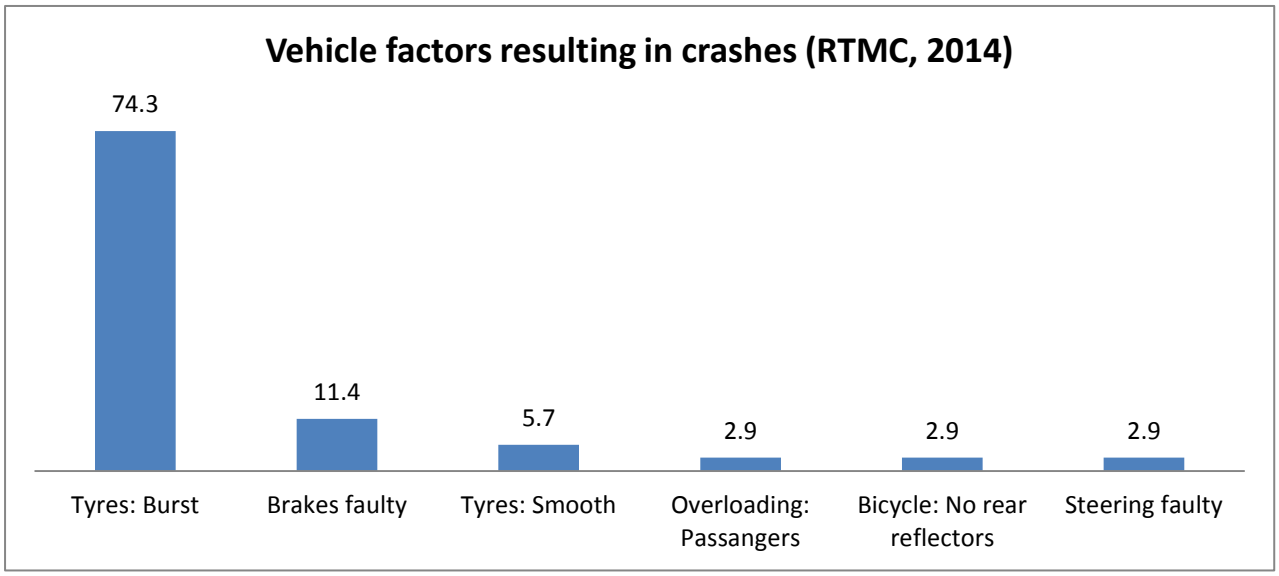


Figure 7: Vehicle factors resulting in fatal crashes (RTMC, 2014)

Summary of challenges under Pillar 3:	Applicable Vehicle type
Safety manufacturing standards/ requirements for vehicle manufacturers need to be enhanced and set	New, locally manufactured and imported vehicles
Harmonisation of appropriate vehicle standards; specific focus on vehicles from neighbouring countries not meeting local technical requirements	All / Foreign registered vehicles
Prevalence of non-roadworthy vehicles	All
Number of overloaded vehicles	All
Lack of periodic vehicle inspection of older vehicles	All
Corruption and fraud at vehicle testing centres	All
Proliferation of vehicle testing stations and inadequate regulation of	n/a

[22]Global plan for Decade of action for road safety 2011-2020

Summary of challenges under Pillar 3:	Applicable Vehicle type
the industry	
Limited private sector engagement on how to implement technologies for fleet management for improved road safety	Industrial, fleet owners
Lack of adequate technological innovation for on board vehicle control to enhance road safety	All
Basic safety features for public transport vehicles are lacking (e.g. rollover bars, speed governors, seat belts, etc.)	Public transport
Poor compliance and adherence to operator (freight and public transport) licensing laws	Heavy industrial / tankers / Public transport
Unregulated and non-compliance with regard to people transportation e.g. scholar transportation using bakkies and open vehicles	Public transport / passenger vehicles
Low level of insurance cover; causing many repairs to be completed to lower than required standards	All

Table 10: Key challenges Identified: Safer Vehicles

PILLAR 4: Safer Road Users

According to the UNDA framework, the safer road users pillar is largely geared toward developing comprehensive programmes to improve road user behaviour and attitude. Sustained or increased enforcement of laws and standards combined with public awareness/education campaigns are developed to promote safer road users.

From the RTMC analysis, human behaviour was determined as having a 73.6% causal contribution to fatal crashes. Data from the RTMC (2014) provides a further breakdown of this contribution, as reflected in **Error! Reference source not found.**. By addressing the human behavioural element a significant number of fatal crashes can be prevented. Behavioural issues can be addressed through various means mainly contained within education interventions and improved enforcement of road rules.

Figure 8 below shows the human factors contributing to road crashes as reported by the RTMC. It should be noted that despite jay-walking being identified as the highest factor contributing to crashes, the behaviour of pedestrians is also driven by the lack of infrastructure to enable safer commuting on the road network e.g. pedestrian bridges across busy roads, lack of suitable/paved verges, etc. It is important to note that speeding, overtaking into oncoming traffic, intoxication (of drivers and pedestrians) and fatigue are all behavioural issues that need to be addressed both through education and effective law enforcement.

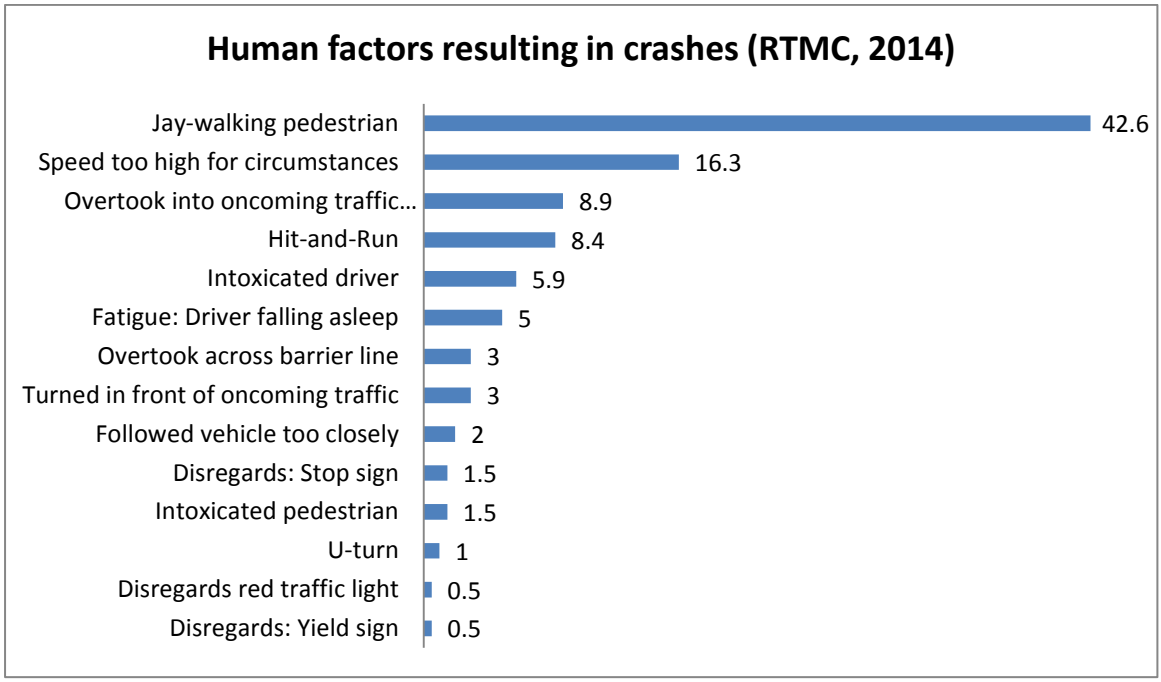


Figure 8: Human factors resulting in fatal crashes (RTMC, 2014)

In many fatal crashes, vehicle speed plays a key role. Excessive speed is one of the most common human factors in crashes as the energy that is released during a crash is directly proportional to speed, and also to the stopping distance that is required. However, research has shown that distracted and inattentive drivers are increasingly becoming a point of consideration in the analysis of driver behaviour.

According to a recent report by the RTMC on Inattentive and Distracted Driving (February 2016) engaging in secondary activities (unrelated to driving) while driving, "can be construed as indicative of a high level of general disassociation with the driving environment or an elevated risk of non-avoidance of potentially avoidable incidents with crash potential." Common driver distractions include the use of cell-phones (including talking through the use of hands-free/Bluetooth devices), eating, smoking, grooming, passenger activity and sound from music or navigation devices.

Summary of challenges under Pillar 4:
Lack of road safety public awareness and education; for adults, youth and learners
Learners and driving testing processes are out dated and do not include road safety prevention elements
Non-compliance with road laws resulting in an increasing number of moving violations
A significant proportion of alcohol and other substances related crashes due to weakness in law enforcement and prosecution of intoxicated drivers
Increase in distracted driver behaviour
Lack of accountability by road users reflected in the non-payment of fines and the bribery of traffic officers
Limited engagement with youth on road safety interventions (data based on age of victims)

Summary of challenges under Pillar 4:
High proportion of fatal crashes (including pedestrian crashes) occurring under night time conditions, despite traffic volumes being lower during such times
Inadequate local research on road safety

Table 11: Key challenges Identified: Safer Road Users

PILLAR 5: Post-crash Response

According to the UNDA framework, the post-crash response pillar is aimed at increasing responsiveness to post-crash emergencies and improving the ability of healthcare and other systems to provide appropriate emergency treatment and longer-term rehabilitation for crash victims.[23] The Road Incident Management System (RIMS) seeks to establish the best practices in responding and dealing with road incidents in an efficient and effective manner. The RIMS operational policy is aimed as a basis of ensuring uniformity throughout South Africa and gives effect to Policies and Procedures for RIMS development. The aim of this process is to provide a coordinated, standardised guideline to be used throughout SA by all organisation that are involved in RIMS.

The research shows that many of the challenges identified are not unique to South Africa. Multiple sources[24]also identify the challenge in easily accessing post-crash care and existing barriers to primary and emergency healthcare. Very little of these research sources are specific to the South African context or to road crashes and related trauma emergency reinforcing the existing gaps in data management systems. Hence, international case studies[25] on middle-income African countries such as Nigeria and Kenya, among others, were consulted. However, inferences can be made in relation to South Africa and about concerns relating to the lack of professional healthcare staff levels, disparity between urban and rural healthcare facilities and the services available at these institutions, resource limitations (including the number and availability of emergency vehicles) which applies equally to the provision of primary healthcare as it does to emergency healthcare.

The shortage of professional medical staff, particularly in the public sector is a serious challenge, the impact of which is felt in the case of emergency and post-crash healthcare. According to the South African Medical Journal[26]:

> "South Africa compares unfavourably with other middle-income countries in terms of medical and dental professionals per 1 000 population. In 2008, South Africa had 0.77 physicians (medical professionals) per 1 000 population compared to Brazil (1.85), Mexico (1.8), the UK (2.47) and Australia (2.3). The UK has 120 000 doctors for a population of 60 million; South Africa, with a population of 48 million, has 27 000 doctors."

[23]Global plan for Decade of action for road safety 2011-2020
[24] Global Health Action (2016). Vol 9
[25]African Health Sciences Journal June (2009) 9(2)
[26]South African Medical Journal August 2011 Vol 101 No 9

There are multiple emergency call-centre numbers promoted in South Africa through various entities e.g. government departments, hospitals, insurance companies, network service providers etc. This poses a significant challenge as the process to access healthcare services in an emergency becomes unnecessarily complex when the purpose should be to provide simplified, immediate and effective post-crash response.

The costs of healthcare in South Africa is referred to under the economic and financial impact section of this document and clearly highlights the financial and budgetary limits relating to the provision of healthcare and emergency healthcare in particular. Consultation and discussion with stakeholders at the Road Safety Summit 2015 confirmed these challenges relating to funding and resources in the South African healthcare environment.

The Road Accident Fund (RAF) is the only social insurance fund available to the public which compensates crash incident victims. The scarcity of such resources makes it particularly important for public awareness around the issue and the entity. It is for this reason that the RAF actively promotes its services at hospitals and within local communities. These interventions must however be strengthened to enhance accessibility and expand its reach in order for road crash victims to realise their due benefit within reasonable timelines.

Summary of challenges under Pillar 5:
Barriers to access and quality of treatment (incl. equipment, training of staff and specialised medical treatments)
Inconsistent responsiveness of emergency medical personnel
Inadequate funding for medical treatment, rehabilitation and loss
Fragmented approach to dealing with post-crash response within the medical fraternity
Limited monitoring of progress of interventions completed or currently underway to address this pillar
Oversight and control in coordinating actions to improve post-crash response
No single nationwide telephone number for emergencies
Low adoption rate for new technologies to increase efficiency and responsiveness levels

Table 12: Key challenges Identified: Post Crash Response

4.4. Economic and financial impact

The situational assessment of road safety requires an understanding of the economic and financial impact of road death and injury. The 'total cost of RTCs' metric is an important road safety indicator that serves as the departure point for understanding the extent and magnitude of the road safety problem in a country. On a national level, reported as a percentage of the Gross Domestic Product (GDP), the RTC cost estimation relates to the consequences RTCs have on the economy and social welfare of a country. It is part of country profile statistics, reported annually, providing a ranking scale of the comparative road safety performances of countries.

Knowing the cost of RTCs on a national level serves to internalise the road safety scourge and to encourage role-players to take ownership of the problem that needs to be vigorously managed. This is necessary to understand the consequences for the economy as well as to understand that resources applied to dealing with road death and injury could be applied elsewhere as these costs are largely avoidable. The opportunity cost of road death and injury is that it could easily pay for free higher education, or it could be used by the DTI as incentive funds to stimulate the economy, or for any other national treasury requirement that could yield a far greater return to South African society.

RTC cost estimation comprises three main cost categories, viz., human casualty costs, vehicle repair costs and incident costs. Understanding the cost elements of these cost categories facilitates informed decision-making for designing and implementing appropriate actions and interventions aimed at reducing RTCs and their impacts. The main reference for estimating RTC costs in South Africa had been the report "The estimation of unit costs of road traffic accidents in South Africa", prepared by the Council for Scientific and Industrial Research Council (CSIR) and published by the

Department of Transport in 2004 - hereinafter referred to as "Cost of Crashes 2004" (CoC 2004). The CoC 2004 methodology produced a variety of unit cost tables, useful for benefit/cost evaluation of road safety programmes and projects targeting of specific types of RTCs and victim groups, but did not adequately address the social and environmental cost elements and the methodology was generally viewed as cumbersome to apply. With the lapse of a decade, the Road Traffic Management Corporation (RTMC) commissioned the evaluation and review of CoC 2004. The overarching objective of the project was to develop a more user-friendly methodology that would more appropriately account for the local realities of the social and indirect cost of RTCs in the South African context. It also aimed to be in line with the 'Safe System' approach which is the basis for the five pillars of the UNDA for Road Safety 2011-2020 as well as of the NRSS.

The first phase of the project updated the RTC unit cost tables of CoC 2004 using the RTMC's 2015 fatal RTC dataset and other appropriate cost elements relating to human casualty, vehicle repair and incident related costs. Where no new or updateable data were available, CoC 2004 data were updated using appropriate consumer price indices. The methodology was benchmarked against international practices to determine relevancy and completeness. Potential additional variables were identified to be included in the second phase which focused on the development of a 2016 methodology with 2015 as the base year (referred to as CoC 2016). International trends and best practices for calculating the social cost of RTCs were reviewed, and in some cases the results from credible studies were used as surrogate input values in the calculations model.

In 2015, a total of 12 944 fatalities in 10 613 fatal RTCs were recorded by the RTMC. Currently, only fatal RTCs and fatalities are recorded annually and therefore the other RTCs and Road Traffic Injuries (RTIs) were estimated from historical data. Under-reporting of RTCs is a worldwide problem that varies substantially among countries. A meta-analysis of 49 studies in 13 countries (European Road Safety Observatory, 2009) found that the mean reporting level according to the 30-day rule was 95 per cent for deaths.

The number of deaths and fatal RTCs were thus increased by 5 per cent to account for under-reporting. The figures used in this study are indicated below.

Number of RTCs and RTIs for 2015, adjusted for underreporting					
	Fatal	Major	Minor	Damage only	Total
Number of RTCs	11 144	40 117	132 609	648 560	832 431
	Death	Serious	Slight	No injury	Total
Number of persons	13 591	62 520	202 509	1 429 794	1 708 414

The total cost of RTCs on South Africa's road network for 2015 amounted to an estimated R142.95 billion - equating 3.4 per cent of GDP. The breakdown of the total cost of RTCs by cost element and by severity is provided in the table below:

-	Total Cost of RTCs (R million)					
	Fatal	Major	Minor	Damage only	Total	%
Human Casualty Costs	58 332	24 794	14 546	1 358	99 030	69.3

-	Total Cost of RTCs (R million)					
	Fatal	Major	Minor	Damage only	Total	%
Vehicle Repair Costs	218	809	2 902	17 395	21 326	14.9
Incident Costs	2 018	5 113	2 740	12 723	22 595	15.8
Total Cost	60 569	30 716	20 189	31 477	142 951	

Although it is difficult to directly benchmark South Africa's performance against other countries as costing methodologies differ from country to country, it is clear that South Africa is not performing favourably. The average cost of RTCs in comparable low- and middle-income countries is 2.2 per cent of their GDP while the average for high-income countries is 2.6 per cent of their GDP (varying between 1.0 and 4.6 per cent).

The following table summarises the unit cost per RTC and the unit cost per person by RTC and RTI severity respectively. These unit costs are commonly used in economic evaluation of road safety interventions.

Unit Cost per RTC (Rand)				
Fatal	Major	Minor	Damage only	Any severity
5 435 261	765 664	152 244	48 533	171 727
Unit Cost per RTI (Rand)				
Death	Death	Death	Death	
3 916 187	423 858	71 352	1 085	

Table 13: Unit Cost for RTC

Further development of a RTC costing methodology would ideally be based on consistent and reliable RTC data on a national level. In the absence of this, strategies will have to be developed to simulate RTC statistics (as was the case to a large extent with CoC 2016) as part of a future strategy. The reporting and recording of RTCs need to be pursued with austerity as under-reporting continues to be a problematic element of RTC costing. Currently, it is uncertain what the level of under-reporting of RTCs in South Africa is.

The CoC 2016 calculations model contains metrics that need to be updated on a recurring annual basis as the availability and accessibility of RTC cost data more relevant to the South African context improve. Much of this will not necessarily be realised through top down demands on stakeholders for data, but through transformation to a road safety 'results focus'[27] paradigm with self-

[27] To achieve road safety 'results focus' is the overarching institutional management function of the RTSMS framework (Bliss and Breen, 2009, SANS/ISO 39001).

manifested shared responsibility across sectors. This paradigm shift is likely to be solely dependent on credible road safety governance and convincing leadership.

The total 2015 cost figure derived from the CoC 2016 study for South Africa (R 143 billion) should be the point of departure for the systematic change of the road traffic safety management system (RTSMS) to become 'results focus'. This includes informing policy and strategy development, facilitating improved coordination among stakeholders and allocating funds and other resources aimed at effectively curbing the road traffic safety problem. CoC 2016 provides evidence regarding the extent and magnitude of road traffic crashes that enable local and provincial authorities to mobilise road safety action plans that could potentially be included in Integrated Development or Transport Plans. By contextualising these costs, improved predictions can be made, targets set and monitored. In addition, the CoC 2016 results should be used to prioritise specific research and development programmes aimed at reducing specific crash costs. This will assist in ensuring that the implementation of the NRSS is efficient and effective.

The CoC 2016 results provide an improved picture of the road safety burden carried by each stakeholder and should be used to delineate road safety roles and responsibilities across sectors as stakeholders can now be held accountable for road safety actions within their domain. Stakeholders can measure progress towards reducing the impact that crashes have on specific sectors. Understanding this cost according to different sectors and domains assist in coordinating different stakeholders and to establish partnerships according to which resources can be allocated appropriately for maximum effectiveness. The acceptance of this monetisation of RTC costs as a measure of the real burden on the socio-economic development of the country should go hand-in-hand with accepting accountabilities and responsibilities for taking actions with an emphasis on the need to focus on the achievement of road safety results through effective implementation of the 'Safe System' underpinned by the Road Traffic Safety Management System (RTSMS) framework.

4.5. Emerging strategic themes

Through evaluation of the underlying reasons for challenges, strategic themes emerged for each pillar. It was found that road safety management (Pillar 1) themes are common problems across other pillars as well. Addressing these strategic themes broadly address the South African challenges and will support the country's objective to achieve a 50% reduction in road fatalities by 2030. These themes are identified below:

	Key strategic themes			
PILLAR 1: Road safety management	**PILLAR 2: Safer roads and mobility**	**PILLAR 3: Safer vehicles**	**PILLAR 4: Safer road users**	**PILLAR 5: Post-crash response**
	Identify and address high road safety risk and hazardous locations	Increase vehicle safety standards	Improve road user behaviour& involve communities in road safety education and awareness programmes	Increase effectiveness of first responses
	Provide self-explaining and forgiving road environment for all road users	Ensure vehicles on the road network are roadworthy	Improve enforcement effectiveness	Simplify access to post-crash care
	Implement road safety audit programme on new and upgraded road infrastructure projects		Increase protection for VRU's	
	Improve coordination and management			
	Improve road safety data systems			
	Eliminate fraud and corruption			
	Ensure adequate funding and capacity			
	Enhance use of technology to protect road users			

Table 14: Strategic Themes

5. Strategy 2016 to 2030 – A Vision for Safer Roads

5.1. Perspective

The NRSS was drafted using various perspectives such as infrastructure, road users, management, and crash incidents amongst others. Considering that Road Safety is a complex and multi-faceted concept and function, it is important to acknowledge that at the centre of it all are ***people***. It is for this reason that the perspective underpinning the strategy is change behaviour within the social environment. It is envisioned that the result thereof will be a marked improvement in road user behaviour, increased awareness of road safety and greater responsibility for road safety by all road users in the South African society. Furthermore, the strategy also focuses on better provision of facilities for all road users (vehicles, vehicle occupants and pedestrians) and an improved and synergised interface between all users and components of the road networks.

A recurring theme that emerged throughout the analysis and assessment phases of the strategy development process was that Road Safety is everyone's responsibility, individually and collectively. What is required is a strategic drive to shift the national psyche towards understanding the importance and impact of road safety and its context, as well as to develop active and responsible citizenry as part of a developmental government agenda. In order to bring about the required change or shift the current road safety trends towards the desired state where road safety is a national priority and the number of fatal crashes and fatalities are significantly reduced, several areas need to be addressed simultaneously. This is highlighted by the strategic themes that emerge in the strategy which identify focus areas for intervention.

Furthermore, considering that South Africa is a developing country, rich in history that has shaped peoples' movement, mobility and transport choices, the manner in which road users interface with the road network is at times not a personal choice or behavioural issue, but is to an extent determined by their context or physical environment. The strategy is therefore not only dealing with infrastructure, vehicles and driver behaviour, but is in effect encouraging a paradigm shift in the overarching approach to road safety. Development and social change should occur through user-centric interventions, design-for-use infrastructure, active citizenry, collective responsibility and good governance. All of these elements need to act in synergy to bring about safer roads with the ultimate aim of reducing crashes and related fatalities.

5.2. The strategic framework

In order to address the challenges identified relating to road safety within South Africa, the following strategic framework has been used. This framework outlines the strategic intent together with an outcomes-based implementation roadmap required to reduce the number of crashes, particularly fatal crashes, and the related number of fatalities within the country.

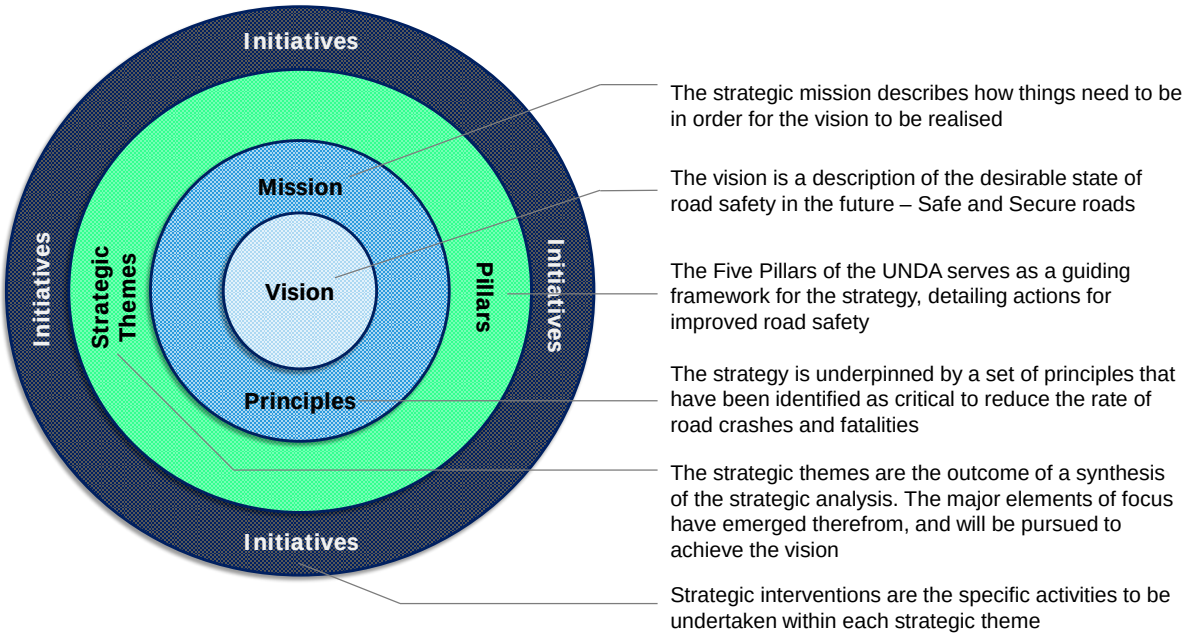


Figure 9: Strategic Framework

At the centre of the strategic framework is the country's vision for road safety, defined as *Safe and Secure Roads*. The mission focuses on the reduction of crashes and fatalities, the promotion of road usage and working towards ensuring an acceptable level of quality in road traffic management. In addition to the mission, the second layer of the framework is made up of, a set of key principles that underpin the strategy. These principles are reflected within the next strategic layer in alignment with the five pillars of the UNDA as well as the strategic themes.

The five pillars are acknowledged as a comprehensive categorisation of the high-level activities required to achieve the mission statement, reach targets set and address challenges identified in Section 4. Through evaluation of the underlying reasons for the challenges, strategic themes emerged per pillar. Addressing these themes effectively would support South Africa to achieve the desired state of road safety. To aid and focus the actions required to address the strategic themes and achieve the strategic targets, objectives and key performance indicators to measure the impact of the interventions are linked to the specific themes for each pillar. This is followed by a list of interventions, prioritised according to potential impact and ease of implementation. The outermost layer of the framework addresses the specific interventions per pillar. Responsibility has been assigned to a lead agency for the overall management of the implementation at the intervention level.

5.3. Principles

The strategy is underpinned by a set of principles that have been identified as critical to reduce the rate of road crashes and fatalities on South African roads. Whilst the list is not exhaustive, the core principles defining the strategy are:

a. **Role of government through its various departments and agencies** – The strategy is based on the notion that road safety is everyone's responsibility. However, it recognises that the DoT must take the lead in an effort to make roads safe and secure.

b. **Horizontal integration** – The strategy takes into account the reality that the activities and programmes of other areas of government, such as cooperative governance, education, health, human settlements, justice, rural development and land reform, social development as well as the police, directly or indirectly have a bearing on the level of safety on our roads.

c. **Inter-sphere coordination** – In terms of the Constitution of the Republic of South Africa, road safety is a shared concurrent function, involving national, provincial and local governments. Inter-governmental and inter-sphere cooperation are therefore the corner-stones of a successful road safety strategy.

d. **Stake-holder participation** – Participative democracy requires that the views of the general public and other stakeholders be solicited both during development of the strategy and during implementation thereof.

e. **Planning and resourcing** – A successful strategy depends on proper organisation and planning as well as adequate allocation of resources.

f. **Compliance and enforcement** – This is a two-pronged strategy which seeks first to promote compliance with existing policy and legislation. However, law enforcement will be improved to address road users who fail to adhere to legislation.

g. **Realistic targets** – The NRSS aims to set forth a target that is both ambitious yet feasible. Based on historic information of reduction in crashes and fatalities in South Africa, as well as the assessment of the current state of road safety management, the strategy is focussed on reducing fatalities by 50% from the 2010 baseline, by 2030.

h. **The UNDA Five Pillars and Safe Systems Approach** – The UNDA Five Pillars and the Safe Systems Approach embodied therein, are applied as a guiding framework to the strategy and form the basis for analysis.

i. **Accountability** – Limited success of previous road safety strategies is largely due to a lack of effective execution and implementation. To ensure that this is not the case moving forward, it is imperative that roles and responsibilities of stakeholders tasked with delivery of the strategy are clearly defined, assigned, communicated and understood.

5.4. Vision and Mission

South Africa's vision for road safety defines a state wherein the safety and security of people's lives are not compromised by them entering the road network system. The vision and accompanying mission statement for the NRSS is illustrated in Figure 10 below:

Figure 10: Strategic Vision and Mission

5.5. Goal and targets

Strategic goal:

Continually reduce the occurrence and severity of road crashes and consequently the level of fatalities and injuries in an efficient, integrated and coordinated manner

Strategic target:

Achieving the mission to reduce number of fatal crashes identified in the mission statement will require efforts to be directed toward achieving the targets set out in the primary guiding policy documents of this strategy as an important first step. In light of the targets set out in these documents, the primary strategic target of this strategy is to:

- ***Reduce fatalities by 50% from the 2010 baseline level by 2030***

A reduction in serious injuries of equal amount would also be considered a strategic target, however current data limitations make measuring this progress difficult. Improving and addressing information shortcomings such as collecting data on road crash injuries has therefore also been identified as a strategic theme of this strategy. The vision for road safety, as well as the targets set out, requires a drastic change in the status quo. This section outlines this new path proposed for the country to embark on in order to achieve its vision and targets. The table 14 below shows the annual targets for the NRSS for the target of a 50% reduction to be met.

Year	Number of Fatalities if the reduction rate is 4% (Realistic)
2007	14 920
2008	13 875
2009	13 768
2010	13 967
2011	13 954
2012	13 528
2013	11 844
2014	12 702
2015	12 944
2016	12 426
2017	11 929
2018	11 452
2019	10 994
2020	10 554
2021	10 132
2022	9 727
2023	9 338
2024	8 964
2025	8 606
2026	8 261
2027	7 931
2028	7 614
2029	7 309
2030	7 017

Table 15: Annual Targets

5.6. Prioritisation and strategy plan

The road safety challenges within South Africa were identified in the context of the UNDA Pillars. This process has highlighted the complexity and cross-cutting nature of the challenges and the responses required to address them. In order to achieve significant reductions in road injuries and fatalities; and manage road safety more effectively, the strategic themes, as listed in Table 14, need be addressed in a collective and integrated manner. Note that each strategic theme is to be addressed through multiple interventions that are outlined in the following sections but first the prioritisation and phasing of interventions are to be discussed below.

Prioritisation

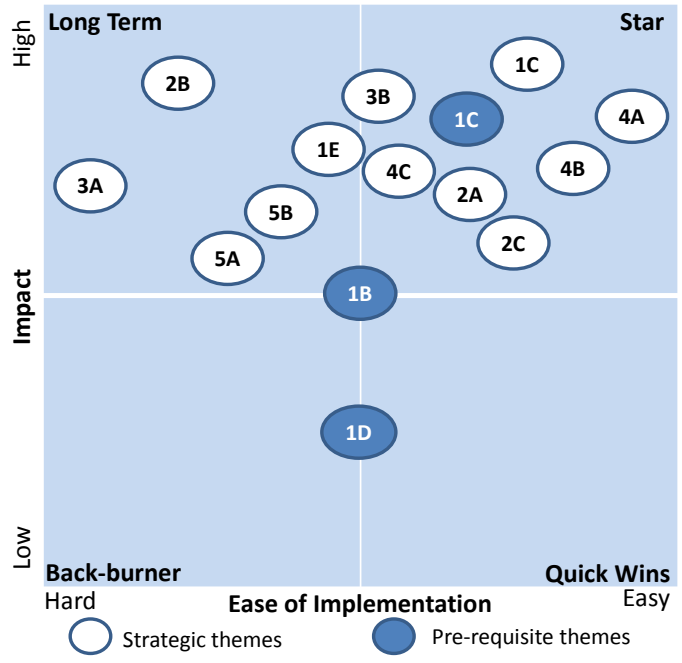
Effective execution requires having a clear focus and thoughtful sequencing of interventions. This is necessitated by the resource constrained context in which road safety is promoted in the country. As a developing economy, South Africa's fiscal and human resources are limited. There is also a great need for existing resources to be directed toward activities which directly facilitate economic growth and development e.g. funding industrialisation. Improving the safety of South African roads is therefore a task of achieving much with very little.

A prioritisation matrix assists in determining the relative importance and supports the planning of the interventions. Themed interventions are comparatively assessed based on ease of implementation as well as expected impact on the set targets. The prioritisation of the strategic themes, as listed in Table 14, is depicted below. Themes appearing closer to the top right corner are themes that need to be addressed as soon possible as these deliver higher relative impact and are easier to implement. Primary focus strategic themes from all areas relate to changing human behaviour as this is one of biggest factors in road crashes:

- Improving road user behaviour and involving communities in road safety. This is a two-pronged initiative that involves both education and awareness to address user behaviour.
- Improve enforcement effectiveness. This theme aims to address user behaviour by improving and increasing enforcement of road laws.
- Eliminate fraud and corruption. As with the enforcement theme, reduction in fraud and corruption would increase effective enforcement and discourage poor road user behaviour.

Figure 11 below also identifies pre-requisite themes. These themes aim to create an enabling environment for the implementation of all other interventions and are therefore also planned for execution in the short-term. These pre-requisite strategic themes are:

- Improving coordination and road safety management;
- Improving road safety data systems; and
- Ensuring adequate funding and capacity for toad safety



Pillar	Strategic Theme	ID
Pillar 1: Road safety management	Improve coordination and management	1A
	Improve road safety data systems	1B
	Eliminate fraud and corruption	1C
	Ensure adequate funding and capacity	1D
	Enhance use of technology to protect road users	1E
Pillar 2: Safer roads and mobility	Identify and address high road safety risk and hazardous locations	2A
	Provide self-explaining and forgiving road environment	2B
	Implement road safety programme on new and upgraded road infrastructure	2C
Pillar 3: Safer vehicles	Increase vehicle safety standards	3A
	Ensure vehicle on road network are roadworthy	3B
Pillar 4: Safer road users	Improve road user behaviour & involve communities in road safety	4A
	Improve enforcement effectiveness	4B
	Increased protection for VRUs	4C
Pillar 5: Post-crash response	Increase effectiveness for first responses	5A
	Simplify access to post-crash care	5B

Figure 11: Prioritisation Matrix

Strategic plan

Based on the above prioritisation methodology, the interventions and associated strategic themes have been sequenced in the short, medium and long-term for implementation illustrated in Figure 12 below.

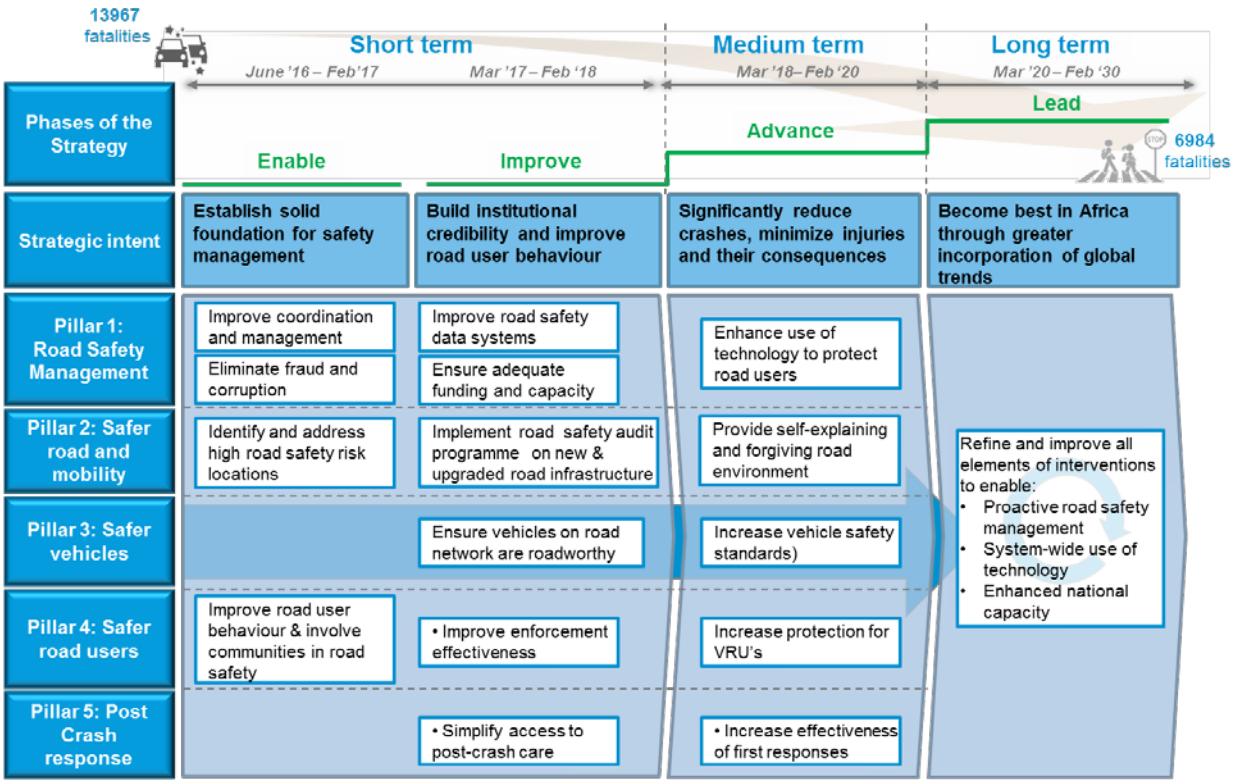


Figure 12: Phasing of interventions by theme

5.7. Strategy objectives and key performance indicators

Guided by the challenge analysis, themed interventions have been identified to define the new direction for road safety. Proposed interventions were informed by best practice insights and a fundamental adherence to the principles outlined in this document with the aim of addressing the challenges and strategic themes identified. By addressing challenges in this way, this strategy aims to meet the strategic targets, vision and strategic goals. An important aspect of any strategy is the ability to monitor progress, and this will be done through performance indicators identified per objective.

PILLAR 1: Road Safety Management

Strategic theme	Objectives	KPIs
Improve coordination and management	Strengthen cooperation between government departments and clarify existing overlaps in responsibility	• Establishment of inter-departmental National Roads Safety Council (NRSC) with fixed scheduled meetings by 2017 • Adherence to defined meeting schedule • Measure number of interventions implemented • Annual release of reports on all interventions' performance
	Ensure implementation of road safety initiatives such as ISO 39 001	• Development and publication of ISO39001 sector specific implementation manuals; • Number of Industries (sectors) participating; • Number of marketing and awareness workshops; • Number of ISO39001 road Safety Ambassadors Trained
	Strengthen public private partnerships to advance safety standards and clarify existing overlaps in responsibility	• Number of public/private engagements relating to Road Safety • Number of public/private formal partnerships entered into related to Road Safety
	Ensure that legislation and regulations support the successful execution of this strategy	• Review and assess all relevant legislation by 2018 • Development of response plan for legislative changes completed by 2019 if applicable
Ensure adequate funding and capacity	Ensure adequate funding and resourcing for road safety interventions	• Establish road safety budget to deliver NRSS by 2017 • Number of partnerships identified to resource the implementation of the strategy
	Ensure that all road safety practitioners are adequately skilled and that responsible entities have sufficient capacity	• Determine resource and capacity baseline by 2017 • Develop and implement industry professionalisation framework by 2018 • Number and type of training interventions • Percentage of posts filled
Eliminate fraud and corruption	Eliminate incidences of fraud and corruption through improved anti-corruption processes and enforcement	• Development of national anti-fraud policy for implementation by all entities in all regions by 2018 • Number of anti-corruption training interventions rolled out to government officials and members of the public • Number of officials trained on anti-corruption • Number of members of the public trained on anti-corruption • Number of incidents of fraud and corruption reported, charges investigated, prosecuted successfully • Number of new systems and processes introduced to address fraud and corruption.
Improve road safety data systems	Integrate data management systems for road safety to strengthen reporting structures and ensure monitoring and evaluation	• Establishment of an improved single centralised national data management system by 2018 to integrate and share information between all spheres of government • Number of annual data audit processes completed • Number of interventions undertaken and progress thereof • Annual publication of the progress of interventions undertaken
	Ensure that all road safety interventions and practices are based on appropriate analysis/theory of change and are also regularly monitored and evaluated	
Enhance the use of technology	Identification and implementation of technology to improve road safety	• Number of technologies interventions in stages of implementation (identified, in review, testing, procurement, piloting and implemented

Table 16: Objectives and performance indicators for road safety management

PILLAR 2: Safer Roads and Mobility

Strategic Theme	Objective	Relevant KPI's
• Identify and Address High Road Safety Risk and Hazardous Locations	• Eliminate High Risk Roads and Hazardous Locations	• Implementation of Hazardous Location Programmes • # of Hazlocs Identified and Prioritised • # of Hazlocs Address o # of Vehicular Hazlocs o # of Pedestrian Hazlocs • Implementation of Road Safety Assessment Programmes • % of road network Assessed (or Progress on the determination of the 10% Highest Risk Roads) • Progress on the identification, prioritisation and addressing 10% highest risk roads.
• Provide self-explaining and forgiving road environment for all road users.(Safe System Approach by Road Authorities)	• To improve the standards of road design to ensure that all road users are given adequate protection and information - focus on VRUs. • To ensure that road design is forgiving, thus allowing motorists to recover from error, or to survive an impact when a crash is inevitable. • To support improved access to public transport in order to reduce number of VRU's on major roads	• Review Design Standards to ensure the mainstreaming of the needs of VRUs, especially pedestrians. • Review Design Standards to provide a more forgiving and self-explaining road environment.
• Implement Road Safety Audit Programme on new and upgrade road infrastructure projects	• To ensure the inherent safety (by the mitigation of high and very high road safety risk) in the provision of new and upgraded road infrastructure • To develop Road Safety Auditor and Road Safety Engineering Capacity. • Develop a culture of Road	• Review Legal Requirements for the execution of Road Safety Audits. • Mandatory Road Safety Audits Policies and Programmes for All Road Authorities. • # of Road Safety Auditors Trained

	Safety among those responsible for the delivery of road infrastructure	• # of Road Safety Audits Completed

Table 17: Objectives and performance indicators for safer roads and mobility

PILLAR 3: Safer Vehicles

Strategic theme	Objective	Key Performance Indicator
Ensure vehicles on road network are roadworthy	Strengthen roadworthiness mechanisms to ensure safety of vehicles on the country's roads and compliance to vehicle safety standards**Error! ookmark not defined.**	• Number of non-roadworthy vehicles on road • Number of roadworthiness tests completed • Establish vehicle safety standards by 2018 • Assess gaps in road worthiness mechanisms by 2019 • Number of road worthiness testing processes updated/changed/added
Increase vehicle safety standards	Promote the fitment of protective vehicle technologies including, amongst others, seatbelts, airbags and driver support warning devices.	• Number of targeted engagements with industry • Number of instances of application of safety technologies
	Advance the safety standards of public transport vehicles, (including bakkies and trucks) and drivers, in order to protect passengers and other road users.	• Establish safety requirement baseline by 2018 • Number of new safety standards introduced 2018 • Number of crashes involving injuries to vehicle occupants

Table 18: Objectives and performance indicators for safer vehicles

PILLAR 4: Safer Road Users

Strategic theme	Objective	Key performance indicators
Improve enforcement effectiveness	Strengthen law enforcement efforts and systems	• Number of traffic violations occurred • Statistics on status of fines (number of paid/not paid/followed up/prosecuted fines (RTIA data)) • Development of intelligence-led enforcement campaigns for national implementation • Increased visibility of traffic police, 24/7 (measured by surveys) • Successful implementation of AARTO • Implement systems to identify repeat offenders by 2018
Improve road user behaviour & involve communities in road safety **and** **Increased protection for VRU's**	Educate people about the dangers of irresponsible road usage and road users of the need to be responsible	• Number of educational/road safety awareness campaigns initiated • Incorporation of specific road safety content in basic education curriculum by 2017 • Improved road safety knowledge of South Africans year-on-year (measured through surveys)
	Improve skills and abilities of drivers	• Regulate driving schools by 2019 • Implement alternative licencing process by 2020 • Introduction of driver re-testing by 2022 • Number of drivers re-tested periodically
	Involve citizens in debates around road safety, and in leading road safety campaigns and interventions	• Number of VRU crash statistics: cyclists; motor passengers, , pedestrians etc. • Number of programmes, activities to promote community discussion and involvement in road safety at school and community levels • Number of learners and community members engaged in road safety programmes • Number of incentives developed for good driving/road user behaviour • Development of bi-annual conference for youth on road safety • Number of youth role models included in Road Safety Ambassador programme
	Increase public engagement around road safety	
	Intensify efforts to deal with distractive and destructive driving behaviour	• Number of crashes occurred due to internal driving distractions • Number of crashes occurred due to external driving distractions • Number of crashes occurred due to driving under alcohol and/or drug influence
	Intensify efforts to deal with speeding and determine appropriate speed limits	• Number of crashes occurring due to speeding • Number of speeding tickets issued • Measure of average speeds as well as in vehicles exceeding the speed limit (existing nationwide continuous traffic observation (CTO) data can be employed) • Number of instances that speed limits have been changed

Table 19: Objectives and performance indicators for safer road users

PILLAR 5: Post-crash Response

Strategic themes	Objective	Key performance indicators
Simplify access to post-crash care	Simplify and improve education for the access to post-crash response services (incl. RAF)	• Implementation of a single, national emergency response number by 2018 • Number of calls received per respective emergency number • Number of response requests per communication type • Number of inquiries to RAF • Number of successful vs. non-successful claims to RAF
Increase effectiveness of first responses	Address inconsistencies and improve quality and responsiveness of treatment (including training and resources)	• Average response time per area • Comparison of survival rates of victims per area • Complete annual audits of skills and equipment per area • Implement RABS by 2020
	Address shortage of funding for medical treatment, rehabilitation and loss	• Average value of funding allocated per victim • Average cost of treatment, rehabilitation and loss
	Strengthen coordination and management of post-crash response resources and information of various stakeholders	• Number of post-crash response command centres • Number of reporting lines • Number of different resources allocated per respective service supplier (Government agencies, public entities) per area • Number of post-crash response requests per area

Table 20: Objectives and performance indicators for post-crash care

5.8. Strategic interventions per pillar

This section provides a list of interventions per pillar, grouped by strategic theme with allocations to the lead agency(s) assigned to manage overall responsibility for the implementation of the intervention.

PILLAR 1: Road Safety Management

Theme	Intervention	ID	Period	Coordinating Agency
Improve coordination and management	• Establish a National Road Safety Oversight Council for governance and oversight of the strategy	1A(i)	Short	DOT
	• Continue to support improvement measures to address the problem areas within road safety e.g. freight transport as they relate to road safety management efforts on national and provincial roads. E.g. roadworthiness, overloading, driver fatigue, etc.	1A(ii)	Short	DOT
	• Establish an annual conference on Road Safety to enhance evidence-based solutions	1A(iii)	Short	RTMC
	• Support and influence the development of guidance for liquor licencing to include road safety considerations	1A(iv)	Short	DTI
	• Monitor and improve compliance by road authorities to strategy targets	1A(v)	Medium	DOT
	• Continuous improvement of co-ordination between private and public health services to improve post-crash response rates across all areas	1A(vi)	Medium	RAF
Ensure adequate funding and capacity	• National road safety budget to be approved by Treasury	1B(i)	Short	DOT
	• Develop and roll out (standardised, modernised and improved) training packages for traffic officers and other road safety practitioners to increase education standards and level of professionalism	1B(ii)	Short	RTMC
	• Complete a full resource and capacity assessment to determine a baseline to deliver the NRSS	1B(iii)	Short	DOT
	• Find alternative sources of funding for road safety interventions (consider both public and private sector)	1B(iv)	Long	RTMC
Eliminate fraud and corruption	• Support the development of the new anti-corruption strategy followed by marketing and communications plan including drafting norms and standards for the corruption strategy.	1C(i)	Short	RTMC
	• Standardise and improve employment conditions for road safety professionals	1C(ii)	Short	RTMC
	• Identify and address opportunities for fraud and corruption in e-NaTIS vehicle licensing	1C(iii)	Short	RTMC
Improve road safety data systems	• Develop a new crash reporting framework for improving the collection and accuracy of data, and development of new forms	1D(i)	Short	RTMC
	• Publication of annual statistics to be achieved within 6 months of the following year	1D(ii)	Short	RTMC
	• Commission research into situational conditions of crashes (time of day, weather, other vehicles present/involved), which should feed into road safety guidelines.	1D(iii)	Short	RTMC
	• Strengthen programme to share data across the private and public sector; including short-term insurance industry to discuss the effective use of this data to introduce new services and products jointly between the private and public sector	1D(iv)	Medium	RTMC
	• Identify availability and potential integration of other crash data sources	1D(v)	Medium	RTMC
Enhance the use of technology	• Technology review, procurement and training	1E(i)	Long	
	• Legislate use of tachograph for all freight and public transport vehicles	1E(ii)	Medium	DOT
	• Implement system for utilisation of technology to build a road safety knowledge management system; using information such as Geographical information systems, Geolocation, etc.	1E(iii)	Long	SANRAL
Implementation of Standards as a tool to support the implementation of the Decade of	• Promotion, marketing and awareness initiatives towards implementation of the Road Traffic Safety Management Systems (ISO39001), both within Government and Industry.	1E(iV)	Medium	RTMC
	• Partnering with SANAS and SABS and other industry partners to put in place measures to ensure that the requirements for Certification Bodies and accreditation of the Standards Auditors are adequately addressed.	1(v)	Short	RTMC
	• Develop and implement regulatory tools and accreditation schemes	1(vi)	Short	CBRTA
	• Develop sector specific implementation manuals to support participating industries	1(vii)	Short	RTMC

Table 21: Actions for road safety management

PILLAR 2: Safer Roads and Mobility

Theme	Intervention	ID	Period	Coordinating Agency
Identify and Address High Road Safety Risk and Hazardous Locations	• Implementation of Hazardous Location Programme	2A(i)	Short	SANRAL / Provinces / Local Authorities
	• Develop Road Safety Assessment Capacity within Road Authorities	2A(ii)	Short	SANRAL / Provinces / Local Authorities
	• Implementation of Road Safety Assessment Programme	2A(iii)	Dependent on 2A(ii)	DOT
Provide a self-explaining and forgiving road environment for all road users	• Provide self-explaining and forgiving road environment for all road users.	2B(i)	Short	SANRAL
	• Employ adequately experienced and qualified staff to support upskilling and training of staff	2B(ii)	Short	LOCAL AUTHORITIES
	• Ensure application of road signage and road markings standards are effectively applied.	2B(iii)	Short	LOCAL AUTHORITIES
	• Develop and implement a road improvement and maintenance prioritisation model (with focus to rural roads based on information driven strategic data	2B(v)	Medium	SANRAL
Implement Road Safety Audit Programme on new and upgrade road infrastructure projects	• Review Legislation pertaining to Road Safety Audits to make it mandatory for All Road Authorities to have Road Safety Audit Policy and Programmes in place.	2C(i)	Short	NDOT/SANRAL/RTMC
	• Develop Road Safety Auditor Capacity	2C(ii)	Short	NDOT/SANRAL/RTMC
	• Implement Road Safety Audit Programmes	2C(iii)	Short	SANRAL/Provinces/Local Authorities

Table 22: Actions for safer roads and mobility

PILLAR 3: Safer Vehicles

Theme	Intervention	ID	Period	Coordinating Agency
Ensure vehicles on road network are roadworthy	• Immediately increase traffic enforcement around vehicle roadworthiness	3A(i)	Short	RTMC
	• Improved surveillance of vehicle testing stations to combat corruption and ensure that vehicle testing is robust	3A(ii)	Short	RTMC
	• Implement periodic roadworthy testing programme for all vehicles as well as specifying incremental checks for public transport vehicles	3A(iii)	Medium	RTMC
	• Improve the roadworthiness of the Public Transport vehicle fleet	3A(iv)	Medium	RTMC
Increase vehicle safety standards	• Enhance visibility of vehicles through "Lights-On" programme	3B(i)	Short	RTMC
	• Research new technologies in vehicle testing, and set standards to internationally acceptable levels including the use of latest technology (e.g. dash-cameras, tachometers)	3B(iv)	Medium	RTMC

Table 23: Actions for safer vehicles

PILLAR 4: Safer Road Users

Theme	Intervention	ID	Period	Coordinating Agency
Improve road user behaviour – Awareness/ involvement	• Incorporate road safety education and awareness campaigns directly under the coordination of the RTMC.	4A(i)	Short	RTMC
	• Coordination of public awareness campaigns – Develop and rollout public education campaigns (Focus on speed, seatbelt use and drunk/drug-driving, distracted driving behaviour).	4A(ii)	Short	RTMC
	• Rollout a responsive campaign empowering public transport passengers and other road users to report poor and/or dangerous driving ('Speak out' campaign).	4A(iii)	Short	RTMC
	• Develop and rollout programmes of community based engagements by introducing the National Prayer Day and other road safety awareness programmes	4A(iv)	Short	RTMC
	• Devise focused persuasive road safety behaviour change campaigns targeting all road users.	4A(v)	Short	RTMC
	• Conduct research into new opportunities for youth, women and people with disabilities in road safety and create opportunities for them to pursue careers in road safety.	4A(vi)	Short	RTMC
	• Involve citizens especially the youth in leading safer road user behaviour (Introduce Road Safety Badge System – at local organisation and community development level e.g. scout clubs, youth clubs, school badges etc.).	4A(vii)	Medium	RTMC
	• Explore and implement sports and popular-culture based road safety interventions.	4A(viii)	Medium	RTMC
	• Conduct research into incentives for compliant road user (specifically fleet owners and drivers) behaviour (Behavioural economics research).	4A(ix)	Long	RTMC
Improve road user	• Develop and rollout public education programme to protect VRUs.	4B(i)	Short	RTMC

Theme	Intervention	ID	Period	Coordinating Agency
behaviour – Education/training	• Enhance school-based safety programmes including scholar patrol, pedestrian safety and cyclist education.	4B(ii)	Short	RTMC
	• Implement traffic management plans for education institutions.	4B(iii)	Short	RTMC
	• Revise driver training processes and testing (all license types, including K53 and Learners Licence tests) - Investigate opportunity for school and TVET-based graduated learner driver programmes to enable learners to acquire drivers' licensing together with their grade 12 or technical and vocational qualifications.	4B(iv)	Medium	RTIA/RTMC
	• Teach children from pre-school level about keeping safe on roads.	4B(v)	Medium	RTMC
	• Introduce sustained road safety education in the basic education curriculum.	4B(vi)	Medium	RTMC
	• Incorporate technology for driver training and licencing to improve driving abilities of new drivers.	4B(vii)	Long	RTMC/RTIA
Improve enforcement effectiveness	• Ensure that traffic departments provide a 24/7 service nationally.	4C(i)	Short	RTMC
	• Develop, implement and enforce intelligence-led adherence to road laws, with focus on protection of VRUs and passengers, through the use of seatbelts and child restraints.	4C(ii)	Short	RTMC
	• Urgently investigate the deficiencies in current enforcement practices and systems, and rectify.	4C(iii)	Short	RTMC
	• Enforce stricter adherence to seatbelts safety standards on all road-based public transport vehicles and the use thereof.	4C(iv)	Short	RTMC
	• To improve police enforcement intelligence through appropriate use of latest technology (e.g. integrated enforcement system, speed-over distance technology).	4C(v)	Medium	RTMC
	• Identify and address of high risk road users for focused interventions.	4C(vi)	Medium	RTMC
	• Start regular national traffic patrols along hazardous/high risk locations.	4C(vii)	Medium	NPA
	• Improve enforcement and consider the introduction of Traffic Courts.	4C(viii)	Medium	RTMC
	• Implement repeat offender disqualification together with rehabilitation programmes for license reinstatement (refers to drivers exhibiting reckless behaviour e.g. intoxication, negligence etc.)	4C(ix)	Long	RTIA
	• Implement medical disqualification – and rehabilitation – (Physically unfit drivers).	4C(x)	Long	RTMC
Increased protection for VRUs	• Establishment of community-based pedestrian/VRU safety teams.	4D(i)	Short	RTMC
	• VRU safety to be included as a key component of Road Safety Manual.	4D(ii)	Short	RTMC
	• Implement NMT policy requiring roads authorities to prioritise vulnerable road users.	4D(iii)	Medium	DOT

Table 24: Actions for safer road users

PILLAR 5: Post-crash Response

Theme	Intervention	ID	Period	Coordinating Agency
Increase effectiveness of first responses	• Deployment of ambulances at high risk locations during peak periods.	5A(i)	Short	DoH
	• Strengthen interaction with DoH and private medical sector in post-crash response (Also HPCSA, medical schools, MRC, etc.).	5A(ii)	Short	RAF
	• Clarification of on-scene response roles / Areas between SAPS, National Traffic Police, Metro Police, Provincial Traffic, Municipal Traffic, etc.	5A(iii)	Short	RTMC
	• Investigate the feasibility for Traffic Police to be legislated to handle fatal crash investigations.	5A(iv)	Short	RTMC
	• Introduce technology use on crash scene to obtain precise location of crashes.	5A(v)	Short	RTMC
	• Increase crash investigation capacity at SAPS and other agencies involved with the function.	5A(vi)	Medium	RTMC
	• Mobilisation of intensive care ambulances for high risk rural sites.	5A(vii)	Long	DOH
	• Increase the number of trained trauma medical personnel, nurses, paramedics, etc. in collaboration with the Health and Welfare Sector Education and training Authority (HWSETA).	5A(viii)	Long	DOH
	• Incentivise Private Health establishments to treat road crash victims.	5A(ix)	Long	DOH
Simplify access to post-crash care	• Full roll-out of the Road Accident Fund model to improve access to quality healthcare and to make the application for financial assistance efficient and easily accessible to all communities.	5B(i)	Short	RAF
	• Implement a single emergency response number across South Africa.	5B(ii)	Short	RAF
	• Introduce RABS.	5B(iii)	Long	DOT

Table 25: Actions for post-crash response

5.9. Steering and governance

The responsibility of implementation

For each intervention, there is a lead agent responsible for ensuring the successful execution of that particular component of the strategy. The table below summarises the general governance structure of road safety and highlights the primary responsibilities of different agencies per intervention type.

Development of Legislation & Policy, Monitor Implementation and Conduct Impact Assessment **Department of Transport**				
Development of road safety plans and targets – Coordinate Deployment of Resources **RTMC**				
Law enforcement	**Road Safety Education**	**Engineering**	**Monitoring & Evaluation**	**Emergency & Post Crash Response**
• Metro Police • Municipal Traffic Police • Provincial Traffic Police • National Traffic Police • CBRTA • SAPS • DoJ	• All road entities • Municipal Road Safety Departments • Provincial Departments of Safety and Liaison	• SANRAL • Provincial Departments of Roads • Municipal Infrastructure Departments	• DoT	• RAF • DoH • SAPS • RTMC • SANRAL • Provincial Traffic • Metro Police • Tow Truck companies

Table 26: Responsible agency per intervention focus

The strategy document recognises that the government has assumed the lead in the development of the Road Safety Strategy 2016 -2030 notwithstanding that the issue of road safety is common to a broader range of stakeholders, which includes citizens, the private sector and greater South African society. The successful implementation of the strategy is thus emphasised as a collective responsibility and not the work of government alone.

Road Safety Strategy Oversight

The execution of the strategy implementation is largely subject to management and commitment by government to the cause of road safety in South Africa. In light thereof, an inter-ministerial oversight council, hereafter referred to as the Council, must be established to ensuring this feat is realised.

The Council should take on the following structure:

- The Council should consist of the following members appointed by the Presidency:
  - A person, who in the opinion of the Presidency, is an expert on road safety, possessing special knowledge regarding road safety supported by relevant training and experience;
  - A person nominated by the road safety lead agency, the Road Traffic Management Corporation (RTMC), as a representative of the agency
  - A person nominated by the Road Safety Advisory Council, as a representative of the advisory council

- A member of the Presidency, designated by the Presidency as a chairman; and
- A person designated by the Presidency as the deputy chairman.
    - Six members shall be Ministers or representatives appointed by the relevant Ministers of the following national departments of government:
- Department of Transport;
- Department of Justice;
- Department of Health;
- Department of Basic Education;
- Department of Higher Education and Training;
- Department of Cooperative Governance.
    - One member shall be the South African Police Commissioner or appointed representative by the South African Police Commissioner
    - Other members of the Council should include representatives of other road safety Agencies
    - Representatives from business, NGO's, SBO appointed by their own constituencies

The objectives of Council shall be as follows:

- Strengthen the governance, leadership and management of the NRSS as the main response to road safety across national, provincial, district and local levels of government;
- Facilitate discourse between government, all other parties and the public to ensure alignment on the NRSS as the main response to road safety in accordance with other existing transport plans, policies and strategies, including but not limited to the NDP (2030);
- Coordinate multi-sectoral stakeholders and assign responsibilities including but not limited to policy review, programme management and coordination, technical assistance and capacity building and sectoral support, for implementation of the NRSS in accordance with the mandates of each stakeholder and aligned to the requirements of the NRSS;
- Monitor the progress of the implementation of the NRSS according to the targets set in the NRSS and evaluate the progress annually;
- Report on the progress of the implementation of the NRSS at each sitting of the Council;
- Identify new, and strengthen existing partnerships for the execution of the NRSS among government agencies, non-governmental organisations (NGOs), the private sector, fund donors, agencies of the United Nations, victims of road injury/survivors of road crashes, communities, and all other related parties; and
- Mobilise resources (including if required, the allocation of existing and additional funds and human resources) for the financing and staffing of the NRSS, including but not limited to estimating expenditure and resource needs, fund-raising from domestic and international institutions, including Treasury, donor coordination and investigating new sources of funding.

In the process of establishing this inter-ministerial oversight council, consideration must be made for the institutional arrangement and mandate of the Council to ensure that the roles of strategic, managerial and implementation oversight occur.

Monitoring and evaluation

The implementation of the Road Safety Strategy must be tracked and progress monitored and evaluated to ensure delivery to plan in accordance with planned timeframes. The implementation components should be captured in the annual business plans of all departmental or agency units and monitored and evaluated in accordance with performance contracts. Annual reports on the progress of the strategy need to be published, within six months of year end. Any required adjustments or revisions to the road safety strategy must come into effect within a time period as specified by the NRSCC in an effort to ensure that deviations do not compromise the strategic objectives and targets.

Risk and mitigation actions

Table 27: Key risks and mitigating actions, lists critical risk factors that should be considered for implementation of the strategy. In addition, mitigating actions are listed which aim to address these risks:

Potential Risk	Mitigating actions
Absence of impetus to drive implementation within departments and drive social change through public engagements	• Government support should be illustrated through regular public commitments regarding road safety • Government support for resources and funding to implement NRSS • Allocate appropriate funding towards road safety agencies • Establish or amend legislation regarding road safety where necessary • Develop continuity plan for road safety in the event of an institutional change • Establish a National Road Safety oversight committee, headed up by the Minister of Transport, with the mandate and authority to deliver of the implementation of the strategy
Operational Performance: operationalisation of the strategy; lead agency and related road safety stakeholder performance below expectation (failure to deliver to plan)	• Develop an overarching detailed implementation plan • Draw up specific action plans per agency assigning responsibility along with allocated human and financial resourcing for task delivery • Develop project milestones for the implementation of the action plans and against which to regularly evaluate progress • Link the delivery of the action plan to employee performance appraisals
Lack of accurate data due to lack of advancement in data systems and technology, inefficient data collation and distribution processes	• Establish centralised database platform with access for all road safety stakeholders • Establish standardised process to capturing and collation of road safety related statistics • Initiate frequent audits of road safety and related transport data • Implement use of intelligent systems for road traffic, law enforcement and road safety
Opportunity for fraud and corruption	• Provide rigorous, adequate, periodic training for road safety, transport and law enforcement officials • Review and provide adequate remuneration to road safety, transport and law enforcement officials • Institute zero tolerance approach to fraud and corruption across government departments and all road safety, transport and related agencies
Lack of funding	• Approve budget for road safety (National Treasury)

Potential Risk	Mitigating actions
	• Support and motivate for increased funding where necessary • Reallocate existing funds within DoT, road safety agencies and related institutions
Insufficient agency capacity and mismanagement of human resources (including stakeholder participation)	• Conduct capacitation exercise across DoT, road safety agencies and related institutions • Support motivation for additional human resources if necessary • Eliminate or repurpose existing superfluous resources • Link the delivery of action plan to employee scorecards
Lack of ongoing monitoring and evaluation	• Initiate reporting cycle frequency according to milestones on the implementation plan • Institutionalise reports for the attention of the Minister of Transport • Develop Annual Performance Plan reporting on all aspects of road safety • Publically publish annual progress to plan

Table 27: Key risks and mitigating actions

Policy, legislative and institutional reform

The following plans, policies, and legislation need to be amended/effected/reviewed to enable effective implementation of this strategy:

- Review of the National Road Traffic Act, 93 of 1996, as amended.
- Finalisation of the amendment and implementation of AARTO.
- Promulgation of the RABS Bill
- Driving Schools Regulation

6. Concluding Remarks

In conclusion, the strategy has made an extensive effort to take into account the full spectrum of road safety across all functions, stakeholders and users. Understanding the sector and interrogating the nature and complexity of the challenges relating to road safety is at the centre of the approach, so as to develop a holistic strategy which is relevant, responsive and robust over an extended implementation period. The impetus of the strategy is to reduce the number of fatal crashes and related fatalities on South African roads by 50% from the 2010 baseline by 2030. This target is only achievable if the paradigm that ***everyone is responsible for road safety*** in the country is adopted and acted upon. However, this responsibility must be articulated in order to assign accountability and ensure there is a motivated drive by government to bring about a change in the current road safety landscape.

To this end, the interrogation of the challenges yielded a set of strategic themes, which needed to be unpacked and developed into objectives, key performance areas and targets. In line with international best practice and global guidelines, these components of the strategy were framed according to the Five Pillars for road safety, as propagated by the United Nations Decade of Action for Road Safety. Furthermore, the framework provides a two-fold approach to the strategy focusing on both the strategic requirements and the implementation plan. It also addresses what governance and institutional requirements are needed to ensure and enable the strategy to be executed. The principle throughout the strategy is that implementation must happen in a coherent and synergised manner, along a predetermined timeline in order to bring about the desired changes to the road safety environment, address the challenges identified and establish a new reality aligned to the vision of the strategy for safe and secure roads.

The user-centric perspective of the strategy aims to put people and the conservation of life at the centre of the strategy. In meeting its obligation to its citizens to bring about a safe and secure road environment, the government will meet its own targets but must also achieve its global obligation as a participant in the UNDA to reduce the number of fatal crashes and fatalities globally.

Based on the analysis completed there are four critical areas for intervention that comes to the fore. These areas are found to be either directly or collectively at the root of the challenges within the road safety environment and are equally the source of the solutions which can mitigate or resolve these challenges. It is therefore necessary to prioritise the interventions which will bring about a change in:

- **Road user's behaviour**, which is seen locally and internationally as the greatest contributing factor to road crashes. Changing behaviour can only be affected by ensuring users are *educated* and *aware of road safety*, *trained* to behave appropriately and effectively *discouraged* from transgressing laws through enforcement. This includes the need to eliminate corruption.
- With large proportion of deaths on the roads being pedestrian related, emphasis needs to be placed on **developing and refining infrastructure design aimed at protecting VRUs** specifically.

- The entire strategy hinges on the **effective leadership and governance** to oversee that implementation is completed and operational requirements are effectively addressed.
- **Data and knowledge management** is an enabling element and a major shortcoming in the South Africa environment. Addressing shortcomings in this space will allow for greater efficiency in the application of resources and better tracking of progress

Each element or component of road safety is complex in nature and could potentially be the subject of extended research and the formulation of targeted and specific strategies respectively. In the implementation process, further development of a strategic approach for specific areas may be identified and pursued.

APPENDIX