**DOCUMENT CONTROL SHEET**

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<thead>
<tr>
<th>Document title</th>
<th>A study for the National Road Safety Steering Committee of South Africa</th>
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<tr>
<td>Work package:</td>
<td>WP5</td>
</tr>
<tr>
<td>Deliverable</td>
<td>5.10</td>
</tr>
<tr>
<td>Version</td>
<td>2.0</td>
</tr>
<tr>
<td>Last version date</td>
<td>01/04/2019</td>
</tr>
<tr>
<td>Status</td>
<td>Final</td>
</tr>
<tr>
<td>File Name</td>
<td>D.5.10RSM in SouthAfrica28012019_finalreport.doc</td>
</tr>
<tr>
<td>Number of pages</td>
<td>102</td>
</tr>
<tr>
<td>Dissemination level</td>
<td>Public</td>
</tr>
<tr>
<td>Responsible author</td>
<td>G. Schermers, M. Small, E. V. Niekerk</td>
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<td>Editors</td>
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**VERSIONING AND CONTRIBUTION HISTORY**

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<tr>
<td>1</td>
<td>30/12/2018</td>
<td>G. Schermers, M. Small, E. V. Niekerk</td>
<td>1st draft</td>
<td></td>
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<tr>
<td>2</td>
<td>01/04/2019</td>
<td>G. Schermers, M. Small, E. V. Niekerk</td>
<td>Final</td>
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<tr>
<td>AARTO</td>
<td>Administrative Adjudication of Road Traffic Offences</td>
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<td>CBRTA</td>
<td>Cross-Border Road Transport Agency</td>
</tr>
<tr>
<td>ChoCOR</td>
<td>Culpable Homicide Crash Observation Report</td>
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<td>COTO</td>
<td>Committee of Transport Officials</td>
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<td>DALYs</td>
<td>Disability Adjusted Life Years</td>
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<tr>
<td>DBE</td>
<td>Department of Basic Education</td>
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<td>DoH</td>
<td>Department of Health</td>
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<td>DoJ</td>
<td>Department of Justice</td>
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<td>DoT</td>
<td>(National) Department of Transport</td>
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<td>DTI</td>
<td>Department of Trade and Industry</td>
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<td>eNaTIS</td>
<td>Electronic National administrative Traffic Information System</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>iRAP</td>
<td>International Road Assessment Programme</td>
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<td>ISO</td>
<td>International Standards Organisation</td>
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<td>MEC</td>
<td>Member of the Executive Council</td>
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<td>MinMEC</td>
<td>Ministers and Members of Executive Councils Meeting</td>
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<td>NCAP</td>
<td>New Car Assessment Programme</td>
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<td>NCDMS</td>
<td>National Crash Data Management System</td>
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<td>NDP</td>
<td>National Development Plan 2030</td>
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<td>NGO</td>
<td>Non-Governmental Organisation</td>
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<td>NRSCC</td>
<td>National Road Safety Co-ordinating Council</td>
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<td>NRSS</td>
<td>National Road Safety Strategy 2016-2030</td>
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<td>National Road Safety Steering Committee</td>
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<td>NRTEC</td>
<td>National Road Traffic Law Enforcement Code</td>
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<td>RABS</td>
<td>Road Accident Benefit Scheme</td>
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<td>Road Accident Fund</td>
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<td>RIMS</td>
<td>Road Incident Management System</td>
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<td>RTIA</td>
<td>Road Traffic Infringement Agency</td>
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<td>RTMC</td>
<td>Road Traffic Management Corporation</td>
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<tr>
<td>SABS</td>
<td>South African Bureau of Standards</td>
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<tr>
<td>SANRAL</td>
<td>The South African National Roads Agency SOC Ltd</td>
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<td>SANS</td>
<td>South African National Standard</td>
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<td>SAPS</td>
<td>South African Police Service</td>
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<td>SDG</td>
<td>Sustainable Development Goals</td>
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<td>TAC</td>
<td>(Victorian) Transport Accident Commission</td>
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<td>UN</td>
<td>United Nations</td>
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<td>WHO</td>
<td>World Health Organisation</td>
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1 Executive summary, observations and project options

This study was originally conceived as a road safety management capacity review, following an established methodology that is being applied in four other countries in the SaferAfrica project (www.saferafrica.eu). For a variety of reasons, this was not possible for South Africa. A more limited, strategically oriented study was conducted instead.

Along with the review of several documents, such as the National Road Safety Strategy 2016-2030 (NRSS), several people within stakeholder organisations have been interviewed, focusing on the agency’s road safety roles and responsibilities, particularly in relation to the NRSS, and any observations about:

- current national activity regarding road safety management and barriers to progress
- the lead agency specific role and activities regarding road safety management and barriers to progress.

The goal of the interviews was to gather insights from stakeholders and develop a high-level understanding of national road safety management systems within South Africa, sufficient to provide options for a path forward to better results.

These observations are focused on higher order road safety management issues.

1.1 National road safety strategy 2016-2030

The NRSS is very consistent with key elements of the safe system approach to road safety. However, experience in many countries shows that road safety strategy implementation is much more difficult than strategy preparation. Many countries continue to struggle with implementing a genuinely systems-based approach, and this is apparent in South Africa as well.

As in many countries, stronger road safety management systems are needed in order to implement the strategy and achieve the country’s safety target. One major element of this in South Africa is the need to bring senior officials with responsibility for road safety, and road safety professionals generally, up to speed on modern road safety analyses, techniques and practices.

1.2 Governance

The National Road Safety Steering Committee (NRSSC) comprises well over 30 representatives of many different national and provincial organisations. Even given South Africa’s constitutional context, with its distributed powers and functions, this seems extremely large. Agency heads are not generally participating in this governance body.

The overall impression is that the NRSSC may be able to serve an essential function for road safety in South Africa – to bring all public agencies and spheres of government together to engage on road
safety issues. However, the NRSSC may find it difficult to provide the strategic national leadership 
and governance of road safety that is required due to the size of the body, and the lack of 
participation by responsible agency heads.

### 1.3 Results

South Africa has a single national road safety target – to reduce fatalities by 50% from the 2010 
baseline of 13,967 (to approximately 6985) by 2030. There has been no material progress towards 
this target. The target was out of step with the ambition of the United Nations (UN) Decade of 
Action 2011-2020 which set as its goal a 50% reduction in fatalities by 2020. This will not be met in 
South Africa, or globally.

A target of less than 7000 fatalities could be reinforced as the focus for road safety in South Africa to 
2030. Serious injury outcomes could also be monitored and reported, and targets set for 2030. 
Given the high proportion of pedestrian trauma, it would be useful to set specific targets for 
reduction in pedestrian deaths and serious injuries.

Good practice is for final road safety outcome targets such as these to be supported by a wider 
results framework. There are key performance indicators in the NRSS, but these are focused on 
delivery, and there are few intermediate outcome measures or targets which leaves a gap in 
performance management. A full road safety results framework would start at a national level and 
cascade to provincial and local levels as appropriate, and from final safety outcomes through to 
intermediate outcomes and required deliverables.

This has been the subject of recent attention following on from the UN Sustainable Development 
Goals, and a more detailed set of voluntary performance targets for countries to consider is set out 
in this report.

### 1.4 Lead agency and coordination

The Governance Agreement of the Road Traffic Management Corporation (RTMC) has not been 
reviewed by the study team, and the team cannot comment on the details of the mandate. 
However, it is understood that some management functions identified within the RTMC Act (such as 
vehicle registration and licensing, vehicle and roadworthiness testing, and driver testing and 
licensing) are being managed by the Department of Transport.

Stakeholders expressed uncertainty as to whether the RTMC has enough power to be an effective 
lead agency for road safety in South Africa. The lead agency does not have to do everything in road 
safety, but it does need to be sufficiently strong to lead the wider road safety partnership, influence 
strategies and actions by institutions, and develop a compelling strategic message in favor of road 
safety within the community.

The RTMC provides the secretariat role for the NRSSC. The NRSSC has well over 20 sub- 
committees, technical committees and working groups reporting to it. This may make coordination
of safety focused activities difficult and runs the risk of dissipating focus on the smaller number of critical projects that are likely to have the greatest impact upon safety.

1.5 Legislation and compliance

There appear to be several important legislative and compliance initiatives which for one reason or another have not been acted upon. For example:

- There is still no resolution across the country to accepting breath alcohol readings as evidence in drink driving cases, which reduces traffic enforcement ability to tackle drink driving with evidence based general deterrent strategies. The procedure for acceptance of the breath alcohol as evidence has been followed through only in the Western Cape.
- The South African Police Service is not legally allowed to enforce the speed limit, which means it cannot assist in tackling a primary safety problem on South Africa's roads.
- The Administrative Adjudication of Road Traffic Offences (AARTO) reform has not been delivered, thus reducing the capacity of agencies to administer good practice administrative penalties including license sanctions.

The National Road Traffic Law Enforcement Code (NRTLEC), which is a statutory responsibility of the RTMC, has still not been promulgated. In a country with well over 200 different traffic enforcement units spread across all three spheres of government, this is a critical reform. It is understood that a review committee will report in early 2019.

1.6 Funding and resourcing

While it is recognized that Government budgets are under pressure, further public investment will be needed in road safety in order to achieve the goals of the NRSS. Some of this investment will need to take the form of one-off capital expenditures, and ongoing operating expenditures. The most likely sustainable funding sources are typically from changes to ongoing user charges. Aside from general government revenues, options for raising the necessary safety investment funds would be changes in the rate of the fuel excise, vehicle licensing charges, the allocation of traffic fine revenue (particularly associated with AARTO), and injury insurance premiums, or a reallocation of these sources to safety.

Smaller and rural provinces report challenges regarding implementation of the national road safety strategy. A funded strategy would improve the influence of the lead agency through contractual responsibilities linked to funding. This would be assisted by preparing a national assessment of the road safety investment needs to 2030, the funding strategies to meet those needs, and an allocation process to ensure funds are well spent. The recent crash costs analysis provides essential input to allow a high-level cost-benefit analysis to be made in support of road safety.

1.7 Promotion

There is professional recognition amongst decision makers and influencers of the need to increase understanding of road safety priorities. However, promotional activity for road safety appears to be
at a low ebb in South Africa and very little budget is allocated to this function. There appears to be no high-profile champion for road safety amongst the stakeholder agencies or political leaders.

There is a need for evidence-based promotion in support of enforcement activity, and more coordinated delivery of safety focused promotions throughout national and provincial agencies. One of the requests from provinces is well-researched and evaluated communication and education projects, and resources based on these that they can use in their daily work.

### 1.8 Research, evaluation and knowledge

Research and evaluation functions are vital for guiding implementation towards reducing deaths and injuries within the correct focus areas and effective projects. Knowledge needs to be actively disseminated through ongoing capacity building programs to sustain a cadre of road safety professionals, and healthy debates about road safety. South Africa has forums for the discussion of research priorities and hopefully these will inform future projects and lead to cooperation amongst different agency road safety programmes.

The departure point of research is a well-managed crash and traffic data base. There is a recognition in both the traffic and engineering community of the RTMC contribution to the fatality data, but also that the system needs to provide more timely injury information to improve resource allocation and focused interventions.

There is an urgent need to develop a road safety results framework in South Africa which can drive improvement through national and provincial agencies. This is relevant for infrastructure safety and vehicle safety, but is perhaps within closest reach in regards to user safety. The preparation and implementation of an ongoing program of observational surveys regarding key driver behaviour – speeding, drink driving, and seatbelt wearing – would reinforce a national results focused road policing approach to safety on the road.

### 1.9 Systems driven investment in interventions

Investment in stronger road safety management systems would drive more effective interventions, and increase the likelihood of South Africa achieving its 2030 target of less than 7000 fatalities per annum. Major intervention options to 2030 include:

- Public infrastructure safety reporting on SANRAL’s network, extending this to the primary provincial and metro road networks, estimating the infrastructure safety backlog, and funding a sustained safety investment program and complementary speed limit setting program to address it
- Completing the set of highest priority United Nations vehicle safety standards being regulated in South Africa, and investing in an ongoing consumer focused crash testing program to drive consumer demand towards a much safer vehicle fleet
- Getting national order into the standards and delivery of road policing and driver licensing services, such that motor vehicle drivers are confident that if they break key safety rules they will be strictly punished, and removed from the road.
Not everything can be done at once however. Project options for initial delivery need to be considered against the current situation in South Africa, both from a systems and a delivery perspective.

### 1.10 Project Options

As part of the SaferAfrica project, five to ten short to medium-term projects with possible significant impact on results or creating enabling environment for the implementation of the national strategy, are identified for further development.

The steps are:

- Prioritise and develop five to ten improvement project options
- Prepare terms of reference
- Objectives
- Main tasks & outputs
- Scheduling of tasks
- Professional skills and experience required
- Broad estimate of cost
- With assistance from stakeholders, define legislative, regulatory, organisational, and financial institutional barriers to the implementation of these projects
- Develop short to medium term strategy to overcome barriers

Following the strategic study report, a prioritized schedule of identified projects would be discussed and developed with the NRSSC up to a terms of reference stage. Risks and barriers to implementation would be identified and addressed.

The idea is not to come up with new projects as compared to the list of activities and projects in the National Road Safety Strategy, but to identify key projects that might provide short or medium-term wins for road safety in the country.

Implementation of the NRTLECs is one of the most crucial projects. However, since a review committee have been tasked with reporting on this early in 2019, this is not included in the project options.

Twelve areas of activity have been identified by the authors which each contain several project options. These project options have not been tested by the study team in any stakeholder forum, and so cannot be prioritized here.

Up to six of these will be prepared for further consideration and investment decision by the NRSSC:

- Governance and leadership – for example, strengthening RTMC mandate, NRSSC coordination capacity, and capacity building and training of officials and other leadership positions
• Road traffic safety management systems involving the private sector – for example, a voluntary pilot program to encourage companies which already have ISO management certification (ISO 9001 Quality, or ISO 14001 Environmental) towards certification under SANS 39001 Road Traffic Safety Management Systems

• Pedestrian protection from road traffic injury – for example, preparation of a national pedestrian safety action plan, or demonstration projects in both urban and rural corridors involving both infrastructure and speed limits

• National speed management reform – for example, a national review of safe speed limits, and comprehensive speed management demonstration projects on national, provincial or local road networks

• UN vehicle safety regulations – for example, leveraging South Africa’s status as a contracting party to the 1958 and 1998 Agreements by applying all the regulations promoted through the World Health Organisation (WHO), or investing in a new car assessment program for South Africa

• Driver licensing – for example, review policy against good practice principles to map the regulatory path to a safer Graduated Licensing System, overhaul identity management and security within the register, or include modern technology in driver testing processes

• Traffic law enforcement – for example, rollout consistent planning and deployment strategies across all provinces, or review legal processes to ensure that non-compliant users are deterred from serious or repeat traffic offending

• Monitoring and evaluation – for example, developing an ongoing program of observational surveys for key driver behaviours (such as speeding, seatbelt use, drink driving) which can be used to evaluate enforcement and awareness programs

• Improvement of the crash data system – for example, improve injury information quality control and linkage to health system indicators, or develop options for future improvements in database standards and national-provincial linkages

• Road Accident Fund – for example, undertake a good practice review of the proposed no fault scheme to ensure it is financially viable, supports better post-crash response and treatment, and the future funding needs for road safety in South Africa

• Communication framework – for example, a research-based programme to develop branding, national communication framework, to support provincial programmes; identification and development of new communication resources, particularly those which can be deployed alongside enforcement activity; or resourcing and capacity building of road safety officials and provincial departments

• Road safety education – for example, developing a cross-agency program to develop classroom and safe route programmes reaching all schools, or work with Safe Schools of Basic Education to look at integrating road safety into the Safe Schools Programmes

• Community based programmes – for example, developing a framework for use by local government to encourage better understanding and participation in road safety, and building grassroots demand for proven initiatives.

While the projects have not been prioritized, it is suggested that the following observations could be applied to such a process:

• Without addressing observable issues in governance and leadership, the 2030 target is unlikely to be achieved
• A systematic, well funded, national demonstration project is required to show what can be achieved through the safe system approach in terms of generating a safe road environment – either the pedestrian or speed reform project is a very high priority
• Major progress is required in relation to vehicle safety, driver licensing, traffic law enforcement and road safety data
• There is high potential safety value in advancing road safety management systems across South African enterprise, and in promoting a much stronger safety focused reform of South Africa's injury insurance scheme
• One of the three final project options (or a combination) needs to be addressed to nurture community demand for road safety.

Building knowledge and understanding, and the capacity to act is critical to each of these options. Across all strategic projects, opportunity needs to be taken to focus on capacity building for those decision makers and professionals who are in a position to significantly improve the safety of road users.
2 The SaferAfrica project

The SaferAfrica project aims to establish a Dialogue Platform between Africa and Europe focused on road safety and traffic management issues.

The platform will work at two levels. A decision making level, run by a Management Board with Working Groups addressing specific topics. The Management Board will be constituted by prominent institutions like the European Commission, the African Union Commission, International Financial Institutions, and Regional Economic Communities. The technical level will involve government and research institutions, international and stakeholders organizations (e.g. NGOs), with a balance between African and EU partners. The Dialogue Platform is intended to constitute a stable body, able to orient road safety policies beyond the project end as well as facilitating activity during the project.

The project activities will be oriented to the "Safe System" approach and grouped in four pillars: RoadSafety Knowledge and Data; Road Safety and Traffic management Capacity Review (which is the focus of this report); Capacity Building and Training; Sharing of Good Practices. These have been specifically identified to be aligned with the mid-term review of the African Road Safety Action Plan.

The activity of the Platform will also focus on the reinforcement of the endogenous African capabilities through the dissemination of EU know-how. In addition to Twinning Programs, different training activities will be identified and carried out. Local contexts will be taken into account and studies on specific risk factors as well as transferability analysis of measures already tested elsewhere will be conducted.

2.1 Background

According to the Global Status Report on Road Safety 2015 of WHO, road traffic injures claim more than 1.2 million lives each year and have a huge impact on health and development. Despite significant efforts and actions implemented over the world, road traffic crashed are a leading cause of death among young people and the main cause of death among those aged 15-29 years. Without further effective action the WHO forecasts that road traffic injury will be the 7th leading cause of death for all by 2030. (Figure 2-1)

The economic impact heavily burdens national economies and households. Moreover, significant differences appear between countries. Data suggest that road traffic deaths and injuries in low- and middle-income countries are estimated to cause economic losses of up 5% of gross domestic product (GDP). The situation between high-, middle- and low-income countries is highly disproportionate, with low- and middle-income countries accounting respectively for 85% of population and 93% of road traffic deaths, but only for 60% of registered motorized vehicles.

The risk of a road traffic death varies significantly by region (Figure 2-2), and the disparity in road safety results in increasing. Using WHO regions, there has been a further deterioration in road fatality rates in the WHO Africa region from 26.1 fatalities per 100,000 population in 2013 to 26.6 fatalities per 100,000 in 2016. Over the same period, there was a further improvement in road fatality rates in the WHO Europe region from 10.4 fatalities per 100,000 population in 2010 to 9.3. Road trauma in Africa is projected to worsen further, with fatalities per capita projected to double over the period 2015-2030, while fatalities per capita are projected to decline by around 20% for HIV/AIDS and malaria.\(^2\) This Euro-African initiative comes at a critical time to arrest and reverse these projections.

The last estimation of WHO accounts for about 270,000 road traffic deaths in Africa. The problems are huge and caused by a number of factors which are complicated to manage. Typical problems include weak institutional management systems, the poor safety quality of road infrastructure and vehicles, the absence of or inefficiency of emergency medical systems, insufficient deployment of...
modern traffic management systems, inadequate legal and regulatory framework, weak enforcement of safety measures, lack of trained staff, and unsafe behavior of road users.

Years of road safety investment and capacity building by many European countries supported by important action from the European Commission, have led to significantly improved road safety conditions (Figure 2-3). Similarly, achieving the road safety performance of global leaders is unlikely to be achieved overnight in Africa, but will necessitate long-term investment and capacity building in road safety management.

Europe could play an important role in supporting African countries in improving their road safety and traffic management conditions to achieve better performance. Besides transferring and adapting to the local contexts the results of the European research and experiences significant support can be provided by all the European road safety stakeholders for designing and implementing a Regional / African vision towards a change of paradigm on road safety management.

Several actions are already on-going and important policy documents (i.e. the African Road Safety Charter and the African Road Safety Action Plan 2020), led by the AU and supported by UNECA and SSATP activities, are already in place paving the way for road safety improvements.

A next (and urgent) step in support of these efforts is in capitalising upon this political commitment to build and enhance existing activity. The aims is to promote the adoption of effective road safety management and sound innovative solutions towards a long-term goal of safe mobility in Africa.

![Figure 2-3 Fatalities per year in the EU since 2001, Source: EU Commission 2018](image)

### 2.2 General scope and context of the SaferAfrica Project

The primary role of the Dialogue Platform will be to act as a high-level and high-powered body that can help positively influence changes in the African regions. Its general goals are:
• Contributing to developing/designing actions related to the Action Plan (and, in particular, to its mid-term review) together with individual African countries/organisations.
• Assessing progress toward the goals of the Action Plan and, based on assessments of the solutions adopted by various countries, releasing recommendations.
• Increasing the endogenous capacities of African countries.
• Fostering the adoption of the principles of the Safe System approach, in which all elements of the road transport system are defined in an integrated way, with the aim of ensuring crash energy levels below what would to cause fatal or serious injury.

This approach is recommended to all countries, irrespective of socioeconomic status, by the leading international organisations concerned with road safety and development and is supported in good practice by a long-term Towards Zero or Vision Zero goal.

The actions and studies that will be carried out in the SaferAfrica project and related to road safety and traffic management are:

• Conducting capacity reviews
• Data collection and evidence gathering
• Analysis of specific risk factors
• Assessment of specific problems and mapping of critical areas
• Analysis of road safety assessment methodologies
• Analysis of road safety management systems
• Set up of methodologies and tools for targeting and measurement of future progresses
• Development and implementation of training programmes
• Definition of research and innovation needs.
• SaferAfrica has been organised into nine work packages, as set out below.

![Diagram of SaferAfrica project work packages](image)

*Figure 2-4  Fatalities per year in the EU since 2001, Source: EU Commission 2018*
3  Context

This section of the report introduces the project and provides the national and global context within which it is undertaken. This includes a brief discussion on the safe system approach to road safety and its application through South Africa’s National Road Safety Strategy.

3.1  The Project

This study was originally conceived as a road safety management capacity review, following an established methodology that was developed through the Global Road Safety Facility. It has now been applied in many national and sub-national contexts, in low middle and high-income countries, and is widely recognized as the strongest road safety diagnostic process available for a country. It also provides a means of bringing various stakeholders behind a common perspective on the critical step change requirements for a jurisdiction to tackle its road safety crisis.

The methodology is reliant on the deployment of specialist senior consultants who have experience working with the highest levels of government including Ministers and Chief Executives to address strategic road safety issues. It is also reliant on a clear political mandate from government. The SaferAfrica project made the senior consultants available, but was unable to secure a sufficiently clear mandate to deliver a road safety management capacity review. The SaferAfrica project is outlined in Appendix 1.

In order to provide some support for road safety stakeholders in South Africa, a significantly reduced but still strategically oriented study was undertaken. The SaferAfrica team (Martin Small and Elna van Niekerk) met with various government stakeholders in order to identify and consider:

- strengths and weaknesses in the national road safety management system
- complex and important safety management and implementation issues, and how to address them
- pragmatic next steps to build national road safety management systems.

Guided discussions were held with a number of people within stakeholder organisations, focusing on the agency’s road safety roles and responsibilities, particularly in relation to the National Road Safety Strategy 2016-2030, and any observations about:

- current national activity and barriers to progress
- the organisation’s activity and barriers to progress.

The goal of the interviews was to gather insights from stakeholders, and develop a high level understanding of national road safety management systems within South Africa, sufficient to provide project options to support better results.
Observations and project options were provided to the Chair of the National Road Safety Steering Committee ahead of its September 2018 meeting for feedback and any direction on future project support.

3.2 National perspective

It is important to identify the wider set of national frameworks within which road safety can be effectively managed.

3.2.1 National Development Plan 2030

Sustained action on road safety can play an important supporting role to many different elements of South Africa’s National Development Plan 2030\(^3\) (NDP), including economic development and social and environmental protection.

The NDP was published in 2012 and most directly references road safety in relation to “Promoting Health”. A health goal is set for reducing injury, accidents and violence by 50% from 2010 levels. The safety of road users is also addressed in relation to transport infrastructure.

Safety issues are focused on driver behaviour and associated compliance, rather than looking at safety on the road as part of a wider road traffic system. There is however some reference to the need to strengthen institutional capacity to manage road traffic, which is in line with the contemporary significance attached to this issue. There is no reference to the human losses caused by road traffic injury in relation to “Building Safer Communities”.

A key focus of the NDP 2030 is active citizenship and social activism, and a special focus on women and youth. It also sets the context of fighting poverty and deprivation through various sectors. Each sector has an obligation to give action to the NDP 2030, through selection of projects that would support it, where relevant.

3.2.2 National Road Safety Strategy

It is important that the NDP recognised the importance of road safety, but the issue required significantly further elaboration. A comprehensive and coherent road safety framework was outlined in the NRSS, which was published in 2017. It is clearly derived from the NDP, and also references international developments such as the UN Decade of Action on Road Safety 2011-2020. The NRSS has a vision to ensure “safe and secure roads”, and a strategic goal to “continually reduce the occurrence and severity of road crashes and consequently the level of fatalities and injuries in an efficient, integrated and coordinated manner”.

In line with the NDP, a target is set to reduce fatalities by 50% from a 2010 baseline by 2030. There were 13,967 fatalities in 2010, which would infer a 2030 fatality target of approximately 6985, and a 2020 mid-term target of approximately 10,475. A 50% reduction in fatalities over a period of two decades would not be considered an ambitious road safety target in global terms and is not in line


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with goals set within the African Union or the United Nations. There has been no progress in reducing the number of fatalities since 2010, with 14,050 fatalities recorded in 2017. While exposure has increased over time, the focus is on the number of South Africans suffering from death or serious injury on the road.

The strategy references the safe system approach to road safety. This is now a largely orthodox articulation of how to address road safety, although internationally it is proving difficult for many countries to implement, whether in low middle or high-income countries. The safe system approach is focused on achieving the ultimate goal of eliminating fatalities and serious injuries on the road, rather than simply seeking incremental improvement. 4

This ambition is a key element of the safe system approach, but is largely absent from the NRSS. That said, the following key strategic themes identified in the NRSS go some way to articulating the range of issues that could be considered as needing to be addressed in South Africa on the path toward the ultimate goal:

- 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.

The NRSS addresses interventions under the conceptual framework promoted through the United Nations Decade of Action 2011-2020, through the following five pillars: Road safety management; Safer roads and mobility; Safer vehicles; Safer road users; Post-crash response.

### 3.2.3 Constitution

It is important in countries with federal systems of government, such as the United States of America or Australia, or systems of government with constitutionally delineated responsibilities between national and sub-national government, such as Kenya and South Africa, to clarify road safety responsibilities between the different arms of government. Without doing so, it can become

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too easy for government to distance itself from the crisis, or position other actors as having the primary responsibility.

Even within the framework of the safe system approach, which places primary responsibility for safety on “system designers” as opposed to the traditional approach of blaming non-compliant users, separation of powers between government can become a means of stepping away from the issue. This is an issue which is increasingly recognised in Australia for example, which has eight sub-national jurisdictions compared to nine in South Africa.

Constitutionally, transport (and many other services such as health and education) is a responsibility of Australian States and Territories. Where the Australian Government once provided a critical road safety leadership role, there is mounting evidence of sustained disinvestment from the Australian Government, and leaving responsibility to the States. Yet the Australian Government continues to collect very high transport user revenues and invest heavily in transport infrastructure. It has sole responsibility for the safety of vehicles entering the national fleet.

Frustration at the slow progress being made in road safety in Australia led the Australian Minister of Transport to commission an inquiry into the National Road Safety Strategy. This inquiry was reported in September 2018, and focuses on the vital leadership role that needs to be played by the Australian Government. A road safety management capacity review undertaken on behalf of the Department for Transport in the United Kingdom addresses similar issues, in much greater depth. Appendix 1 sets out the findings, recommendations and conclusions of these two reports, emphasising the need for systematic action at a national government level.

South Africa is a constitutional republic with national, provincial and local spheres of government. Chapter 3 of the constitution sets out the principles of cooperative government in South Africa. Amongst other mechanisms, it requires all spheres of government to co-operate with one another in mutual trust and good faith by:

- fostering friendly relations
- assisting and supporting one another
- informing one another of, and consulting one another on, matters of common interest
- co-ordinating their actions and legislation with one another
- adhering to agreed procedures, and
- avoiding legal proceedings against one another.

These principles are very consistent with what is required in road safety, where the strength of multi-sectoral arrangements is a significant determinant of success.

Schedule 4 of the constitution sets out the following functional areas of concurrent national and provincial legislative competence which are most relevant to road safety: consumer protection; education at all levels excluding tertiary education; health services; traffic police; public transport; public works; regional planning and development; road traffic regulation; and vehicle licensing.

From a road safety perspective, Schedule 5 assigns exclusive provincial legislative competence in relation to: ambulance services; provincial planning; and provincial roads and traffic. In relation to
local government, Schedule 4 assigns competence in: municipal planning; municipal health services; municipal public transport, and municipal public works, and Schedule 5 allows provinces to assign responsibilities in: municipal roads; street trading; street lighting; traffic and parking

Specification of the various responsibilities between the three spheres is provided in national legislation.

The net effect of this brief constitutional survey is that the Government of South Africa has responsibilities for all but a few of the critical elements that are needed to drive improved road safety results in the country. All of these elements are shared with the nine Provincial Governments, and very few aspects fall under the sole control of local government. This heavily disaggregated institutional environment makes the capacity and quality of the national road safety leadership role even more important.

### 3.3 Global perspective

This national road safety setting needs to be considered in terms of a wider global crisis which is unfolding.

#### 3.3.1 A critical determinant in poverty

Road traffic injury is a non-communicable disease of mobility which disproportionately strikes the poor and the vulnerable. While death is the most obvious and shocking injury consequence, non-fatal injury can itself have dramatic flow-on consequences in terms of poverty and life-chances. These are summarised in Figure 3-1 below.

![Figure 3-1 Road Traffic Injury and Cycle of Poverty](image-url)
3.3.2 A critical development issue

The UN Sustainable Development Goals (SGDs) that have been set to 2030 are the successor to the Millennium Development Goals set in 2000 for achievement by 2015. This included Goal 6: Combat HIV/AIDS, Malaria and Other Diseases.

Regrettably, road traffic injury was not included in the Millennium Development Goals, which appears to have led to a lack of priority. Road safety is now however recognised as a major development issue for low and middle-income countries, with a strong link to the anti-poverty agenda, and has now been mainstreamed into the SDGs, which were set in 2015.

The SDGs include a stand-alone road safety target within "Goal 3: Health", and is directly referenced in relation to a second target, within "Goal 11: Sustainable Cities and Communities":

- SDG 3.6: Halve road deaths and injuries by 2020
- Other SDG targets considered relevant to road safety are:
  - SDG 12.6: Encourage companies, especially large and transnational ones, to adopt sustainable practices
  - SDG 12.7: Promote public procurement practices that are sustainable, in accordance with national policies and priorities.

It is notable, particularly given road safety was not previously recognised as a development issue, that the WHO projected a worsening of the problem globally, while other persistent public health issues are projected to improve Figure 3-2 compares the projected progress on HIV/AIDS, malaria and road traffic injury between 2015 and 2030.

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WHO estimates that low and middle-income countries (LMICs) contribute to 90% of global road traffic deaths and they have double the fatality rates of high-income countries. The economic cost equates to up to 5% of GDP. The African region has the highest road traffic fatality rate per 100,000 population (26.6). South Africa’s rate (25.1) is lower than the African Region rate but higher than the overall world fatality rate of 17.4. Figure 3-3 illustrates the significant impact this projected deterioration is expected to have on Sub-Saharan Africa.
3.4 National data analysis

Low and middle-income countries are on the front line of the global road safety crisis.

Road crash and injury data systems are often not well developed in LMICs, and it is widely accepted that official records do not capture all road traffic fatalities, and even fewer serious injuries. This is a view held by practitioners within many countries, and is supported by the WHO’s global surveillance system.

3.4.1 WHO estimated fatalities

WHO uses available fatality and exposure data, and knowledge about vital registration systems in a country, to produce a periodic estimate of fatalities.

Table 1 below illustrates the variation between officially recorded fatalities in South Africa and the WHO estimate of fatalities, for 2010 and 2013. At a time of sustained growth in human and vehicle population, WHO’s estimated fatality rate in South Africa declined between 2010 and 2013, but then increased slightly to 2016.

There can be a great difference between officially recorded fatalities and WHO estimated fatalities, particularly in Africa. One of the features of South Africa is how close the official record and the WHO estimate is. Table 2 below summarises WHO data on South Africa.

Table 1 Officially Recorded and WHO Estimated Fatalities in South Africa

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2013</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Officially Recorded</td>
<td>14,804</td>
<td>13,802</td>
<td>14,071</td>
</tr>
<tr>
<td>Fatalities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WHO Estimated Fatalities</td>
<td>15,995</td>
<td>13,273</td>
<td>14,507</td>
</tr>
<tr>
<td>WHO Estimated Fatality Rate</td>
<td>31.9</td>
<td>25.1</td>
<td>25.9</td>
</tr>
</tbody>
</table>

Table 2 WHO data for South Africa

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Est. fatalities</td>
<td>16 113</td>
<td>15 995</td>
<td>13 273</td>
<td>14 507</td>
</tr>
<tr>
<td>Est. fatalities per 100 000 population</td>
<td>33.2</td>
<td>31.9</td>
<td>25.1</td>
<td>25.9</td>
</tr>
<tr>
<td>Population</td>
<td>48 576 763</td>
<td>50 132 820</td>
<td>52 776 130</td>
<td>56 015 472</td>
</tr>
<tr>
<td>Registered vehicles</td>
<td>9 237 574</td>
<td>9 587 781</td>
<td>9 909 923</td>
<td>9 909 923</td>
</tr>
<tr>
<td>GNI per capita (US$)</td>
<td>5 760</td>
<td>6 090</td>
<td>7 190</td>
<td>5 480</td>
</tr>
<tr>
<td>Pedestrians % of fatalities</td>
<td>39.1</td>
<td>-</td>
<td>33.4</td>
<td>38.4</td>
</tr>
<tr>
<td>Est. fatalities per 10 000 vehicles</td>
<td>17.4</td>
<td>16.7</td>
<td>13.4</td>
<td></td>
</tr>
</tbody>
</table>

Despite the increase in population and in number of registered vehicles between 2007 and 2013, the WHO estimated fatalities and fatality rates decreased. Pedestrian deaths as a proportion of total road traffic fatalities also decreased.

3.4.2 Reported fatalities and fatal crashes

The Road Traffic Management Corporation (RTMC), responsible for the management of the fatal crash system in South Africa, reported fatality figures slightly lower than those estimated by WHO. According to the RTMC road traffic fatalities reached a high of 15,419 in 2006, declined steadily through 14,804 fatalities in 2010 to a low of 11,844 fatalities in 2013, before increasing again. In 2017, 14,050 people died in 11,437 fatal crashes in South Africa. Figure 3-4 below tracks reported fatalities and fatal crashes from 2006 to 2017, and shows deterioration from reduced fatalities before 2013 to increased fatalities from 2013 onwards.

![Figure 3-4 Reported road traffic fatalities and fatal crashes in South, Source Africa 2006-2017 (RTMC)](image)

The reported fatality rate per 100,000 population decreased from 32.3 in 2006 to 24.7 in 2017. Similarly, the fatality rate per 10,000 registered vehicles declined from 20.1 to 12.7 over the same period. These rates are close to the WHO estimates, and are tracked in Figure 3-5 below.
Figure 3-5  Reported fatality rates in South Africa 2006-2017

3.4.3  Fatalities per road user type

Figure 3-6 illustrates the proportion of fatalities suffered by each type of road user in 2017. Pedestrian deaths constituted 38% of traffic fatalities in 2017, which is a significant increase, up from 33% in 2013. Motor vehicle occupants (drivers and passengers) comprise almost the entire rest of the fatalities (59%) with only a very small proportion of cyclists (3%).
According to the RTMC, human factors were the main contributing factor in 91% of the fatal crashes in 2017. Jaywalking pedestrians was the main factor in 24% of crashes, followed by hit-and-run (11%) and speed too high for circumstances (10%). A more systems focused analysis would likely identify the road and speed environment as the primary determining factor in the heavy proportion of pedestrian fatalities.

### 3.4.4 Crash type

Figure 3-7 reports on fatal crashes by crash type. Unsurprisingly, the dominant crash recorded is a single vehicle pedestrian crash, which comprised 36% of fatal crashes. Other single vehicle crashes (overturned, hit fixed object, and left road) made up a further 27% of crashes. 25% of fatal crashes involved multiple vehicles – most of these were head-on collisions.
3.4.5 Vehicle type involved in fatal crashes

During 2017 15,000 vehicles were involved in 11,437 fatal crashes – an average of 1.3 vehicles per crash. The vehicle type most involved in fatal crashes illustrated in Figure 3-8 below is motor car (48%), followed by light delivery vehicle (21%).

3.4.6 Location

Obtaining the exact location of crashes remains a challenge for the RTMC. Although the police records give an indication of where a crash occurred, in most cases these refer to a route number or...
street name only, with no exact location. Even in cases where route numbers are provided, these cannot currently be associated with road network ownership. The number of fatalities and fatal crashes per police district are known and these are communicated to the relevant authorities to encourage road safety improvement actions.

3.4.7 Fatalities and fatal crashes – time related

Almost half (48%) of fatal crashes occurred on Saturdays and Sundays, despite lower traffic volumes during weekends. The most fatal crashes occur between 18:00 and 19:00, with 23% of crashes occurring in the 3-hour period between 18:00 and 21:00. The most deaths occur in December, July and April, which corresponds to peak holiday periods in South Africa, when high traffic volumes are experienced on major routes.

3.4.8 Socio-economic burden of road crashes in South Africa

Aside from an assessment about the actual scale and nature of road trauma, it is important to understand its impact in a variety of ways. The Global Burden of Disease Study is a highly reputable global surveillance program which reports on and facilitates comparison of all the different causes and risks of death and disability within a country and between countries.

The Global Burden of Disease Study can be analysed in a variety of ways. Some 2016 summary data is provided in Table 3 below for cause of death, and cause of Disability Adjusted Life Years (DALYs) in South Africa.

*Table 3* Road Traffic Injury Burden on South Africa, 2016

<table>
<thead>
<tr>
<th>Population Group</th>
<th>Road traffic ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause of Deaths</td>
<td></td>
</tr>
<tr>
<td>All South Africans</td>
<td>7th highest cause of death</td>
</tr>
<tr>
<td>South Africans aged 5-14 years</td>
<td>1st</td>
</tr>
<tr>
<td>South Africans aged 15-49 years</td>
<td>3rd</td>
</tr>
<tr>
<td>Cause of DALYs</td>
<td></td>
</tr>
<tr>
<td>All South Africans</td>
<td>3rd highest cause of DALYs</td>
</tr>
<tr>
<td>South Africans aged 5-14 years</td>
<td>1st</td>
</tr>
<tr>
<td>South Africans aged 15-49 years</td>
<td>3rd</td>
</tr>
</tbody>
</table>


There is nothing theoretical about the impact of road traffic injury on the future development of South Africa. It is imposing a massive burden on the most productive part of the population aged 15-49, and the economic losses are substantial.

Figure 3-9 is an infographic summarising a cost of crashes analysis undertaken by the RTMC.
This issue is addressed further below, but for now, it is important to note that the estimate of ZAR 162 Billion losses is just for one year. Currently, it is estimated that the equivalent of 3.5% of South Africa’s gross domestic product is lost in road traffic crashes each year. This reinforces the urgent need for South Africa to significantly intensify its road safety efforts.

### 3.5 The Safe System Approach in South Africa

The NRSS is explicitly based on the safe system approach to road safety. This section briefly outlines that approach and discusses the key elements of the NRSS in this light.

#### 3.5.1 Towards the elimination of fatalities and serious injuries – the safe system approach

The Organization for Economic Cooperation and Development and the International Transport Forum published a landmark report in 2008, entitled “Towards Zero: Ambitious Road Safety Targets and the Safe System Approach” \(^6\). It was inspired by the reframing of road safety as a societal health issue in the best performing countries such as the Netherlands and Sweden, and prompted by ambitious road safety targets set in Europe and other high-income countries such as Australia and New Zealand.

The report documented what has become known internationally as the “Safe System” approach, now recognised throughout the world as the basis upon which good road safety practice rests. The principles of this approach were described in the following terms:

- addressing all elements of the road traffic system in an integrated way
- focusing on preventing death and serious injury rather than the prevention of crashes, which is an unrealistic goal
- challenging the fatalistic view that road traffic injury is the price to be paid for achieving mobility and economic development by setting a societal goal (with interim targets) to eliminate road deaths and serious injuries in the long-term which can motivate and encourage all involved
- accenuating the safety responsibility of designers of the road traffic system for achieving road safety results and promoting a shared vision amongst citizen, public, and private organizations regarding the ultimate safety ambition of eliminating fatal and serious injury
- aiming to develop a road traffic system better able to accommodate human error, commonly achieved through better management of crash energy, so that no individual road user is exposed to crash forces likely to result in death or serious injury
- using social and economic analyses to understand the scale of the trauma problem, and direct investment into those programs and locations where the greatest potential benefit to society exists
- demanding equity in addressing the safety needs of both motorized and non-motorized users, and aligning safety with the goals of sustainable development and other societal objectives such as improved local air quality, greenhouse gas reduction, energy security, poverty reduction, social inclusiveness and occupational health and safety
- necessitating the strengthening of all elements of the road safety management system, especially institutional management functions, to achieve sustainable success.

This approach should not be regarded as fixed – the ideas and practices will continue to evolve. But it stands in stark contrast to largely discredited approaches of the past which have presented road safety as a task of perfecting human behaviour or (contrary to injury prevention research evidence) relied on education and information campaigns to reduce road trauma.

3.5.2 NRSS guiding assumptions and principles

South Africa’s NRSS provides an example of how the safe system approach is being used to promote effective road safety programs in low and middle-income countries. The following guiding assumptions and principles to the Safe System approach are referenced:

- **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.

In doing so, the NRSS places itself well within the mainstream of good practice road safety policy.

3.5.3 Key Strategic Themes

The key strategic themes set out in the NRSS also reveal a well-considered response to a clearly understood set of road safety issues within South Africa. Some brief comment is provided against each theme, in Table 4 below.

Table 4 Key Strategic Themes of the NRSS, and the Safe System Approach

<table>
<thead>
<tr>
<th>Key Strategic Themes</th>
<th>Relevance to the Safe System Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve coordination and institutional strength</td>
<td>This is critical in most countries, and is made more critical in South Africa because of the heavily disaggregated institutional environment</td>
</tr>
<tr>
<td>Improve road safety data systems</td>
<td>This needs to start from a position of working with what currently exists, which is clearly one of the best in Africa</td>
</tr>
<tr>
<td>Eliminate fraud and corruption</td>
<td>This needs to be tackled in a systemic way in order to support safer user behaviour, particularly</td>
</tr>
<tr>
<td>Ensure adequate funding and capacity</td>
<td>Addressing this problem will rely on a wider issue of overall government priority</td>
</tr>
<tr>
<td>Enhance use of technology to protect road users</td>
<td>This is critical in every respect, from better management systems, right through infrastructure treatments, vehicle standards, support for safer driving, and post-crash response</td>
</tr>
<tr>
<td>Identify and address high risk locations</td>
<td>This approach would support large and highly cost-beneficial investment in much safer infrastructure, and improved speed environments</td>
</tr>
<tr>
<td>Provide a self-explaining and forgiving road environment for all road users</td>
<td>This promotes the essential element of the safe system approach – to create a safe environment for all road users</td>
</tr>
<tr>
<td>Enable regular road safety audits on new and existing infrastructure</td>
<td>This is an important accountability mechanism for all road infrastructure investment</td>
</tr>
<tr>
<td>Increase vehicle safety standards</td>
<td>This is another essential element of the safe system approach which requires the application of the safest technology available for users both inside and outside motor vehicles</td>
</tr>
</tbody>
</table>
Ensure vehicles on the road network are roadworthy | This is a clear concern, particularly linked in stakeholders’ minds with fraud and corruption issues

Improve road user attitude and behaviour & involve communities in road safety | A much stronger behaviour change program will be critical to getting quick wins while the safety of other parts of the system are built up

Improve enforcement effectiveness | See above – it is critical to increase the perceived risk of detection by all users in order to deter unsafe behaviours

Increase protection for vulnerable road users | The safe system approach seeks no-blame protection of human use of the road, not perfection of human behaviour

Increase efficacy of first responses | The speed of response to serious crashes is critical

Simplify access to post-crash care | All victims need no-blame immediate access to treatment from serious crashes

The NRSS then goes on to identify four critical areas for intervention:

- **Road user 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.

The NRSS can be read as being very consistent with key elements of the safe system approach to road safety. However, experience in many countries shows that road safety strategy implementation is much more difficult than strategy preparation. Many countries continue to struggle with implementing a genuinely systems approach, and this is apparent in South Africa as well.
4 National Road Safety management system

South Africa’s road safety management system is generating a certain set of results, which the NRSS seeks to improve. Those results can improve, in response to changes in the critical elements of that management system.

This section of the report briefly sets out the road safety management framework which is being used within the Safer Africa project. The seven institutional management functions identified in the road safety management framework set out in Figure 4-1 below (results focus, coordination, funding and resource allocation, promotion, monitoring and evaluation, research and development and knowledge transfer) are used to discuss and analyze the current situation in South Africa.

4.1 Road safety management framework

There have been many ways of discussing road safety. Within a systems approach, good road safety management practice addresses road safety as a production process with three interrelated elements: institutional management functions that produce interventions that in turn produce results. This is encapsulated in the road safety management framework developed by the Global Road Safety Facility from a practical, evidential and analytical base, which is illustrated in Figure 4-1 below.

Figure 4-1 Road Safety Management Framework

A key feature of this framework is the specification of desired road safety results including not just final outcomes (such as fatalities and serious injuries), but also intermediate outcomes (such as traffic speed) which are tied to the delivery of outputs (such as tickets issued to speeding drivers) from evidence-based interventions (such as speed enforcement supported by targeted advertising).

Interventions are focussed on the road network because this is where crashes occur and injuries are suffered, where people travel, where vehicles are permitted to be used, and where emergency services must recover crash victims. Interventions related to the road network, to vehicles and drivers, and to crash victims can be designed to either set a higher quality of safety standards and rules, or achieve better compliance with those standards and rules.

Another key feature of the framework is the institutional management functions which drive more effective interventions and better results. When given full effect, these functions provide direction on how cost-effective interventions are identified, prioritised, scoped, funded, targeted and delivered. They also assist in building support for sustained road safety improvement and for building the human, financial and institutional capacity needed to sustain that support, and transform it into improved safety results within the community.

The framework has been used to support road safety strategy and development in a large number of middle-income countries throughout the world. It provides an analytical platform from which stakeholders can consider the best steps forward for road safety in South Africa, particularly at an institutional management level.

4.2 Governance

Road safety requires a determinedly multi-sectoral approach, where partner agencies first come together to agree on strategy and then take responsibility for delivering their own outputs in concert with their partners. There is no one-size-fits-all approach to the governance system through which a coherent approach to national road safety issues is achieved. However, a study of road safety management in Africa identified four key elements:

- A governing body which includes the heads of transport, highways, police and health agencies
- A management group that provides advice and follows up implementation of the governing body decisions
- A forum for engaging non-State actors in road safety issues
- A dedicated and professional secretariat to lead the day to day effort.

The peak governance body for road safety in South Africa is the MinMEC (a formal inter-governmental forum) responsible for Road Traffic Matters and Transport. It comprises the national Minister of Transport, and the relevant Member of the Executive Council (MEC) for each of the nine provinces, as the elected representatives most directly responsible. A Committee of Transport Officials (COTO) reports to the MinMEC. COTO established the National Road Safety Steering Committee as a sub-committee chaired by the Director-General of Transport with membership
including Heads of Department of the nine provinces and CEOs of agencies established by the National Department of Transport.  

The NRSSC comprises 36 members:

- Road Traffic Management Corporation – Chief Executive (or Group Executive delegate)
- Department of Transport – Deputy Director General
- 9 Provincial Heads of Department for Transport and Traffic matters
- 9 Provincial Road Safety Coordinating Committee Chairs
- 6 NRSSC Technical Committee Chairpersons
- South African Police Service – Major General
- Department of Health – Chief Director
- Department of Justice – Chief Director
- National Prosecuting Authority representative
- South African Local Government Association CEO (or Chief Director delegate)
- South African National Roads Agency CEO (or Chief Director delegate)
- Road Traffic Infringement Authority CEO (or Chief Director delegate)
- Cross Border Road Transport Agency CEO (or Chief Director delegate)
- Road Accident Fund CEO (or Chief Director delegate)
- Metro Police Chief’s Forum Chairperson (or Metro Chief delegate).

Even given the constitutional context, it is difficult to see how such a group can function as an effective governance body for road safety in South Africa.

Aside from the very large number of members, which may tend to reduce the capacity to make decisions, in practice, attendance appears to be delegated down each representative organization. Attendance is typically below that of the delegate which is envisaged – for example, below Chief Director level for the transport related agencies. The Chair of the NRSSC is the RTMC Group Executive Law Enforcement and Road Safety Education.

The overall objective of the NRSSC is to coordinate the programs and projects across all three spheres of Government and in partnership with civil society towards making South Africa’s roads safer and the achievement of the goal of reducing road crash fatalities by 50% by 2020. Its mandate is summarised here:

- To drive and continuously evaluate the national programs and initiatives to achieve the goal of reducing road crash fatalities by 50% in 2020
- Utilise research, data and statistics as intelligence to continuously identify key focal areas
- Develop and implement policies and infrastructure solutions to protect all road users
- Strengthen enforcement and awareness of existing legislation and where needed review / improve legislation as well as vehicle and driver registration systems
- Promote harmonization of road safety, vehicle safety regulations and international good practices

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8 NRSSC Terms of Reference
- Coordinate, integrate, monitor and guide initiatives, programmes among all stakeholders
- Assist and guide provinces in setting up and managing the required structures to coordinate and guide road safety programmes and plans at provincial and local levels
- Report on progress and escalate issues and risk to COTO, the RTMC Board and Shareholders Committee and MinMEC on at least a quarterly basis or as and when required.

The NRSSC has established its own structure as set out in Figure 4-2 below, with six Technical Committees (not listed is the Technical Committee for Standards and Procedures). In total, these Technical Committees have a further 20 working groups reporting to them.

![Figure 4-2 National Road Safety Steering Committee Structure, Source: NRSSC Terms of Reference](image)

In its current form and mode of operation, the NRSSC may be able to serve an essential function for road safety in South Africa – to bring all public agencies and spheres of government together to discuss road safety issues. However, it is unlikely to be able to provide the strategic national leadership and governance of road safety that is required. Very large numbers of participants and layers of committees appear to be substituting for strategic analysis and leadership. A much simpler strategy and results oriented governance structure is required.

Addressing this situation will not be straightforward, given the various agency responsibilities. It may rely firstly on the Chief Executive of the RTMC and the very senior leadership of the Department of Transport working together to enroll much more senior representation. This personal leadership task is critical in road safety management.  

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9 See Small and Runji (2014) for an extended discussion about this.
4.2.1 Strengthening the lead agency

Lead agencies are central to orchestrating and aligning specific road safety interventions and management functions to support achievement of intermediate and final safety outcomes. This requires the agency to regularly engage at a technical, management and leadership level with the key partner agencies, and with the government Minister(s) who hold political responsibility for road safety. Wider partnerships with business and civil society institutions are also needed to generate a broad societal response to the road safety problem.

Lead agencies can take a variety of organizational forms, and it is not atypical for the lead agency function to be part of a motor vehicle regulatory agency, but all adopt an outwards-facing partnerships-focused approach. This leads naturally towards sharing data and information about safety performance and routinely discussing joint strategy and tactics with key partners to tackle the major road safety challenges which they collectively face. While good governance is the essential building block, with the necessary institutional, legal and financial support, the lead agency requires senior figures capable of working with uncertainty, and the political and/or legal mandate to work effectively across organisational boundaries.

The RTMC is nominated as the lead agency for road safety in South Africa. However, there is little reference to this in its foundation legislation (Road Traffic Management Corporation Act1999) which refers to the functions of the organization in very generic terms. The organization is governed by a Shareholders Committee comprising largely the same members as the MinMEC. They appoint a Chief Executive and a Board, with which it enters into a governance agreement.

The Shareholders Committee must, under Section 18 of the RTMC Act, ensure a structure is in place to manage the following functional areas:

- Training of traffic personnel
- Road traffic information
- Accident investigation & recording thereof
- Communication and education
- Infrastructure safety audits
- Road traffic law enforcement
- Vehicle registration and licensing
- Vehicle and roadworthiness testing
- Testing and licensing of drivers, and
- Administrative adjudication of road traffic offences

The Chief Executive is also held responsible under Section 32 for developing a national road traffic law enforcement code. The code must, taking into account local developmental needs, capacity and available resources, set out:

- minimum requirements for training and appointment of road traffic law enforcement officers
- strategic direction and goals to be achieved
management practices and human resource practices to be followed
operating principles to be applied
performance levels to be achieved
supporting management information systems to be implemented
compliance requirements.

This was yet to be completed in July 2018. It is understood that the governance agreement does not assign formal mandate for the lead agency function to the RTMC.

Where lead agencies do not exist at a national or sub-national level they need to be established. Where they are established in low and middle income countries they are often established in name only and invariably need to be strengthened. Even in high-income countries that are in a mature phase of road safety development the lead agency function can become a focus of attention and investment, such is the centrality of their role in driving improved performance.

While achievement of the NRSS target requires a strong focus on the responsibilities and accountabilities of public agencies, it is important to recognise that this can be enhanced by having an open and transparent relationship with community interests. Community road safety is included in the strategy through community-based vulnerable road user teams, but other community-based interventions appear focused on special days and events.

The National Development Plan 2030 shows the critical role of an active citizenry, which does not seem to be fully developed in the National Road Safety Strategy – a clear programme of how non-government organisations (NGOs) and government can mutually support road safety initiatives would be beneficial. It is important that where the strategic objectives of NGOs are in alignment with the NRSS, these organisations be acknowledged and are encouraged to pursue the mandate within their areas of specialisation and relevant to their scope and reach. Appendix 3 outlines the role of NGOs in road safety.

4.3 Results focus

In simple terms, over time, a road safety management system needs to be developed which ensures South Africa’s road safety partner agencies are:

- Understanding the primary road safety issues across the country
- Using effective management systems that can respond to those issues
- Delivering well designed interventions, and
- Achieving sustainable reductions in road trauma.

This results focused approach needs to encompass all aspects of the road safety management framework and drive all parties towards achievement of a single objective. Good practice involves collaborative engagement between key road safety partner agencies and external stakeholders to develop a jurisdictional road safety strategy or strategic plan.
South Africa has a single national road safety target – to reduce fatalities by 50% from the 2010 baseline of 13,967 to approximately 6985 by 2030. A straight line reduction would suggest a 2020 target of approximately 10,475, but 14,050 fatalities were recorded in 2017. The original target was poorly aligned with the global goals set for the UN Decade of Action to halve fatalities by 2020, but South Africa was not alone in this. Australia, for example, set a target of a 30% reduction in fatalities by 2020, and is unlikely to achieve that result. From the vantage point of 2018, the original target of less than 7000 fatalities looks much more ambitious, and should be reinforced as the focus for road safety in South Africa to 2030.

Good practice road safety management involves articulating a vision for eliminating fatalities and serious injuries on the road, and setting interim targets over a period of around a decade. For South Africa, at this point, the target period through to 2030 is appropriate, particularly given this now aligns with the dates of the Sustainable Development Goals. There are essentially two methods to setting final outcome targets: bottom-up, or top-down. When first deployed in the 1990s, multiplicative models were developed from the bottom up to assess what could be achieved from a series of policy and investment commitments across a range of evidence backed interventions – the level of ambition in fatality targets was derived by the level of advance commitment to the interventions.

An alternative top-down approach which has been adopted for the European Union is to set a performance target first. A target to reduce fatalities by 50% was set for each of the last two decades, and is proposed for the next decade to 2030. The primary planning task is to settle on the options for achieving the headline target.

Either way, it is not advisable to rely on fatalities to assess and manage road safety performance. While the total volume of fatalities in South Africa means that variations in fatality numbers from year to year are likely to reflect the underlying level of safety rather than being prone to statistical variation, a much richer performance assessment methodology is required.

Best practice road safety management incorporates a results framework with three distinct components:

- final safety outcomes (the results being sought – for example fatalities and serious injuries)
- intermediate safety outcomes (the intermediate results to assess progress in key areas – for example seatbelt wearing), and
- institutional outputs (the specific deliverables implemented to affect the intermediate results – for example, safety engineering investment program).

In support of the Sustainable Development Goals, the United Nations has published a set of voluntary performance targets. These are a mix of intermediate safety outcomes and output or delivery measures. All 12 are set out in Table 5 below, with comment relevant to the current status in South Africa.

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<table>
<thead>
<tr>
<th>Target</th>
<th>Date</th>
<th>Measure</th>
<th>Type</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>By 2020</td>
<td>All countries establish a comprehensive multisectoral national road safety action plan with time-bound targets</td>
<td>A delivery or output measure</td>
<td>The NRSS could be supplemented through a comprehensive road safety results framework</td>
</tr>
<tr>
<td>2</td>
<td>By 2030</td>
<td>All countries accede to one or more of the core road safety-related UN legal instruments</td>
<td>A delivery or output measure</td>
<td>Not all UN legal instruments provide the same level of benefit, and priority should be given to the key vehicle safety regulations</td>
</tr>
<tr>
<td>3</td>
<td>By 2030</td>
<td>All new roads achieve technical standards for all road users that take into account road safety, or meet a three star rating or better</td>
<td>An intermediate outcome measure</td>
<td>This is a critical performance indicator for any new road investment (SANRAL’s attribute based performance assessment could be further developed for this)</td>
</tr>
<tr>
<td>4</td>
<td>By 2030</td>
<td>More than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety</td>
<td>An intermediate outcome measure</td>
<td>This is a critical performance indicator for any new road maintenance or safety engineering expenditure (SANRAL’s performance assessment may also be useful for this)</td>
</tr>
<tr>
<td>5</td>
<td>By 2030</td>
<td>100% of new (defined as produced sold or imported) and used vehicles meet high quality safety standards such as the recommended priority UN Regulations, Global Technical Regulations or equivalent recognized national performance requirements.</td>
<td>An output measure primarily because it requires delivery of an amended regulatory system</td>
<td>This is a critical measure which relies on South Africa further developing its current vehicle safety management capacity to focus on catching up with safety technology in high income countries</td>
</tr>
<tr>
<td>Target</td>
<td>Date</td>
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<tr>
<td>6</td>
<td>By 2030</td>
<td>Halve the proportion of vehicles travelling over the posted speed limit, and achieve a reduction in speed-related injuries and fatalities</td>
<td>An intermediate outcome measure</td>
<td>Vehicles exceeding the speed limit is a key measure of the effectiveness of enforcement</td>
</tr>
<tr>
<td>7</td>
<td>By 2030</td>
<td>Increase the proportion of motorcycle riders correctly using standard helmets to close to 100%</td>
<td>An intermediate outcome measure</td>
<td>The safety standards of helmets match UN specifications, and full user compliance required</td>
</tr>
<tr>
<td>8</td>
<td>By 2030</td>
<td>Increase the proportion of motor vehicle occupants using safety belts or standard child restraint systems to close to 100%</td>
<td>An intermediate outcome measure</td>
<td>This is another critical measure which is well within reach of South Africa</td>
</tr>
<tr>
<td>9</td>
<td>By 2030</td>
<td>Halve the number of road traffic injuries and fatalities related to drivers using alcohol and/or achieve a reduction in those related to other psychoactive substances</td>
<td>An intermediate outcome measure</td>
<td>Alcohol is clearly a major issue in South Africa, and a concerted legal and enforcement effort could achieve this target</td>
</tr>
<tr>
<td>10</td>
<td>By 2030</td>
<td>All countries have national laws to restrict or prohibit the use of mobile phones while driving</td>
<td>A delivery or output measure</td>
<td>This is in place</td>
</tr>
<tr>
<td>11</td>
<td>By 2030</td>
<td>All countries to enact regulation for driving time and rest periods for professional drivers and/or accede to international/regional regulation in this area</td>
<td>A delivery or output measure</td>
<td>A straightforward legislative measure</td>
</tr>
</tbody>
</table>
This is not to suggest that these voluntary performance targets should be adopted uncritically for South Africa. For example, there is already an established regulatory control on commercial transport operations, and there is already a mobile phone law in place. However, they cover a number of issues which are significant, and represent areas where further specification is required, such as alignment with the highest priority UN vehicle safety standards, and increased speed limit compliance.

4.4 Legislation, Standards and Compliance Systems

An effective legislative regime defines the accountabilities of key government agencies and the staff within those agencies to take action to prevent road trauma. It also sets out a comprehensive set of safety standards regarding:

- Planning, design, construction and management of road infrastructure
- Construction and maintenance of motor vehicles which are used on the road network
- Licensing of the drivers of those motor vehicles
- Traffic rules applying to motor vehicle drivers and other road users
- Commercial transport operations
- Penalties for non-compliance.

It may also address insurance arrangements to effectively treat and rehabilitate victims of road crashes, as well as compensation. There are also a critical interlinking set of electronic motor vehicle and driver registers and systems which facilitate effective traffic law enforcement on the road, and strong audit and compliance activities which facilitate effective traffic law enforcement by the motor vehicle regulator.

There appears to be a quite long schedule of legislative initiatives which are known to professional staff within agencies, but which for one reason or another have not been acted upon. These include:

4.4.1 Drink driving

In its global status report on the subject, WHO estimates the impact of alcohol related harm, and specifically “alcohol-attributable fractions” based on quantifiable causal links with alcohol
consumption.\textsuperscript{11} Globally, WHO estimated that in 2016 there were 900,000 injury deaths attributable to alcohol. This included around 370,000 in road traffic crashes, of which 187,000 were estimated to be people other than drivers. In South Africa WHO estimates that around one third of male traffic fatalities and one quarter of female traffic fatalities (around 3600 in total) were attributable to alcohol in 2016. It is therefore of significant concern that Parliament has yet to legislate in response to a Supreme Court decision that found that breath alcohol testing devices cannot be used as evidentiary devices to prosecute a drink driver. In 2016, the National Prosecuting Authority\textsuperscript{12} indicated that evidential breath alcohol testing could be reintroduced and piloted in the Western Cape. Other law enforcement agencies are confined to taking samples of blood as evidence of law breaking. This is poor practice, and significantly impedes the efficient and effective enforcement of a critical aspect of road safety law in any country.

4.4.2 Speed enforcement

The speed travelled by a motor vehicle has a direct bearing on the risk of a crash occurring. A rigorously controlled scientific study to demonstrate this crash risk relationship was conducted in Adelaide, South Australia, and found that each 5 km/h increase in speed over the speed limit in a 60 km/h zone doubles the risk of a casualty crash.\textsuperscript{13} This is similar to the risk of a casualty crash for a driver at the general drink driving legal limit in South Africa, and highlights the safety impact of exceeding the speed limit by only a small amount. Typically underestimated as a contributor in fatal crashes, speed was regularly estimated by the National Fatal Accident Information Centre as playing a role in around one third of all fatal crashes in South Africa.\textsuperscript{14} It is therefore surprising that the South African Police Service is not legally allowed to enforce the speed limit.

4.4.3 Infringements

The AARTO (Administrative Adjudication of Road Traffic Offences) project provides an opportunity to significantly alter the driver behaviour landscape in South Africa. AARTO has established the necessary linkages between the database of registered motor vehicles, the database of driver licences, and a National Contravention Register. It has been operating and fully tested in pilot mode in Gauteng, and is now understood to require final legislative attention in one final respect – to ensure efficient transmission of legal notices by verified mail (this is a matter of legislative detail which every jurisdiction must address). This system was first conceived arising from a fact finding mission to Australia in the late 1990s, and its capability lies at the heart of a good practice road traffic enforcement regime in South Africa’s future. It is time that the system became fully operational, nationwide.

Enforcement of the current law is essential for South Africa to tackle its road safety problem. This is based on an extensive body of road traffic law in South Africa which needs constant attention and

maintenance in its own right. It is also important that there is a safety focused analysis of the major legislative change that is needed to drive sustained reductions in fatalities and serious injuries.

4.5 Funding and Resource Allocation

Significant additional investment into safety focused management systems and interventions is an essential requirement for a successful effort to reduce road trauma in South Africa. Institutional capacity to establish the scope of the road trauma problem and develop business cases to cost-effectively reduce road trauma is essential, and sustainable funding sources are required to ensure that the investment can be applied over several multi-year cycles. The capacity to allocate safety resources to projects and programs which are likely to produce the best return on public resources is also essential.

Often in the past road safety investment in low and middle-income countries has been too small or too dispersed to be effective. Good practice road safety investment and allocation procedures focus on treating specific lengths of the road network and applying a smaller range of the most effective engineering and enforcement treatments, supported by any necessary legislation/enforcement, promotion/education and project management activity.

4.5.1 Establishing the economic burden of crashes

It is important that the economic burden that road crashes impose is well understood and used to prepare compelling safety investment cases. To its credit, a cost of crashes study was commissioned by the RTMC and undertaken by CSIR Built Environment.\(^15\) This study uses the “human capital” approach to estimating the primary economic burden of road crashes on society established. This is one of two approaches that are typically used for assessing crash costs – the other being the “willingness to pay” approach.

The human capital approach relies on estimates of productivity losses, which can be made with some precision, to which are added estimates of “immaterial” losses. Payments by the Road Accident Fund as compensation have been used and adjusted to estimate what can be termed “immaterial losses”, “grief and suffering”, or “lost quality of life”. It is possible that this approach, combined with direct and highly measurable vehicle repair and incident costs, has resulted in an underestimate of the costs of road crashes in South Africa.

The recommended approach to costing road crashes is the willingness to pay method.\(^16\) The estimation process is more complex, but directly surveys what members of the community are willing to pay to reduce the risk of themselves or their family being killed or seriously injured in a road crash. The value of statistical life which this generates typically leads to higher estimations of the cost of road crashes. A sustained debate on this over the last ten years has led to the Australian

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Government committing to formally shift to this estimation methodology, which is practised widely in North America and Europe.\textsuperscript{17}

Notwithstanding this, the RTMC study estimated a total cost of crashes in South Africa ZAR\textsubscript{142.95} Billion in 2015 – equivalent to 3.4\% of the country’s gross domestic product. This study will play a critical role in preparing compelling business cases for road safety investment in South Africa by monetising the value of crash and injury prevention. It is encouraging to see the cost of crashes being updated to reflect the prevailing economic and safety conditions in South Africa was adjusted with CPI\textsubscript{X} to ZAR \textsubscript{162.04} Billion in 2017.

While this is an essential step in building a road safety investment plan for South Africa, it is possible that it is an underestimate due to the methodology applied. A 2008 study of the cost of road crashes in low and middle-income countries used the world’s best understanding of the variety of direct and indirect economic costs associated with road crashes to prepare a formula for countries such as South Africa.\textsuperscript{18} This formula is used widely around the world as a rapid estimate tool, based on the best estimate of fatalities and GDP per capita.

The formally determined estimates should continue to be applied, but should not regarded as fixed. A full willingness to pay survey could be undertaken to more fully explore the economic burden of road crashes on South Africa.

4.5.2 Funding

There are a number of sources of potential funds within South Africa which are directly associated with the safety of the road transport system. These need to be explored and tested for their ability to be harnessed for road safety.

The national road transport budget is funded by general revenue, and there is no dedicated Road Fund. Government revenue is supported by a few different sources, which includes road tolls, but is dominated by a national fuel levy. The lack of any clearly defined funding mechanism for road transport means that road safety funding is largely dependent on annual appropriations, managed over a three year forward estimates period.

A typical means of raising sustainable funds for road safety is motor vehicle registration fees, but this is not done on a consistent national basis. The National Road Traffic Act gives provinces the authority to determine vehicle registration fees in their jurisdictions. This is clearly seen as a benefit for the road user, but does not facilitate good revenue management.

Notwithstanding the lack of a dedicated funding system for roads, or road safety, there are significant ongoing transport outlays through national government expenditure. A review of the publicly available budget documents\textsuperscript{19} highlights provincial government reliance on national


\textsuperscript{19} See Chapter 7 Roads and Transport, “Provincial Budgets and Expenditure Review: 2010/11 – 2016/17”.

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government subsidies for critical elements of road transport funding – namely, road maintenance and public transport.

For example, there is a longstanding Provincial Roads Maintenance Grant, which delivers on S’hambaSonke (“Moving Together”), the 2011 pro-poor strategy for roads infrastructure development and maintenance. To promote forward planning, provinces are required to submit road asset management plans indicating infrastructure projects to be implemented over a 10-year period. In fact, provincial expenditure appears to be dominated by the Grant. Of the ZAR 34.5 Billion which Provinces were estimated to spend on road maintenance over the 2014 three year forward estimates (2014/15, 2015/16, and 2016/17), the national government had made allowances for ZAR 29 Billion (over 80%). 2018 budget estimates documents\textsuperscript{20} for Vote Transport indicate that the 2017/18 appropriation for the Provincial Roads Maintenance Grant is ZAR 10.8 Billion.

The Provincial Roads Maintenance Grant has three components. The largest component enables provinces to expand their maintenance activities, while the other two allow provinces to repair roads damaged by floods and rehabilitate roads that are heavily used in support of electricity production. Given the typical need to invest in retrofitting safety features into roads, these maintenance programs are unlikely to have any significant effect on the primary infrastructure safety issues in South Africa, being head-on, single vehicle, and pedestrian crashes.

A greater safety effect is possible from national government investment into public transport. This is because public transport services can be an effective demand management tool, thus reducing exposure to road traffic injury. The national government provides substantial transfers to provincial government for public transport, through the Public Transport Operations and Public Transport Infrastructure (renamed Public Transport Network) grants.

Total provincial expenditure on public transport over the three years up to and including 2016/17 was projected to be ZAR 24.2 Billion, which included ZAR 18.5 Billion (over 75%) in national government grants. Budget estimates documents indicate that the 2017/18 appropriation for the Public Transport Operations Grant for provinces is ZAR 5.7 Billion, and the Public Transport Network Grant for municipalities is ZAR 6.2 Billion. It is important to note that as well as providing subsidies to municipalities, this grant also supports improved public transport network infrastructure, and pedestrian and cycling infrastructure.

There is some opportunity for an enlightened asset manager to provide safety benefits at the margins of the maintenance expenditure, and there is some indirect safety support through improved public transport investment. However, there does not appear to be any national government funding allocated to provincial governments or local government directly for the purposes of road safety.

Some consideration could be given to identifying the critical road safety investment needs for South Africa, and the options for funding this investment. In recent years, it is noted that the general fuel levy was increased by 30/litre, and the Road Accident Fund levy was increased by 9c/litre, between 2016/17 and 2017/18. This increased the expected revenue from ZAR 62.8 Billion to ZAR 71.3 Billion.

\textsuperscript{20} National Treasury, “2018 Budget Estimates of National Expenditure: Vote 35 Transport”.
The Government proposed a further increase to the general fuel levy by 22c/litre and the Road Accident Fund levy by 30c/litre, for the 2018/19 year.\textsuperscript{21}

There are many calls on any government’s expenditures, and those expenditures are heavily prioritised. Increases in the Road Accident Fund levy, for example, are presumably being directed entirely towards ensuring that the reformed injury insurance scheme is financially viable, able to meet its liabilities into the future. In fact, in relation to this critical injury insurance scheme, there are strong public policy arguments in favour of using the Fund as a means of raising investment into road safety. There are good examples in Australia (Transport Accident Commission in Victoria), New Zealand (Accident Compensation Commission) and Canada (Insurance Corporation of British Colombia), of similar injury insurance funds being directed to invest the funds they carry into road safety, as the injury insurance fund’s primary loss reduction strategy.

Currently, established programs are in place to support maintenance of provincial roads, and public transport, and an additional program could be dedicated to the safety of road users. Funds are being raised from road users, and could be directed into highly cost beneficial programs, capable of significantly reducing the considerable economic and social losses of road traffic injury in South Africa. It is not apparent that priority has been given to identifying the investment needs to meet South Africa’s road safety targets to 2030.

\textbf{4.6 Promotion}

Promotion is an essential management function because it helps build constituencies for change. It is also however very easy to consume significant resources to little or no effect through poorly conceived promotional activity. Promotional activity should be carefully targeted at first to decision makers, partner organizations (those in a position themselves to take significant road safety action) and key influencers. This activity should promote consistent road safety messages which are well aligned to key road safety strategies. The goal in this first phase is to influence significant safety decisions that increase investment in road safety, improve the safety of the infrastructure, improve the quality of the vehicle fleet, enforce better road user behaviour, or provide better post-crash response.

Over time, promotional activity can be extended to wider target audiences, in association with specific programs. This could include for example legislative initiatives (informing the community of changes in law which must be complied with), or enforcement campaigns (informing the community of specific campaigns targeting specific behaviours). All activity should be subject to evaluation and review, and adjusted as necessary to make best use of resources.

Good practice road safety promotion encompasses a number of elements\textsuperscript{22}, such as those addressed below.

\textsuperscript{21} National Treasury, “Budget Review 2018” (21 February 2018).
\textsuperscript{22} See, for example, Bliss and Breen 2009 op.cit.
4.6.1 Promoting a far-reaching road safety vision or goal

The vision of the National Road Safety Strategy is “safe and secure roads” and the strategic goal is to "continually reduce the occurrence and severity of road crashes and consequently the level of fatalities and injuries in an efficient, integrated and coordinated manner”. As discussed above, this is supported by a final outcome target to reduce the number of fatal and serious casualties in South Africa, by 50% from 2010 base, by 2030.

A step-change in performance is required to reach this target and, in that sense, it is a far-reaching goal. However “safe”, as opposed to “safer”, is typically defined in the international literature as the absence of fatal and serious injury. This “elimination” agenda, with a staged set of interim targets (such as South Africa’s 50% reduction in fatal and serious injury) is a core element of the safe system approach to road safety. There does not appear to be much promotion to the public or across influential sectors of society of an elimination agenda or the drive to achieve interim targets in 2030.

4.6.2 Championing and promoting at a high level

One of the comments made by interviewees, was that there is no high-level champion for road safety in the Department of Transport, or in any of the agencies. This was compared to the level of visibility of the Ministers during the Arrive Alive project when the office of the Minister actively took part in drawing up the road safety strategy.

The NRSSC has been mandated with decision-making members, but responsibility is heavily delegated. The NRSS recognises the need for management and commitment by government to road safety and includes an action to establish an inter-ministerial oversight council that would include the Presidency. This would provide great impetus to the country’s road safety efforts.

4.6.3 Multi-sectoral promotion of effective intervention and shared responsibility

The NRSS acknowledges the multi-sectoral nature of road safety and the need for shared responsibility, as reflected by the NRSSC. At an operational level many stakeholders felt that projects are multi-sectoral interventions. This is especially true of the stakeholders from the different police forces, provincial road safety education and emergency services, but the shared responsibility might not be reflected at strategic level. For example, are the objectives, targets and activities of the National Road Safety Strategy reflected in the departmental indicators and key performance indicators? Stakeholders suggest that provinces, metros and local authorities are all governed by their own internal goals and budgets and not necessarily a shared commitment to deliver on the NRSS.

This could be usefully addressed both in partnerships between government agencies, and the partnerships that are needed with and between non-government organisations.
4.6.4 Leading by example with in-house road safety policies

It is important that the key road safety players within government are seen to lead by example. There are a variety of ways in which this can be done, and one example of it is in relation to the contribution of South African National Roads Agency Limited (SANRAL) in road safety education.

It is particularly important that the behaviour of the "visible" agencies in road safety, such as the traffic enforcement agencies and SAPS, emergency services, agency and department officials reflect the behaviour these departments want from the public. Officers not wearing seat-belts, or high level officials disregarding traffic lights, for example, are important issues that influence how serious members of the public take the road safety message.

There are leadership by example opportunities in many government agencies, particularly in how they manage the safety of their own operations, and the rules they have for their interaction with suppliers. A notable feature of the NRSS is the room given to the promotion of SANS 39001 Road Traffic Safety Management Systems.

SANS 39001 specifies requirements for a road traffic safety management system to enable an organization that interacts with the road traffic system to eliminate death and serious injuries related to road traffic crashes. This could be a powerful voluntary tool to get the buy-in from private sector and have an impact of work fleets. Certification may be a viable early option for organisations which already have certification to other related ISO management systems ISO 9001 (Quality Management Systems) and ISO 14001 (Environmental Management Systems). Organisations can benefit from developing their own road traffic safety management system using SANS 39001 as a template, without going through the full certification process. A decision by government agencies to take on this task would provide a powerful signal to the wider business community about the importance of working towards the elimination of fatalities and serious injuries and thus increase the buy-in from private sector.

4.6.5 Preparation of a road safety promotion plan

The RTMC appears to have insufficient budget to play the necessary road safety promotional role, and are limited to engaging in relatively low key campaigns. This leaves a gap for other agencies to promote road safety under their own identities, which may have the effect that:

- the public are not sure who is responsible for road safety
- the NRSS vision and target is not promoted in a unified and prioritised way
- messages promote the relevant agency, rather than the key interventions.

There is professional recognition of the need to increase understanding amongst decision makers and influencers, but promotional activity for road safety appears to be at a low ebb in South Africa. Without first strengthening road traffic enforcement activity, communications to users is highly unlikely to be effective in achieving key behaviour changes in the driving population.
A road safety promotional plan could be developed in collaboration with a wide range of government and non-government stakeholders, led by the lead agency, which sets out deliberate steps to:

- raise the profile of road safety in South Africa and create a climate for change amongst national or local decision makers and influential people within the community and media
- direct promotional investment into major evidence-based national initiatives to enhance the effect of major changes in road traffic enforcement or the road safety environment
- provide a mechanism for local communities or communities of interest to advocate for local government decisions to improve safety on city or village streets.

Other issues relevant to promotion (message content, underlying theory of behaviour change) will be discussed under the project list, in terms of good practices for road safety promotion.

4.7 Research, Evaluation and Knowledge

Good results focused research, monitoring and evaluation systems start with good crash fatality and injury data. WHO has provided a strong template for a review of road crash data systems in several respects. It encourages significant stakeholder input into what information is collected and in what form it can be retrieved. It also emphasises the need to address significant practical issues such as ensuring that adequately trained personnel, both at the roadside and back-office, have the necessary equipment to support the system, and make de-personalised data widely available.

Certainly, within the context of Africa, and low and middle income countries, one of the features of South Africa is how close the official record and the WHO estimate is. That said, there is likely to be room to strengthen the road safety data systems in South Africa. Currently the official crash data system in South Africa contains information on fatal crashes and fatalities only. This system is based on Culpable Homicide Crash Observation Report (CHoCOR) forms completed by officials from the South African Police Service (SAPS). Data on crashes with less severe injuries are recorded by some provincial and metropolitan authorities on an ad hoc basis, using third-party systems that are not compatible.

It is encouraging to note that the RTMC is in the process of establishing a web-based National Crash Data Management System (NCDMS) to serve as the register of crashes as per the definition of the National Traffic Information System (NaTIS) in the National Road Traffic Regulations, 2000. The two primary data sources are:

- CHoCOR forms
- Accident Report forms

The system will allow for the capture and verification of road crash data on a national and provincial level, preventing duplication of crash information. It will have the capability to verify driver and vehicle information directly with the NaTIS registers, and to verify the identity of persons involved in crashes with the population database of the Department of Home Affairs. The system will link to

hospitals, mortuaries and insurance associations to validate injury information. It will also allow more accurate location data to be captured and will produce reports facilitating improvement of road safety in South Africa. Drivers will be allowed to report no-injury crashes via web interface, which will lighten the load on SAPS to complete Accident Report forms. The RTMC is in the process of rolling out the NCDMS to provincial and metropolitan authorities. In time, historical crash data will be transferred to the NCDMS.

Monitoring and evaluation activity is important for the good governance of road safety within the jurisdiction and the transparency between partners and within the wider community about road safety progress. It is important that the RTMC in South Africa should have the formal authority to compile safety data and develop a reporting system which provides stakeholders with information about activities and results. Initial reports may need to be adjusted until a consistent format and data set is settled which provides meaningful road safety information. The collection of baseline data ahead of major interventions, and continued monitoring of performance, allows a stronger understanding of safety issues to be developed over time, and also provides key stakeholders with tangible results which they can use to promote further investment in road safety.

Given the multi-disciplinary nature of the road safety task, there are many different research questions and development projects that can be initiated, ranging from sophisticated evaluations of major road safety projects through to the development of driverless cars. While many essential research findings in road safety are fully transferrable across low, middle and high-income countries, the development of a local road safety research capacity is important in order to encourage deeper investigation of local issues and interventions. The focus of the research and development function should be on developing and implementing periodic survey instruments which will inform government agencies’ focus on results. Over time it may expand into initiating and funding specific research for learning from successes and failures, and contributing to the development of a safe road transport system in South Africa.

There is an urgent need to develop a road safety results framework in South Africa which can drive improvement through national and provincial agencies. This is discussed below in relation to the safety performance of the road infrastructure, where considerable analytical effort has been invested in recent years to identify how this should be assessed. A more basic requirement to help drive traffic enforcement and associated campaigns is the preparation and implementation of an ongoing program of observational surveys regarding driver behaviour – focusing on speeding, drink driving, and seatbelt wearing.

There is also an urgent need to bring senior officials with responsibility for road safety, and road safety professionals up to speed on modern road safety analyses, techniques and practices, particularly in the safe system approach to road safety. It appears this capability may not be as strong as is needed, particularly in moving towards a safe system approach, and may lead to a simplistic interpretation of what needs to be done or to individual preferences for activity rather than evidence-led interventions. A road safety knowledge transfer program could form part of a larger promotion plan, aimed at influencing Ministers, MECs and senior officials to become champions of road safety.
5 Interventions

This section surveys the current environment in terms of the core interventions required to deliver safe road traffic system – the road, the vehicle, the user and post-crash response.

5.1 Road environment

Each sphere of government in South Africa holds responsibility for the safety of significant lengths of road infrastructure.

South Africa has a very large road network, of which around one fifth is paved. The South African National Roads Agency Limited (SANRAL) manages the national road network. Table 5 shows SANRAL’s network comprising 21,403 km of the Strategic Network, as published in 2015.

Table 5 SANRAL Network Summary per Province

<table>
<thead>
<tr>
<th>Province</th>
<th>SANRAL Current</th>
<th>Remaining Strategic Network</th>
<th>Remaining Primary Network</th>
<th>Total</th>
<th>Surfaced</th>
<th>Gravel Secondary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Cape</td>
<td>4 550</td>
<td>0</td>
<td>315</td>
<td>4 865</td>
<td>3 293</td>
<td>26 391</td>
<td>29 684</td>
</tr>
<tr>
<td>Free State</td>
<td>1 580</td>
<td>988</td>
<td>1 831</td>
<td>4 399</td>
<td>3 794</td>
<td>21 887</td>
<td>25 681</td>
</tr>
<tr>
<td>Gauteng</td>
<td>659</td>
<td>243</td>
<td>473</td>
<td>1 375</td>
<td>2 955</td>
<td>18 32</td>
<td>4 787</td>
</tr>
<tr>
<td>Kwa-Zulu Natal</td>
<td>1 324</td>
<td>780</td>
<td>1 395</td>
<td>3 499</td>
<td>5 077</td>
<td>22 228</td>
<td>27 305</td>
</tr>
<tr>
<td>Limpopo</td>
<td>3 615</td>
<td>0</td>
<td>0</td>
<td>3 615</td>
<td>5 593</td>
<td>14 632</td>
<td>20 225</td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>2 411</td>
<td>137</td>
<td>1 165</td>
<td>3 713</td>
<td>4 069</td>
<td>8 506</td>
<td>12 575</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>3 189</td>
<td>0</td>
<td>1 872</td>
<td>5 061</td>
<td>1 768</td>
<td>22 621</td>
<td>24 389</td>
</tr>
<tr>
<td>North West</td>
<td>2 599</td>
<td>130</td>
<td>86</td>
<td>2 815</td>
<td>4 960</td>
<td>14 700</td>
<td>19 660</td>
</tr>
<tr>
<td>Western Cape</td>
<td>1 476</td>
<td>753</td>
<td>1 551</td>
<td>3 780</td>
<td>4 120</td>
<td>10 541</td>
<td>14 661</td>
</tr>
<tr>
<td>Totals</td>
<td>21 403</td>
<td>3 031</td>
<td>8 688</td>
<td>33 122</td>
<td>35 628</td>
<td>143 338</td>
<td>178 967</td>
</tr>
</tbody>
</table>

There were 11,719 km of remaining roads identified as part of the Strategic and Primary Network which are managed by Provincial Governments, but may still be incorporated within SANRAL, if agreed by the relevant Province. SANRAL expects that its network will increase to 35,000 km in the medium to long term.

Of the remaining non-SANRAL network:

- Nine provincial authorities manage approximately 180,000 km
- Eight major cities manage 52,000 km of (paved) roads, and
- Local Municipalities manage 300,000 km of (unpaved) roads.

Table 6 describes the proclaimed road network by road design, broken down by dual carriageways, four lane undivided roads, two lane single carriageway roads, and gravel roads.

Table 6 Proclaimed Network by Road Design

<table>
<thead>
<tr>
<th>Design</th>
<th>Total proclaimed roads</th>
<th>SANRAL managed roads</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Length</td>
<td>Percentage</td>
</tr>
<tr>
<td>Dual carriageway</td>
<td>2,160 km</td>
<td>0.6%</td>
</tr>
<tr>
<td>Fourlane, undivided</td>
<td>940 km</td>
<td>0.26%</td>
</tr>
<tr>
<td>Twolane, single</td>
<td>62,794 km</td>
<td>17.12%</td>
</tr>
<tr>
<td>Twolane, gravel</td>
<td>300,978 km</td>
<td>82.04%</td>
</tr>
</tbody>
</table>


SANRAL manages approximately three quarters of the dual carriageways, which have a high degree of safety built into them because they separate motor vehicles, greatly reducing the opportunity for head-on conflicts. There are also extensive grade separations to reduce conflict at intersections. Of much greater safety concern is the very high proportion of SANRAL’s network which are either four lane undivided roads or two-lane single carriageway roads. Approximately three quarters of the two-lane single carriageway roads are managed by Provincial Governments.

In rural areas, these two-lane roads are likely to have concentrations of significantly less safe road sections, with motorised users unprotected for example from head-on and intersection crashes. In urban areas, the absence of median strips on major roads increases safety risks for pedestrians.

While this information starts to provide some insight into the extent of potential safety issues on South Africa’s major roads, there is little if any published information on the number of fatalities and serious injuries on the roads managed by each sphere of government. SANRAL, for example, which manages around 3% of the total network but carries one third of the motorised traffic, does not project forward in its strategic documents from a documented volume of trauma on its roads, and it does not provide this information retrospectively in its public reporting documents. No information

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was available from extensive searching about where the serious road crashes are occurring in terms of the type of crash or the jurisdictional responsibility for the road.

A South African Road Assessment Program was launched in 2013 by the Department of Transport and the Road Traffic Management Corporation, with the support of the International Road Assessment Programme (iRAP).

The iRAP methodology provides road agencies with an international good practice process for gathering observational data about the safety of the infrastructure, integrating this with existing traffic and crash data, and making good quality safety investment decisions. iRAP combines video analysis of infrastructure safety attributes with available crash and traffic data to provide an objective assessment of the inherent safety quality of the infrastructure. The intention was to assess “10% of sealed roads (36,000km) where over 50% of fatalities are expected to occur.” However there is no publicly available information on the assessments that were done.

SANRAL subsequently developed its own related safety performance assessment program – NetSafe, which allows SANRAL to identify potential hazardous locations on roads based on the existing road elements. The data is collected annually using a survey vehicle with cameras and laser measuring equipment. National roads are divided into very short sections and the geometric features of each section are coded. Risk and prioritisation indices are then calculated, based on a combination of the geometric features and traffic volumes on the road.

The NetSafe analysis highlighted that crashes on most rural roads are quite rare, and also random, and that by identifying the physical attributes of the road and its use, identification and prioritisation of potential hazardous locations can be improved. More detailed safety investigations can be better targeted to support better use of safety improvement budgets. While pavement condition on SANRAL’s network is regularly published, based on a five-level grading system from “very poor” to “very good”, the same or similar information from the NetSafe analysis is not published.

The lack of publicly available performance information reduces the capacity to develop an understanding within South Africa of the primary safety issues in regard to the road environment. This limits the scope and potential of any advocacy on this issue. As noted previously, safety star ratings have been put forward by the UNAs a means of setting infrastructure safety targets, and NetSafe could be used and/or further developed as a management tool to drive this safety improvement.

The above is not to infer that road authorities are not concerned about the safety of users on the road. For example, there has been for some time a published road safety audit manual backed by clear policies within SANRAL about their use in new and improvement works. There are clearly significant steps being taken, with increasing priority given to pedestrian safety on SANRAL’s network, not just providing overbridges such as on the N17 between Springs and Johannesburg, but

25 See https://www.irap.org/wp-content/uploads/2013/07/SARAP%20brochure_electronic.pdf, retrieved September 2018. Key features of such studies are a one to five safety star rating of the road environment which is surveyed, and a Safer Roads Investment Plan which identifies the key treatments (and locations) which need to be applied in order to improve the safety star rating.
26 PIARC Road Safety Manual
also footpaths. Roundabouts are more likely to be installed, such as on three major intersections on the R31 Kimberley Ring Road. Investment is being put into average speed over distance enforcement, which are capable of achieving very high levels of speed limit compliance.  

It was reported in 2015 that the country faces a maintenance backlog of ZAR 179 Billion. Poor maintenance can have an impact upon safety, but asset management programs are inevitably focused on what are at best secondary safety treatments, such as pavement condition, or signs and markings. An infrastructure safety program looks firstly at primary safety treatments tackling the major crash types for motorised users – such as head-on crashes, single-vehicle run-off road crashes, and intersection crashes – as well as for non-motorised users. This leads to treatments such as median separation (such as wire-rope barriers on single carriageway roads), roadside barriers, and intersection treatments such as barriers. It also leads to speed management treatments on the infrastructure to directly slow motor vehicle speeds in favour of pedestrian safety. It is advisable for South Africa to develop targets for the safety of the infrastructure, and an infrastructure safety program to achieve those targets.

The NRSS contains relevant objectives and indicators which are useful for specific elements of the road network, particularly in relation to the objective to "eliminate high risk roads and hazardous locations". However, this work appears to need much greater strategic management and leadership, from the national perspective. Some questions to start this work off may be:

- What is the safety performance of the various networks across each of the provinces?
- What program of work would it take to meet a three star rating for 75% of the travel on the network (as per the voluntary performance target)?
- What investment would be required to achieve this level of safety performance (the equivalent of the "maintenance backlog")?
- And how will this be funded and rolled out through to 2030?

A stronger national perspective on infrastructure safety can assist in sharpening the focus on this issue at a provincial level.

### 5.2 Speed Environment

A much stronger safety focused lens appears necessary for South Africa's road network. A safer speed environment is a critical part of this.

Speed is a critical element in determining the safety of the road environment. Determining a safe travelling speed for any road environment depends on the function, design and use of the road. That is, a fully grade separated dual carriageway with median barriers which is accessible only to motor vehicles is safe at a much higher speed than a single carriageway market street which has many pedestrians where a safe speed is much lower.

The table below shows the safe speeds for a number of road types and potential conflicts – “safe” meaning a speed at which 90% of the crashes that take place will cause no serious injuries.  

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SANRAL (2018), “Investing in Road Safety”.

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### Table 7 Safe Speeds in Different Road Environments

<table>
<thead>
<tr>
<th>Road Type and Potential Conflict</th>
<th>Safe Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads with possible conflicts between cars and unprotected road users</td>
<td>30 km/h</td>
</tr>
<tr>
<td>Intersections with possible lateral conflicts between cars</td>
<td>50 km/h</td>
</tr>
<tr>
<td>Roads with possible frontal conflicts between cars</td>
<td>70 km/h</td>
</tr>
<tr>
<td>Roads where front and side conflicts with other road users are impossible</td>
<td>100+ km/h</td>
</tr>
</tbody>
</table>

The speed being travelled by a motor vehicle has a direct bearing on the risk of a fatality or serious injury occurring, whether the crash was caused by speeding or not.

Setting safe speed limits, which are appropriate to the function, design and use of the road is more easily said than done. This is because the dominant philosophy in road design and management since the mid 20th century has been to facilitate motor vehicle movements on road networks at speeds which, regrettably, greatly elevate the likelihood of a fatality or serious injury if something goes wrong and a crash occurs. This dominant philosophy and practice has resulted in very large numbers of people being needlessly killed and seriously injured throughout low, middle and high-income countries.

In 1971 speed limits on urban and rural roads in South Africa were metricated (from miles to kilometres per hour) and adjusted upwards from 35 mph to 60 km/h and from 70 mph to 120 km/h. In response to 1970s “oil crises” the limits were variously changed temporarily to as low as 50 km/h and 70 km/h, until the mid 1980s.29

The general speed limits set under the National Road Traffic Regulations 1996 are now:

- 60 km/h on a public road within an urban area
- 100 km/h on public road outside an urban area which is not a freeway, and
- 120 km/h on freeways.

In May 2015, the Government Gazette published the Minister of Transport’s intention to amend Section 292 of the National Road Traffic Regulations regarding general speed limits.30 The net effect of this amendment would have reduced default speed limits:

- from 60km/h to 40km/h in urban areas
- from 100 to 80km/h in rural areas, and
- from 120 to 100km/h on freeways which pass through a residential area.

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30 See Government Gazette 11 May 2015, No.38772. Department of Transport No.411 “Publication of the National Road Traffic Regulations for Comments”.
This is a very ambitious reform which, if implemented, would achieve significant reductions in fatalities and serious injuries. However, it appears as though this notice was not supported by any policy paper explaining the change, or providing background research or information. Comments were simply sought within a four-week period. No collation of comments appears to have been published, and the Minister of Transport under whose name the notice was published did not refer to any progress made on the matter in a formal address six months later.\footnote{See address by the Minister of Transport, Ms Dipuo Peters 13 November 2015, retrieved October 2018 file:///Users/martinsmallconsulting/Library/Mobile%20Documents/com~apple~CloudDocs/Safer%20Africa/South%20Africa/Minister%20Dipuo%20Peters%202015%20Speed%20Limits%20Speech%20.webarchive}

In any one jurisdiction, there are a range of cost-effective technical options to speed control issues, but success is likely to come from taking a change management approach to the overall problem. The proposed changes would shift South Africa closer to the setting of speed limits according to safe system principles, as set out in Table 10 above, and as recommended by the OECD and International Transport Federation.\footnote{OECD/International Transport Federation (2018), “Speed Crash Risk”. Paris.} However, after decades of promoting high speed limits, it is not realistic to assume that simple announcements of technical safety rules, however well justified, will be followed by effective implementation. A speed management reform process, informed by a change leadership approach (as recently illustrated by the 80 km/h initiative in France) allied with the many evidence based analyses which are available\footnote{See for example SWOV (2016). “Speed and speed management”. SWOV Fact sheet, November 2016, The Hague.}, would be highly valuable. Well designed demonstration projects would highlight the wide range of benefits available from creating a safer speed environment.

### 5.3 Vehicle safety

Vehicles do not typically cause many crashes. But the technology capability within vehicles can prevent many crashes, and many injuries. Within the whole of the road traffic system, vehicles are quite different to other factors, for several reasons:

- Vehicles are the focus of private rather than public investment and ownership, which means that while consideration of the cost of regulation remains significant, those costs are typically born directly by the user
- There has been a rapid acceleration of health promoting technology in vehicles, which accommodate human error, and so directly deliver on the safe systems philosophy
- Vehicles stick in the system for very long periods of time (typically twenty years and more in low and middle-income countries), which means that poor vehicle safety standards now lock in poor safety results for decades to come.

Vehicle safety in Africa has tended to focus on maintaining old technology. This is a significant concern of the NRSS, in which issues of roadworthiness and maintenance dominate. The wave of motorization puts these concerns into perspective, however. Vehicle safety opportunity in South Africa does not lie in maintaining old and less safe vehicle technology currently in the fleet. Roadworthiness will always be important in Africa but, long term, this approach locks the continent...
into a low technology and low safety cycle, always several steps behind what can be achieved elsewhere.

Figure 5-1 below provides a theoretical explanation for what can be achieved under different vehicle safety policy scenarios.

The safety quality of a vehicle fleet will deteriorate over time. By putting in place an effective roadworthiness and inspection regime, the safety quality will continue to deteriorate, but not as substantially. Alternatively, by putting in place new safety technology requirements and updating technical maintenance requirements the safety quality of the fleet can be substantially increased.

![Figure 5-1 Fleet Safety under different Policy Scenarios](image)

The major safety opportunity does not lie in focusing on fleet inspection. The major safety opportunity lies in increasing the quality of the vehicle safety technology as it enters the fleet.

### 5.4 Vehicle Safety Technology

Vehicle safety technology is playing an increasingly dominant role in the safety enjoyed by high income countries around the world. In these countries, a virtuous circle of government regulation, private sector investment and consumer information programs is generating significant improvements in road safety results.

The picture is quite different in low and middle-income countries which suffer from inadequate or non-existent regulation, lower levels of technology, and low consumer awareness. The crash testing programs and advocacy in low and middle-income countries by Global New Car Assessment
Programme (Global NCAP) have revealed major issues which significantly reduce road safety prospects in Africa:

- Routinely, automotive manufacturers withhold safety features from vehicles sold into low and middle-income markets
- The fundamental reason for this is a lack of regulation in low and middle-income markets.

South Africa appears to sit astride these two dynamics in global vehicle safety environment. It has regulatory systems in place, and has a major leadership role to play in support of vehicle safety throughout the continent.

South Africa is the only African signatory to the critical 1958 and 1998 United Nations conventions on vehicle safety.\textsuperscript{34} South Africa is also a member of the UN World Forum for Harmonization of Vehicle Regulations (Working Party 29) which is hosted by the United Nations Economic Commission for Europe, and is the primary global body responsible for the development of passenger car safety standards.

In 2018, the World Health Organisation reported on country application of seven critical vehicle safety regulations developed and agreed through the UN vehicle safety regulatory system.\textsuperscript{35} These regulations cover seat belts, seat belt anchorages, front and side impact, electronic stability control, pedestrian protection and child seats.

Global NCAP promotes adoption by all countries of the nine regulations set out in Table 5 below, alongside the current status of application by South Africa.

\begin{table}[h]
\centering
\caption{Application of Key International Vehicle Safety Regulations}
\label{tab:vehicle_safety_regulations}
\begin{tabular}{|l|c|}
\hline
UN Vehicle Safety Regulation & Application by South Africa \\
\hline
Seat Belt Anchorages (No.14) & Applied \\
Seat Belts (No.16) & Not Applied \\
Child Restraints (No.44) & Not Applied \\
Child Restraints (No. 129) & Applied \\
Crash Tests: Frontal Impact (No.94) & Not Applied \\
Crash Tests: Side Impact (No.95) & Not Applied \\
Pedestrian Protection (No.127) & Applied \\
Electronic Stability Control (No.140) & Applied \\
Motorcycle Anti-lock Brakes (No.78) & Not Applied \\
\hline
\end{tabular}
\end{table}


\textsuperscript{34} The 1958 Agreement concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be fitted to and/or be used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions, and the 1998 Agreement concerning the Establishing of Global Technical Regulations for Wheeled Vehicles, Equipment and Parts.

It is encouraging that so many of these regulations have been applied, particularly those for pedestrian protection and electronic stability control. This is consistent with the NRSS, which seeks to increase vehicle safety standards, but the NRSS key performance indicators in this area are rather weak, referring only to engagement with industry, and monitoring the rates of technological uptake. It is possible therefore that this aspect of the NRSS could be achieved in full without any further regulatory action may be taken over the life of the strategy – this would prevent South African road users from benefiting from established safety technologies.

A timetable could be set to apply the remaining seat belt and child restraint regulations (No.16 and 44), and both frontal impact and side impact regulations (No.94 and 95). It is also important to consider the application of Regulation No.78, which mandates the application of anti-lock braking systems to motorcycles. While South Africa has not yet suffered the devastating safety effects of the explosion in motorcycles experienced elsewhere in Africa, this technology would be highly effective for current motorcyclists, and would provide some protection against any potential increase in motorcycling.

5.4.1 Consumer information

In 2016 and 2017, the Automobile Association of South Africa (AASA) published ‘entry-level vehicle’ safety reports. These reports responded to the concern that in this highly competitive market, lower prices in South Africa may sometimes be attained at the expense of safety features. This is an important piece of desktop research, in lieu of the stronger crash test approach, which would allow much fuller consideration of the structural engineering.

The report developed a method to compare the safety features found in motor vehicles retailing under ZAR160,000. The known application of two active safety features, and five passive safety features was used to generate an overall safety score for 25 “entry level” vehicles:

- Active safety (crash prevention)
  - Anti-lock brakes (ABS)
  - Electronic Stability Control
- Passive safety (crash protection)
  - Driver’s airbag
  - Front passenger airbag
  - Side airbags
  - Head / curtain airbags
  - Crash test rating (frontal impact).

A total of 135 safety points were achievable. The vehicles were ranked as having either “poor”, “moderate”, or “acceptable” safety.

Table 9 Overall Safety Scores of Entry Level Vehicles

| ‘Poor’ Safety (≤10/135 points) | ‘Moderate’ Safety (20-50 / 135 points) | ‘Acceptable’ Safety (≥50 / 135 points) |

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<table>
<thead>
<tr>
<th>Vehicle</th>
<th>Safety Score</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kia Picanto 1.0 Start</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renault Kwid 1.0 Expression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Datsun Go+ 1.2 Lux</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kia Picanto 1.2 Start</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hyundai i10 1.1 Motion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chery QQ3 1.1 TXE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chery QQ3 0.8 TE (aircon)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kia Picanto 1.0 Street</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Datsun Go 1.2 Mid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tata Indica 1.4 LGi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tata Vista 1.4 Ini Bounce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tata Vista 1.4 Ini Ignis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tata Indica 1.4 Ini Bounce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tata Vista 1.4 Ini Ignis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tata Indica 1.4 Ini Bounce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tata Vista 1.4 Ini Ignis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tata Manza 1.4 Ini</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tata Manza 1.4 Ini</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tata Manza 1.4 Ini</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suzuki Swift DZire sedan 1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chevrolet Spark 1.2 Curve</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tata Bolt hatch 1.2T XMS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mahindra KUV100 1.2 G80 K4+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


The safety results when compared with price show that there were significant differences in safety. As illustrated in Figure 5-2 below, the vehicles with the highest safety scores were the most expensive, and the vehicles with the lowest safety scores were the cheapest. Overall, the study illustrated that some vehicles are considerably safer than others, and that none of the vehicles achieved 50% of the total safety points available.

![Figure 5-2](attachment:image.png)

Figure 5-2  Entry Level" Vehicle Safety Scores and Prices
This desktop study has been augmented in recent years by two sets of crash tests undertaken by the AASA and Global NCAP, under the banner “Safer Cars for Africa”. The November 2018 crash test results highlights the highly variable safety protection provided to users by vehicles being sold in South Africa. Vehicles by Kia, Hyundai and Toyota achieved three star safety ratings, but the popular Nissan NP300 Hardbody received zero stars.

New vehicle safety standards issues typically have a flow on effect to the standards applying to used vehicles which are imported into South Africa, and to the potential export of used vehicles from South Africa to neighbouring countries. It requires a comprehensive regulatory system in its own right, and this provides the basis for ongoing roadworthiness and inspection regimes for the fleet.

5.4.2 Vehicle Roadworthiness and Inspections

A comprehensive vehicle roadworthiness and inspection regime is in place in South Africa. A roadworthiness test is required at change of ownership. Public transport vehicles and heavy goods vehicles require testing every 12 months. Buses need to have their roadworthiness checked every 6 months.

The roadworthiness test checks essential items such as:

- identification and documentation
- electrical systems
- fittings and equipment (including mirrors, safety belts, etc.)
- braking system
- wheels (including tyre condition)
- suspension and undercarriage
- steering
- engine
- exhaust system
- transmission and driving instruments
- vehicle dimensions

There is, however, a clear concern expressed in the NRSS and more widely amongst stakeholders about fraud and corruption within the vehicle inspection system, which is delivered by a mix of private and public inspection operators. Motor vehicle fraud and corruption opportunities need to be addressed in a similar way whether delivery is through public or private providers. The South African Bureau of Standards (SABS) undertake compliance audits, and the RTMC has a National Traffic Anti-Corruption Unit. New legislation covering periodic technical inspections is in Parliament, requiring mandatory vehicle testing every 24 months, and it is hoped that the opportunity will be taken to strengthen the legal powers and operational capability of the RTMC to tackle any fraudulent or corrupt activity.

Care is required to ensure that roadworthiness and inspection regimes do not lead to over-regulation, as illustrated in a study of crash and licensing data from the Australian State of Victoria.

36 See https://www.aa.co.za/about-us/safer-cars-for-africa
Roadworthiness inspections are required at the point of sale of a vehicle (in Victoria), or at regular 12 or 6-monthly intervals (in New Zealand).

The study indicated that the 6-monthly inspections in New Zealand were very unlikely to be cost-effective – at least a 12% reduction in injury crashes was estimated to be needed for this measure to be cost-effective. The study also investigated the possibility of Victoria moving to annual vehicle roadworthiness inspections for vehicles over five years, and concluded that while the annual crash savings may be in the order of 4%, this is likely to be much less than required to make an annual periodic scheme cost effective. The six month testing in New Zealand was considerably relaxed, and the Victorian proposal was not introduced.

That said, there is a joint study program underway between the World Bank’s Global Road Safety Facility and CITA (Comité International d’Inspection des véhicules Automobiles) to examine vehicle inspection and safety performance in Africa, and there may be a greater argument to strengthen the inspection system in South Africa. Given this, the focus of improved testing regimes could be applied to commercial vehicles, as these are separately regulated from all motor vehicles and carry many passengers, and older vehicles, where roadworthiness issues are likely to be more extreme.

### 5.5 Road Users

The National Road Safety Strategy sufficiently addresses most of the critical questions, although there are clearly implementation issues, since many of these interventions have been put forward in earlier strategies.

#### 5.5.1 Driver Licensing

Significant concern was expressed by stakeholders about the driver licensing systems in South Africa, often centering on corruption generally, and on driving schools in particular. It is worth addressing quality of regulation issues, but there appear to be much wider issues regarding safety standards. Amendments to the National Road Traffic Act have been drafted, relating to the control of driving schools and driving instructors, namely:

- prohibiting the registration of a person as an instructor unless he or she is employed by a registered and graded driving school, or if he/she has been convicted of a prescribed under the Criminal Procedure Act, 1977, or if he/she was convicted or paid admission of guilt fine for driving under the influence of liquor or drugs;
- prohibiting the operation of a driving school unless such a driving school is registered and graded, and providing for this registration and grading;
- providing for the suspension or cancellation of registration of a driving school and the appointment of an inspectorate of driving schools;
- providing for the appointment of a person or body of persons as a provincial inspectorate to conduct inspections and evaluations to ensure compliance with the Act, and the

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empowerment of the Minister to prescribe the powers and duties of the provincial inspectorates.

The testing and licensing centres are some of the few income generating activities in road safety and are managed by provincial and local authorities and metros. Corruption and inefficiencies in the system are a major concern of all stakeholders. The overall system has not been upgraded for many decades, although some technological advances were made and are planned. For example, there is an online booking system and a computerised driver’s license test in Gauteng.

The operational part of driver testing is a provincial function and the MEC approves applications, although the Department of Transport manages the quality of the testing centres (National Inspectorate for Driving License Testing Centres). In 2012 the Department of Transport implemented a new computerised license test with the purpose to combat fraud and corruption at driver’s license testing stations. Not all centres make use of the computerised system. There have been complaints about the NaTiTest which apparently contains many questions which do not fall within the official syllabus in the National Road Traffic Act 93 of 1996.

Other issues raised include that the current practical K53 test methods limits the number of people that can be tested per day per test official and in the yard, causing many backlogs, which support corrupt practices. The current driver’s license card is not based on secure technologies and is easy to forge. The envisaged reform of driving schools and testing is supported, but would need to be significantly enhanced by a more systematic policy reform in order to drive safety improvement.

There is considerable research literature available to review the safety of any country’s driver licensing arrangements – moving towards a comprehensive graduated licensing system which protects drivers and other users at the riskiest stage of the driving experience. Just a few of the critical reform options which are well supported by a comprehensive international literature review on the subject are set out below:

- Minimum age requirements at the beginning of the licensing system through until a full licence is issued. Maturity is a major issue, and there is a much greater crash risk for younger drivers, and neurobiological development research indicates this lasts in the population through until approximately 25 years of age.
- There is evidence to support the introduction of a hazard perception test conducted before progressing from learner to provisional stages, and a practical on-road exit test before progressing from the provisional stage to a full licence being issued.
- Night driving and peer passenger restrictions during a probationary phase, as crash risk is greater at night for all drivers and is exacerbated by inexperience and immaturity amongst young and novice drivers. The presence of peer-age passengers creates a significant additional crash risk for younger drivers.

A comprehensive assessment of the driver licensing system appears warranted in South Africa to strengthen safety standards and compliance regarding who may be licensed to operate a motor vehicle and how.

5.5.2 Behaviour Change

There is a major behaviour change need for road safety in South Africa. Road safety promotion (through mass media) does not seem to receive much attention and has been identified as a weaknesses, since there does not seem to be a coordinated effort from RTMC, based on research of target groups, specific approaches, and progressive messaging.

More importantly, there does not seem to be an underlying theory of behaviour change, which would link different interventions together. This might lead to ad hoc implementation of the different interventions without progressive planning and monitoring. Provinces feel that the RTMC should be more involved in research projects in terms of target groups and development of resources and media which they have access to (either being supplied with the resources for poorer provinces or with online access for better-resource provinces).

Characteristics of effective behaviour change campaigns:

- The use of an underlying theoretical model
- The consideration of prior quantitative or qualitative research on the issue
- Responsibility for decision-making regarding message development needs to be based on independent research rather than governmental decisions
- The use of campaign supports such as legislation and enforcement
- The type of appeal approach adopted in the campaign and the media mix used to transmit the message, and
- A key agency is responsible for co-ordinating all publicity, including the campaign and public relations.

Although there are various technical committees to ensure coordination in support of road safety promotion, the actual messaging reaching the public come from various agencies with different branding, often with a marketing component that may blur the road safety message. Messages should have a consistent branding where the Lead Agency visibility is clear.

The role of road safety officers during multi-disciplinary actions are not clearly planned to have impact. Their role could include more pre-activity promotion through relevant media, showing the consequences of risky behaviour and preparing the public for the multi-stakeholder actions on specific routes.

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5.5.3 Road Safety Education

Current education and information interventions are being promoted in schools, including the Participatory Education Techniques, Multi-media (curriculum) project, Road Safety debates, Driver of the Year competitions. No assessment has been made of the quality or impact of the projects themselves, but not all schools are targeted due to lack of resources for road safety education (staff, vehicles, project budgets etc). The curriculum project is implemented by some provinces but not all, or to a limited extent. Although the activities are monitored (number of activities, schools visited), no information could be found such as a list of all schools and what interventions have been undertaken with those schools in which years.

Provinces make use of different road safety mascots (reverting back to Danny Cat which has been serving schools for at least 30 years). It is important for pre- and primary schools that there is some consistency and the development of a modern symbol should be investigated.

Both SANRAL and the private sector have developed road safety education materials. It is important that the national government through the RTMC and the Department of Basic Education provide education materials to the provincial authorities and Department of Education which have been well tested and evaluated. Research previously undertaken by other entities should be taken into consideration in developing nationally consistent programmes and materials.

Various road safety education interventions are envisaged in the NRSS from pre-school through to Grade 12. Primary and pre-primary education programs should be including work on the safety of the trip to and from school for children, focusing on child pedestrian safety, including lower speed limits and supporting infrastructure. It is envisaged that school leavers would be assisted with preparation for the learners and drivers license before they leave school. While it is recognised that a driver licence provides important vocational opportunities, the safety risks associated with young drivers are well researched, documented and very high. There is a strong public policy argument for delaying licensing and not encouraging early licensing.

5.5.4 Traffic Enforcement

Stakeholders clearly consider the credibility of enforcement to be at a very low ebb in South Africa, due to the inefficiency of the justice system, and corrupt and unprofessional conduct of traffic enforcement officers. It was said that smaller / poorer provinces do not have enough equipment to enforce traffic law properly.

AARTO needs to be implemented as soon as possible, since the lack of consequences of committing offences, seriously affect the credibility of enforcement and the motivation of enforcement officers. AARTO needs to run smoothly across the country in terms of the collection of fines.

There is a review committee looking at traffic enforcement, the implementation of the National Road Traffic Law Enforcement Code (NRTLEC) and the unifying of the traffic force. In the absence of the formal recommendations of the review committee, some observations are made.
The implementation of the NRTLEC is one of the key tools to coordinate traffic enforcement in the country, and to develop a uniform professional development and training program for traffic police. The NRTLEC is also one of the activities which the RTMC is specifically mandated to through the RTMC ACT.

Some of the issues regarding a unifying force are hugely challenging, such as salary and rank structures, and the principle of a unifying force is not addressed here – it is essentially a decision about the machinery of government in South Africa. However, the phased implementation of key aspects of the NRTLEC should not be put off while buy-in for a unified force is sought.

Currently, enforcement programmes are not data-led, including research on the effectiveness of certain enforcement methods. Many comments were made on the lawlessness of the South African community and it is important that the impact of enforcement activities are evaluated, and used to improve the delivery of these essential safety services.

Some stakeholders considered that the former CSIR quality control system for traffic offence monitoring should be revived at provincial and local level. This would support more informed management decision about targeting which offences should be enforced, as well as where and when. This tool also assisted communication with the public in terms of the offence levels and risk factors.

5.5.5 Enforcement of critical offences

Driving under the influence of alcohol is one of the biggest challenges for road safety in South Africa. No blood or breath test is necessary under the National Road Traffic Act, which allows for conviction on the basis of a trained officer making detailed observations of symptoms and behaviour. Contravention of the law can be demonstrated when:

- “the concentration of alcohol in any specimen of blood taken from any part of his or her body is not less than 0,05 gram per 100 millitres, or in the case of a professional driver ... not less than 0,02 gram per 100 millitres”
- “the concentration of alcohol in any specimen of breath exhaled by such a person is not less than 0,24 milligrams per 1000 millitres, or in the case of a professional driver ... not less than 0,10 millitres per 1000 millitres”.

As noted previously there have been significant issues related to the enforcement of drink driving laws. The general limit of 0.05 g/dl is credible, but there is a strong public health and traffic safety argument to implement a zero limit for young and novice drivers. This could also be reasonably applied to commercial drivers, rather than the current 0.02 limit.

However, the key to successfully tackling drink driving is to achieve and maintain a high perceived risk of detection amongst drink drivers. This requires the deployment of general deterrent based policing strategies. In terms of drink driving, this means:

- Strong legal systems which allow random breath testing anytime, anywhere
- Legally enforceable testing of a very high proportion of all drivers
• Strictly applying the law across the entire motoring population.

The reliance on breath testing devices is fundamental. Scanning devices deployed in large roadblocks allow officers to quickly and accurately assess whether or not a driver may have excess alcohol in their system. Where the scan indicates this may be the case, the vehicle can be taken out of the traffic stream and an evidentiary breath sample can be taken for prosecution purposes at the roadside.

It is understood that the specific Dräger breathalyser used in South Africa was withdrawn countrywide in 2011 after the National Prosecuting Authority determined its results could not be used as evidence in court. It is good practice that all speed and alcohol enforcement equipment is directly referenced in law, and its accuracy is maintained. The Western Cape is understood to have finally reintroduced evidentiary breath testing in 2016, after having addressed the technology issue. Other provinces have not addressed the technology issue and are still not delivering random breath testing operations.

A blood-testing based process is highly inefficient, and likely to be ineffective in generating a deterrent effect. A district surgeon, registered nurse or a prison medical officer is required to take a specimen of an arrested driver’s blood, which is then submitted to a state laboratory for scientific analysis. An arrested driver driver can also request that his or her medical practitioner be present when the blood specimen is taken.

The state must prove that the analysis was made by an expert who had the necessary skill and that the specimen analysed was that of the accused. It is also understood that there are various issues with blood samples, starting from the logistical problems in the enforcement operation, such as the availability of medical personnel, through to issues with the four state laboratories which are understood to be used instead of private facilities for funding reasons. The problems identified are:

• Broken equipment and bad management
• A backlog in getting samples analysed and released, leading to long delays in finalising criminal cases
• Samples getting lost
• Corrupt technical staff (for example, not following strict and proper operational procedures when analysing blood samples)

Given the estimated 3600 road fatalities relating to alcohol, it appears that a full national revision of South Africa’s drink driving laws and enforcement processes would be highly beneficial, alongside a sustained new investment in general deterrent based drink driving enforcement strategies.

Speed has been identified as a key risk factor in road traffic injuries, influencing both the risk of a road crash as well as the severity of the injuries that result from crashes. In high-income countries, speed contributes to about 30% of deaths on the road, while in some low-income and middle-income countries, speed is estimated to be the main contributory factor in about half of all road crashes.
Controlling vehicle speed can prevent crashes from happening and can reduce the impact when they do occur, lessening the severity of injuries sustained by the victims. The relationship between speed and injury severity is particularly critical for vulnerable road users such as pedestrians and cyclists.

Good practice speed enforcement relies on automated detection, apprehension and prosecutorial systems, entirely managed outside of Court processes. AARTO is capable of facilitating a whole new level of safety in South Africa by providing a platform for investment in automatic speed enforcement. It needs to be implemented. Once this is achieved, a national investment program into automatic speed enforcement systems is highly likely to be the quickest and most highly cost beneficial means of getting South Africa’s road fatalities on the path towards the country’s 2030 target.

One of the measures that seems to have had successful outcomes is the speed over distance enforcement that was piloted in KwaZulu-Natal and Western Cape and could be implemented in other areas. These systems should be expanded throughout SANRAL’s network (and even the highest traffic volume Provincial roads) and be complimented by a well organised program of mobile speed cameras. The additional fine revenue available from more systematically enforcing speed limits can be reinvested into a national road safety fund.

5.6 Post-Crash Response

Post-crash response is the fifth pillar of the Decade of Action for Road Safety 2011 to 2020 Plan. Increasing the responsiveness to post-crash emergencies will improve the ability of health and other systems to provide appropriate emergency treatment and longer-term rehabilitation for crash victims.

The activities proposed in the plan include:

- develop prehospital care systems and implementation of a single nationwide telephone number for emergencies
- develop hospital trauma care systems and evaluate the quality of care
- provide early rehabilitation and support to injured patients and those bereaved by road traffic crashes, to minimise both physical and psychological trauma
- encourage the establishment of appropriate road user insurance schemes to finance rehabilitation services for crash victims through introduction of mandatory third-party liability
- encourage a thorough investigation into the crash and the application of an effective legal response to encourage fair settlements and justice for victims
- encourage research and development into improving post-crash response.

The NRSS addresses many of the proposed activities in its response, but does not plan to monitor the number of people disabled through traffic injury and no mention is made of the NGOs existing in this space as possible partners in interventions.
There is a central number for reporting a road crash to SAPS (10111), from where other services can be informed. Some provinces have a central emergency number, but none of these are centrally managed and the caller is not certain that the call will result in appropriate action. The issue at hand is not the number itself but the effectiveness of the reaction units.

Inequities in the provision of trauma care is a problem in South Africa which is not confined to road crash victims. However, the existence of the Road Accident Fund (RAF) as public insurance available to citizens without the means to private insurance is a foundational support. The need to strengthen the RAF is addressed below.

Although South Africa is one of the few countries in the African continent with an organized statutory system of pre-hospital care, the access of many South Africans are limited to basic trauma care due to the constraints of distance and time as in most of the developing world. Access to pre-hospital care and overloading of tertiary facilities also needs to be addressed.

There are notable disparities in mortality rates for injured patients around the world. One study looked at the mortality rates for all seriously injured adults in three cities, in countries at different economic levels. The mortality rate was 35% in a high-income setting, 55% in a middle-income setting, and 63% in a low-income setting. Another study reported a six-fold increase in mortality for patients who reached hospital with injuries of moderate severity. The mortality rate was 6% in a high-income country hospital and 36% in a rural area of a low-income country.

Much of the disability from extremity injuries in developing countries should be eminently preventable through inexpensive improvements in orthopaedic care and rehabilitation. In part, the improved survival and functional outcome among injured patients in developed countries comes from high-cost equipment and technology. However, much of the improvement in patient outcome in higher-income countries has come from improvements in the organization of trauma care services – in terms of human resources (staffing and training), physical resources (infrastructure, equipment and supplies), and process (organization and administration).

### 5.6.1 Trauma response capacity at health facilities

Between 2010 and 2013 audits were done of health facilities as to basic indicators (in 2103 there were 3 808 facilities in South Africa) and certain basic parameters were set, and assistance given through Operation Phakisa.

The Trauma Society of South Africa has undertaken more detailed projects to address trauma management standards and information. One of these was the preparation of guidelines for the assessment of trauma centres in South Africa. Based on standards from the United States of America, and endorsed by the relevant professional bodies in South Africa, the requirements are in

41 Trauma Society of South Africa
43 www.idealhealthfacility.org.za
The guideline defines criteria for four levels of trauma care facilities:

- Level I: Major trauma centre
- Level II: Urban trauma centre
- Level III: Community hospital
- Level IV: Primary health care centre.

The Trauma Society of South Africa also facilitated the development of an electronic trauma registry, the South African National Trauma Registry, to collect and store data related to trauma. This data capturing, processing, storage and retrieval system is based on WHO and other internationally recognized and standardized systems and guidelines.

Datasets collected include: patient demographics and incident details, transport and response times, trauma centre admission with clinical information and probability of survival calculations, diagnostic and therapeutic procedures performed, theatre and Intensive Care Unit information and hospital outcome information. It also offers features like the automatic calculation of the internationally accredited Injury Severity Score, New Injury Severity Score, and Probability of Survival scores, together with other scores relevant to patients in intensive care units.

The system was successfully piloted in a few hospitals in the private and public sectors in SA and has been implemented in some public and private sector trauma centres, such as Charlot Maxeke Johannesburg General Hospital (a public tertiary hospital in Johannesburg) and Christian Barnard Hospital (a private hospital in Cape Town).

### 5.6.2 Incident Management

SANRAL manages incident management systems on the national networks and has developed a Road Incident Management System (RIMS) Policy. The aim of this is to provide a coordinated, standardised guideline to be used throughout South Africa by all organisations that are involved in RIMS, and to establish the best practices in responding and dealing with road incidents in an efficient and effective manner.

The five pillars of RIMS are:

- Programming and Pre-planning
- Resource Allocation and Management
- Communication and Communication Technology
- Capacity Building, Skills Development and Training
- Systems Maintenance, Monitoring, Reporting and Evaluation

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SANRAL has also been tasked with overseeing the skills training and development of emergency services officers in RIMS since 2016. The RIMS skills training is mainly aimed at traffic officials, paramedics, SAPS, military, fire departments and other emergency response services.

Disaster management is a concurrent national and provincial competency, and although the requirement for the implementation of a standard system on provincial and local roads is clearly provided for in disaster management legislation and policy, lines of command are not always clear in practice. As one analyst explains "ambulance services and provincial roads and traffic are functional areas of exclusive provincial legislative competence whereas municipal roads and traffic can be assigned to local authorities in terms of provincial legislation." Furthermore, SAPS patrols have to respond to serious incidents such as crashes are not only focused on the national network but also respond on provincial and other roads. They can also respond 24 hours a day which provincial and local traffic are not able to do.

5.6.3 Crash Investigation

The RTMChas a responsibility to investigate crashes in accordance with the following criteria:

- Crashes in which five (05) or more persons are killed;
- Fatal crashes in which four (04) or more vehicles are involved;
- Fatal crashes in which vehicles carrying hazardous substances are involved; or
- Any high-profile accident at the discretion of the Corporation.

The members of the SAPS accident units have been put through various crash investigation courses, such as on-scene investigation, road crash investigation, road crime crash fault finding, first responder, and are implementing mechanical investigation and photography training. SAPS are now training some of the Metros on accident attendance and have agreements with them to on-scene investigation and management of the scene.

5.6.4 Implementation of Road Accident Fund Benefit Scheme

Finally, it is important to note the significant reform proposed by the Department of Transport to replace the existing Road Accident Fund (RAF). Draft legislation for a Road Accident Fund Benefit Scheme (RABS) is aimed at ensuring a reasonable, equitable, affordable and sustainable system of structured benefits to replace the RAF. The RAF is not self sustaining in that the injury insurance premiums are insufficient to fund the future liabilities of the scheme. The scheme also fails on public policy grounds because it is a fault based scheme – that is, in order to qualify for compensation, claimants must prove that the road crash was caused by the fault of the driver of another motor vehicle.

The case for RABS is based on the following arguments:

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46 https://www.nra.co.za/live/content.php?Item_ID=4973
48 Ibid
- the current system is indemnity and insurance based and needs to be transformed into a social benefit scheme which benefits a larger section of the population
- compensation is inequitable because a small section of the population receives the biggest share of available funding as compensation
- the current system is unsustainable in that contributions bear no relation to claimants who claim and exhibits an ever-growing deficit, and
- the solution is to remove the requirement to establish ‘fault’ as a determinant to qualify for benefits.

Further benefits will be realised by:

- making available timely and appropriate healthcare benefits based on a reasonable tariff
- simplifying claims procedures
- providing wider cover to persons injured in road crashes
- providing for fewer exclusions from benefits
- providing defined benefits which promote affordability
- reducing disputes by removing the ‘fault’ requirement
- providing pre-determined benefits
- and alleviating the burden on courts through the establishment of an internal appeal procedure.

Typically, the replacement of “at fault” with “no fault” injury insurance schemes is opposed by the legal community, and welcomed by consumer interests. From a safety perspective, the example of the Transport Accident Commission (TAC) in Victoria, Australia provides a compelling case to look again at how the injury insurance scheme is structured to focus on injury prevention as the primary loss reduction strategy. TAC has, for example, become the primary investor in infrastructure safety improvements in Victoria, and has demonstrated cost effective returns to its regulated injury insurance scheme as a result.
6 Appendices

6.1 Appendix 1: Recent national reviews of road safety in Australia and the United Kingdom

Arising from concern at slow progress in road safety, the Governments of Australia and the United Kingdom commissioned wide-reaching investigations into the problem in 2017. Short extracts of the resulting reports highlight the need for concerted action by national governments, whether functioning within a constitutional Federation, or a highly devolved unitary state.

6.1.1 Australia: Inquiry into the National Road Safety Strategy 2011-2020

On 8 September 2017 the Australian Government announced the commencement of an independent Inquiry into the effectiveness of the National Road Safety Strategy 2011–2020. The inquiry report was handed down in September 2018. The key findings are below.

<table>
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<tr>
<th>There is a disconnect between intentions, resourcing and road safety practice</th>
<th>Australia needs a transformative approach to road safety. Road trauma targets are not being met and, at the same time, the Safe System approach espoused in the National Road Safety Strategy 2011–2020 is often not being honoured ‘in the field’.</th>
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<tr>
<td>Not focusing on harm elimination means settling for sub-optimal results</td>
<td>Some improvement in safety is often regarded as sufficient or is assumed. We accept that we are making the roads, vehicles and users “safer” but frequently miss the opportunity to make them SAFE outright. We must move from a coping mechanism to one that fixes the problem once and for all.</td>
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<tr>
<td>More resources and a more intense focus are needed</td>
<td>Many safety aspects have not received sufficient focus or resources under the current National Road Safety Strategy. There are flaws in accountability, the scale and source of funding, gap analysis, capacity building, change management, quality assurance, technology, insurance and organisational culture.</td>
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<tr>
<td>Smart allocation of resources will enhance road safety</td>
<td>Smart application of safety initiatives demonstrated to the inquiry show a return across portfolios of up to 20:1. Leadership from the very top of government is required to recognise and unlock these multi-agency high returns on investment.</td>
</tr>
<tr>
<td>Road safety reform must scale-up the proven interventions and embrace new ideas</td>
<td>The consultative process provided a range of ideas and reforms. Many of these deserve further consideration within the context of developing future action plans and the next strategy.</td>
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There were 12 recommendations:

• Create strong national leadership by appointing a Cabinet minister with specific multi-agency responsibility to address the hidden epidemic of road trauma including its impact on the health system.
• Establish a national road safety entity reporting to the Cabinet minister with responsibility for road safety.
• Commit to a minimum $3 billion a year road safety fund.
• Set a vision zero target for 2050 with an interim target of vision zero for all major capital city CBD areas, and high-volume highways by 2030.
• Establish and commit to key performance indicators in time for the next strategy that measure and report how harm can be eliminated in the system, and that are published annually.
• Undertake a National Road Safety Governance Review by March 2019.
• Implement rapid deployment and accelerated uptake of proven vehicle safety technologies and innovation.
• Accelerate the adoption of speed management initiatives that support harm elimination.
• Invest in road safety focused infrastructure, safe system and mobility partnerships with state, territory and local governments that accelerate the elimination of high-risk roads.
• Make road safety a genuine part of business as usual within Commonwealth, state, territory and local government.
• Resource key road safety enablers and road safety innovation initiatives.
• Implement life-saving partnerships with countries in the Indo-Pacific and globally as appropriate to reduce road trauma.

On 5 October 2018, the Deputy Prime Minister who is also the Federal Minister for Infrastructure, Transport and Regional Development announced a new Review of National Road Safety Governance, as proposed in Recommendation 6 above. He stated that “undertaking the Governance Review is an important step in improving capability and accountability, as well as informing how best to implement other recommendations of the NRSS inquiry made by the Independent Panel in their report handed down last month.”

6.1.2 United Kingdom: Road Safety Management Capacity Review

In May 2017, the Department for Transport commissioned a road safety management capacity review to benchmark and understand the current status of institutional delivery of road safety in Britain, and to identify practical and actionable opportunities for strengthening joint working, local innovation, and efficiency on a national and local basis.

The detailed independent report was published in June 2018, and its conclusions are provided below.

_Britain is one of the global leaders in road safety and has achieved its results over decades by means of a systematic, planned, research-based response to road safety problems. Notwithstanding the good_  

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progress achieved, and as in most other countries active in road safety, there is widespread concern about current road safety results amongst the road safety community in Britain. This review has found strong support for more ambitious activity to address the large scope for preventing avoidable death and serious injury in road crashes.

In 2016, 1792 people lost their lives on British roads, the highest total since 2011. The trend in road fatalities has been broadly flat since 2010. There was a 5% drop in UK fatalities compared to 17% for the EU average in the period between 2010 and 2015. A further 24,101 crash victims were seriously injured. Road traffic injury represents a leading national cause of major trauma and for some age groups, a leading, if not lead cause of death when compared to all other causes. Research-based forecasts indicate that unless more effective action is taken, 350,000 people will be killed or seriously injured in Britain between 2010 and 2030. Apart from this human cost, the societal value of prevention of the casualties of all severities is estimated to be around £160 billion. The large scope for preventing avoidable human tragedy is evident and is not being sufficiently addressed.

The context for road safety is constantly changing and is set to change in ever more fundamental ways by 2030. The roll-out of known, effective safety measures is essential to address the increasing risks from trends in choice of active travel modes and the need to address the safe mobility of an ageing population. The introduction of new technologies such as driverless cars will need careful planning and anticipation of possible risks such that the potential road safety benefits are realised.

The government has embarked upon an ambitious long-term course in adopting the Safe System approach in line with international best practice. Most professionals view Safe System as a sound approach which involves the extension and deepening of current practice. The Highways England strategic framework; the strategic work in some cities, and the recent launch of Safer Roads Fund are widely cited as highly promising. At the same time, Safe System is not yet fully launched or promoted, nor is there sufficient understanding across the sectors of what this means for their road safety work in Britain. This review makes a variety of recommendations, summarised in the preceding sections, to address this.

In any country or jurisdiction, the context for road safety activity is highly complex (given its multi-sectoral and multi-disciplinary nature), and careful leadership is a critical success factor. Bold leadership and further steps by the national lead agency for road safety, the Department for Transport, are sought.

In Britain, the complexity of this road safety context has increased in recent years, both due to new developments in localism and greatly reduced budgets, as well as some falling away from successful past practice. This is evident in many sectors and is the cause of widespread concern by practitioners and professionals, including policymakers. There is national consensus amongst those with everyday responsibilities for road safety that the priority given to road safety has been slipping for some years into unknown territory and that the momentum and rate of progress in casualty reduction seen in previous decades has been lost. Continued fragmentation and dilution of established effective practice is a threat to future road safety performance.

The principal conclusion of this review is that the absence of a national road safety performance framework is impeding progress. It is clear that this has been a major factor in the marked reduction in
priority and observable recession in results-focused road safety activity in virtually every sector, and in both national and local government.

Over a two-decade period up to 2010 a carefully derived strategic national safety policy framework and quantified casualty reduction targets provided focus for national and local activity and substantial reductions in deaths and serious injuries in road crashes were achieved.

It is widely reported that the absence of national quantitative targets to reduce death and serious injury since 2010 has contributed to a different focus from, or reduced focus on, death and serious injury prevention and reduction in important policy areas. While localism is cited nationally as being the primary reason for the withdrawal of targets, road safety professionals (across many sectors, including local government) are not convinced, observing that locally relevant targets are set in many other areas, e.g. housing, other areas of public health, motor vehicle emissions and walking and cycling.

Professionals have reported problems with retaining a road safety priority, or in some cases even the function itself, in local authority policymaking and investments. Problems are evident in the low priority now given to enforcing key road safety rules. Above all, a lack of a rationale for joint working was reported within departments, across central government, with and within local authorities and across the wider road safety profession. The lessening involvement of key agencies with core responsibilities at national and local level is challenging meaningful shared road safety responsibilities in key sectors. Current activity, in general, remains highly fragmented and lacks focus.

The relationship between setting quantified road safety targets and achievement of the reduction of death and serious injuries in road collisions is well established in research findings. International organisations working with road safety see target-setting as a global success story. Successful application of a Safe System approach requires a Safe System performance framework. This comprises the setting of an explicit long-term goal towards the ultimate prevention of death and serious injury, and interim measurable targets to reduce deaths and serious injuries. These must be underpinned by a range of supporting, targeted, measurable outcomes and outputs which are directly linked to the prevention of death and serious injury. As noted in global guidance on road safety management provided by the World Bank, national goals and quantified objectives are the essential foundation stone in support of achieving better results. In their absence, the focus and rationale for all other institutional delivery functions (i.e. coordination, funding and resource allocation, legislation, promotion, monitoring and evaluation, research and development and knowledge transfer) lack cohesion.

A further conclusion reached in this review, is the lack of appropriate investment in results-focused, evidenced-based road safety activity which has influenced the amount and quality of road safety work. In many areas, including policing and health and local authority work, this has been severely reduced. Alongside the setting of goals and quantitative targets, more financial resource is required to improve joint working, innovation and efficiency in delivery. It is clear that the current level of spending is not commensurate with the current value of prevention and that there are many opportunities for large returns on investment presented by a wide variety of systematic, demonstrably effective interventions. The long-term Safe System approach involves working towards the prevention of serious and fatal crash injury risk for as long as it takes to achieve it acceptably and affordably. Safe System treatments in The Netherlands, Sweden, Norway and elsewhere have so far shown good ratios of benefits to cost.
and have proved to be publicly acceptable. Large, potential returns in investment for the British road network have been identified.

Britain has taken a bold next step in addressing the need for results focused road safety management by adopting Safe System in the British Road Safety Statement. In order to make a success of this and to prevent the substantial avoidable tragedies experienced daily on UK roads this report concludes that critical success factors will be:

- Strong ministerial leadership
- A planned, systematic, accountable approach to road safety management with clear roles and responsibilities
- The adoption of a national long-term goal towards the ultimate prevention of death and serious injury, and
- The adoption of national interim quantitative targets to 2030 to reduce death and serious injury, supported by a set of related safety performance objectives to foster closer management, more efficient delivery and use of public resource to achieve better results.

6.2 Appendix 2: Summary of Interviews

A number of officers within national and provincial government were interviewed, as per the table below. This summary is a reflection of the comments made by the interviewees. The accuracy of the comment has not been verified. Some of the comment is contradictory, and some is contrary to research evidence or established good practice. The summary is provided on the basis of all the interviews, and no comment should be attributed to any particular interviewee.

<table>
<thead>
<tr>
<th>Person</th>
<th>Designation</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Mr S Podile</td>
<td>Group Executive Law Enforcement and Road Safety</td>
<td>Road Traffic Management Corporation (RTMC)</td>
</tr>
<tr>
<td>Dr L Mofomme</td>
<td>Group Executive Corporate Services</td>
<td>RTMC</td>
</tr>
<tr>
<td>Chief N Jolingana</td>
<td>Chief of National Traffic Police</td>
<td>RTMC</td>
</tr>
<tr>
<td>Mr M Mokhantso</td>
<td>DH, Road Safety Education</td>
<td>RTMC</td>
</tr>
<tr>
<td>Ms S Zulu</td>
<td>SH, Road Safety Education</td>
<td>RTMC</td>
</tr>
<tr>
<td>Mr T Seete</td>
<td>Stakeholder Management</td>
<td>RTMC</td>
</tr>
<tr>
<td>Mr Heinrich van Deventer</td>
<td>Senior Specialist Business Analyst</td>
<td>RTMC</td>
</tr>
<tr>
<td>Mr D Roux</td>
<td>Research and Development and Traffic Safety Engineering</td>
<td>RTMC</td>
</tr>
<tr>
<td>Mrs M Goudkamp</td>
<td>Deputy Director: Non-Motorised Transport</td>
<td>Department of Transport (DoT)</td>
</tr>
<tr>
<td>Mr A Chego</td>
<td>Director: Rural and NMT</td>
<td>DoT</td>
</tr>
<tr>
<td>Adv J Makgatho</td>
<td>Chief Director: Road Transport Regulation</td>
<td>DoT</td>
</tr>
<tr>
<td>Mrs T Moya</td>
<td>Director: Road Safety &amp; Special Projects</td>
<td>DoT</td>
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Governance and Accountability

The national sphere of government needs to make policies and legislation, but whatever is promoted in this sphere requires consultation with provinces and if they don’t agree it may become a political issue. The different politics across the different spheres of government can frustrate change.

The NRSSC is supposed to be decision-makers, with smaller subcommittees comprised of implementers that feed into the committee, but there are several issues. Implementation of some decisions that come out of the NRSSC is prevented by politics internal to the province.

There is sometimes a reluctance to implement decisions even if agreed by the NRSSC.

There is no cohesion within the national sphere and there seems to be
constant disagreement between the DOT and its own agencies.

The DOT should play a stronger leadership role in road safety, since all agencies have road safety elements and they have the authority to call the agencies for quarterly meetings.

Each province gets its own budget from national government, but resources are over-allocated.

There is mismanagement in provinces.

There is no accountability to joint decisions. People agree in meetings to do certain things, but because their accountability lies within their own authority (province or local) and nothing happens. The national sphere of government has very little power to see decisions through. It is more like a gentleman’s agreement.

People are cynical about road safety – they are not supportive because they do not think anything has changed or will change.

The NRSSC is supposed to be attended by the Heads of Departments but they don’t come. They don’t have a technical understanding or understanding of the effort and the influence that could be harnessed by just getting all together.

The concurrent function with provinces and municipalities has weakened central control and necessitates a strong coordination function from the national DoT (through its agencies).

<table>
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<tr>
<th>Senior Management Capacity, Political Will</th>
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<tr>
<td>Looking at the success in the health sector pertaining to AIDS, it is important that road safety be elevated to presidential level, only then will it receive the attention it requires.</td>
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<tr>
<td>Road safety programmes will not have an impact if it remains at departmental level.</td>
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<tr>
<td>The general attitude towards road safety is that it is the last thing the anybody ever thinks of when it comes to funding.</td>
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<tr>
<td>The RTMC’s coordination mandate is not reflected in the governance agreement</td>
</tr>
<tr>
<td>Ministers and MEC are not good role models for others in road safety, even though they may say they support road safety</td>
</tr>
<tr>
<td>Unfortunately, road safety is only as good as the political will. South Africa goes through phases when road safety is on top of the agenda and then</td>
</tr>
</tbody>
</table>
falls of the agenda again. The DOT has gone through quite several Ministers and the approach is not consistent.

Senior management do not always have road safety specific knowledge and do not know what is important in road safety.

Funerals of big accidents are attended and promises made without understanding the effort that would be needed for a turnaround strategy.

Politicians think that there are quick fixes in road safety – if there was one it would have been implemented. All solutions need to be thoroughly and consistently implemented, which costs money.

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<tr>
<th>Coordination</th>
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<tbody>
<tr>
<td>The RTMC does not have enough power to really drive road safety results. It can only influence and must work with that.</td>
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</table>

It is important in terms of coordination to be clear where the functions reside – is it RTMC or the DOT? There are uncoordinated initiatives – DOT will be doing initiatives which you would expect the RTMC to do.

The RAF spends only R10m per year on road safety, and that includes the salaries of those involved. RAF has a deficit on R10bn and is still accepting claims.

The RTMC leadership role is only as strong as the investments by other agencies.

The DOT will sit back and do nothing if agencies are not functioning according to their mandate.

The RTMC is not supposed to be an implementing arm but should be setting standards and coordinating.

The NRSSC mostly consist of traffic officers who want to coordinate traffic law enforcement activities. That committee does not address the important integration of issues, such as the five pillars in the Decade of Action.

Traffic law enforcement is an extremely important component but crash statistics show that enforcement alone is not enough in bringing down the crash statistics.

The RTMC is a coordinating body but does not have statutory powers over any of the other agencies or entities.

Provinces feel that the RTMC coordination and planning of operations, especially law enforcement, is done well. There are structures through
which they communicate with the provinces.

In terms of RTMC and RTIA (and even RAF) there are coordination meetings taking place but there is a lack of direct communication and standing meetings between the DOT and the provinces at operational level. The information from the Head of Department level meetings are not cascaded down sufficiently.

| Implementation of the NRSS | Safe System approach: that is a phrase that has been used a lot in South Africa, but it means different things to different people. It has a lot of merit and technical committees had a lot of debates about how relevant that is to developing countries. The debate helped to focus on how to allocate the little resources effectively.

The NRSSC has the right representatives but declarations made must be implemented and progress must be measured. We discuss this over and over but there is no implementation.

There are roadblocks in implementing the strategy – mainly politics, sometimes national and sometimes provincial.

Our annual statistics are not very good. In the long run the enforcement operations are not making any impact and we need to work on behaviour. We are not doing enough.

The strategy does tick all the boxes, but for a strategy it is still very elaborate. The measure of an effective strategy is that the implementing agencies have internalised the main points and works to them.

Education and awareness are key elements, but it is still not sure exactly how that will be done.

The road safety strategy is not focused enough on reaching specific intermediate outcomes, other than crash reduction.

For infrastructure improvement you have to prove that you have a program in place to get funds, but no extra funding will come from anywhere, since road safety is not a priority at all.

You have to utilise the funds that you get – existing money must be spend wisely.

Any funding that is provided to authorities should be conditional, with the applicant needing to indicate the percentage that will be allocated to road safety.

The RTMC expects the provinces to make the NRSS their own and to
develop provincial implementation plans.

The RTMC does not have a large enough budget to implement the strategy. The implementation is with the provinces and the plan should be followed by resources. Could work like grant systems for roads.

The accountability of provincial line functions is to its own structures, not the RTMC so the mechanism to ensure accountability is lacking.

Because of the lack of formal accountability to the national structures, funding would be an enabling mechanism, that could drive road safety projects through business plans, etc.

The coordinating structure does not have power over provinces due to constitution of the country – 3 tiers of government. National cannot necessarily get provinces to do things through the intergovernmental framework.

In some provinces there is a severe lack of funding to do anything extra – some provinces do have more funding and less dependency on outside funding.

In terms of communication campaigns – very different in the different provinces, linked to resources allocated.

Results focus is missing and that is a big issue – there is no results framework and the monitoring of indicators is missing.

<table>
<thead>
<tr>
<th>Justice System and AARTO</th>
<th>The administration process within justice for traffic offences is not serious.</th>
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<tbody>
<tr>
<td></td>
<td>The Justice Department is not helping. They refuse to amend the laws that would support road safety. They will not have dedicated courts to address traffic and not realising that road safety is a national catastrophe.</td>
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<td></td>
<td>The Judiciary is not enlightened in terms of the road safety matters which is not considered as serious as murder, leaving many cases to be scrapped. That has a big influence on road safety – Police do their part but there is no consequence.</td>
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<tr>
<td></td>
<td>The Administrative Adjudication of Road Traffic Offences (AARTO) Act and the RTIA were born out of the frustrations with the judiciary. South Africa wanted to move away from the criminal system towards administrative penalties.</td>
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<tr>
<td></td>
<td>AARTO has been trialled, and works. Offenders have a certain period to pay a fine and there is a discount associated with the time period. If the fine is not paid, it would go to the AARTO Office and from there an</td>
</tr>
</tbody>
</table>
Infringement notice will be issued. Legal liability rests on the owner of the vehicle.

The justice system and AARTO is failing us. There is no consequence management in terms of finalisation of punishment. Even if there are many more traffic officers and enforcement is effective, there will be no change in behaviour if the contravention system is failing. This talks to AARTO implementation and to the Justice System which does not see traffic fines in a serious light.

Fines are not unified across the country so an offender faces different fines in different areas for the same offence.

Fines do not make a difference to behaviour, since people just pay or simply ignore. The punishment should include more options, such as community service, which would be a better deterrent.

Traffic officers are not motivated. One of the reasons is that they see that enforcement is no real deterrent, since their activities are not backed up by the Justice System.

The Road Traffic Infringement Agency (RTIA) is the independent arbiter of traffic infringements and fines issued under AARTO.

The AARTO Act authorises the RTIA to administer the process.

A pilot project was run in the Tshwane area. The system is working but one of the issues is that the offenders do not received the infringement notices due to various issues, including the SA Post Office. There is a need to amend the law to make it possible to send the infringement notices through email rather than registered mail. Over 50% of notices were not delivered.

The contravention register connects with national driver and vehicle registries (managed by the RTMC through NaTIS). Up to now the different traffic entities have their own contraventions systems (working on 7 different platforms).

Every time now a person renews their vehicle license they have to bring proof of residence to ensure that the address list is updated.

<table>
<thead>
<tr>
<th>Traffic enforcement and resources</th>
<th>There are multiple issues in regard to traffic law enforcement and resources.</th>
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<tbody>
<tr>
<td></td>
<td>Corruption</td>
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<tr>
<td></td>
<td>There is a high level of corruption in traffic law enforcement, integrated in</td>
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</table>
how things are done

Traffic methodologies are outdated, always reactive.

Traffic officers are deployed but not managed effectively – there are 2400 contraventions and they are just sent to the road and not directed what to focus on.

They were supposed to identify road safety issues and focus on those related offences.

There used to be models that authorities used, developed by the CSIR, to measure offence levels in a very simple way that did not bring extra costs. It consisted of small frequent surveys done by traffic officers themselves.

Speed

This is a huge problem. A few years ago there were more speed cameras in place, but it is a challenge of the municipalities to maintain them. There are fewer fixed cameras than before.

Average speed enforcement has been piloted in different provinces, but it has some challenges. KZN started implementing this and now there are various stretches of road in the WC making use of this. The toll gantries in Gauteng can be used for this.

Speed over distance is one of the most effective measures where head-on collisions in some cases were eradicated without a barrier.

One national traffic force

The idea originated from the ANC Conference, when the new minister of transport was appointed. The traffic chiefs should be part of the process, but some fight the process, so someone needs to decide and carry through.

One traffic force would be ideal, but this is never going to happen in our lifetime, as there are too many issues like rank structures and salaries. It is also a political issue – for example, provinces that are not governed by the ruling party may not agree.

It may be possible to integrate the 9 provincial forces, but to integrate the metros and local authorities would be a huge task.

There are 334 subnational local governments which each has a traffic enforcement. These are Local Municipality, Metro and Provincial. Then
there are the National Traffic Police. The different forces are trained differently.

Alcohol

The court ruling on the use of breathalysers means that you have to go to police station and a blood sample needs to be taken. There are cases of 6 years ago that are still on the role.

State pathology agencies are not effective. With private agencies you can get the answer at the scene, but it is a struggle to be able to use this. If drunk drivers could be processed at the roadside, as is the case under good practice drink driving enforcement legislation, it could make a big difference to road safety.

Resources

A lot of what happens in transport in Africa is determined by the roads authorities and not enough time and effort is spent on enforcement agencies. It is always the people who build the roads who have large budgets.

Traffic is not a 24/7 service, except in the Western Cape. In most provinces the unions pose a problem to a change in contractual arrangements with employees. The most severe crashes occur at night when there are no traffic officers on duty. Mpumalanga is achieving some success with longer hours operations.

There is fragmentation of traffic law enforcement and legislation. The public do not see a unified force due to different uniforms and operational standards.

Certain things can be done under the law, but there is no implementation capacity – for example, taxis can be confiscated, but there are no pounds to keep them so it is a futile exercise.

It is unfair to expect smaller / rural provinces to provide all the resources for major national roads – especially enforcement equipment like speed cameras. SANRAL takes care of some weighbridges, but not all.

Infrastructure like weighbridges in some provinces is old-fashioned and not effective.

Traffic officers should all be knowledgeable about all aspects of road safety, but their training is not enough to support this.
| National Traffic Police | The RTMC have a unit called the National Traffic Police (NTP). RTMC ask for performance of others so should now also report on their own performance. They should put a bit more effort into transparency.

Up to a year ago the CBRTA had a Law Enforcement function but the force (160, mainly trained on the cross-border legislation) has been transferred to RTMC to be part of the NTP.

Retraining was needed when these different forces with different training backgrounds were thrown together.

It was never intended that the RTMC was to have a traffic force. In terms of the legislation it was an anomaly but was still approved by the shareholders.

The NTP functions mainly in Gauteng area, and in fact don't have a legal mandate in other provinces.

During peak seasons they are deployed to other provinces as force multipliers, and don't come with any special function, or their own equipment. There are notices that they can't issue outside Gauteng. |
| Traffic Police Patrols | SAPS are training some of the Metros on accident attendance, on scene investigation and management of the scene.

SAPS is implementing road policing nationally (although they respond to non-traffic offending as well), and provinces locally. Static vehicles are positioned in crucial places to be visible to motorists, and to pull over and check vehicles.

There are joint Province and SAPS operations, based on joint operational plans – 365 days of the year.

The SAPS patrols are not only focused on the national network but also respond on provincial and other roads.

One of the major issues is the 24/7 patrolling function, which NRSSC has been trying to convince the provinces to look at. SAPS is a 24/7 service. |
| National Road Traffic Law Enforcement Code (NRTLEC) | In the RTMC legislation, the RTMC is mandated to implement the NRTLEC. The NRTLEC has been drafted, but has never been implemented.

Now there is a Law Enforcement Review Committee, whose recommendations are still in draft format and not available in the public domain.

One of the aspects of the NRTLEC code is the unification of the different
traffic forces, but not all stakeholders have not been in support of this, e.g. Local Municipalities and Metros, some provinces, unions. The review committee was established in response to this, to see how the resistance can be overcome.

The NRTLEC can be at the core of the enforcement strategy and would strengthen the oversight role of the RTMC.

<table>
<thead>
<tr>
<th>Road User Behaviour</th>
<th>Drivers take chances because they know the law is not being enforced on the road at night.</th>
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<tbody>
<tr>
<td></td>
<td>People do not have respect of law enforcement even if there are marked vehicles around them – we have a substantial behaviour problem.</td>
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<td></td>
<td>Some of the factors looked at is the road layout, especially on the provincial and alternative routes, which can be narrow, where overtaking is dangerous, and there is a lack of proper road signs.</td>
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<td></td>
<td>Even though there are rest areas people don't make use of them.</td>
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<tr>
<td></td>
<td>Pedestrians walk on freeways and “campaigns” are not yielding results. There are many squatters who stay very close to the road. During the night they put stones, etc on the road to stop cars and commit crimes.</td>
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<tr>
<th>Road Safety Education and Communication</th>
<th>The public needs to be informed when there are successful operations</th>
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<tbody>
<tr>
<td></td>
<td>CBRTA follows up on enforcement statistics to communicate issues with the operators and their drivers.</td>
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<td></td>
<td>There is very little focus on education and awareness in South Africa, unlike in successful countries.</td>
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<td></td>
<td>One of the issues for the Department was a private website called Arrive Alive. They felt that promoting the Arrive Alive brand would have promoted a private website. They could actually now go back to the provinces and communicate that they could again use the Arrive Alive brand.</td>
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<td></td>
<td>The road safety curriculum project is implemented in some provinces but there is no systematic support in terms of provision of resources or adaptation to new educational principles.</td>
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<td></td>
<td>SANRAL is implementing a project focused on teachers. The workshops they do for teachers qualify for professional development points through university accredited training.</td>
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<tr>
<td></td>
<td>Road Safety Education stops in Grade 4 – there is no road safety education provided from there to Grade 12. SANRAL has piloted a road safety</td>
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programme for Secondary Schools.

The biggest challenge is human behaviour and in practice there is a weak focus on education and awareness. The road safety message competes with many other issues and communication needs to be more strategic.

The RTMC does not have funding for a public road safety communication project. They have to make use of corporate partnerships (including alcohol companies), and work with other agencies. It is usually in preparation of festive periods that all collaborate to develop messages.

It is possible that other agencies spend more on road safety communication than the RTMC, which is the mandated institution.

The key messages are: Speed, drinking and driving, pedestrians, texting and driving. Pedestrian messages are safe crossing and visibility.

One of the issues is that decision-makers don’t see the need for road safety, so communication should also be aimed at the decision-makers to influence road safety.

The reach of school road safety education projects is not great, due to funding, so only a few schools take part per year

There are very few road safety officers to service large number of schools

There is confusion from DOT / RTMC – provinces are not sure whether they can use the Arrive Alive Brand or not.

Road Safety Projects are measured in terms of outputs but not in terms of what is achieved or the impact

Resources (officers, materials, vehicles) are not enough to really reach all schools, drivers, communities and so most road safety efforts cannot really make an impact

There is no strong national campaign to support provincial ones, e.g. provincial campaign on local radio stations should be strongly supported by national messages on TV. The National campaign should be highly visible in all provinces to ensure equal levels of campaigns in the different provinces.

Road Safety Officers are not trained sufficiently. A training curriculum has been identified now but provinces can only send a few officers due to funding constraints.
We often hear that research is being done, but we do not feel the impact of that research, which we need in order to improve road safety education or traffic operations.

**Driver Licensing**

SA needs a more secure driver's license card, which should have happened already in 2005. The driver licensing system itself also needs to be upgraded and a graduated driver licensing has been envisaged but not implemented for a long time.

The licensing function is with the Department of Transport who has draft agreements for licensing and vehicle testing with the MECs. The carrying out of the function is done by the provinces, and can't be contracted out to private institutions.

Driver and vehicle licensing centres are money generating functions.

Driving license testing centres are run by both the municipalities and some provincial governments and the DOT oversees the system. Minimum standards for these centres were developed and published in a gazette. They are graded according to their amenities and the systems that they are offering. Local municipality would budget and source and would staff the centre, but DOT can inspect the service and complaints would come to the DOT.

Vehicle safety standards must be incorporated into the NRTA to be compulsory and the DOT would be involved in any such changes.

There is corruption throughout the system, but especially in the licensing system. One of the reasons is that there are not enough resources to meet the high demand. The system cannot cope, so the public puts pressure on the system.

Driving schools are rife with corruption and the standards of driving are poor, in general, although there are some good examples.

Driving schools used to be part of the DOT mandate, together with driver licenses. That function is now not receiving the necessary attention.

Previously there were some attention focused on the standards of driving schools and instructors but not much of that is discussed now.

Regulation of Driving Schools is omitted in the Road Traffic Act. This has a negative impact on the quality of drivers entering the system. Driving schools are used as instruments of corruption and since they are not regulated, there is very little control traffic authorities in provinces have over these institutions.

**Road Crash Data**

SAPS and RTMC partner to manage the database of culpable homicide for
road crashes. SAPS provides data to the RTMC weekly, monthly, depending on the requirement from the RTMC.

In order for a case to be registered as culpable homicide – there must have been somebody killed. There is a verification process at station level and then verified from the national. Sometimes it is a challenge – fatalities are not so much a problem (fatalities are followed up according to the international standard of 30 days)

The system does not allow injuries to be recorded. Most of the time the health department is supportive of providing data

Near some settlements on the national roads – a death could be murder – not traffic.

CBRTA has embarked on a project that will develop a tool called TRIPs – one pool of data between South Africa and other countries and will pick up the habitual offenders. It will become a data base of commercial operations that will give information on vehicles, drivers, operators, record of offences. The project is being piloted by SADC but will eventually also include COMESA and EAC.

CBRTA wants to publish the information in regard to cross border activities (charges and road blocks) and would like to look at the rate in which CB vehicles are involved in accidents. They have so far relied on the RAF information.

CBRTA would like to use the data to present to the companies, but there is not enough detail in the data.

In public forums the private sector and government does not agree on the accuracy of the data.

Even if the data are not accurate, this should not be a stumbling block since there are many things that one can still do, and you can identify high risk locations without all statistics. Of course the data system should improve and the RTMC is trying to put things in place.

Fatality data seems decent, but for the identification of hazardous locations you need injury data as well. Even with fatality data there are some problems with SAPS and one suspects that even fatal crashes are underreported

RTMC are said to be doing as best they can to provide partners with data and are very helpful, but a total system makeover is needed. Not all provinces and authorities need to have the same system, but the standards
| Infrastructure | of systems should be the same so that RTMC can receive data in the same format / standard  
There are different levels of crash data quality. Western Cape has a project to get the information from Dept of Health on a regular basis  
There is a lack of road safety engineering knowledge and capacity.  
SANRAL developed a toolbox for road assessment that they want other authorities to also use and maximise. Since it is not compulsory it is not really utilised enough.  
There are systems in place to make it mandatory to integrate road safety into the mainstream e.g. will influence the funds the authorities get for maintenance.  
The existing road safety engineering need is so high that it does not matter whether you identify hazardous locations (hazlocs) through crash data or through looking at exposure and use.  
There should be 5 hazlocs per province identified just to start off. Each province should have a hazloc programme in place.  
Road safety audits should be mandatory. Audits force a road safety mentality to make provision for non motorised users. The current thinking is old school in terms of infrastructure, and still orientates around the vehicle and mobility function.  
Road safety audit has already had an impact on SANRAL. After 6 years of audits they started to see a change in the mindset of the engineers who were on the courses, designs have special focus on needs of all road users.  
Audits force people to take pedestrians into consideration.  
SANRAL developed a course for auditors and 400 have been trained. There are also efforts to influence SADC  
Desire lines for pedestrian are well-defined and infrastructure provision should not ignore that.  
Modern technology should be applied in infrastructure provision for pedestrians (cost-effective pedestrian bridges).  
Pedestrians are on the freeway, and can’t be ignored. The best infrastructure should be provided to ensure that they are channelled safely, since enforcement is very limited when it comes to pedestrians. |
| There is no more effort to do things correctly. All the councillors want rumble strips, or stop streets, but no one looks at how it should be done. Even in your own department you realise that things are not being done correctly on the ground  
Cycling as commuter activity is growing and there should be projects looking at provision of walkways and cycle paths (even separated) as a demonstration project. There are also new materials and these paths can be marked more effectively. There should be a network of pathways for pedestrians and cyclists  
In the past one could base interventions on previous research – for example, you knew that putting up extra signs at a curve could make made a difference. Now, with the current level of lawlessness, it is very difficult to predict how people will react. Your intervention might make a situation even more dangerous.  
There should be more practical training for engineering services – most people just learn on the job.  |
|-----------------------------------------------|-----------------------------------------------|
| **Operator Compliance (SANS 39001)** | **The CBRTA is going to implement an operator compliance accreditation scheme based on minimum standards. The company would have an internal system that can be audited to ensure that they are still compliant SANS 39001 which will be included in the accreditation scheme. This will include fitness of vehicle, driver standards, management of driving hours, and loading standards.  
For a company to get a permit to operate across border you must demonstrate that you comply with a management system. Then you will get an accreditation level. If operators are at a high accreditation level, then Law Enforcement officers don’t have to stop them and they can receive priority at border stops. That will be for SA operators and hopefully it will spread to others.  
There is a gap that domestic vehicles will be regulated differently and maybe at some point it should be rolled out at domestic level as well.  
There will be a need for policy change, or regulation of the founding act to be updated.  |
| **Road Crash Response** | **The members of the SAPS accident units have been put through various training courses within SAPS, e.g. on-scene investigation; road crash investigation; road crime crash fault fining; first responder; planned – photography, currently busy with mechanical investigation course  
Lack of evidence can lead to cases thrown out of court, so the training is a very important aspect (Fault finding includes – vehicle defects, like tyre** |
burst, or lights not functioning, wiring, brake fluid leaking)

| SAPS are now training some of the Metros on accident attendance, on-scene investigation and management of the scene. |

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<tr>
<th><strong>Research</strong></th>
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<tbody>
<tr>
<td>SANRAL is doing research on road user behaviour and is in the process of putting a research panel together for all their mandated areas, including road safety.</td>
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<tr>
<td>The National Road Safety Research Forum (NRSRF) reports to the National Road Safety Steering Committee.</td>
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<tr>
<td>SAPS is responsible for some research on vehicle markings and visibility of markings and blue lights night / day.</td>
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<tr>
<th><strong>Funding</strong></th>
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<tr>
<td>Funding is seen as a challenge by all, and there is a “realistic” view that there will be no new money – will have to make use of the what is available and plan better, allocate and implement effectively.</td>
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<tr>
<td>Smaller and rural provinces experience a severe lack of resources for all road safety activities, for instance they get funding from treasury to do all their provincial functions, which in the case of smaller provinces is a very low percentage. There is nothing extra given for special projects and it is almost impossible to do extra road safety projects.</td>
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<tr>
<td>Allocation of funding from the licensing fees – the method of calculation should not be based on the registered vehicles, but on the vehicle traffic.</td>
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<tr>
<th><strong>SAPS Function</strong></th>
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<tr>
<td>The SAPS mandate is the investigation of crime, with road traffic, that is especially where there are serious accidents and deaths when the case officially registered.</td>
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<tr>
<td>SAPS responsibility of the investigation is something that will always be done by them. There is a legal process after the crash of which SAPS is the custodian.</td>
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<tr>
<td>SAPS supports the NRSS and are busy with their own road policing strategies.</td>
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<tr>
<td>Because the road safety law enforcement falls within the DOT, SAPS does not have a role with speed enforcement. They don't monitor speed. They can do the installation of cameras but has no power to enforce. They can do seatbelts, vehicle checks, alcohol, motorcycle helmets.</td>
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<tr>
<td>Municipalities have their own legislation in their own jurisdictions</td>
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<tr>
<th><strong>CBRTA Function</strong></th>
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<tr>
<td>CBRTA is an agency of the DOT tasked with regulating road transport and regulating the industry through permits.</td>
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CBRTA also do facilitation through lobbying to ensure flow of trade.

As far as road safety is concerned, they have a very small role to play.

The focus is on commercial cross-border traffic, (goods and people working for hire or reward).

Industry development component where road safety is housed, do campaigns targeting commercial vehicles. They go to taxi ranks and also do health awareness and partners with service providers to do health checks.

**RAF Function**

Road Safety is not a priority investment area. Although it is mandate to engage in Road Safety as referenced in legislation, it is not a key mandate, and not a key part of the organisations loss reduction strategy.

The key mandate is compensating victims R36bn – 95% goes to compensation and 5% goes into administration. Of that 10M is invested in road safety – including salaries in road safety.

The 95% that goes into compensation, legal costs are a large proportion (SA still has a fault-based system). About 7bn legal cost for both RAF and plaintiff legal costs.

Evidence is used for road safety projects – for example, road crash data is collected from the different institutions, and RAF engages in a crash verification system for serious and fatal injuries. Data is provided to RAF regions to initiate claims or to verify claims (rejected R1bn fraudulent claims).

In the Eastern Cape, RAF invested in a low cost infrastructure project, and on the Golden Highway 40km stretch they installed speed calming measures, speed humps and rumble strips. The feedback was that crashes were reduced with 50%.

They typically go to the municipality and request engineers to assess possible solutions and specification.

There is a new amendment act (RT Amendment Act) making it an obligation for children to be restrained, and RAF has a programme to promote the use of child restraints through public education, and also provide child restraint seats. This is done through hospitals, e.g. invite women who have given birth to a full session to talk about the importance of child restraints. Due to poverty the affordability discussion is not always useful.

Assistance is sometime provided to NGOs like Amawoolies, QuadPara
Another project is a driver training programme (conscious driving programme for professional drivers of all ages). The programme includes rider training, e.g. delivery on motorcycles and including those who ride socially like biker clubs. The impact of this programme has not yet been assessed. The idea is to encourage other companies take part in the programme as part of their own training programme (linked to the SETA levies).

The Road Accident Benefit Scheme has been drafted on a no-fault basis and Parliament will be holding public hearings on the Bill.

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<tr>
<th>SANRAL</th>
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<tr>
<td>SANRAL is the provider of the national road network and has the same responsibilities in terms of road safety as other roads authorities</td>
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<tr>
<td>SANRAL sees its responsibility in road safety under the Pillars of Engineering, Road Safety Education and Awareness and Incident Management.</td>
</tr>
<tr>
<td>Under engineering, as applicable to the SANRAL network, look at new facilities, routine road maintenance, planning, pavement issues, transportation planning.</td>
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<tr>
<td>The SANRAL performance plan for road safety includes road safety audits, road safety education sites, road safety research (specifically on road safety behaviour), and identification of pedestrian hazardous location</td>
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<tr>
<td>SANRAL’s vision 2030 includes road safety as a specific pillar, which makes it easier to align with the National Road Safety Strategy while also following own plan.</td>
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<tr>
<td>SANRAL as a national entity has taken on responsibility to communities living next to the road. According to the scholar transport policy learners of all provinces but the Free State, only receives subsidised transport if more than 5 km from school. In rural areas many learners use the national road to walk to school.</td>
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<tr>
<td>SANRAL implements projects supporting the road safety education functions.</td>
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<tr>
<td>SANRAL takes part in the pedestrian hazardous location project, addressing prioritised sites on their network.</td>
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<tr>
<th>Project Suggestions</th>
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<tr>
<td>Push through with NRTLEC and the unification of the forces – there are current activities in this regard but this would solve many problems</td>
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<td>Implement AARTO</td>
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<td>Establish traffic courts to ensure fast conclusion of traffic cases.</td>
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<td>Increase resources to provinces to deliver vehicle inspection and driver licensing functions</td>
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<td>Implement a system of drivers licenses in schools.</td>
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<td>Revive the School Driver Education Project with the private sector.</td>
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<tr>
<td>Revamp the Drivers License system (K53) to make it more effective for present day circumstances, bringing in technology and computerised testing for learners license</td>
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<td>Properly regulate Driving Schools</td>
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<td>Fund and deliver integrated campaigns on focused offences</td>
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<td>Communicate the consequences of offences very clearly – not just the physical effects of speeding, non-wearing of seatbelts, texting and driving, drinking and driving, but also the legal consequences if caught.</td>
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<tr>
<td>Re-introduction of the Evidentiary Breath Testing for drinking and driving</td>
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<tr>
<td>Project focusing on drunken driving as offence, from operating procedures of officers with evidentiary breath testing, including strong awareness component. Random breath testing</td>
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<tr>
<td>Other focused projects such as the one described for alcohol, but for seatbelts and child restraints.</td>
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<td>Rebrand Road Safety (as strong as Arrive Alive was)</td>
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<td>Road safety should be back in the teacher’s curriculum</td>
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<tr>
<td>Supplementary and on the job training for Traffic Engineers</td>
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<td>Training programmes for Senior Management on what is important in road safety</td>
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<tr>
<td>There should be national road safety competitions involving traffic law enforcement, that could serve as motivation for officers</td>
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<tr>
<td>Almost all provinces recommended pedestrian projects, which include pedestrian hazardous locations / routes with infrastructure and facilities</td>
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</table>
The RTMC should make it obligatory to do road safety audits. Provinces should report how many road safety audits, assessments, appraisals. This can be linked to funding.

Money should be allocated to road safety. To get that you should show you have identified hazardous locations, have a road safety management system, do audits.

Cycling as a commuter activity is growing and there should be projects looking at provision of walkways and cycle paths (even separated) as a demonstration project. There are also new materials and these paths can be marked more effectively. There should be a network of pathways for pedestrians and cyclists.

Do a competition for cost-effective pedestrian bridges (can be through universities). It is said that there should be a pedestrian bridge every 300m but it is very expensive. An example is between Moloto Road and Menlyn Mall (have 10 X R1m bridges instead of 1 X 10M bridge).

A research project on the effectiveness of traffic enforcement. Provision of cameras and resources to the province to do such a project with assistance from national to monitor and measure impact.

Do proper research on the effect of road safety campaigns and communication: what types of adverts, TV inserts, communications really work or are understood by people. Monitor campaigns with and without enforcement.

Provide provinces with resources like pamphlets, guidelines, videos. National should do some research on what works best and provide these resources to the provinces – that is for all themes (child restraints, occupant restraints, alcohol, pedestrian visibility, truck health, drugs and driving, the effect of speed).

Enforcement standard vehicle markings and lights using the newest technology and policy on usage. Test the perception of visibility with the public.

Traffic officers trained specifically to give evidence in court in crash investigation units. More officers should be trained specifically to give evident in court, especially in terms of crash investigation.

Crash investigation resources: mechanical examiners need equipment, crash investigation units need cameras and videos of the scene, including
an aerial view of the scene

Some training is needed to advance the level of skills in the whole of SADC region, including Cross Border officials from different countries
6.3 Appendix 3: NGO Role in Road Safety

The Global Alliance of Non Government Organisations for Road Safety is an umbrella organization that currently represents more than 200 member NGOs from more than 90 countries.

Some of the benefits of NGOs in road safety are that they:

- are matched very closely to the actual needs in the field of road safety due to their scale and specialization
- can respond to the social expectations faster than local, regional or national administration, and can play a significant role in the design and implementation of programmes to improve road safety.

Both the WHO and the World Bank, and many other multilateral institutions, have engaged with NGOs advocating for road safety and road traffic injury victims for well over a decade, for good reason. “NGOs are a key part of the road safety equation in countries, as they make road safety an issue which is personal, real and in need of urgent attention. They are instrumental in generating a demand from the public for safer roads, and when they base their interventions on evidence about what works, they can contribute in significant ways to saving lives on the roads.”

In South Africa there are various NGOs, Associations and Federations relevant to road safety, representing different viewpoints and thematic areas, including:

- Trauma Society of South Africa
- South Africans against Drunk Drivers
- Wheelwell
- Quadriplegic Association of South Africa
- Global Road Safety Partnership
- Justice Project SA
- Association for People with Disabilities
- National Council for Persons with Physical Disabilities In South Africa
- Southern African Institute of Driving Instructors
- Soul City Institute
- The Road Safety Foundation
- Automobile Association
- ChildSafe South Africa
- Drive More Safely
- South Africa Medical Rescue Organization
- The Bicycling Empowerment Network South Africa
- The South African Red Cross Society
- The South African Road Federation.

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It is important that there is a strong engagement between NGOs and public agencies to reinforce a common commitment to the safe system approach to road safety and achievement of the national road safety target in 2030.