SSATP
Africa Transport
Policy Program

FINAL VALIDATION DRAFT

Managing Road Safety in Africa

A Framework for National Lead Agencies

SSATP Working Paper

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Foreword

The African road safety crisis is real, and it is escalating at an alarming rate. It is a major development issue, and a growing contributor to fatalities next to malaria and HIV/AIDS, and therefore needs to be addressed as such. While effective evidence based treatments are available, the crisis cannot be effectively addressed without first addressing the political will to act, and the institutional capacity to respond. This requires road safety to be recognised within the international community as a sustainable development goal over the next next 15 years, and for countries to back this up with effective response.

In 2004 the World Health Organisation identified the nomination of a lead agency for road safety as the first step to effectively addressing a country's road safety situation. In the WHO's 2013 status report, almost all African countries are said to have nominated a lead agency, but as we now know some of these exist in name only. Many steps are required for a country's road safety management system to develop, but establishment and continual strengthening of the lead agency function is the essential building block to the progress that we all want to see.

This African road safety management framework has been prepared to assist many countries and the regional economic communities to recognise and address the significant deficits in road safety management capacity. For those with functional and efficient agencies, the goal is to significantly strengthen them and to take agency leadership forward as we collectively build a safer and more prosperous future for Africa.

This is not a step-by-step how to guide with all the answers – such material already exists and is well referenced in this paper. Rather, it is a framework that, in addition to addressing generic concerns, is customised to the peculiarities and circumstances faced by many African road safety institutions. I urge countries to candidly accept that road safety management gaps exist and to use this framework as an instrument to pinpoint and close those gaps. The lives of millions of Africans depend on us continuing to improve our road safety management efforts.

Acknowledgements

Many people have made significant contributions to road safety in Africa, and this road safety management framework document attempts to acknowledge this contribution as the basis for investment in the future. In analytical terms, the framework owes much to the preparation of essential guidelines in this area by the Global Road Safety Facility (regarding road safety management capacity at a country level), and by recent SSATP guidelines (regarding mainstreaming road safety in road investment projects).

The preparation of a guiding framework was prompted by an explicit request to SSATP by member countries at a road safety workshop held in Addis Ababa, Ethiopia in 2012. The first attempt was the preparation of a country level framework for Ethiopia following the request in 2013 by the Ethiopian National Road Traffic Safety Council. Special mention must be made of Ato Tilahun Yimer in his support for this project which allowed many ideas to be tested.

Special mention must also be made of the support provided to the project by the West African Road Safety Organisation, which allocated significant time during their meeting held in Freetown, Sierra Leone in April 2014. The leadership of the President Mr Osita Chidoka and the organisational efforts of Mr Lateef Ramoni allowed SSATP to expose the ideas to a wider grouping of lead agency representatives and develop the case studies that support this framework.

The authors would also like to acknowledge the peer review of Said Dahdah, Arnab Bandyopdhyay, Kazushige Endo, and Sevara Melibaeva (World Bank), Asif Faiz (SSATP), and Girma Bezabeh (African Development Bank).

Executive Summary

Africa is experiencing the highest per capita rate of road fatalities currently in the world. The World Health Organisation estimates the rate of road traffic deaths at 24.1 per 100,000 people in Africa. By comparison, this rate is 18.5 in Asia and 10.3 in Europe. The problem is set to worsen. Road fatalities in sub-Saharan Africa are projected by WHO to increase by 112%, from approximately 243,000 in 2015 to 514,000 in 2030. The projected escalation for road traffic fatalities in African comes as some improvement is being projected for the two diseases which are the focus of the Millenium Development Goals – malaria and HIV/AIDS.

Political commitment at a global, African, regional and country level, and resource mobilisation amongst multilateral banks, donor countries and national treasuries are critical to an effective response. Road traffic injury needs explicit recognition within the United Nations as a sustainable development goal. The scale of the crisis in Africa certainly lends weight to this.

In line with guidance from the WHO, with the *Global Plan for the Decade of Action for Road Safety 2011-2020*, and with the 2012 African Road Safety Action Plan, this paper presents and discusses a framework from within which African countries can develop and improve their road safety management system. The focus is on national road safety lead agencies (RSLAs) in Africa which are charged with leading a country's effort to tackle the road safety crisis, and on the institutional management functions which they must champion. Road safety lead agencies need to be established if they do not already exist and strengthened where they do exist.

The *African Road Safety Action Plan 2011-2020* which was adopted by the heads of States in Luanda in January 2012, recognised the significance of countries' road safety management capacity. Most recently, the *African Road Safety Charter* has set road safety management as the first duty of contracting States, and the creation and institutional strengthening of road safety lead agencies. Regional cooperation is essential in this area, and is given most notable road safety effect in the Economic Community of West African States (ECOWAS), within which the West African Road Safety Organisation (WARSO) has been established.

Many of the lessons previously learned bear repeating today as they still need to be addressed, with one analysis concluding that:

- A high proportion of crash victims are poor, or likely to be pushed into poverty as consequence of road crashes, making road safety a development priority
- Projects tend to be too small and too fragmented to achieve measurable safety results, solely focused on interventions and not taking account of the institutional capacity required to implement them
- Although many national coordination bodies have been established, accountable lead agencies are needed to mobilise the resources and partnerships necessary to achieve results.

Internationally good practice road safety management is associated with a "Safe System" approach to road safety which promotes a more holistic approach to the problem and recognises that road safety interventions cannot hope to perfect human use of the transport system, but can protect human use. In the African context, moving to a safe system approach to road traffic management would infer learning from mistakes elsewhere, and adopting a modern and effective model for sustainable improvement in road safety.

Within a systems approach, effective 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*. A key feature of the framework is the institutional management functions which drive more effective interventions and better results. When given full effect, these functions form the essential aspects of a road safety management system for a country and 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.

Many different agencies and organisations need to perform these management functions effectively. They may be exercised in different ways in different social and political contexts, and are addressed here in the context of a national lead agency:

- Results Focused Approach: The road safety lead agency is responsible for leading national efforts to achieve the country's road safety goals. It needs to work collaboratively with partner government agencies to develop a national road safety strategy or strategic plan and manage to an agreed results framework. This is a critical step – too often in Africa low capacity levels lead to strategy tasks simply being outsourced, or in-house strategy formulation lead to a lowest common denominator approach.
- Coordination: The road safety lead agency needs to orchestrate and align specific road safety interventions and management functions to support achievement of intermediate and final safety outcomes. In Africa particularly, the lead agency needs to be given the mandate to act as first amongst equals, and to be able to step out of a narrow sectoral based perspective, in order to bring many different agencies together to improve road safety.
- Legislation: The lead agency is responsible for ensuring that the effectiveness of existing laws, standards and directives regulating roads, vehicles and road users are evaluated, and safety improvements are proposed. African experience points to significant issues in this area, including vehicle safety where global construction safety standards are referenced in law in only a handful of African countries, and the effectiveness of enforcement activity reported across 48 African countries was rated as 3.9 out of 10 for speeding 3.5 out of 10 for drink driving.

- Funding and Resource Allocation: Ideally the road safety lead agency holds responsibility for ensuring that sufficient funding is allocated to strategically oriented safety initiatives in order to meet the country's road safety goals. African countries which have significant road development programs can quickly build road safety management capacity through external funding sources, and all African countries should be looking at allocating 10% of road investment funding and 5% of road maintenance funding to road safety (as set out in the African Road Safety Action Plan).
- Promotion: The road safety lead agency is responsible for promoting road traffic safety through forums, formal and non-formal education, public participation and (if tied to specific safety projects) even mass media promotion. There is a pressing need to raise awareness of the scale of the road safety problem at a national level throughout Africa, to promote effective interventions, and to build support for decision making to implement them.
- Monitoring and Evaluation: The road safety lead agency is responsible for analysing and publishing road traffic crash and injury data, and for monitoring, evaluating and reporting on strategy and program implementation by government agencies. Data management is an ongoing issue for Africa, with for example only 18 countries using the standard international definition of fatality as occurring within 30 days of the crash.
- Research and Development and Knowledge Transfer: The road safety lead agency is responsible for supporting research and development activity in the area, and undertaking road traffic safety studies to allow better decision making in the future.

An effective road safety lead agency can take a variety of organisational forms, and the final form will inevitably reflect how each country establishes its government institutions. The establishment of a coordinating committee comprising agency heads, or an interministerial council may be an important interim step in the establishment of a lead agency function, but such a grouping does not in itself constitute a lead agency.

Perhaps the most primary form of a lead agency within African countries is a work group within an already existing government department of agency with major delivery or transport system responsibilities, such as ministry of transport or a ministry of works. This allows use of already established administrative systems, and tends to create stronger synergies between the specific performance of the lead agency functions, and the delivery responsibilities of the host department.

An alternative is to establish an autonomous lead agency agency, at arms length from the government, to lead the efforts of all other agencies. This could report directly to the Minister of Transport or even the Prime Minister or President. This infers a clear mandate at a Ministerial or Head of Government level across the transport sector or indeed the whole government, which can be used to very powerful effect.

Aspects requiring consideration in the establishment of a road safety lead agency within an existing department, or indeed of a new autonomous agency, include:

- Ensure there is clarity about why the lead agency function is being established and the expected benefits of this. Better governance, accountability and leadership for road safety are particularly important, as is the ability to effectively coordinate the various arms of government.
- Consider who the champions for the lead agency function are, and whether that support will still be there if and when something goes wrong. Manage the early stages with a view to embedding the road safety management function and its results focus beyond the first burst of enthusiasm or the effect of a charismatic leader, or the strong support of a powerful politician.

The agency should be mandated to promote road safety, set strategies and targets for road safety improvement, and lead the range of institutional management functions discussed above. Developing partnerships both inside and outside of government will be critical to how the agency needs to operate as this will allow it to leverage greater road safety effort from others, and the statutory mandate needs to specifically mandate a coordination role.

Specific attention is also required to the establishment and consolidation of a sustainable operating environment. A key aspect of such an operating environment is that, within an overall accountability system, it promotes independence in decision-making, action and innovation. Another key aspect of a sustainable operating environment is the existence of an ongoing funding stream to meet the agency's requirements to effectively lead the national road safety effort. Without clear accountability and mandate, backed up by the necessary resourcing, the lead agency will be set up to fail.

The most effective lead agencies deliver on a common set of management functions, but they develop over time, and respond to their own operating environment. The statutory mandate, function and funding of a road safety lead agencies in Benin, Nigeria, Ghana and Ethiopia are described, and they have each in their own way made progress in performing the institutional management functions, and each face different challenges. Of note is the time that has been taken to develop road safety management capacity – for example, the National Road Safety Centre in Benin was established in 1987, the Nigerian Federal Road Safety Corps in 1988, and the Ghanaian National Road Safety Commission in 1999. Greater urgency is needed to lift road safety management capacity across all countries in Africa.

The primary guidance prepared by the GRSF on implementing the *World Report* recommendations provides the strongest analytical and program focussed framework for taking action in the area: initiate a full review of road safety management capacity within the country to highlight key areas for development; and initiate high-impact safe system projects capable of marshalling the necessary resources and demonstrating the potential for sustained safety benefits within the community.

The recent guidelines prepared by SSATP for mainstreaming safety in regional trade road corridor projects has taken the overall road safety management framework set out in the GRSF country guidelines and made it specifically relevant to major road infrastructure projects in Africa. These project guidelines provide the mechanism to significantly improve road corridor safety and build road safety management capacity in a country. This is particularly important given the significance of regional trade road corridors on the many landlocked countries of Africa, and the need for cross-border facilitation of transport links generally.

These strategic review and implementation processes remain potent ways of meeting the road safety management challenge for countries in Africa. It is important to note that the establishment of a road safety management framework for Africa relies on strong governance models within government. The establishment and strengthening of a road safety lead agency, and the performance of these functions within an overall road safety management framework is not an optional extra. It is essential for driving up investment in road safety through stronger interventions which will deliver better safety results. In this context the paper concludes by addressing key management challenges:

- Building political support for road safety
- Improving the convening and coordination powers of a lead agency
- Raising funds for road safety
- Improving data systems and performance monitoring
- Balancing short term results and long term strategy
- Creating an effective structure within a lead agency
- Assessing strengthening priorities for lead agency.

The establishment and strengthening of road agencies were a key institutional reform of the African transport landscape in the late twentieth century. Today road safety lead agencies are at the frontline of a public health epidemic in Africa and need considerable investment and support from national treasuries and the international community alike in order to effectively tackle this crisis.

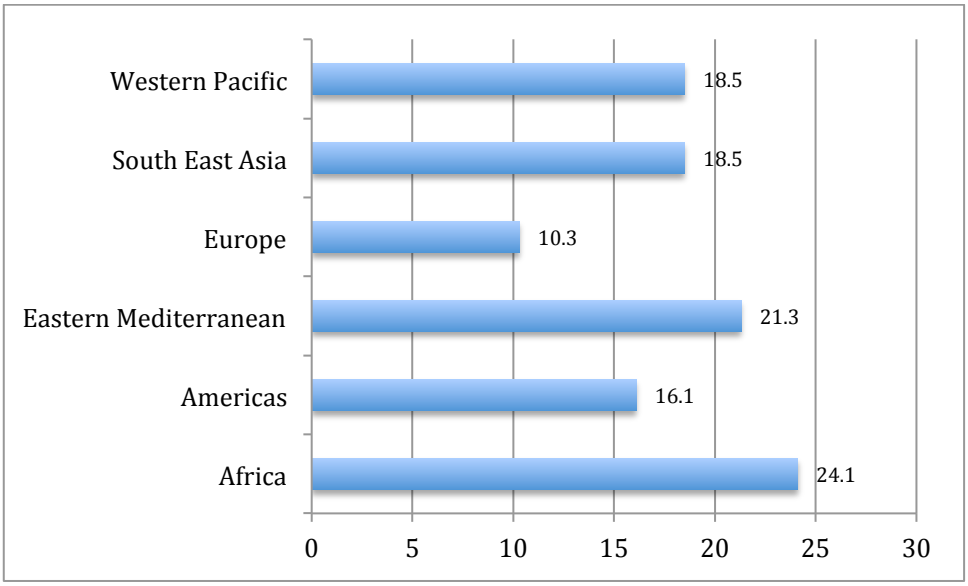
1 The African road safety crisis

The global crisis in road traffic injury declared by the World Health Organisation (WHO) 2004 *World Report on Road Traffic Injury Prevention*[1] continues largely unabated. Globally, road traffic is the cause of tremendous health losses. An estimated 1.24 million people die on the world's roads each year, and many millions more are temporarily or permanently disabled. The 2013 Global Burden of Disease (GBD) study estimated that road traffic injury is the leading cause of death worldwide for 15-24 year olds, and the second leading cause of death for 25-39 year olds behind HIV/AIDS. Twice as many people die of road traffic injury as of malaria, and the World Health Organisation projects that road traffic injury will accelerate and overtake HIV/AIDS as a cause of death by 2030.

A growing burden on Africa

Africa is experiencing the highest per capita rate of road fatalities currently in the world. As illustrated in Figure 1, the WHO *Global Status Report on Road Safety 2013*[2] estimates the rate of road traffic deaths at 24.1 per 100,000 people in Africa. By comparison, this rate is 18.5 in Asia and 10.3 in Europe. The region possesses 2% of the world's vehicles, 12% of the population, and 16% of the fatalities.

Figure 1 Estimated Road Fatalities per 100,000 Population 2010 (WHO Regions)



Source: World Health Organisation, *Global Status Report on Road Safety 2013.*

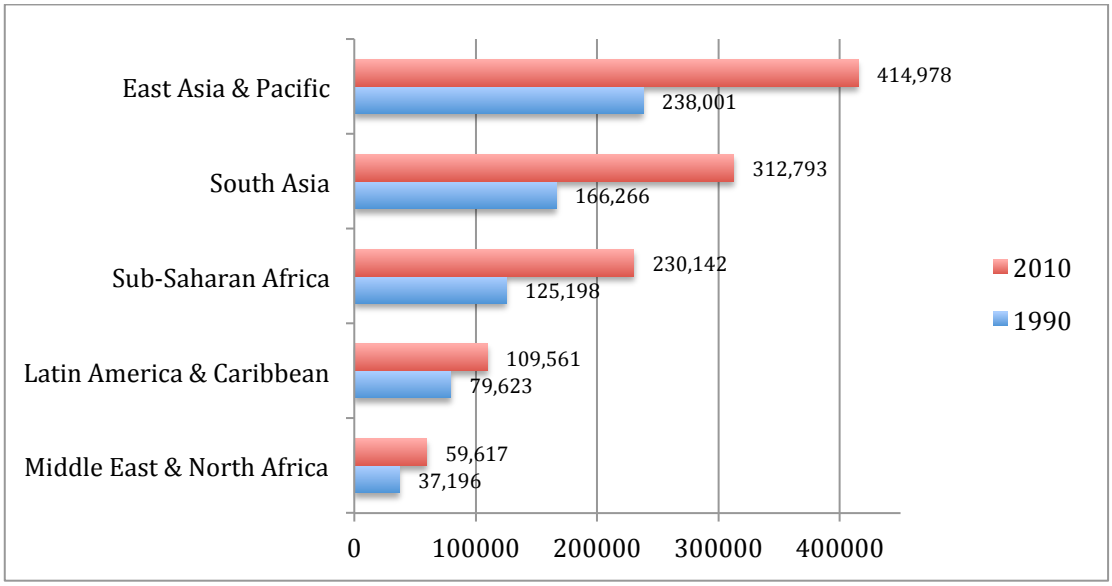
Annex 1 graphs estimated fatality numbers and rates for countries in Africa, based on the WHO *Global Status Report*. Nigeria and South Africa have the highest fatality rates (estimated at 33.7 and 31.9 deaths per 100,000 population per year respectively). These two countries along with Ethiopia, the Democratic Republic of

[1] Peden M, Scurfield R, Sleet D, Mohan D, Hyder A, Jarawan E, Mathers C, eds (2004). *World Report*
[2] Global Status Report on Road Safety 2013, World Health Organisation, Geneva.

Congo, Sudan, Egypt, Tanzania, Uganda and Kenya, accounted for 63% of the estimated 233,765 road deaths on the African continent in 2010.

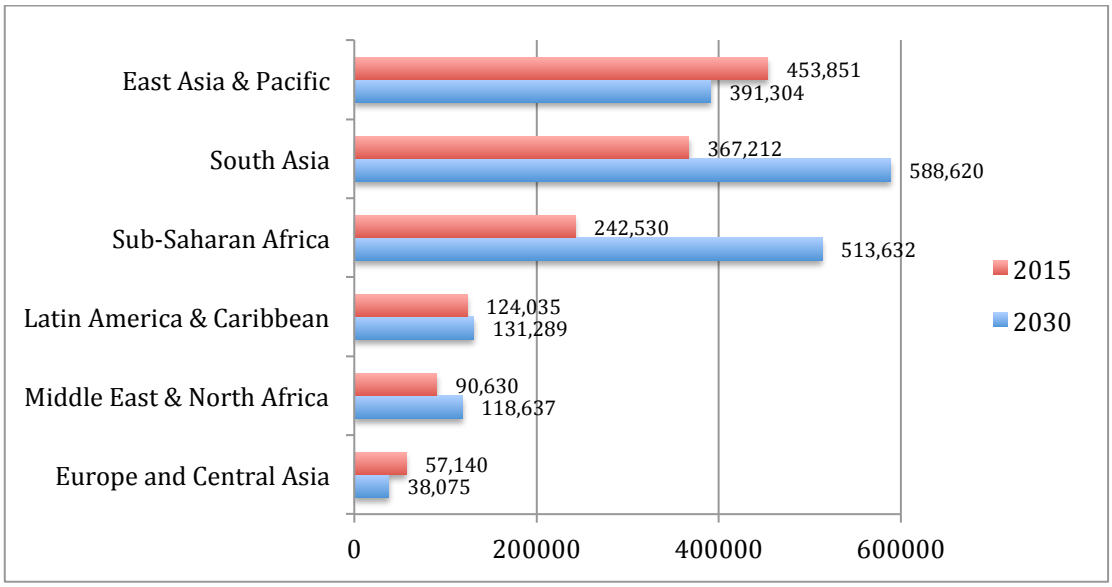
Figure 2 illustrates the significant growth in estimated road traffic fatalities that Africa and other low and middle income regions in the world have experienced over the last twenty years.

Figure 2 Estimated Road Fatalities (World Bank Regions, Low and Middle Income Countries)



Source: Institute for Health Metrics and Evaluation, 2013, *Global Burden of Diseases, Injuries, and Risk Factors Study 2013* (retrieved March 2014 http://www.healthmetricsandevaluation.org/gbd/visualizations/gbd-heatmap).

Figure 3 Projected Road Fatalities (World Bank Regions, Low and Middle Income Countries)



Source: World Health Organisation 2013, *Projections of Mortality and Causes of Death 2015 and 2030* (retrieved March 2014 http://www.who.int/healthinfo/global_burden_disease/projections/en).

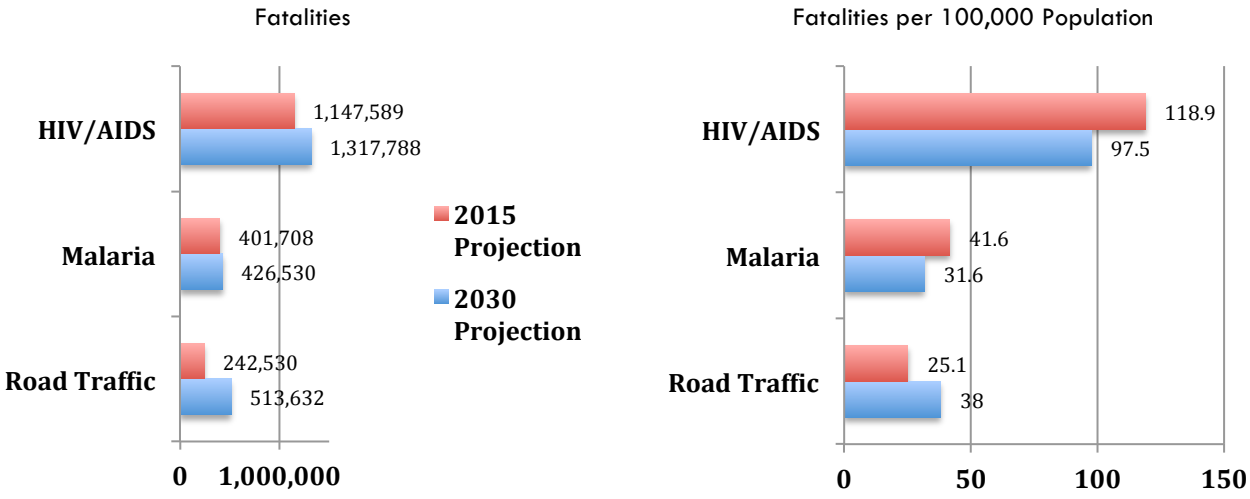
The problem is set to worsen, as illustrated in Figure 3. Road fatalities in sub-Saharan Africa are projected by WHO to increase by 112%, from approximately 243,000 in 2015 to 514,000 in 2030. This is a far greater percentage increase than any other region of the world, and is in stark contrast to the projected reduction in fatalities in Europe and Central Asia, and East Asia and the Pacific.

A major development issue for Africa

Road traffic injury is a major development issue for Africa. The *World Report* noted that more than half the people killed in traffic crashes are young adults aged between 15 and 44 years – often the breadwinners in a family. Furthermore, road traffic injuries cost low-income and middle-income countries between 3% and 5% of their gross national product[3]. The costs have been estimated at more than the total development aid received by these countries.

The projected escalation for road traffic fatalities in African comes as some improvement is being projected for the two diseases which are the focus of the Millenium Development Goals – malaria and HIV/AIDS. Figure 4 shows that road fatalities per capita are projected to increase by 51% over the period 2015-2030, at the same time fatalities per capita are projected to decline for both HIV/AIDS (-18%) and malaria (-24%). Road fatalities are projected to overtake the number of malaria fatalities in the region during this time.

Figure 4 Projected Fatalities in Sub-Saharan Africa



Source: World Health Organisation 2013, *Projections of Mortality and Causes of Death 2015 and 2030* (retrieved March 2014 http://www.who.int/healthinfo/global_burden_disease/projections/en).

Road traffic injury is a non-communicable disease of mobility which disproportionately affects the young and the poor. Political commitment at a global, African, regional and country level, and resource mobilisation amongst multilateral banks, donor countries and national treasuries are critical to an effective response.

[3] See iRAP and Dahdah, S and MacMahon K, *The True Cost of Road Crashes: Valuing Life and the cost of a serious injury, International* Road Assessment Programme, Basingstoke.

Road traffic injury needs explicit recognition within the United Nations as a sustainable development goal – either as a standalone health goal, or as part of a sustainable transport goal. The scale of the crisis in Africa certainly lends weight to this.

Promoting a systematic country response

The *World Report* articulated the need for a systems based response to the crisis. It gave increased prominence to institutional management and capacity issues, stating "a key factor in tackling the growing road traffic injury burden is the creation of institutional capacity across a range of interlinking sectors, backed by both strong political commitment and adequate and sustainable resources."[4]

The six recommendations in the report directly addressed institutional management issues, and remain very relevant for tackling Africa's road safety crisis over the next decade:

1. *Identify a lead agency in government to guide the national road safety effort*
2. *Assess the problem, policies and institutional settings relating to road traffic injury and the capacity for road traffic injury prevention in each country*
3. *Prepare a national road safety strategy and plan of action*
4. *Allocate financial and human resources to address the problem*
5. *Implement specific actions to prevent road traffic crashes, minimize injuries and their consequences and evaluate the impact of these actions*
6. *Support the development of national capacity and international cooperation.*[5]

The *World Report* provided impetus to a growing body of road safety analysis and programs which went beyond traditional implementation and evaluation of interventions associated with roads, vehicles and people. Over time, road safety management has come to be regarded as the critical component for any sustained safety effort at either a country or jurisdictional level. This is illustrated in a variety of ways. In 2009, for example, the Global Road Safety Facility (GRSF) published country guidelines in response to the *World Report* which codified a complete road safety management framework.[6]

The 2011 *Global Plan for the Decade of Action for Road Safety 2011-2020* is based on five pillars – road safety management, safer roads and mobility, safer vehicles, safer

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[4] Peden M et al (2004), op.cit.

[5] ibid

[6] Bliss T, and Breen J (2009). *Implementing the Recommendations of The World Report on Road Traffic Injury Prevention: Country guidelines for the conduct of road safety management capacity reviews and the related specification of lead agency reforms, investment strategies and safety programs and projects*, Global Road Safety Facility, World Bank, Washington.

road users, and post-crash response. Within Pillar 1 Road Safety Management, the Plan encourages:

> *the creation of multi-sectoral partnerships and designation of lead agencies with the capacity to develop and lead the delivery of national road safety strategies, plans and targets, underpinned by data collection and evidential research to assess countermeasure design and monitor implementation and effectiveness.*[7]

Road safety management is also a critical feature when road safety is addressed within a corporate or organisational setting. In 2012 the International Standards Organisation published *ISO 39001 Road Traffic Safety Management Systems*, which applied quality management processes to the ultimate goal of eliminating death and serious injury on the road.[8] By working on the elimination of death and serious injury within their own organisations, a wide range of private and public institutions can make a highly effective contribution to road safety.

This paper presents and discusses a framework from within which African countries can develop and improve their road safety management system. Its focus is on national road safety lead agencies (RSLAs) in Africa which are charged with leading a country's effort to tackle the road safety crisis, and on the institutional management functions which they must champion. That said, it is recognised that the following strategic management issues also need to be addressed.

Action at a country level needs support from the wider international community. There is a strong case for the United Nations to reinforce its commitment to the UN Decade of Action for Road Safety, recognise road safety as a global development priority, and establish road safety as a sustainable development goal post 2015. This political support is also necessary from Africa's Regional Economic Communities and amongst Africa's continental institutions.

Road safety lead agencies need to be established if they do not already exist and strengthened where they do exist. While the WHO *Global Status Report* identifies almost all countries in Africa having a nominated lead agency, many of these are likely to exist in name only – an agency with no effective mandate or insufficient capacity to execute the mandate. Where lead agencies are established, they invariably need strengthening in order to effectively lead sustained safety improvements at the national level.

Road safety needs to be fully integrated into regional road transport corridor projects, which continue to be a focus of major infrastructural and economic development investments in Africa. Current implementation processes and practices which prioritise mobility over safety will likely see an increase in fatalities through these investments. Instead these investments need to incorporate modern

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[7] *Global Plan for the Decade of Action for Road Safety 2011-2020,* World Health Organisation, Geneva.
[8] *ISO 39001 Road Traffic Safety Management Systems: Requirements and Guidance for Use*, International Standards Organisation, Geneva.

safety principles to build critical road safety management capacity, and demonstrate the potential for success in bringing infrastructure, vehicle and behavioural safety programs to bear on Africa's road safety crisis.

Other key management and investment decisions will also be needed, and managed at a country, regional and continental level. These include more systematic processes for data management and knowledge transfer. Significant reform of vehicle safety regulation throughout the continent would play a vital role in sustainable trauma reduction, particularly with the expected increase in motorisation, as would more effective regulation and enforcement of driver behaviour.

This paper focuses on the national lead agency as a catalyst for road safety change within the countries of Africa. But further work is required to build professional and administrative support systems for road safety at all levels. Professionals from sub-national administrations need an understanding of key safety issues in the area and a network with whom they can share ideas and professionals in national administrations need to be brought together within regional economic community structures. A stronger leadership role is also required amongst the major African institutions if the current trajectory for road safety in Africa is going to be halted. Road safety leadership and professional networks are essential at each level.

2 African commitment to road safety

As global responses to the road safety problems articulated in the *World Report* were initiated, African Ministers responsible for Transport and Health, met at the African Road Safety Conference in Accra, Ghana, in February 2007. Ministers called for further road safety support in Africa from the Group of Eight leading industrialised countries, and committed to improving transport infrastructure and health services in Africa so as to prevent road accidents. African countries were well represented on the program for the First Global Ministerial Conference on Road Safety in Moscow in December 2009, which called on the United Nations General Assembly to establish 2011-2020 as the Decade of Action for Road Safety.

African Road Safety Action Plan

At the Second African Road Safety Conference in November 2011 convened by the UN Economic Commission for Africa the *African Road Safety Action Plan 2011-2020* was formulated. The action plan was subsequently endorsed by the African Union Conference of Ministers in charge of Transport, and then adopted by the heads of States in Luanda in January 2012.

In relation to Pillar 1 Road Safety Management, the action plan recognised that some countries in Africa had "established and substantially implemented modern road safety policies." The plan also noted that "for the majority of countries however, it will take time to establish institutional frameworks with all the necessary functions … the Decade of Action will provide the opportunity for African countries to intensify or to develop activities towards building their institutional capacity."

With an expectation of establishing and strengthening lead agencies, improving data management, and developing and strengthening partnership and collaboration, some of the activities set out under Pillar 1 of the action plan are to:

- Establish/strengthen national road safety lead agency with legal, financial and human backing
- Prepare and approve a road safety policy/strategy
- Set realistic and attainable road safety targets
- Advocate road safety to become one of the focus areas for development plans
- Allocate at least 10% of road infrastructure Investment to road safety
- Allocate 5% of road maintenance resources to road safety
- Promote and assist road safety research and studies and use good practices from other countries
- Develop and implement a sustainable and accurate national database on road crashes
- Harmonise vehicle and driver registration data systems
- Commit to an appropriate road safety component in all relevant international partner funded interventions
- Promote private sector and civil society organisations' involvement in road

safety.

African Road Safety Charter

The increasing recognition of the importance of road safety management, and the establishment and strengthening of lead agencies, has been further reinforced by the *African Road Safety Charter*. The first duties and commitments of the States which sign the Charter are to road safety management, and the creation and institutional strengthening of road safety lead agencies. Chapter IV Road Safety Management states:

> *Article 4: Creation of Road Safety Lead Agencies*
> *State Parties shall establish legally mandated national Road Safety Lead Agencies, with cross-sectorial coordination responsibilities within three years after the signing of this Charter. The responsibilities of the Lead Agencies shall … include: Policy advice to Government on matters of road safety across sectors; Formulation and coordination of the implementation of road safety strategies.*
>
> *Article 5: Institutional Strengthening of Road Safety Lead Agencies*
> *State Parties shall provide institutional support to Lead Agencies through financial and human resources, political support and recognition to give them the requisite clout to perform their coordination functions.*

Articles 6-8 address road safety strategies, data management systems and collaboration.

Regional cooperation

Road safety collaboration across the continent takes a variety of forms. A 2001 protocol agreed by the Southern Africa Development Community includes clear commitments to working at a regional level to improve road traffic safety.[9] This refers primarily to harmonising vehicle and driver safety regulation, but also to cooperation over a regional road traffic quality management plan. The purpose of the plan is in part to "improve road traffic safety which contributes to the quality of life of the region's inhabitants."[10] Promotion, research and development, and knowledge (and technology) transfer are identified as areas of collaboration. The goal is to maximise results, backed up by indicators which are monitored, and a regional coordinating mechanism.

Regional cooperation is given most notable road safety effect in the Economic Community of West African States (ECOWAS), within which the West African Road Safety Organisation (WARSO) has been established. A 2012 workshop hosted by

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[9] *Protocol on Transport, Communications and Meteorology in the Southern African Development Community Region, 1996, Southern African Development Community (http://www.sadc.int/files/7613/5292/8370/Protocol_on_Transport_Communications_and_Meteorology_1996.pdf, retrieved March 2014).*

[10] ibid, Article 6.12(1)(a).

SSATP noted that, except in West Africa, lead agencies operate in professional isolation and concluded that *t*here is a need to create regional associations of lead agencies with close links to existing regional economic community structures. The establishment, structure and operation of WARSO was regarded as a good practice model. This continues to be an important step for Regional Economic Communities to take, as WARSO provides an increasingly vital role as a knowledge exchange and focal point for road safety in the region. Apart from specific WARSO initiatives, the ongoing peer to peer sharing and testing of ideas which WARSO facilitates is a critical component to building road safety management capacity within the region.

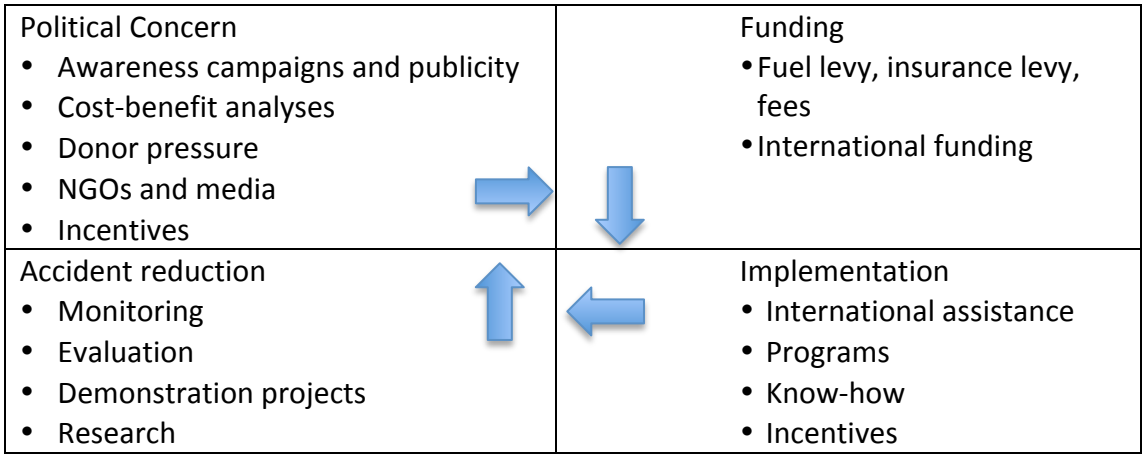
3 Road safety management lessons in Africa

The lessons learned about road safety in Africa are similar to those learnt elsewhere. The economic and social context is different, but the reasons why people are killed and seriously injured while using the road network are very similar – the interaction between the road network, the motor vehicles and the road users is not being managed to facilitate safe travel.

A 1998 appraisal of road safety in five countries by the Africa Transport Policy Programme (SSATP) considered the appropriateness of countermeasures, and raised the implementation of those countermeasures as the main issue to be addressed. The report recognised that evidence based countermeasures from highly motorised countries may not be entirely transferrable for Africa, if road crashes in Africa are indeed different, but concluded that "there is no doubt that the main problem in Africa is implementation of accident countermeasures rather than (that) conventional road accident countermeasures are not working." [11]

The report thus pointed directly to a road safety management problem. The primary weakness identified was a lack of political concern, interest and priority, and the report identified better data, monitoring, and feedback as ways of addressing this. Other issues identified were an exaggerated reliance on information and education as a means of tackling the issue, and the weak political positions of road safety councils in the five countries. Figure 5 illustrates what this review considered were the main requirements to sustained road safety in Africa and ways of fulfilling them.

Figure 5 Main requirements to sustained road safety in Africa and ways of fulfilling them[12]



This analysis of issues in African countries can be seen today as a forerunner to the fully developed management framework prepared by the Global Road Safety Facility. As discussed below, the GRSF provides an analytically robust framework which is consistent with the approach set out under the UN Decade of Action and what has

[11] Terje Assum (1998), *Road Safety in Africa Appraisal of Road Safety Initiatives in Five Selected Countries in Africa*, Working Paper No.33, SSATP Africa Transport Policy Program.
[12] Ibid.

been described as the "safe systems" approach to road safety. A new more intensive management approach to road safety in Africa may however require specific attention to some aspects drawn out in Figure 5. Examples of this are the need to promote understanding at a societal and political level, and the need to prioritise major safety investments within international assistance/funding programs.

A review of road safety in Sub-Saharan Africa published in 2000 on behalf of the United States Department of Transportation also drew attention to a number of management issues.[13] It is notable that this review concluded that a comprehensive sectoral needs analysis should be undertaken to guide road safety work in the future. This was met by the road safety management capacity review methodology which was developed, tested and then documented by the GRSF.[14] Road safety management capacity reviews are a key mechanism by which a country can effectively assess its situation and develop a strong forward program of road safety reform, and have been conducted in Uganda, Ethiopia, Nigeria, and Sierra Leone.

This overall management picture of institutional issues, and of funding issues is further illustrated in a study commissioned by the World Bank to audit the road safety aspects of its sector programmes and individual projects in Sub-Sahara Africa. Specifically in relation to road safety management, the study pointed to issues in the legal authority of the institutions responsible for road safety, and the need for sustainable funding. Without specifying precise organisational forms which may necessarily vary from country to country, the report noted that "the level of authority should enable coordination of road safety policies at inter-Ministerial level. This should be translated into road safety plans and programmes to be approved through Parliament and integrated into Departmental programmes and budgets to facilitate implementation." In relation to funding, the report noted the importance of donor engagement on sustainable funding mechanisms that cover "all road safety activity that needs to be permanent (the functioning cost of the institution, action agendas, accident data base, road safety activities managed from the institution, e.g., safety campaigns), seed money to initiate activities with other partners, and training."[15]

Many of the lessons previously learned bear repeating today as they still need to be addressed. One summary of lessons provided within the African context in 2009 identified that:[16]

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[13] Jacobs G, and Aeron-Thomas A (2000), *Africa Road Safety Review*, United States Department of Transportation and Federal Highway Administration.

[14] Bliss and Breen (2009) op.cit.

[15] Van Niekerk EC, Muhlrad N, Grosskopf SE, Adolehoume AP, and Venter PR, *Scaling up Road Safety Activities in World Bank Programs in Sub-Sahara Africa*, Proceedings of the 23rd Southern African Transport Conference, July 2004.

[16] Bliss A, *Implementing a Decade of Action in Africa: designing and building safer roads*, Make Roads Safe Africa 2009, Dar es Salaam, July 2009 (retrieved March 2014 http://www.makeroadssafe.org/news/related/Pages/AfricaPresentationsandSpeeches.aspx).

- A high proportion of crash victims are poor, or likely to be pushed into poverty as consequence of road crashes, making road safety a development priority
- Projects tend to be too small and too fragmented to achieve measurable safety results, solely focused on interventions and not taking account of the institutional capacity required to implement them
- Although many national coordination bodies have been established, accountable lead agencies are needed to mobilise the resources and partnerships necessary to achieve results
- The safe system approach is well aligned with other key development priorities such as urbanisation, climate change and energy security, and co-benefits can be identified.

Most recently, SSATP commissioned a study on the safety management of regional trade road corridors in 2012. Recognising the vital economic development role that these corridors play, this study reviewed the literature and empirical evidence on the safety problems on regional trade road corridors, with a particular emphasis on Africa. In the third phase of this study SSATP published guidelines in 2013 for fully integrating safety into regional trade road corridor projects.[17] The guidelines used the GRSF framework to set out a process through which all aspects of road safety would be addressed and managed, with a particular focus on building road safety management capacity within the country or countries in which the project was undertaken.

Different contributions at different times have added to the collective understanding of how the African road safety crisis is best addressed at a country level. This paper goes on to outline the critical road safety management functions for a lead agency, and describe how these are applied in several case studies in Africa. It concludes by addressing the key management challenges facing lead agencies.

[17] Breen J, Humphreys MH, Melibaeva S, *Guidelines for Mainstreaming Road Safety in Regional Trade Road Corridors*, Working Paper No.97, SSATP Africa Transport Policy Program.

Working towards the elimination of fatalities and serious injuries – the safe system approach

The Organisation for Economic Cooperation and Development and the International Transport Forum published a landmark report in 2008 *Towards Zero: Ambitious Road Safety Targets and the Safe System Approach*. 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, and a management framework developed within the Global Road Safety Facility for national, state, or local jurisdictions to assist in implementing it. The report characterised safe system principles as:

- aiming to develop a road transport 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.
- incorporating many strategies for *better management of crash forces*, with a key strategy being road network improvement in conjunction with posted speed limits set in response to the level of protection offered by the road infrastructure.
- relying on strong *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.
- (being) underpinned by *comprehensive management and communication structures* incorporating all key government agencies and other organisations which have a role in determining the safe functioning of the transport system.
- *aligning safety management decision making* with broader economic goals and human and environmental health goals, and create a commercial environment that generates demand for and benefits the providers of safe road transport products and services.
- embracing the *ethos of "shared responsibility"* for road safety among the various actors of the road transport system, such that there is a shared vision amongst citizens, public, private and not for profit organisations *regarding the ultimate safety ambition*, and how to achieve it.

These principles should not be regarded as fixed, but they stand in stark contrast to largely discredited approaches of the past which have presented road safety as a task of perfecting human behaviour, or relied on education and information campaigns to reduce road trauma. In the African context, moving to a safe system approach to road traffic management would infer learning from mistakes elsewhere, and adopting a modern and effective model for sustainable improvement in road safety.

4 Road safety management and the role of lead agencies

There have been many ways of discussing road safety, but the systems based approach exemplified in the best performing countries is now recognised as the basis upon which good road safety management practice rests. Within a systems approach, effective 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*.[18] This section outlines the overall framework within which countries can most effectively tackle their road safety challenges, and describes the institutional management functions that need to be addressed in doing so.

Road Safety Management Framework

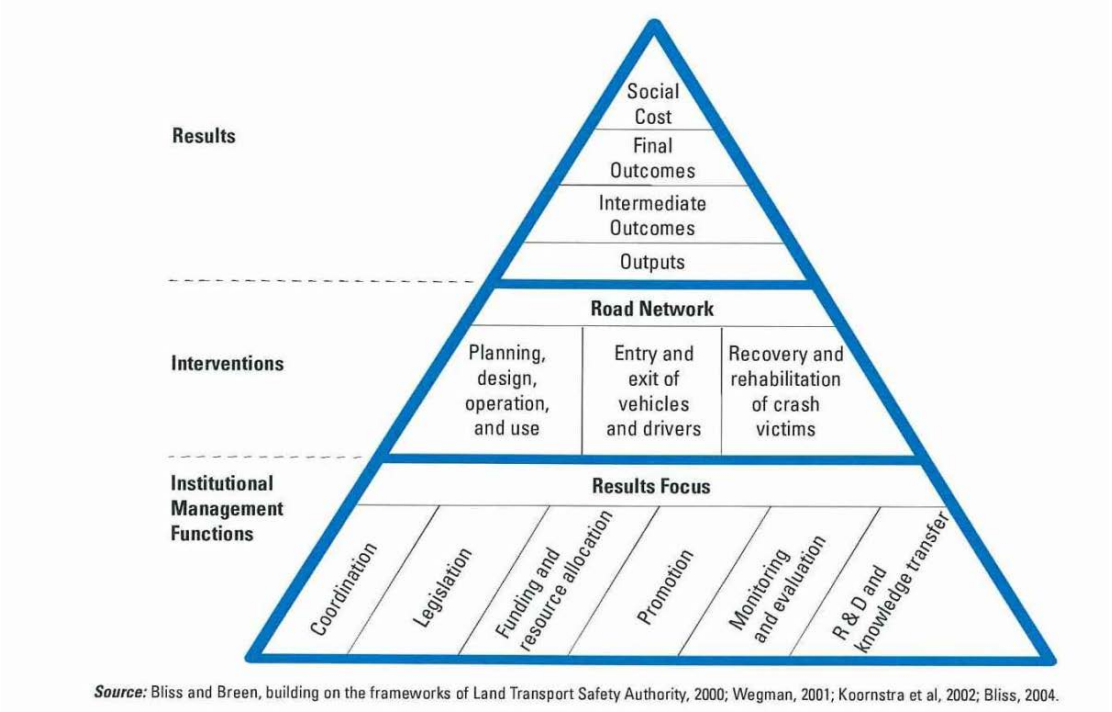
A key feature of this framework (see Figure 6) is the specification of desired road safety results including not just final outcomes and social cost (casualties and their burden on society), but also intermediate outcomes which are tied to the delivery of outputs from evidence based interventions. Within this framework, interventions are considered in terms of the road network. This helps ground interventions in real terms. The road network 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 can be designed to change the planning, design, operation and use of the road network, to control the entry and exit of vehicles and drivers, and to facilitate recovery and rehabilitation of crash victims. Each of these intervention sets can themselves be broken down into setting a higher quality of safety standards and rules, or achieving better compliance with those standards and rules. This framework document references the various intervention sets for Africa (such as mainstreaming road safety within infrastructure projects, lifting vehicle safety standards, and improving compliance amongst commercial operators). The focus of this paper is however on the institutional management functions which are critical to designing and implementing interventions in the most effective manner.

The key feature of the framework is therefore 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.

[18] Bliss and Breen (2009) op.cit.

Figure 6 Road Safety Management Framework



Source: Bliss and Breen, building on the frameworks of Land Transport Safety Authority, 2000; Wegman, 2001; Koornstra et al, 2002; Bliss, 2004.

Many different agencies and organisations need to perform these management functions effectively. This applies equally to road agencies seeking to provide a safe road traffic environment for a variety of road users, to enforcement agencies seeking to maximise compliance with road rules, and to companies seeking to reduce employee exposure to risk of injury. The functions are a particular focus for a road safety lead agency (RSLA), especially for those lead agencies which may not have operational responsibilities for delivering interventions. Although these agencies do not have direct responsibility for all interventions, they need to play an influential leadership role in shaping those interventions and maximising road safety results.

The management functions are addressed more deliberately here. They may be exercised in different ways in different social and political contexts, but are addressed here in the context of a national lead agency. Some direction on key tasks is provided below, but the manner and sophistication in which the tasks are performed will evolve over time as the country's road safety management system develops. This includes adjustments associated with any changes to organisational structures within government. Which organisation does what may change, but the functions remain the road safety management building blocks for success, and the performance of the functions needs to be improved and strengthened over time.

Results Focused Approach

The RSLA is responsible for leading national efforts to achieve the country's road safety goals. It needs to work collaboratively with partner government agencies to develop a national road safety strategy or strategic plan. An effective strategy is likely to be supported by two key elements. The first is a results management framework which includes ambitious and achievable targets, and intermediate indicators that will allow progress to be more precisely tracked over time. The

second is a funded multi-agency action plan to implement the strategy, which is focused on the evidence based interventions necessary to positively impact on the intermediate outcomes being sought.

The RSLA needs to focus on the management functions that inform an outcomes framework and drive the interventions towards improved results. A country may have a strategy, a results management framework, or an action plan, or all three. However, the strategic plan may provide insufficient direction on how the key road safety issues will be addressed. The results framework may have too many items of measurement to allow for effective management, or they may be focused on areas of low safety value. An action plan may be insufficiently focused on the key issues, or has not been developed in a manner that facilitates an effective multi-agency approach to the overall problem.

Whatever the situation, the RSLA must drive an overriding focus on results within government and the broader community, and bring together all other management functions to bear on this single purpose – to achieve sustained reductions in road trauma. Given the significance of this function, the RSLA should consider promoting a road safety management capacity review within the country in order to assess the best opportunities for road trauma reduction. It may also seek to review the effectiveness of its own operations in leading the national road safety effort, or support one of its key partner agencies to do the same. It is important that each major initiative, whether the development of a national strategy or the preparation of a multi-agency action plan, is taken as an opportunity to strengthen and improve the response to the country's road safety crisis.

An important balance must be struck in strategy setting, which is often a very weak function. Too often in Africa low capacity levels lead to strategy tasks being outsourced without the processes established that allow sufficient knowledge transfer and the development of critical road safety management expertise in country, with the result being a targeted but shelf-bound strategy. Alternatively, in-house strategy formulation can reduce to a lowest common denominator, with the result being an agreed but ineffective strategy. The RSLA needs skilled leaders to avoid these problems and facilitate a sound results focused strategic platform.

Coordination

The RSLA needs to orchestrate and align specific road safety interventions and management functions to support achievement of intermediate and final safety outcomes. This requires regular technical, management and leadership engagement between the lead agency and its key partner agencies. It also requires regular engagement by the agency's top management with the government Minister or Ministers who hold political responsibility for road safety. This is particularly important for building a strategic understanding of road safety amongst elected representatives and assisting them to identify the benefits of mandating significant action in support of road safety.

In order to generate a broad societal response to the road safety problem, the RSLA also needs to engage regularly with business and civil society institutions which are capable of influencing the level of safety enjoyed within the community. This influence can be demonstrated in the form of significant safety focused decisions about their own operations, or in promoting a climate of support for road safety within the country.

Partnership meetings become the lifeblood of the national road safety effort by encouraging all parties to discuss strategic road safety issues, and the best strategic response to the range of immediate safety issues that inevitably arise. This engagement is also critical to ensure that regional government and parties outside government can effectively engage with the national road safety agenda. The ideal is to build up a wider partnership that complements and supports national decision making and action.

Partnership coordination requires effort and attention, with action related agendae, agreement on responsibilities arising from meetings, minutes and follow up. That said, the purpose is not the meeting itself, but addressing key operational and strategic issues within an effective partnership environment. It also needs to be recognised that coordination and collaboration can be time-consuming and costly. An effective RSLA therefore not only generates common understanding of the strategic intent within the partnership, it also respects the decision making responsibilities of its partner agencies.

More than any other, this function requires the RSLA to act as first amongst equals, and to be able to step out of a narrow sectoral based perspective. It is not uncommon, for example, for a lead agency housed within the transport sector to have difficulty engaging effectively with policing, justice, health, education or insurance sector agencies. The potential support for road safety within corporates operating in Africa should also be noted in this context, as integrating third parties into a national framework can prove difficult. On one hand, the organisation may seek to simply be “associated” with road safety or look for niche activity (which are often of lower safety value) that public agencies are not engaging in. On the other hand, public agencies can easily become defensive and not look widely enough at the opportunity for third parties to become more involved in delivering their significant road safety responsibilities. The RSLA, and its key road safety partners, need to be empowered and to be capable of acting beyond their own sectoral perspective.

Legislation

The lead agency is responsible for ensuring that the effectiveness of existing laws, standards and directives regulating roads, vehicles and road users are evaluated, and safety improvements are proposed. This may require the lead agency to regularly commission and consider studies on current legislation and the compliance and enforcement of the legislation.

Examples of the policy reviews which could be scheduled for review are the legislative and compliance systems associated with the design, construction and management of the road network; the licensing of vehicles, drivers and operators, and the recovery and rehabilitation of crash victims. Reviews could address the effectiveness of:

- the institutional management responsibilities for road safety held by various government agencies
- safety standards and rules set in legislation for roads, vehicles, drivers and operators, as well as emergency response
- the business systems within government agencies for assessing risk, funding and managing safety programs, and regulating activity which has a safety impact
- testing/inspection/audit/enforcement services delivered either by government or the private sector
- activity to achieve compliance with safety standards and rules.

The RSLA needs to be able to prioritise the legislative reviews that will be undertaken, taking into account the effort required to review the particular activity compared with the potential benefit.

African experience points to the need for regular maintenance and updating of national law and the systems for enforcing compliance with the law. In some areas, such as vehicle safety where global construction safety standards are referenced in law in only a handful of African countries, there are major gaps in legislation. In other areas, such as speeding or drink driving by motor vehicle drivers, there are major gaps in enforcement. The effectiveness of enforcement activity reported across 48 African countries in the WHO *Global Status Report* was rated as 3.9 out of 10 for speeding 3.5 out of 10 for drink driving. Significant safety benefits can be achieved by addressing these issues.

Funding and Resource Allocation

Funding and resource allocation is a key function for any RSLA. Ideally the RSLA holds responsibility for ensuring that sufficient funding is allocated to strategically oriented safety initiatives in order to meet the country's road safety goals. This function is highly dependent on the government budget management processes in each country. Typically, however, it would be expected that the RSLA would be involved in reviewing past road safety results and performance, determining areas of significant potential for road safety improvement, supporting the preparation of budget bids from partner agencies for funding, and promoting these bids through government processes.

These budget bids may be prepared for processes which are set by dedicated road funding agencies, or for consolidated budget processes within government. This does not suggest that the lead agency must have decision rights over the road safety related budgets of autonomous government agencies. It does however suggest that

the specific endorsement of the RSLA must be sought for any safety related budget proposals by partner agencies. This is important to provide assurance that expenditure is well aligned with the national road safety effort.

Lead agencies also need to be involved in funding decisions over major road development and construction projects. These projects involve significant investments in the quality of the main road network, and have a direct impact upon the safety of road users. New guidelines prepared by SSATP show how mainstreaming road safety into these projects can play a major road safety improvement role over time.[19] The lead agency needs to be consulted regarding the safety component of major road development projects as they are being prepared, finalised and approved for funding.

It is difficult to assess the adequacy of funding for road safety, and compare this across a continent, but investment is clearly insufficient. While 34 out of 45 African countries which responded to a WHO survey question about funding identified that their RSLA was funded, there is little doubt that the capacity of the lead agency to effectively discharge its functions is invariably constrained by resources. At a broader level, two out of 30 countries identified that they had an unfunded national road safety strategy, 25 had a partially funded national strategy, and only 3 countries had a fully funded strategy.

It takes significant time, effort and financial resources to build capable road safety management units within an existing agency, and even more to build institutions capable of achieving sustained reduction in road trauma. African countries which have significant road development programs can quickly build road safety management capacity through external funding sources, and all African countries should be looking at allocating 10% of road investment funding and 5% of road maintenance funding to road safety. Lead agencies need to be engaged as major projects are developed in order to address the road safety management capacity priorities for the country.

Promotion

The RSLA is responsible for promoting road traffic safety through forums, formal and non-formal education, public participation, and mass media promotion. Safety promotion can be effective when used to support significant results focused activity, and needs to be planned well in advance.

The establishment of a funded program of promotional activity will assist in boosting the profile of road safety. Promotional activity should be carefully targeted at first to decision makers, partner organisations (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 that have been mandated through the lead agency.

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[19] Breen J, Humphreys RM, and Melibaeva S, *Guidelines for Mainstreaming Road Safety in Regional Trade Road Corridors*, Working Paper No.97, SSATP Africa Transport Policy Program.

This activity needs to be strategically oriented, with the target audience provided with specific actions which they can take to improve the safety of others. Over time, promotional activity can be extended to other target populations, 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.

There is a pressing need to raise awareness of the scale of the road safety problem at a national level throughout Africa, to promote effective interventions, and to build support for decision making to implement them. As noted previously, promotional activity providing information or educational materials is often treated in Africa as an effective intervention in itself, rather than an effective support to direct interventions within the road environment. Indeed, distribution of road safety materials to school children and exhortations to road users to not engage in high risk behaviours are demonstrably ineffective without being integrated into related programs, such as reducing speed and improving pedestrian crossing opportunities for children's route to school, or strictly enforcing road user rules.

The most effective promotional work by a public servant is that which influences significant safety decisions to increase investment in road safety, improve the safety of the infrastructure, improve the quality of the vehicle fleet, enforce better road user behavior, or provide better post-crash response. The day to day reality of working within government in Africa clearly creates challenges for this, but it is an essential function of the lead agency, and one that must be embraced if safety is to improve.

Monitoring and Evaluation

The RSLA is responsible for analysing and publishing road traffic crash and injury data, and for monitoring, evaluating and reporting on strategy and program implementation by government agencies. The compilation of a regular road safety progress report (at least once a year, but preferably four times a year) is an essential means by which the lead agency can assess operational and outcome progress and determine whether adjustments are needed. This should be supplemented periodically by a full outcomes based evaluation of a national road safety strategy.

Monitoring and evaluation activity is important for the good governance of road safety within the country and transparency between partners and within the wider community about road safety progress. Initial reports may need to be adjusted until a consistent format and data set is settled which provides meaningful road safety information. Reports also need to be consistent with an overall results management framework which sets out desired results in terms of both final and intermediate outcomes. Final outcomes, being deaths and serious injuries, are ideally able to be reported for the country as a whole as well as for regions and different high risk demographics (such as children or elderly) and high risk users (such as pedestrians).

Intermediate outcome indicators, such as the proportion of motor vehicle occupants wearing a safety belt, are also vital because they can more accurately represent changes over time in the underlying level of safety that is experienced by users. The indicators should be directly associated with the delivery of interventions. The quality and quantity of this delivery should therefore also be subject to regular monitoring and evaluation activity. For example, the number of roundabouts or safe pedestrian crossing points that are installed, or the number of speeding tickets issued or alcohol tests administered to drivers can all be important measures to determine the success or otherwise of particular strategies.

Reporting and data systems that are required to monitor and evaluate progress are a significant problem in Africa. For example, only 18 countries reported in the WHO *Global Status Report* using the standard international definition of fatality as occurring within 30 days of the crash. Nine countries only record fatalities which occur at the scene of the crash, five countries record a fatality that occurs within five days, and seven countries record a fatality that occurs within seven days. There is systemic underreporting, but also indication of over-reporting with four countries recording a fatality that occurs within one year of the crash. As noted previously, the relatively low intensity of safety interventions makes meaningful evaluation very difficult, but all interventions should include a formal evaluation component which can build the level of road safety understanding within the country, focusing perhaps on intermediate outcomes, but mostly on delivery of evidence based interventions.

Research and Development and Knowledge Transfer

The RSLA is responsible for supporting research and development activity in the area, and undertaking road traffic safety studies to allow better decision making in the future. It is also responsible for best practice road safety knowledge transfer to those in a position to improve the safety of others.

Research should be conducted in such a way that allows follow up actions to occur. For example, a program of research activity over several years may be necessary to develop understanding on the level of compliance with safety belt laws, speed limits, mobile phone laws or drink driving laws. Specific traffic speed surveys may also need to be conducted. The results of each of these would link directly with an outcomes management framework which gave priority to improving compliance over time. Other ways in which the research program can be applied practically are to commission research into specific areas of policy concern, thus facilitating better informed consideration of policy issues, policy options, and the implementation of better policy decisions.

There are many ways in which knowledge transfer activity can be undertaken. These should be focused on persons working in road safety fields, and aim to both improve their specific technical knowledge of the field which they are working in, and their general understanding of the road safety field. Opportunities should be taken to seek contributions from visiting experts, or more formally organised capacity building programs developed by individual agencies.

5 Organisational forms for a lead agency

An effective road safety lead agency can take a variety of organisational forms, and the final form will inevitably reflect how each country establishes its government institutions. The role of the lead agency may also change as work evolves. The *Africa Road Safety Policy Framework* identified and discussed three different lead agencies existing in Africa at that time. This document identified only 18 African countries having established national lead agencies, and they were typified in three ways:[21]

- A Coordinating Committee made up of representatives from key stakeholders. This was regarded as simple and quick to initiate, yet difficult to keep alive for lack of an owner and to achieve results, and so useful only as a first step.
- A National Road Safety Commission within a Ministry of Transport. This was regarded as an effective organisational form which could expand and become more complex with time, and while experiencing financial and human resource constraints was obtaining sustained positive results
- An Inter-ministerial Committee headed by the Prime Minister with a Permanent Commission within the Ministry of Transport. This was regarded as an ambitious form involving a wide array of stakeholders, which is visible and engaging with a Ministerial Committee which demands continued effort, and is achieving success.

However, this typology tends to confuse the nomination of a road safety lead agency with the establishment of a coordinating mechanism that is needed to bring all relevant agencies together to develop a common approach across government. The defining feature of a lead agency is the institutional management functions it performs, or ensures are performed by other agencies. These functions can be delivered through a variety of organisational forms, but they are not capable of being performed by a committee. An interdepartmental or interministerial committee can perform a governance role, but the institutional management functions rely on administrative and technical management capacity to effectively lead the coordinated efforts of government.

Coordinating Committee with Secretariat

The establishment of a coordinating committee comprising agency heads, or an interministerial council may be an important interim step in the establishment of a lead agency function. The Committee or Council will need administrative and technical support to develop decision oriented agenda and track progress over time, but it needs to be recognised that problems may emerge if the Secretariat seeks to actually lead the national road safety effort without the necessary governance, legislative and funding support. This is typically a weak accountability mechanism. It is more likely to generate uneven levels of response from agencies, and allow them

[21] *Africa Road Safety Policy Framework: A platform for the implementation of the Decade of Action for Road Safety: 2011-2020* (2013), United Nations Economic Commission for Africa, Africa Transport Policy Program, World Bank.

to frame issues in ways that reflect what they regard as important. This form is therefore most useful if considered as a starting point for the parties to agree on the establishment of an effective lead agency structure.

Lead Agency Function within Government Department

Perhaps the most primary form of a lead agency within African countries is a work group within an already existing government department of agency with major delivery or transport system responsibilities, such as ministry of transport or a ministry of works. This allows use of already established administrative systems, and tends to create stronger synergies between the specific performance of the lead agency functions, and the delivery responsibilities of the host department.

It also comes with some complexities. The host department can be overly influential in framing the road safety problem as a policy, regulatory, infrastructure or enforcement issue depending on its mandate and thus unwittingly create barriers with key but distant stakeholders. This form also relies on a departmental chief executive who is capable of taking a leadership role amongst peers in other agencies, and facilitating a direct relationship between the senior executive charged with the Lead Agency function and the Minister to whom the departmental Chief Executive is directly responsible.

Autonomous Lead Agency for Road Safety

An alternative is to establish an autonomous lead agency agency, at arms length from the government, to lead the efforts of all other agencies. This could report directly to the Minister of Transport or even the Prime Minister or President. This infers a clear mandate at a Ministerial or Head of Government level across the transport sector or indeed the whole government, which can be used to very powerful effect.

This requires well honed leadership skills to be able to understand technical agency advice, and provide sector or government wide direction. This form relies on an agency having a robust legislative framework, sufficient leadership and technical capacity to gain respect and input from operational agencies which may have seen themselves as being responsible for road safety previously.

Considerations for nominating a lead agency

Further consideration of how the lead agency function is established within the overall government administration is merited. A 2005 review of evidence regarding the benefits and risks of establishing government agencies concluded that "governments work better when their organisations have clear missions, strong support from the centre, visionary leadership, task motivation and professionalism among the staff, and managers with authority to get on and do the job."[22] These are the characteristics of an effective lead agency.

Based on this review, there are several considerations that should be addressed in

[22] R Laking "Agencies: Their Benefits and Risks", *OECD Journal on Budgeting*, vol.4 no.4, 2005.

the establishment of a road safety lead agency within an existing department, or indeed of a new autonomous agency:

- Ensure there is clarity about why the lead agency function is being established and the expected benefits of this. Better governance, accountability and leadership for road safety are particularly important, as is the ability to effectively coordinate the various arms of government. Ensure the focus of the lead agency function is on building capacity in road safety management and leadership.
- Consider who the champions for the lead agency function are, and whether that support will still be there if and when something goes wrong. Manage the early stages with a view to embedding the road safety management function and its results focus beyond the first burst of enthusiasm or the effect of a charismatic leader, or the strong support of a powerful politician.

The location of the road safety lead agency function within an established agency demands particular consideration of these issues. In governance terms, it is essential that the road safety function has a strong presence among the agency's range of statutory functions. The agency should be mandated to promote road safety, set strategies and targets for road safety improvement, and lead the range of institutional management functions discussed in Section 4.

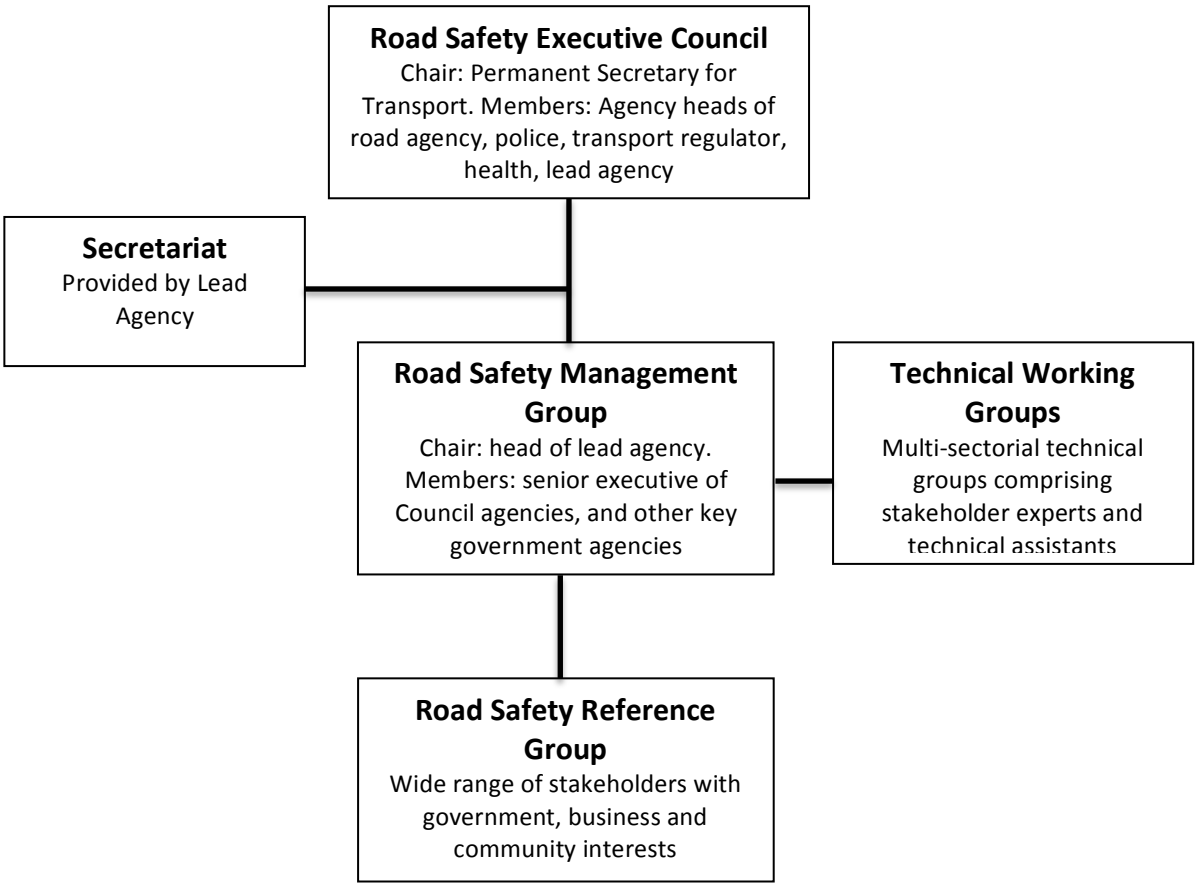
Developing partnerships both inside and outside of government will be critical to how the agency needs to operate as this will allow it to leverage greater road safety effort from others. The statutory mandate may specifically mandate a coordination role to bring together the government and wider community efforts to achieve national road safety goals. Otherwise, an effective measure has been to prepare a Memorandum of Understanding between the key road safety agencies, which would recognise the road safety management and coordination function of the lead agency as well as the delivery responsibilities of other agencies.

The statutory reference to the road safety lead agency function needs to be reflected in the organisational structure, with a senior direct report to the agency chief executive made accountable for road safety performance. It also needs to be reflected in the budget and organisational accountabilities within the agency. It needs to have sufficient capacity to be influential in its external partnership focused mandate. A good test for this is whether it has sufficient capacity to influence the operations of other functions within the agency which have a high safety impact.

Whether or not the RSLA is established within an existing agency, or as a stand-alone agency, specific attention is required to the establishment and consolidation of a sustainable operating environment. A key aspect of such an operating environment is that it is free of excessive bureaucracy – that is, within an overall accountability system, the operating environment promotes independence in decision-making, action and innovation. Another key aspect of a sustainable operating environment is the existence of an ongoing funding stream to meet the RSLA capacity requirements to effectively lead the national road safety effort. Without clear accountability and

mandate, backed up by the necessary resourcing, the lead agency will be set up to fail.

Whether or not the lead agency function exists within a department, or as an autonomous agency, a national coordination structure needs to be in place to create the conditions within which agencies work together. A generic coordinating structure is set out below. It can be modified based on the actual institutional arrangements in each country, but the essential features have been shown to be effective in many different environments.



This generic structure involves an executive group connecting the key government agencies, chaired by a senior figure and supported by the lead agency, which encourages coordinated advice to Ministers, and coordinated delivery between agencies. A management group helps shape the strategic agenda and oversees coordination of the agreed interagency action plan, supported by technical groups as required, and engaging with key stakeholders within the country. Technical working groups are needed to address specific policy or delivery issues amongst the agencies. A reference group is also important for a much wider group of stakeholders to be engaged in national road safety issues, and provide input and support for how they are addressed.

Examples of some African lead agencies

The most effective RSLAs deliver on a common set of management functions, but they develop over time, and respond to their own operating environment. The statutory mandate, function and funding of a number of African RSLAs are described below. They have each made progress in their own way, and each face different challenges. Of note is the time that has been taken to develop road safety management capacity – greater urgency is needed to lift this capacity across all countries in Africa.

National Road Safety Centre, Benin

The National Road Safety Centre in Benin was established by decree in 1987. It is governed by a Board and reports to the Ministry of Public Works and Transport. Its main mission is "the study, research and implementation of all means to increase the safety of road users, including measures to prevent and fight against road accidents."

The centre has a wide range of responsibilities including:

- road user education and awareness campaigns
- periodic technical vehicle inspections, and roadside vehicle checks in collaboration with the Police and the Gendarmerie
- road network inspection and audits of road projects
- collection and management of statistical data.

Technical vehicle inspections are the main source of funding and ensure financial autonomy for the Centre, but there is insufficient funding being applied to the road safety problem, and no safety investment plan in place to increase funding.
An action plan is developed annually and submitted for adoption by the Board, together with the draft annual budget.

International conventions on road traffic safety such as the Vienna Convention and various ECOWAS provisions are in place, but generally the legislative and regulatory framework needs strengthening, including a highway code. The legislative area is regarded as requiring the greatest attention, and a number of draft laws have been prepared for Government adoption.

An area where management capacity has been lifted over time is data analysis, with the implementation in 2000 of the BAAC data management system. The Centre collects data from National Police and the Gendarmerie, and referral hospitals, and then processes, analyses and publishes it. Ongoing management of the data management system means it has reached acceptable levels of reliability, and is regarded as an indispensable aid for strategy development, implementation and evaluation.

This data management capability and the ongoing funding source for its operations are important features of the Centre which can be expected to play vital roles in future efforts to improve road safety outcomes in Benin.

Federal Road Safety Corps, Nigeria

The Federal Road Safety Corps (FRSC) was established by Decree in 1988, and has operated under its own Act since 2007. The President of the Republic has oversight of the FRSC and appoints the FRSC Corps Marshal, as well as a Federal Road Safety Commission. This governing board has policy making and administrative responsibilities for the FRSC, but the FRSC management is empowered with the day to day running of the Commission under the Corps Marshal and Chief Executive.

It has a strong institutional history, and has established the ultimate vision "to eradicate road traffic crashes and create safe motoring environment in Nigeria." Its mission is to regulate, enforce and coordinate all road traffic and safety management activities. Remarkably, its functions cover the full gamut of safety activity: management, road, vehicle, user and post-crash response. Responsibilities include:

- highway traffic codes
- enforcement of road user behavior
- determining and enforcing all speed limits
- educating motorists and the public on the proper use of the highways
- driver licensing and vehicle number plates
- road safety audits and promotion of safe infrastructure
- promotion of vehicle safety regulation and technology
- safety ratings for transport operators
- roadside and mobile clinics for the treatment of accident victims
- crash investigation and road safety research.

The FRSC championed the process of preparing Nigeria's first National Road Safety Strategy 2014-2018 for consideration by the Federal Executive Council of Nigeria. FRSC hosts the West African Road Safety Organisation which provides essential peer to peer opportunities within the regional ECOWAS community, and is providing technical and advocacy support in the region.

At a time when the prognosis for road safety across Africa is poor, the FRSC is investing in further measures to strengthen road safety management capacity. Improved data collection is a notable example of this with Nigeria implementing the WHO standard definition of a fatality as occurring within 30 days of a crash, and joining the International Road Traffic Database (IRTAD). These are important steps to gain greater understanding of nature and scale of the road safety problem in Nigeria, and to drive stronger and more effective interventions in the future.

The Nigerian Safe Corridor Project is a further example of how the FRSC has strengthened its road safety management capacity. This project was developed

within the Federal Roads Development Programme (FRDP) – a USD330 million eight year programme of the Federal Ministry of Works, funded through a World Bank investment loan. The primary focus of the FRDP is rehabilitation of 442 km and upgrading and maintenance of 340 km on 19 sections of the federal road network.

The project supports the Federal Road Safety Corps (FRSC) to pilot the "safe corridor" approach on the project roads, as well as other high traffic roads. Following road safety audits on the project roads conducted by the FRSC and the development of a multi-sector approach, the project was allocated USD10 million. Areas of planned activity include: safety engineering; enforcement; emergency medical services; public education and outreach; training, technical assistance and policy development; monitoring and evaluation.

The Safe Corridor Project involves the World Bank, the Global Road Safety Facility, the Federal Road Safety Corps (as the lead agency), the Federal Ministry of Works, and the Arrive Alive Road Safety Initiative (AARSI). AARSI is an NGO funded jointly by First Bank, Diamond Bank, Zenith Bank, DHL and Chevron, through which additional financial contributions have been made to the project.

The Safe Corridor Project is focused on six of the FRDP corridors: Abuja-Kaduna-Zaria-Kano; Mokwa-Bida-Lambata-Suleja; Enugu-Abakaliki-Ogoja-Mfun (Cameroon Border); Benin-Ifon-Owo-Ilesa; Jos-Bauchi-Gombe; and Abuja Metropolis. Deliverables to date under the project include:

- a road safety management capacity review
- a highway patrol assessment by RoadPOL, a good practice road policing network
- procurement of 37 fitted patrol vehicles, 7 life support ambulances, 24 patrol motorcycles, 1156 screening and 45 evidential breathalysers, and 82 radar guns
- further donation of evidence based alcohol testers by AARSI, and distribution of 500 helmets to cyclists
- teaching school pupils on use of highway
- additional unit command posts and emergency ambulance stations
- a training and capacity building programme for all FRSC officers
- training support for:
    - 40 officers in liquid hydrocarbon products delivery in France
    - 5 officers in road safety audit in the United Kingdom
    - 30 officers in highway patrol in the United States of America
    - 100 paramedics at National Hospital Abuja.

Through this project, the FRSC has demonstrated a critical capacity to engage in large scale externally funded projects which are seeking to both build organisational capacity and achieve quick results, in a manner which is sustainable, boosts the visibility of road safety, and can be replicated. More broadly, the organisation's close administrative connection with the Presidency of the Republic is an important and positive feature of the FRSC capacity to lead road safety efforts in Nigeria.

National Road Safety Commission, Ghana

Ghana has a vision "to have the safest road transportation system in Africa." The lead agency charged with realising this vision is the National Road Safety Commission which was established by an Act of Parliament in 1999 to develop and promote road safety activities in Ghana and coordinate related policies. It has a mission to promote best road safety practices for all categories of road users.

The key responsibilities of the NRSC include:

- undertaking nation-wide road safety planning, education, advocacy and resource mobilisation for interventions
- encouraging the development of road safety education as part of the curriculum and the training of teachers in road safety
- co-ordinating, monitoring and evaluating road safety activities, programmes and strategies
- developing and maintaining a comprehensive road traffic crash database and publish reports related to road safety.

There is regular interaction and meetings between NRSC management and the Minister of Transport. The NRSC submits Quarterly Reports to the Ministry of Transport, and an Annual Report to Parliament. There are eight key stakeholder agencies, of which the Driver and Vehicle Licensing Agency was also established in 1999 to promote road safety, and also reports through to the Ministry of Transport.

75% of the annual funding for the NRSC comes from the Road Fund, 20% from the insurance industry, and 5% from the Government's consolidated fund. In amending the NRSC legislation, consideration is being given to allocation of a set percentage from the Road Fund, vehicle registration and inspection fees, and insurance premiums. Sustainable funding is critical, and more significant investments will be needed, while consideration is also being given to building the functions of the agency to include compliance activity.

It is notable that the Commission has overseen the preparation of three national strategies since its inception. The most recent (National Road Safety Strategy III 2011-2020) is deliberately aligned with the UN Decade of Action on Road Safety and received specific endorsement from the President. Fifteen years on from its establishment, the Commission demonstrates the value of an autonomous lead agency, which is capable of leading national road safety policy, strategy and coordination.

National Road Traffic Safety Council Ethiopia

The National Road Traffic Safety Council is one of the most recent lead agencies to be formed in Africa, established by regulation in 2011, replacing a coordination office in the Road Transport Authority. There are currently 11 members individually appointed by the Office of the Prime Minister, with a mix of Ministers and key agency chief executives. The council is accountable to the Ministry of Transport.

A Technical Committee supports the work of Council, and meets regularly to monitor progress and coordinate activity.

The objective of the Council is to develop road safety strategy and coordinate the concerned organs for its implementation. The main functions and powers of the council are to:

- formulate national road safety plans and programs
- coordinate and/ or encourage government and private sector participation in road traffic safety
- evaluate the effectiveness of the existing laws, standards and directives regulating roads, vehicles and road users, and propose safety improvements
- promote roads traffic safety through forums, formal and non formal education, public participation, and mass media promotion and
- evaluate and report on strategy and program implementation by government agencies.

The council is supported by a small Office and its activity is funded from a combination of the Ethiopian Road Fund (through a fuel levy) and the Ministry of Transport. Safety focused expenditure is small compared with the budget allocated to road development programmes, but the funding source through the Road Fund is regarded as providing stability in base funding.

The NRTSC has a good relationship with a number of donor, academic business and NGO agencies. This includes the Ethiopian Red Cross Association which provides ambulance services and pre hospital treatment for road victims. Ethiopia is a Federal country with nine regional states and two autonomous city administrations. There is a quarterly meeting with regional transport bureaus and city administrations to discuss their performance.

Similarly with other countries in Africa road safety laws and regulations used in Ethiopia are generally outdated and require considerable attention. The small size of the office also limits the attention given to monitoring and evaluation, or research and development and knowledge transfer functions. However, the position of the NRTSC within the Ministry and the recognition of the need to take further measures to address road safety is significant. This has led to the development of a management framework to promote strengthening of the Office and engagement across sectors on how greater road safety management capacity can be achieved and financed within Ethiopia.

6 Meeting the road safety management challenge

The six recommendations of the 2004 *World Report* continue to provide direction for countries seeking to tackle the road safety crisis in Africa: identify the lead agency, assess the policy and institutional settings, prepare an action oriented strategy, allocate resources, implement the actions, and support capacity building.

The primary guidance prepared by the GRSF on implementing the *World Report* recommendations provides the strongest analytical and program focussed framework for taking action in the area: initiate a full review of road safety management capacity within the country to highlight key areas for development; and initiate high-impact safe system projects capable of marshalling the necessary resources and demonstrating the potential for sustained safety benefits within the community.

The recent guidelines prepared by SSATP for mainstreaming safety in regional trade road corridor projects has taken the overall road safety management framework set out in the GRSF country guidelines and made it specifically relevant to major road infrastructure projects in Africa. These project guidelines provide the mechanism to significantly improve road corridor safety and build road safety management capacity in a country. This is particularly important given the significance of regional trade road corridors on the many landlocked countries of Africa, and the need for cross-border facilitation of transport links generally.

This twin set of review and implementation processes remain potent ways of meeting the road safety management challenge for countries in Africa. But they rely on lead agencies or government ministries effectively promoting the review process, and then building support for the implementation of the review recommendations. They also rely on lead agencies being able to capitalise on these projects and build sustainable road safety management functions within their country.

Good governance and road safety

This final section looks at some of the actions and approaches that a lead agency can take to support a more systematic approach to road safety and to promote high-impact analyses and projects.

Before doing so, it is important to note that the establishment of a road safety management framework for Africa relies on strong governance models within government. Governance was regarded as the key to progress in a major recent study into Africa's transport infrastructure which concluded that:

> "inadequate infrastructure goes only part way toward explaining the poor performance of the transport sector in Africa. On the one hand, existing infrastructure has been used inefficiently, increasing investment needs and subsequent fiscal demands; on the other hand, institutional and policy

deficiencies continue to mitigate the effectiveness of new investment."[24]

This highlights the potential road safety value for African in focusing on the institutional management functions. The establishment and strengthening of a road safety lead agency, and the performance of these functions within an overall road safety management framework is not an optional extra. It is essential for driving up investment in road safety through stronger interventions which will deliver better safety results.

With a management framework in place, it is easier for Ministers or agency heads to provide the necessary governance support for road safety without resorting to their own conventional wisdom or that of their stakeholders. Good governance principles suggests that they have road safety performance topmost in their mind and engage with management on the full range of human, financial and system resources needed to improve that performance.

Building political support for road safety

The most important task for building political support for road safety is to engage directly with the Minister or Ministers responsible for road safety, and demonstrate the political relevance of road safety. This may take time, but it is an essential prerequisite for Ministers to trust those senior executives who have responsibility for road safety and make significant decisions in favour of road safety. A primary purpose of this relationship is to develop and sustain a mandate and authority for the lead agency to act on the Minister's behalf.

Different approaches may be required to demonstrate political relevance: for example, the scale of human trauma on the road (or the scale of trauma compared to other economic or social issues) may need to be presented, or examples of how action has been taken elsewhere and results have been achieved. Global, African or regional government commitments may need to be spelt out. Quick and well considered responses to a high profile crash or spate of crashes may be an important opportunity to build political support.

It should be noted that this task of gaining political support for road safety is not to infer that senior appointees within a RSLA should be politically aligned to the Government. Indeed, this task is consistent with the entrenched principle of political neutrality in many countries, which can be easily maintained by adopting a professional advisory approach to the task of leading the national road safety effort. Simply put, the road safety executive needs to find a way to engage with the Minister in a manner that facilitates safety positive decision-making.

Access to the Minister may need to be facilitated through the Minister's staff, or through an agency chairman or chief executive. However it occurs, the nominated road safety executive must be in a position where frank and direct advice about

[24] Gwilliam, K (2011), *Africa's Transport Infrastructure Mainstreaming Maintenance and Management*, World Bank, Washington.

tackling the road safety crisis can be presented directly to the responsible Minister. As trust is built, the safety executive can begin to make judicious use of the mandate agreed by the Minister to enlist the support and action from key road safety agencies and other influential entities. There are good examples throughout Africa of how third parties are enlisted to build a climate of support for road safety in a country, and indeed organisations such as the Global Road Safety Partnership for which this is a significant focus, and is active in a number of African countries.

Political support can be increased and built over time by successful demonstration projects that involve a range of organisations. It can also be developed by a lead agency that becomes skillful in matching political direction with effective road safety initiatives. For example, a strong law and order agenda can be supported by targeted legislative and enforcement programs, or a preparedness to analyse regulatory impacts may assist in advancing the safety of vehicle imports, or a drive towards infrastructure development can lead to upgrading the inherent safety of the road network. It is important that the lead agency identifies a range of effective measures that can be progressed quickly when the political opportunity becomes available.

Improving the convening and coordination powers of a lead agency

The most effective lead agencies tend to have an outward-looking partnerships-based approach. This is because there are typically at least four major institutions in any country which deliver significant road safety related services – the road agency, the vehicle/driver/operator regulator, the traffic enforcement agency, and the post-crash response and treatment agencies. Commonality of approach and coordination of activity is critical because the lead agency is concerned about maximising the contribution of each agency. The Minister responsible has a critical role in actively supporting the mandate of the lead agency to convene these various agency chief executives. This may need to be supported by connections with other relevant Ministers on the issue.

The convening and coordinating capacity of the lead agency cannot rely on Ministerial engagement however. The head of the lead agency will need to establish and maintain strong inter-personal connection with other agency heads. This very human engagement needs to be supported by effective institutional mechanisms – primarily some degree of formal agreement between the various parties, and engagement processes which will support effective coordination of effort towards the country's road safety goals.

The preparation of some formal documentation regarding the purpose and process for the engagement is an important governance measure to support effective road safety management at a national level. The documentation should at the least identify the contributions of each of the participating agencies to road safety, and can also outline the processes which will support the coordination of activity, such as the establishment of technical working groups. The documentation could be in the form of a relatively straightforward Memorandum of Understanding between the participating agencies as has recently occurred in Zambia, or in the form of

legislation. An example of the latter is the National Road Traffic Safety Council in Ethiopia – it was established by regulation which sets out the purpose and functions of the Council, and how the membership is determined.

The lead agency needs to back up this inter-agency agreement with meaningful processes for determining safety priorities and coordinating delivery of agreed actions. The chief executive group needs to be formed and supported in such a manner which encourages the agencies to share perspectives and analysis and develop a common understanding of the critical steps required to achieve sustainable results. The chief executives need to see value for their agency in gaining the input and cooperation of others in their programmes and in having an opportunity to influence other agencies' programmes. A first step in this is simply recording the key road safety related activities which each agency is undertaking and has programmed into the future. These processes can form a platform for collaboratively developing national strategies and action plans in the future.

Raising funds for road safety

The current and projected scale of road trauma throughout Africa will only be effectively addressed through major additional investments and this is a critical task of the RSLA at a country level. The RSLA will need to lead the preparation of a multi-year safety investment plan which is put forward for Cabinet consideration and integrated into major budget processes from which outyear funding decisions are made and external loan funding processes are entered into. This is one of the tasks associated with a road safety management capacity review, but however it occurs the RSLA needs to find a way to inject itself into these planning-budgeting-funding processes if it is raise the funds necessary to achieve sustainable road safety results.

An important first step is to establish the overall scale of the trauma problem. Data issues need to be recognised upfront, but there are options for addressing these in high level advocacy and advice. For example, it is well recognised that the current data systems mean that most countries in Africa under-report fatalities. RSLAs should not be hesitant to identify data deficiencies, and can instead use the WHO estimates of the gap between nationally reported data and their own estimate of trauma in the country. These WHO estimates rely on assumptions, but the assumptions are well documented and based on sound data management principles.

Another early step is to document an estimate of the national cost of road trauma. There are a number of methods to do this which sum the various direct costs associated with a crash such as material damage, cost of emergency services, cost of health care, and also estimate the broader socio-economic costs such as lost production and pain and suffering.[25] Ideally, there would be a national economic survey of the socio-economic cost of road trauma based on the community's willingness to pay to reduce the risk of road trauma. However, some high-income countries have not yet reached this level of national analysis, and country based

[25] *Notes on the Economic Evaluation of Transport Projects* (2005), Transport Note No. TRN-16, The World Bank, Washington.

studies in injury costs need to be prioritised against other data and research needs. As noted the socio-economic cost of road trauma in low and middle income countries is equivalent to approximately 3-5% of GDP, and this establishes a monetary value for road trauma which can be used to develop future business cases.

More importantly, the RSLA needs to enter the annual planning-budgeting-funding cycle in a substantial way. One way of doing this is to compare road safety budgets with road infrastructure budgets. The disparity can be enormous and reflects as much as anything the institutional strength of the relevant agencies involved. In one African country, a three year road safety action plan was costed at approximately USD23.6m, and is being funded at a level of USD1.22m per annum. In contrast, the country is in the middle of a five year USD2600m road development program, much of which has either been delivered or funded. This may be an exceptional example within Africa, but throughout the world RSLAs are faced with the similar problem – how to lift the sights of what safety investment is actually required. African heads of state have signed off on the allocation of 10% of road development expenditure and 5% of road maintenance expenditure on road safety which means the level of investment always needs to be challenged.

This discussion requires positive engagement with the road agency in the first instance in order to demonstrate support for their delivery of a safer road environment. Without this, it is easier for the agency to see safety as a threat to current budgets rather than an additional value which can be offered, or retreat into saying that their roads are safe and people should simply use them correctly and perfectly on every trip. One option is to prepare a planning budget through which a fully articulated three to five year safety investment plan is set out with the assistance and input from the road agency, as well as from other key partner agencies.

There are many different sources of funds to build road safety management capacity and implement strong improvement programs. It is important that funding for the lead agency is ongoing and sustainable. Aside from consolidated government budgets, options include motor vehicle registration and or inspection fees, fees for testing or issuing driver licences, levies on premiums for either vehicle or injury insurance cover, or fuel levies. Given these funding sources are directly related to transactions which directly relate to the volume of activity and exposure to risk, there is a good case for a set percentage of these revenues to be allocated to road safety, assuming appropriate financial management and accountability mechanisms are in place. The same can be said where a road maintenance fund exists for the allocation of a set percentage to activity which is overseen by the lead agency (5% being the policy target established by African leaders).

These funding sources can support the lead agency and road safety management capacity building more generally, but significant safety interventions are likely to need external investment. As noted previously, external loan funding has been successfully accessed by the FRSC in Nigeria. In Argentina, loan funding has been

much more explicitly tagged to road safety management capacity building.[26] Road safety lead agencies need to be fully engaged in these external funding processes. It should also be recognised that private corporations have shown willingness to support stronger road safety responses at a national level. Funding for critical safety improvements could also conceivably extend to any government directions to engage greater private sector participation in road network planning and operations through public private partnership models.

Improving data systems and performance monitoring

WHO has prepared specific guidance for decision makers and practitioners on data systems, and this provides an important reference point for assessing the current state of data systems and the best approach for their improvement.[27] The guidance includes a checklist for data system improvement strategies:

- *Which departments contribute data, enter data, or analyze data directly from the existing system, and what changes are proposed?*
- *From workflow mapping, which parts of the process lead to long time delays, duplication of work, or have a negative impact on data quality?*
- *Do the features of the database system meet users' key requirements? If not, what features are needed, and can the existing data software platform be altered to meet these requirements?*
- *Is there a need to change the data software platform used?*
- *Is linkage to other databases feasible and desirable? What are the possible mechanisms?*
- *Is there a data management plan? Does it specify procedures for data collection, entry, processing and use? Are roles and responsibilities specified and assigned appropriately? Does it contain adequate provisions for data backup and security?*
- *What additional quality assurance measures can be introduced?*
- *Are there enough staff dedicated to the system and do they have sufficient capacity to operate it?*

The guidance addresses scenarios where the current data system needs to be improved, or a new data system needs to be developed. Common data systems within Africa include the Microcomputer Accident Analysis Package (MAAP) and the Bulletin d'Analyse des Accidents Corporels (BAAC) which are recognised as allowing for ease of implementation and customisation. However, decisions about data systems can be complex and need to be approached with care. They also need to be sufficiently and sustainably resourced to be effective, and ideally are packaged up and integrated with major project funding which includes capacity building components specifically in the data systems area.

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[26] Bliss T, and Raffo V (2013), *Improving Global Road Safety: Towards Equitable and Sustainable Development, Guidelines for Country Road Safety Engagement,* International Union for Health Promotion and Education.

[27] *Data Systems: A Road Safety Manual for Decision Makers and Practitioners* (2010), World Health Organisation, Geneva.

Data issues should not however be regarded as a barrier for action. Every road safety executive would like more data, but there are means of gathering data quickly and effectively in order to make good safety investment decisions and monitor progress. The best example of this is the International Road Assessment Program (iRAP). iRAP represents international best practice for assessing the relative safety of road corridors for different types of users – such as motor vehicle occupants, pedestrians, motorcyclists. It is applicable in urban and rural settings and does not rely on years of (usually inadequate) crash data to deliver safety star ratings (one to five) for road corridors, and to develop a prioritised set of infrastructure and related safety works. Using a combination of physical inspection and video analysis, iRAP tools can establish a star rating for the road network under investigation, and can develop a prioritised program of works towards achieving at least 3 star safety ratings for all road users.[28] All analytical aspects of the program are evidence based, and detailed on the iRAP website.

Balancing short term results and long term strategy

An iRAP analysis is an essential first step in using the SSATP corridor safety guidelines. But a constant struggle for road safety lead agencies is to allocate time and energy on those activities which have the greatest chance of supporting sustained improvement in road safety results. Many stakeholders can have differing views on what should be done, and how much of it should be done. It is therefore critical that the lead agency has a clear understanding of what its own priorities are, and that these have been developed in concert with Ministers and key partner agencies and stakeholders. Without this, the lead agency can find itself responding constantly to ad hoc or popular ideas which have no evidential base as effective road safety interventions.

Short term gains are often sought, and if there is relevant legislation in place, the quickest and most cost effective results that are possible are generally through compliance and enforcement measures. This activity could be targeted at commercial operators which dominate the movement of people and goods in Africa, and comprise a combination of on-road enforcement regarding key driver behaviours and safety critical vehicle maintenance, as well as support sanctions to suspend driver licences or remove vehicles from operation. Enforcement activity requires ongoing annual investment to maintain the effect. Care should be taken to ensure that any education, information or promotion activity is targeted to directly support the compliance and enforcement program, as they tend to be ineffective on their own. It is very easy for the lead agency's critical resources to be consumed by lower value activities.

More systemic responses will take more time and more investment but last longer than bursts of compliance and enforcement activity. These responses must incorporate significant road safety management capacity building aspects, and draw

[28] See http://www.irap.net/about-irap-2/assess-roads-in-your-country for an explanation of how iRAP is established in a country.

heavily on partner agencies to develop high-impact interventions. The SSATP guidelines on corridor safety provide a process for bringing together the partner agencies to focus on the safety of discrete lengths of the most highly trafficked parts of the road network, bearing in mind that 50% of low and middle income countries' road trauma is estimated to occur on just 10% of its network. The guidelines are consistent with the project methodology within which major road programmes are developed and implemented which makes their application through external funding processes relatively seamless.

Care is needed during this process to ensure that accountability mechansims are effectively harnessed. The lead agency may need to play an important catalyst role in initiating and scoping the project, but professional expertise and responsibility is likely to be held by other transport, police and health agencies who need to assume responsibility for developing more specific project proposals. It is important that the lead agency bring the parties together into a common project purpose, but it is equally important that accountability for various aspects of a major project are respected. A joint project leadership group may be necessary at least in the early stages in order to effectively initiate and establish the project.

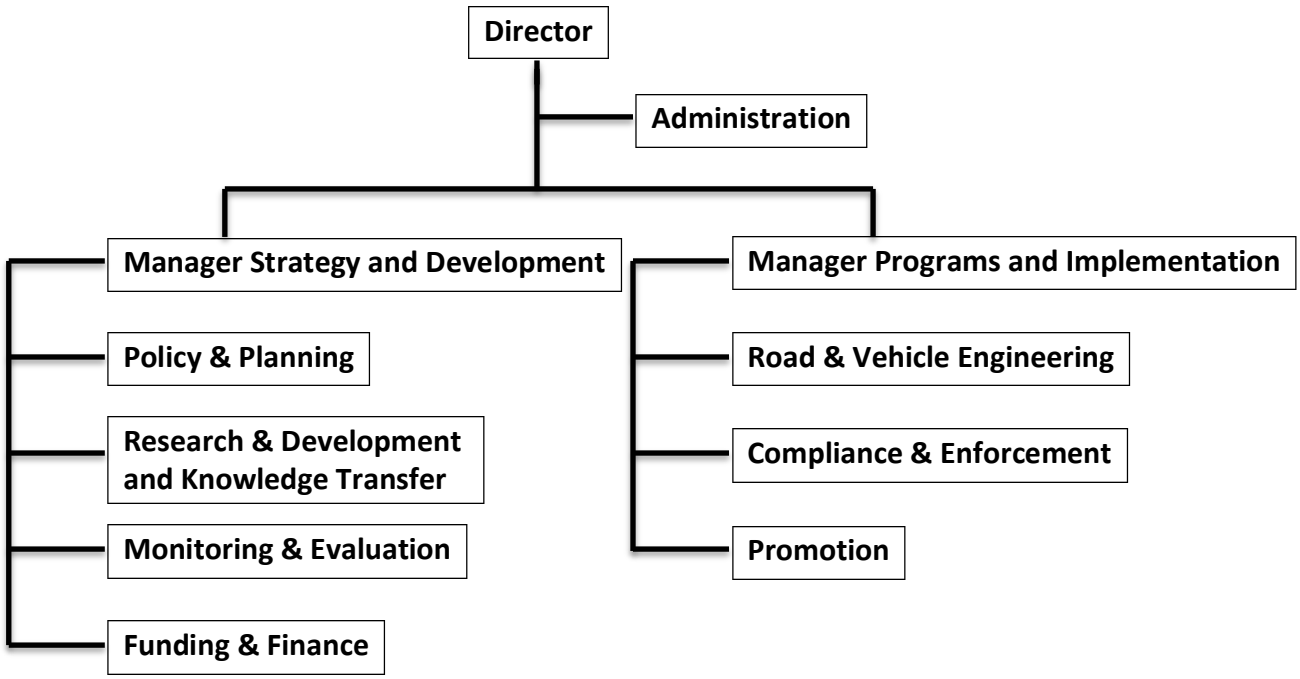
Creating an effective structure within a lead agency

A variety of organisational forms can be deployed for a lead road safety agency, and a variety of effective structures. For African countries where road safety management capacity issues exist it is important to align the structure and functions within the lead agency to:

- lead engagement with government agencies and other partners involved in road safety towards achievement of the country's road safety goals
- lead the analysis and provide program direction for critical road safety management functions, and road safety interventions.

The lead agency, whether an autonomous agency or a major function within an established agency, needs a fulltime permanent head who may report to an agency chief executive but has a close working relationship with the responsible Minister. The Director is responsible for leading the analytical and decision-making processes necessary to provide the Minister and/or other decision makers with options to effectively address key road safety issues in the country, and for representing and promoting road safety and the work of the Office across all aspects of society.

A simple notional structure that has been prepared for a lead agency in Africa is set out below. This functional structure, which is amenable to development and expansion over time as the lead agency evolves and could work as a separate work unit within an established department or as autonomous agency. The agency head would be supported by two experienced managers, capable of leading work programmes that are dependent on the involvement and support of outside partners for success.



The functions that need to be aligned with positions would be:

- Manager, Strategy and Development – develops and leads road safety strategy and development activity, with a particular focus on institutional management functions, and promoting effective action to achieve the country's road safety goals:
  - Policy and Planning – analysis, advice, planning and oversight of national strategic plan, road safety policy, and annual road safety action plans
  - Research and Development – initiating and managing research and development projects, reviewing and disseminating relevant research findings through road safety partners, promoting professional development in road safety across all key government and non-government partners in a position to take action.
  - Monitoring and Evaluation – collating and analysing relevant data from government agencies, preparing and publishing regular progress reports, initiating and leading projects to improve data quality
  - Funding and Finance – liaising with partners and donors to increase investment in road safety, and managing processes to allocate and account for effective use of funds deployed.
- Manager, Programs and Implementation – facilitates the development and implementation of high impact, targeted, and cost effective interventions to achieve the country's road safety goals:
  - Road & Vehicle Engineering – works with federal, city and regional road and transport authorities to shape and facilitate the implementation of high impact safety engineering interventions
  - Compliance & Enforcement– works with federal, city and regional police and transport authorities to shape and facilitate the

implementation of high impact legislative, compliance and enforcement interventions

- Promotion – develops and manages implementation of road safety promotion activity to increase awareness of key road safety issues and promote understanding of effective interventions to address these issues

All staff in such an organisation must be capable of effectively leading work programmes in their area of responsibility, and of working effectively through partnerships in order to achieve success. The agency would also need to be able to draw on sufficient funds to contract specialist or short-term contractors (for example, specialist research or statistical analyses) to meet programme objectives.

Assessing strengthening priorities for lead agency

The strengthening of a lead agency is as important as its establishment. A checklist developed by the GRSF to assess lead agency capacity is set out in Annex 3, which facilitates assessment of a lead agency as having a weak, basic or advanced capacity level. Based on an expert assessment, GRSF guidelines set out the following priorities for strengthening the lead agency, which resources would need to match.

Lead Agency Capacity	Priority steps for strengthening Lead Agency
Weak Capacity Level	• Designate lead agency • Establish and fully resource small lead agency secretariat • Operationalize coordination groups • Confirm national safety investment strategy • Identify project(s) to launch investment strategy • Implement, monitor and evaluate project(s) • Prepare and approve national rollout program
Basic Capacity Level	• Strengthen and refocus secretariat • Strengthen and refocus coordination groups • Upgrade national investment strategy • Prepare quantitative performance targets • Sharpen agency responsibilities and accountabilities
Advanced Capacity Level	• Review lead agency functions, forms, structures and processes • Reform and restructure lead agency • Upgrade national investment strategy • Set new, more ambitious performance targets

Ideally, a management capacity assessment would be undertaken as part of an overall national road safety management capacity review, or as a component to integrate safety into regional trade road corridor projects.

If this suggests a never ending cycle of road safety management capacity building and review, then it adequately reflects the environment that RSLAs in Africa are entering or are engaged in now. The strongest lead agencies in high income countries are continuing to invest in their capacity to understand and manage the safety of their community on the road.

A key feature of the safe system approach that is being embedded in credible road

safety guidance and toolkits throughout the world is to work towards the elimination of fatalities and serious injuries caused through everyday use of the road. The establishment and strengthening of road agencies were a key institutional reform of the African transport landscape in the late twentieth century. Today road safety lead agencies are at the frontline of a public health epidemic in Africa and need considerable investment and support from national treasuries and the international community alike in order to effectively tackle this crisis.

Annex 1 African Summary of Global Status Report on Road Safety 2013

The *Global Status Report on Road Safety 2013* published by WHO is the most comprehensive survey available from which essential information for the state of road safety in Africa can be drawn.

The document reports on a survey conducted in 2011, based on the same methodology as that for a 2009 report. The fatality estimates were for 2010, and data on legislation and policies were for 2011. The method for estimating fatalities is set out in the report and is based primarily on the nature of the death registration data in each country.

The African Region for WHO does not include Morocco, Tunisia, Libya, Egypt, Sudan, South Sudan, Djibouti and Somalia. Unless specifically noted, Africa refers to all countries in Africa and so includes those countries. Five countries in Africa did not participate in the WHO survey: Algeria, Libya, Eritrea, Djibouti and Somalia.

The WHO African Region has an estimated road fatality rate of 24.1 per 100,000 population. As a comparison, this rate is 18.5 in Asia or 10.3 in Europe. The WHO African region possesses only 2% of the world's vehicles, but represents 12% of the population and 16% of the fatalities.

Figures A1 and A2 below report the estimated fatalities and estimated fatality rates in 2010 for countries in Africa. Nigeria and South Africa have the highest fatality rates (estimated at 33.7 and 31.9 deaths per 100,000 population per year respectively). These two countries along with Ethiopia, the Democratic Republic of Congo, Sudan, Egypt, Tanzania, Uganda and Kenya, accounted for 63% of the estimated 233,765 road deaths on the African continent in 2010.

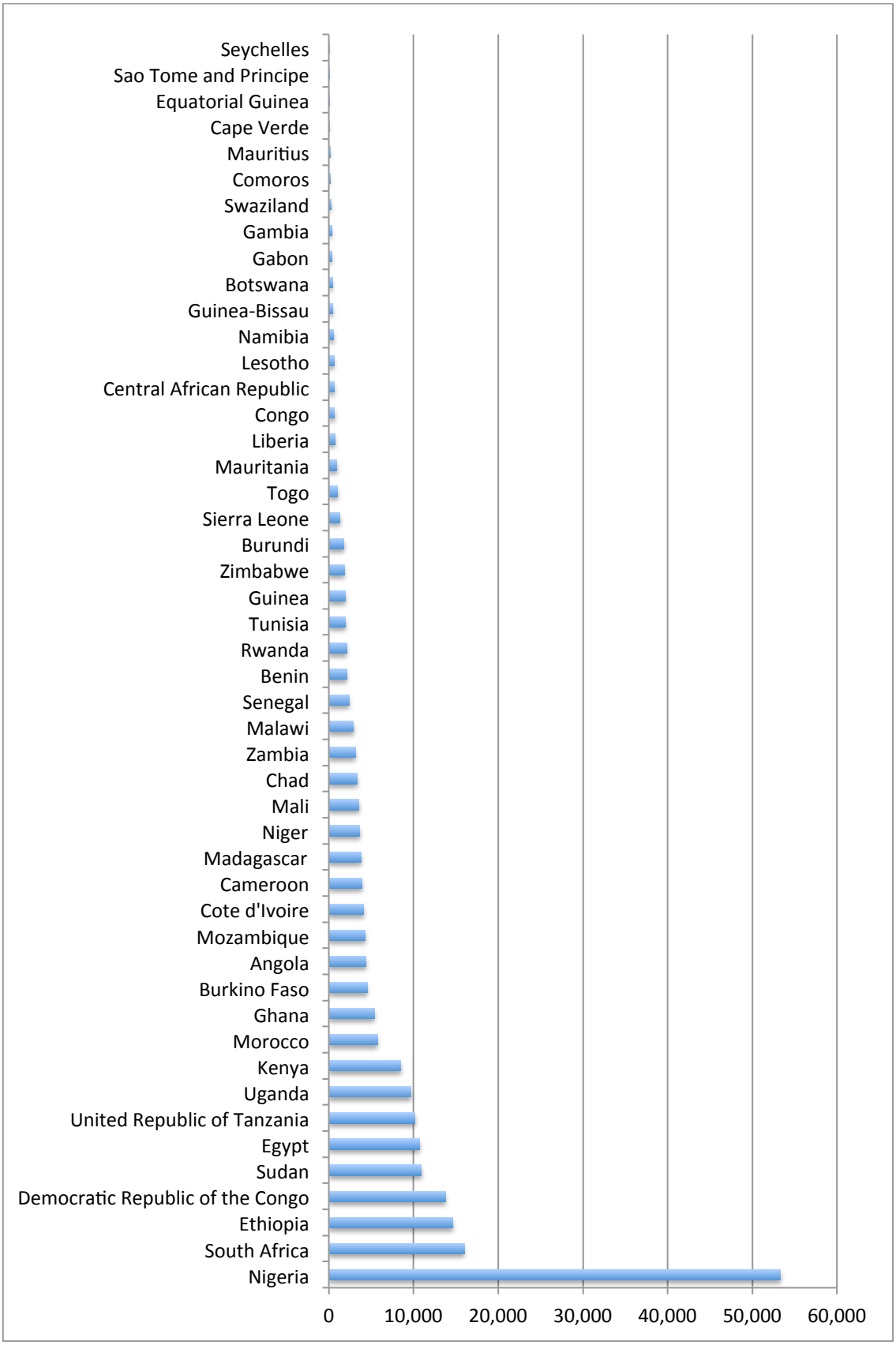
Changes between the 2009 and 2013 reports include Burundi, Guinea-Bissau, Madagascar and Sudan identifying a lead agency for road safety, and Guinea-Bissau, Congo, Malawi, Mauritania, Mozambique, Namibia and Sudan identifying a national road safety strategy. Only Liberia and Tanzania have identified they do not have a lead agency. Just three countries in Africa declared that their national strategy is fully funded: Botswana, Equatorial Guinea, and Mauritius.

The following data points are from the summary report prepared for the WHO African Region:

- Vulnerable road users (pedestrians, cyclists and motorized two and three wheeler users) constitute 52% of road user deaths, with pedestrians alone accounting for 37%.
- Only a small minority of countries have laws regarding anti-lock braking systems (six countries) electronic stability control (three countries) or airbags (four countries).

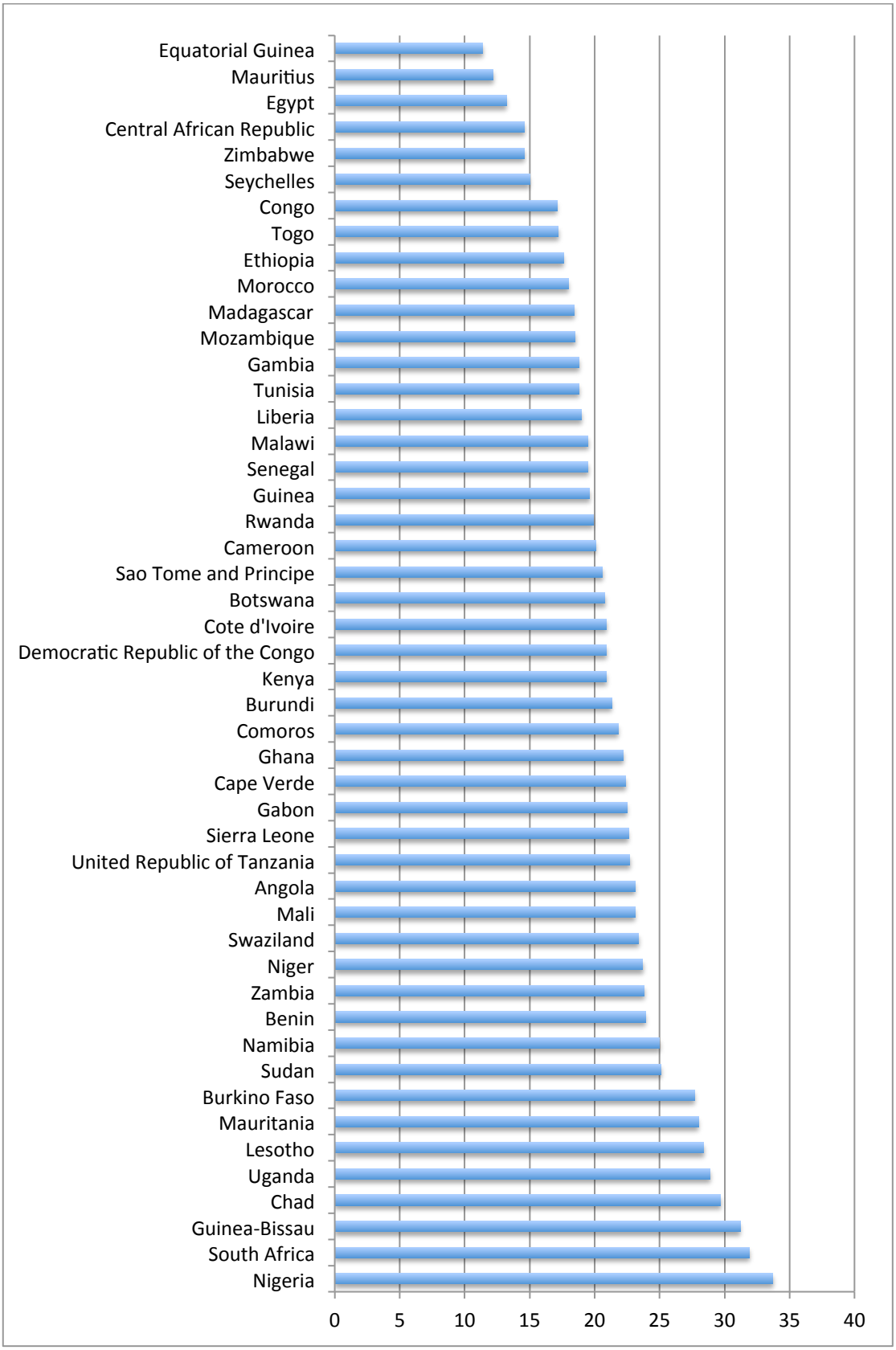
- Only 11 countries have national policies to support investment in public transport as an alternative to car travel.
- 27 countries have national laws regulating the use of mobile phones while driving.
- In 22 countries, experts estimate that less than 10% of seriously injured patients benefit from ambulance evacuation, and in only nine countries is it estimated that half or more injured road users are taken to hospital by ambulance.
- 25 countries have national speed limits on urban roads less than 50 km/h: Benin, Burkina Faso, Cape Verde, Comoros, Congo*, Equatorial Guinea, Gambia, Ghana, Guinea-Bissau*, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles*, Sierra Leone*, Togo*, Uganda, United Republic of Tanzania (the asterisk denotes adoption between 2008 and 2011). None of these countries consider that the law is enforced.
- Just two countries (Togo and Sao Tome and Principe) identify themselves as not having national drink-driving laws, which is no change since 2008. There are only nine countries which have a blood alcohol concentration of 0.5g/L as a legal driving limits: Benin, Democratic Republic of Congo, Equatorial Guinea, Liberia, Mali, Mauritius, Nigeria, South Africa, Swaziland. Only eight countries provided an estimate of the proportion of annual road deaths that is due to alcohol impairment (ranging from 4.7% in Swaziland to 60% in Equatorial Guinea).
- Only Burundi, Gambia, and Liberia do not have law requiring a motorcycle helmet to be worn, but only nine countries have an estimate of the helmet-wearing rate (ranging from 3% in Congo to 100% in Botswana).
- 33 countries have national seat-belt laws (Angola and Ethiopia adopted such laws between 2008 and 2011) but just half of these concern all car occupants. Angola, the Central African Republic, the Congo and Ethiopia have upgraded the enforcement of seat belt wearing to all occupants between 2008 and 2011. Law enforcement and results monitoring are also very poor in this area.

Figure A1 Estimated Road Traffic Fatalities in Africa (2010)



Source: *Global Status Report on Road Safety 2013*, World Health Organisation, Geneva.

Figure A2 Estimated Road Traffic Fatalities per 100,000 Population in Africa (2010)



Source: *Global Status Report on Road Safety 2013*, World Health Organisation, Geneva.

Annex 2 Institutional Road Safety Management Functions[29]

Results focus All the other institutional management functions are subordinate to this function and contribute to its achievement. Its ultimate expression concerns a strategic orientation that links all actual and potential interventions with results, analyses what can be achieved over time, and sets out a performance management framework for the delivery of interventions and their intermediate and final outcomes. It defines the level of safety that a country wishes to achieve expressed in terms of a vision, goals, objectives and related targets.
Coordination Concerns the orchestration and alignment of the interventions and other related institutional management functions delivered by government partners and related community and business partnerships to achieve the desired focus on results. To be effective this function must allow for accountable decision-making at senior institutional levels. Arrangements must be appropriately resourced, including a dedicated secretariat to harmonize delivery arrangements across partner agencies to achieve road safety results and serve as a platform for mobilizing political will and resources.
Legislation Concerns the legal instruments necessary for governance purposes to specify the legitimate bounds of institutions, in terms of their responsibilities, accountabilities, interventions and related institutional management functions to achieve the desired focus on results. This function ensures that legislative instruments for road safety are well matched to the road safety task. This function typically addresses land use, road, vehicle, and user safety standards and rules and compliance with them. A mixture of specialist legislative and technical expertise is needed within government to develop and consult on enforceable standards and rules with due consideration to cost, effectiveness, practicality and public acceptability.
Funding and resource allocation Concerns the financing of interventions and related institutional management functions on a sustainable basis using a rational evaluation and programming framework to allocate resources to achieve the desired focus on results. This function seeks to ensure that road safety funding mechanisms are sufficient and sustainable. A rational framework for resource allocation allows the making of a strong business case for road safety investments based on cost-effectiveness and cost-benefit analyses.
Promotion Concerns the sustained communication of road safety as a core business for government and society and emphasizes the shared societal responsibility to support the delivery of the interventions required to achieve the desired focus on results. This function goes beyond the understanding of promotion as road safety advertising supporting particular interventions and addresses the overall level of ambition set by government and society for road safety performance.

[29] Bliss ,T and Breen, J (2009) *Op Cit*.

Monitoring and evaluation Concerns the systematic and ongoing measurement of road safety outputs and outcomes (intermediate and final) and the evaluation of interventions to achieve the desired focus on results. This function covers the management of transport registries for drivers and vehicles, crash injury databases in the transport and health sectors, and periodic survey work to measure performance and gather exposure data. It also includes the organization of independent inspection, audit and review services.

Research and development and knowledge transfer

Concerns the systematic and ongoing creation, codification, transfer and application of knowledge that contributes to the improved efficiency and effectiveness of the road safety management system to achieve the desired focus on results. This function has guided the design and implementation of good practice national strategies that have achieved sustained reductions in road deaths and injuries, in the face of growing mobility and exposure to risk.

Annex 3 Global Road Safety Facility checklist on Lead Agency role and institutional management functions, within overall road safety management review[30]

Checklist: Lead agency role and institutional management functions				
Questions	**Yes**	**Partial**	**Pending**	**No**
Does the lead agency (or de facto lead agency/agencies) effectively contribute to the *results focus* management function?				
• Appraising current road safety performance through high-level strategic review?				
• Adopting a far-reaching road safety vision for the longer term?				
• Analyzing what could be achieved in the medium term?				
• Setting quantitative targets by mutual consent across the road safety partnership?				
• Establishing mechanisms to ensure partnership accountability for results?				
Does the lead agency (or de facto lead agency/agencies) effectively contribute to the *coordination* management function?				
• Horizontal coordination across central government?				
• Vertical coordination from central to regional and local levels of government?				
• Specific delivery partnerships between government, non-government, community and business at the central, regional and local levels?				
• Parliamentary relations at central, regional and local levels?				
Does the lead agency (or de facto lead agency/agencies) effectively contribute to the *legislation* management function?				
• Reviewing the scope of the legislative framework?				
• Developing legislation needed for the road safety strategy?				
• Consolidating legislation?				
• Securing legislative resources for road safety?				
Does the lead agency (or de facto lead agency/agencies) effectively contribute to the *funding and resource allocation* management function?				
• Ensuring sustainable funding sources?				
• Establishing procedures to guide the allocation of resources across safety programs?				

[30] Bliss ,T and Breen, J (2009) *Op Cit*.

Does the lead agency (or de facto lead agency/agencies) effectively contribute to the *promotion* management function?				
• Promotion of a far-reaching road safety vision or goal?				
• Championing and promotion at high level?				
• Multisectoral promotion of effective interventions and shared responsibility?				
• Leading by example with in-house road safety policies?				
• Developing and supporting safety rating programs and the publication of their results?				
• Carrying out national advertising?				
• Encouraging promotion at local level?				
Does the lead agency (or de facto lead agency/agencies) effectively contribute to the *monitoring and evaluation* management function?				
• Establishing and supporting data systems to set and monitor final and intermediate outcome and output targets?				
• Transparent review of the national road safety strategy and its performance?				
• Making any necessary adjustments to achieve the desired results?				
Does the lead agency (or de facto lead agency/agencies) effectively contribute to the *research and development and knowledge transfer* management function?				
• Developing capacity for multi-disciplinary research and knowledge transfer?				
• Creating a national road safety research strategy and annual program?				
• Securing sources of sustainable funding for road safety research?				
• Training and professional exchange?				
• Establishing good practice guidelines?				
• Setting up demonstration projects?				