



Road Safety Management Capacity Review

- GEORGIA

DRAFT

Interim Report

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EXECUTIVE SUMMARY

1. Overview

A road safety management capacity review was carried out in Georgia during May 2013 with the assistance of senior management of the Georgian governmental agencies and other stakeholders. The key findings of the review are summarized as follows.

The road safety problem in Georgia is serious and challenging and its improvement is viewed by the government as a national priority. Road death rates in Georgia have reduced over the last decade by around 9% against a 2.6 fold increase in traffic. However, rapidly increasing traffic levels require a scaling-up of investment in improvements in road traffic system safety. This is necessary to prevent avoidable loss of life and severe injury on a significant scale and at large societal cost.

Notwithstanding current efforts, this review has identified systemic road safety management capacity needs to produce future successful national road safety work. Well-orchestrated targeted action nationally, regionally and locally building is needed to achieve sustained improvements in road safety results. Agencies are agreed that road safety management in Georgia needs to be strengthened to allow a successful, results-focused, systematic approach.

The overarching priority is to establish a lead agency which is formally tasked and funded to direct, promote and monitor the national road safety effort on behalf of government. In addition, efficient and funded inter-agency coordination arrangements are necessary to assist decision-making and to ensure scaled-up, sustainable funding for effective targeted intervention and management capacity.

Based on the findings of the review a substantive and carefully prepared multi-sectoral road safety project is recommended to facilitate systematic, results-focused activity and capacity building. The road safety project would aim to *simultaneously* implement best practice multi-sectoral interventions in identified high-risk corridor(s); strengthen related management delivery capacity in key agencies (with a focus on lead agency, coordination and monitoring and evaluation arrangements); and assist with road safety policy development priorities. The project would use a *learning by doing* approach to facilitate swift knowledge transfer and to implement effective road safety measures, supported by a range of international technical assistance. Specific recommendations are made for road safety project components. Possible roles are identified for the key road safety partners and stakeholders, based on an understanding of their current functions.

2. Road safety results

Against the background of economic and social recovery of a country in transition and post-conflict and rapidly increasing freight and passenger traffic volumes, the risk of death and serious injury in Georgia's road traffic system is high. The outcomes of road crashes are costly in socio-economic terms – estimated at around 1-1.5% of GDP. Road users in Georgia face significantly higher risks of death and injury than in many other countries in

the region and a death rate which is 4 times as great as in the best performing countries globally. Future economic growth, assisted by the amelioration of the global financial crisis, is likely to lead to more motor vehicle traffic producing increased exposure to the risk of death and serious injury.

3. Road safety intervention

Targeted reductions in fatal road crashes have recently been sought within the framework of a national road safety action plan (2010-2013). A range of intervention is being carried out by the key agencies within this framework and in externally-assisted projects in Georgia. One particularly notable development is the recent introduction of compulsory front seat belt legislation which has resulted in high reported wearing levels in the front seats of cars. Grade-separated road improvements and targeted treatments at high-risk sites have been carried out in rural and urban areas with reported good effects, Agencies also noted the benefits of recent changes in the enforcement of excess alcohol rules. Continuing development of the emergency medical system is taking place.

Alongside the global community, Georgia is a supporter of the United Nations (UN) Decade of Action on Road Safety and contributes to the periodic Global Status Report on Road Safety coordinated by the World Health Organization. An association agreement is being discussed with the European Union (EU) and Georgia has signed up to a range of UN and EU conventions, agreements and Directives such as on motor vehicles regulations and safety equipment, driver and vehicle testing and inspection standards and aspects of road engineering. In addition, a regional road safety plan under the TRACECA¹ framework has been established.. This plan highlights some (though not all) of the key road safety priorities addressed in this review, but assumes capacity will be made available across the management system for their implementation. These development hold future promise, if implemented, to address some of the demands of rapid motorization.

However, despite this evident progress and when benchmarked against international good practice, agency intervention remains fragmented in nature, is insufficiently targeted, coordinated and resourced and is not yet monitored scientifically or systematically to determine its effect.

4. Institutional management of road safety

The measurement of road safety problems, the identification of priority treatments (mainstreamed into road traffic system design wherever possible), the monitoring of intervention and periodic and transparent reporting are key to a systematic approach to road safety. Current institutional management arrangements need a strong, shared focus on results and related framework to measure problems and target and monitor results While driver and vehicle registries have been fully modernised, comprehensive functioning crash injury databases both in the police and health sectors are envisaged but not yet established.

¹ TRACECA (Transport Corridor Europe-Caucasus-Asia) is an international transport programme involving the European Union and 14 Member States

Good practice indicates that a governmental lead agency should be in place to foster the governmental effort, be publicly accountable for road safety on behalf of government and carry out a range of management functions. Experience in good practice countries shows that additional coordination arrangements, supported by this lead agency are usually set up.² The absence in Georgia of a formally tasked and fully funded lead agency to orchestrate the agencies' efforts on behalf of government is impeding road safety progress and should receive priority attention. The absence of an accompanying, functioning national coordination body with a funded secretariat provided by the lead agency is also identified by agencies as a barrier to progress. Capacity for other management functions such as funding and resource allocation, promotion, research and development and knowledge transfer need to be established or strengthened in the key agencies at national and regional/city levels, transport, roads, police, health and education..

5. A long-term road safety investment strategy

Experience globally indicates that achieving results requires long-term political will. This needs to be translated into long-term road safety investments targeted across a range of sectors and in governance and institutions, infrastructure, vehicle fleets, licensing standards, road safety behaviours and the health system.

To assist jurisdictions in this process and as part of the road safety management capacity review process, World Bank guidelines³ recommend that a qualitative, strategic investment strategy be outlined for a long-term period with three stages: *establishment*, *growth* and *consolidation* phases and the strategic lines of these are proposed in this report for Georgia. Experience shows that this sequencing is crucial if common pitfalls are to be avoided. Jurisdictions which target national results without developing the essential building blocks of accountable governmental leadership, institutional capacity and partnership working to implement effective intervention towards agreed results do not often succeed in producing significant, sustainable results.

The focus of this report in recommended action for the *establishment* phase of a long-term road safety investment strategy. It addresses capacity strengthening needs identified by the review and focuses on building capacity in Georgia to bring targeted road safety outcomes under control initially in high-risk/ high volume corridors. The aim is to create a platform which can assist the eventual scaling-up of investment to accelerate capacity strengthening goals and achieve improved results across Georgia's road network. Recommendations for the establishment phase are set out in Table 1 within the context of a funded road safety project. This would provide a framework for multi-sectoral agency working to develop swift knowledge transfer to implement international good practice activity in a 'learning by doing' context and with appropriate 'hands-on' technical assistance.

² Global Road Safety Facility (GRSF), 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 Specification of Lead Agency Reforms, Investment Strategies and Safe System Projects, World Bank Global Road Safety Facility, Washington DC.

³ Global Road Safety Facility (GRSF), 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 Specification of Lead Agency Reforms, Investment Strategies and Safe System Projects, World Bank Global Road Safety Facility, Washington DC.

Table 1: Establishment phase strategy for Georgia

Results	<ul style="list-style-type: none"> ▪ Include ‘safe’ transport in Georgia’s transport strategy vision statement. ▪ Adopt the long-term <i>Safe System</i> goal and approach ⁴ for Georgia, recommended by the Global Plan ⁵ and international development organizations.. ▪ Within funded project work, set quantitative performance targets for high-volume/high-risk demonstration corridors.
Interventions	<p>Within funded project work agencies to :</p> <ul style="list-style-type: none"> ▪ Implement comprehensive multi-sectoral measures in targeted high-risk demonstration corridors (covering rural sections and surrounding urban areas). ▪ Agencies to review and internationally benchmark national road safety policies and interventions and commence implementation of policy reforms
Institutional Management Functions	<p>Within funded project work agencies to:</p> <ul style="list-style-type: none"> ▪ Establish and formalize lead agency role and related coordination arrangements . ▪ Manage, monitor, and evaluate road safety results in high-risk demonstration corridors ▪ Review and internationally benchmark institutional management functions and start to implement institutional reforms. ▪ Establish modern, functioning crash injury databases and survey protocols and carry out surveys of the core network using the International Road Assessment Programme (iRAP) tool.⁶

6. Project concept for road safety component – establishment phase

The project would have four objectives which would be delivered simultaneously, using a *learning by doing* approach and supported by a range of international technical assistance for each project component. The recommended strategic objectives and lines of possible components are set out in Tables 2 and 3.

Table 2: Recommended road safety project objectives

<u>Objective 1</u>	Strengthening road safety management capacity in Georgia to deliver multi-sectoral interventions in targeted demonstration corridors. The main focus for agencies would be on ‘learning by doing’ support for lead agency, agency coordination, promotion and monitoring and evaluation arrangements.
<u>Objective 2</u>	Targeting the key sections of the network where most deaths and serious injuries are to be found with effective multi-sectoral intervention (delivered by all those agencies and organizations that can help to achieve specific results and supported by a range of targeted international technical assistance). Typically, there is a high concentration of road deaths and injuries on a small proportion of the road network where traffic volumes and vehicle speeds are high. This activity would help to provide the dimensions for

⁴ The *Safe System* goal is to seek the elimination of death and long-term injury following road traffic crashes. The *Safe System* approach s set out in Annex 4.

⁵ A Decade of Action (2011-2020) was announced by the United Nations in March 2010 (Resolution 64/255)and is accompanied by a Global Plan which has been produced by the United Nationa Road Safety Collaboration.(2011). *Global Plan for the Decade of Action for Road Safety 2011 – 2020*, World Health Organization, Geneva.

⁶ The International Road Assessment Programme (iRAP) is a good practice tool recommended by the World Bank’s Global Road Safety Facility and other international organisations which targets high-risk roads in low and middle-income countries where large numbers of people are killed and injured. It inspects them using objective methods to identify options for affordable *Safe System* safety engineering countermeasures. .Road assessment programmes are in being used to assist roads authorities in some 70 countries throughout Europe; North, Central and South America, Africa and Asia Pacific. See <http://www.irap.net/about-irap/about-us>.

	further roll out nationally and inform the development of measurable outputs and targeted outcomes needed for a national road safety investment plan in the ‘growth’ phase’.
<u>Objective 3</u>	Conducting any necessary policy reviews to address agreed road safety priorities, again supported by targeted international technical assistance and make recommendations to improve road safety results which would be implemented in the ‘growth phase’ of the investment strategy
<u>Objective 4</u>	Accelerating road safety knowledge transfer where appropriate via international expert networks to the key partners for different aspects of the project.

Table 3: Recommended road safety project components

Component	Core component elements
1. PROJECT LEADERSHIP AND MANAGEMENT Designated project lead agency arrangements and a fully resourced project steering committee to lead and manage the following components 2,3,4 and promote the project.	Designated lead agency arrangements, coordination structures and working procedures and project promotion.
2. PROJECT INTERVENTION Agencies to develop and implement multi-sectoral interventions in targeted demonstration corridors	Systematic infrastructure safety improvements
	General deterrence-based road safety enforcement programmes targeting safe behaviours. Publicity and awareness campaigns. Community development and corporate social responsibility campaigns
	Improved post crash-response and emergency medical services
3. PROJECT MONITORING AND EVALUATION Comprehensive monitoring and evaluation systems for project interventions and components in place.	Performance targets, performance measures and periodic surveys and reporting arrangements.
4. POLICY REFORMS Policy reviews	Policy reviews of agreed road safety priorities (interventions and institutional management)

1. Background

1.1 The global context for road safety and UN Decade of Action

Deaths and injuries from road traffic crashes are a major and growing public health epidemic worldwide. Each year over 1.2 million people die and a further 50 million are injured or permanently disabled in road crashes.⁷ A large proportion of these involve the most vulnerable in society – children, older people and non-motorized users.

Middle-income countries, which are motorizing rapidly, are the hardest hit. Deaths and injuries in road crashes in low and middle-income countries are projected to be the 5th largest cause of death by 2030 unless urgent action is taken.⁸ They are the leading cause of death for children aged between 5-14 years and young people between 15 and 29 years of age.

International development organizations agree that the problem of fatal and serious road traffic injury is largely avoidable. Reversing the adverse impacts of rapid motorization can be managed successfully. The new focus is on the long-term elimination of road deaths and serious injuries rather than accepting these as human failure and the inevitable price of economic progress. This shift is also being aligned with other sustainable development initiatives addressing poverty reduction, environmental, energy and public health goals. These present major opportunities for achieving co-benefits in orchestrated initiatives.

Against this background the United Nations in 2010, supported by its partners including the World Health Organization and World Bank, declared a Decade of Action on Road Safety 2011-2020.⁹ A related Global Plan¹⁰ was produced in 2011 with the ambitious target of halving deaths to save 5 million lives. The Global Plan urges governments to improve road safety management by establishing effective lead agency and related coordination arrangements and focus on achieving results for the long-term and interim. It also advocates adopting a *Safe System* approach¹¹ (See Annex 4) to implement effective system-wide, multi-sectoral intervention. Recognizing the importance of safer infrastructure, it urges counties and financiers to scale-up and devote 10% of infrastructure project investment to road safety.

At regional level, without new action an 18% increase in deaths is forecast for the World Bank's European and Central Asia (ECA) Region by 2020.¹² A regional report identified that in spite of progress observed in the ECA region, additional and scaled-up efforts are

⁷ World Health Organization (2013). *Global status report on road safety – supporting a decade of action*, WHO, Geneva.

⁸ *Global burden of disease*, 2008. Geneva, World Health Organization, 2011 (http://www.who.int/healthinfo/global_burden_disease/estimates_regional/en/index.html).

⁹ UN General Assembly resolution 64/255, March 2010, Geneva.

¹⁰ United Nations Road Safety Collaboration (2011), *Global Plan for the Decade of Action for Road Safety 2011 – 2020*, World Health Organization, Geneva

¹¹ OECD 2008, *Towards Zero: Achieving Ambitious Road Safety Targets through a Safe System Approach*, OECD, Paris.

¹² Kopits E, Cropper M. *Traffic fatalities and economic growth*. Washington, DC, World Bank, 2003 (Policy Research Working Paper 3035).

needed to remedy the significantly worse performance than that of their counterparts in Western Europe.¹³

At national level, Georgia is a supporter of the UN's Decade of Action on Road Safety and contributes to the periodic Global Status Report on Road Safety coordinated by the World Health Organization. An association agreement is being discussed with the European Union and Georgia has signed up to a regional road safety plan under the TRACECA framework. Targeted reductions in road deaths have recently been sought and rates have reduced recently against increases in traffic. Against the background of a road death rate (per 100,000 population) which is over 4 times higher than the best global country performance and new risks associated with increasing motorization levels, the Georgian authorities view improved road safety as a national priority.

1.2. Road safety management capacity review

Background

A road safety management capacity review (RSMCR) is an established good practice tool developed by the World Bank and is used in low, middle and high-income countries seeking to scale-up their road safety investment and improve road safety performance.^{14 15}

This RSMCR initiative in Georgia is provided by the World Bank's Global Road Safety Facility. The RSMCR is being carried out to assist the government of Georgia in its road safety activity, inform future World Bank and country road safety investments and form part of the ongoing preparation of road safety components in its projects in Georgia.

Schedule

The RSMCR commenced on 13th May 2013 in Georgia with interviews with key governmental agencies and stakeholders from a variety of sectors (see Annex 1). The review team met with agencies responsible for the planning, design and operation the road network and the setting and enforcement of key safety rules for users; vehicle registration and compliance regimes; driver licensing, testing and training standards and compliance; and those concerned in the emergency medical system and trauma care system with the recovery and rehabilitation of crash victims. Face-to-face meetings with individual agencies and stakeholders were conducted between 13th and 24th May and a key section of the road network was travelled during a regional visit.

¹³ World Bank: Europe and Central Asia Region (2009)) *Confronting Death on Wheels Making Roads Safe in Europe and Central Asia*.

¹⁴ Global Road Safety Facility (GRSF), World Bank,, 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 Specification of Lead Agency Reforms, Investment Strategies and Safe System Projects*, World Bank Global Road Safety Facility, Washington DC.

¹⁵ OECD (2008), *Towards Zero: Achieving Ambitious Road Safety Targets through a Safe System Approach*, OECD, Paris.

This in an interim report for the World Bank and the key agencies and it is envisaged that a workshop will take place in Tbilisi, Georgia to discuss its findings and recommendations and agree next steps.

Method

The RSMCR meetings were carried out in accordance with World Bank guidelines and country capacity checklists.^{16 17} The level of investigation was strategic and jurisdictional road safety management capacity was assessed with reference to three best practice dimensions: *results*, *interventions* and *institutional management functions* as shown in Annex 2.

Structure of report

This report summarizes the review findings (Section 2), presents the strategic outlines of a recommended long-term investment strategy for road safety in Georgia (Section 3). The focus is its establishment phase and specific recommendations are presented for project development (Section 4). Annex 1 lists the organizations and experts consulted. Annex 2 presents the road safety management system model used by the World Bank. Annex 3 comprises an information note on good practice lead agency and coordination arrangements. Annex 4 lists the review team. Annex 5 comprises an information note on the *Safe System* approach.

2. Key findings of the road safety management capacity review

The RSMCR consultations with the Georgian elected representatives, officials and experts generated a frank and informed assessment of road safety management capacity issues in Georgia. There was strong appreciation across agencies of the need to establish results-focused road safety activity and understanding of the key capacity building steps needed to enable systematic road safety management in important areas of activity.

An outline of the review findings for road safety management system *results*, *interventions* and *institutional management functions* is presented in Section 2.1

2.1 System results

Final outcomes (deaths, serious and minor injury and social costs)

- In 2012, it was reported that 605 people died and 5359 people were injured in road traffic crashes in Georgia. It is estimated that road traffic injury is amongst the top 10

¹⁶ Global Road Safety Facility (GRSF), World Bank, 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 Specification of Lead Agency Reforms, Investment Strategies and Safe System Projects*, World Bank Global Road Safety Facility, Washington DC.

¹⁷ Global Road Safety Facility, World Bank, Bliss T and Breen J (2013, in print). *Capacity Reviews and Safe Systems Projects, Guidelines Supplement*, World Bank Washington DC

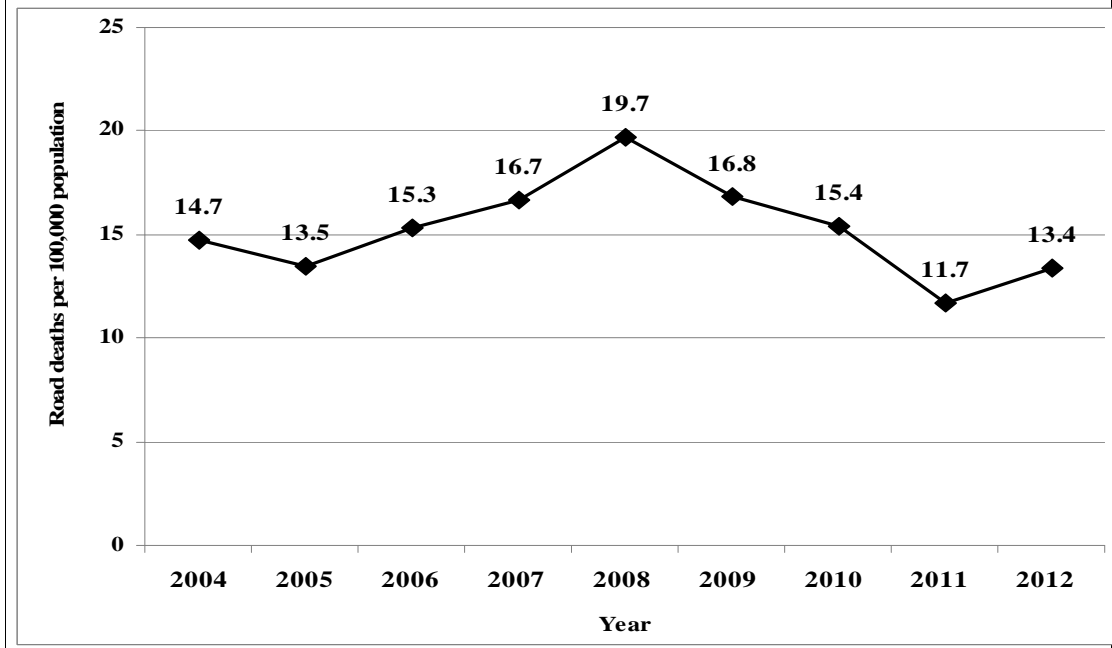
leading causes of death nationally.¹⁸ It is also estimated that the socio-economic costs of deaths and serious injuries are in the region of 1 to 1.5% of GDP.¹⁹

- Against the background of steadily increasing motorized traffic which has increased 2.6 fold since 2004, including strong growth in commercial vehicle transport and transit, a 9% improvement in the road death rate (per 100,000 population) is evident during the period 2004- 2012.

Table1: Reported vehicle and road traffic injury trends: Georgia 2004-2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total registered vehicles	319461	359142	415291	508041	613116	661048	713085	775522	848956
Total road deaths	637	581	675	737	867	741	685	526	605
Total road injuries	4069	3870	4795	4946	6015	5482	5099	4486	5359

Road traffic deaths per 100,000 population: Georgia 2004-2012



Source: Ministry of Internal Affairs, 2012

- The road death rate (per 100,000 population) in Georgia is at least 4 times that of the best global performers and amongst the worst in the World Bank’s Europe and Central Asia Region (ECAR).

¹⁸ World Life Expectancy (2013) , *World Health Rankings, Georgia*.

¹⁹ Partnership for Road Safety (2010) *Socio-economic costs of ignoring safety belts in Georgia*.

Table 2: Deaths and death rates: selected ECA countries: 2010

<i>Countries</i>	<i>Death (number)</i>	<i>Population (million)</i>	<i>Deaths per 100,000 population</i>
Russian Federation	26,567	142,905	18.5
Georgia	685	4,436	15.4
Romania	2,377	21,462	11.1
Azerbaijan	925	8,997	10.2
Latvia	218	2,248	9.7
Lithuania	300	3,329	9.0
Armenia	293	3 262	8.9
Estonia	78	1,340	5.8

Source: Ministry of Internal Affairs, 2012

- Georgia does not use the 30 day definition of road death in national statistics which is used in most developed countries. If used, this would lead to a larger number of road deaths nationally. Typically in good practice as an addition to the national police road crash injury database, the health sector also records road traffic injury in the computerized health surveillance system using ICCD codes.²⁰ Currently, there is no health sector recording of the volume of road traffic injury in Georgia, although a new computerized system is to be rolled out which will include a specific code for road traffic injury.
- There is no distinction in national data between serious and minor injury in national reported data which does not allow the true severity of the problem (and its costs) to be fully identified.
- All road user groups (pedestrians, cyclists, motorcyclists, car drivers, car passengers, minibus occupants etc.) are not routinely identified in the national crash injury database.. Key crash types (head on collisions, run-off road collisions, side-impacts and vulnerable road user impacts) are not identified and crash locations are not recorded. A fully functioning good practice crash injury database which can serve to identify key road user problems and allow targeted multi-sectoral agency work is not yet available, (although is foreseen together with agency data sharing in the National Road Safety Action Plan 2010-2013 and budget and technical assistance is available in an existing project). Apart from overall death rates, no disaggregated information is available on the risk (relative to exposure) of death and serious injury in road traffic crashes. Little information is available on the social costs of road crashes and injuries to inform business cases for investment.

²⁰ International Road and Traffic Accident Database (IRTAD) (2011) *Reporting on Serious Road Traffic Casualties: Combining and using different data sources to improve understanding of non-fatal road traffic crashes*, International Traffic Safety Data and Analysis Group, OECD/ITF, Paris.

- A high concentration of road deaths and injuries is evident on a relatively small proportion of the road network where traffic volumes and vehicle speeds are high and where there is an unmanaged mix of motorized and non-motorized road user traffic. For example 21% of annual road deaths are to be found along the high-volume/high-risk E60 highway which carries 60% of international traffic. High speeds in urban areas (permitted by the excessively high urban speed limit of 60 km/h with a 15% prosecution threshold) are also contributing to avoidable loss of life in Tbilisi and elsewhere.
- There is no long-term goal or vision for road safety in Georgia. A national traffic strategy was published in 2008 and national road safety action plan in 2010 which set a national target was set covering a short period to reduce fatal crashes by 20% by 2013 (a baseline year was not indicated). A 12% decrease in road fatalities and a 13% reduction in death rate (per 100,000 is evident between 2010-2012.²¹ The national road safety action plan which specified a range of provisions, although many were very broadly framed, has been partially implemented. A regional road safety plan has been developed under the TRACECA framework.
- While a variety of organizations have been cited as lead agency for road safety since 2009 working, funded, lead agency and related coordination arrangements are virtually non-existent. The World Report for Road Traffic Injury Prevention ²² cited the establishment of a lead agency as a pre-requisite for road safety management). (See Section 2.3).

Intermediate outcomes (e.g. infrastructure safety quality, vehicle safety quality, mean speeds, drinking and driving, seat belt use, crash helmet use)

- Little information other than enforcement data (as opposed to normal traffic data for behavioural survey) is available on a systematic basis to allow agencies to manage key road safety problems and monitor policy change and intervention outcomes.

Institutional outputs (e.g. levels of breath testing, speed checks, seat belt checks etc)

- It has not been possible to gather and assess available, national offence data within the timescale of the review.

²¹ Many countries have experienced sharp reductions in deaths and serious injuries around this period which is coincident with the global financial crisis. While a causal relationship is not yet identified, many experts believe that the GFC has also been an important factor in the reductions observed.

²² Eds. Peden M, Scurfield R, Sleet D, Mohan D, Hyder A, Jarawan E, Mathers C (2004). *World Report on Road Traffic Injury Prevention*, World Health Organization and World Bank (Washington), Geneva

System results: Conclusions and key recommendations

Crash data show that the road safety problem in Georgia is serious and challenging. Road users in Georgia face significantly higher risks of death and injury than in many other countries in the region and in the best performing countries globally. Future economic growth, assisted by the amelioration of the global financial crisis, is likely to lead to further increases in vehicles and increased exposure to risk of death and serious injury.

- (1) While agencies are starting to address road safety problems well-orchestrated targeted action nationally, regionally and at municipal levels building on current efforts is needed to achieve sustained improvements in road safety results.*
- (2) To provide long-term focus for this activity it is recommended that the long-term Safe System goal be set to eliminate death and disabling injury in road traffic crashes.*
- (3) The overarching priority is to establish lead agency arrangements which are formally tasked and funded to direct, promote and monitor the national road safety effort on behalf of government. In addition, efficient and funded inter-agency coordination arrangements are necessary to assist decision-making and to ensure scaled-up and sustainable funding for effective targeted intervention and management capacity.*
- (4) Urgent work through the establishment of surveys and databases by police, health and roads sectors is needed to better understand the scope and scale of Georgia's road injury problem.*
- (5) Specific, multi-sectoral road safety project components are recommended within a proposed road safety project to provide first steps towards addressing these capacity needs.*

2.2 System intervention

2.2.1 Planning, design, operation and use of the road network

- Georgia's mountainous topography and roads largely designed to old standards with inadequate safety provisions, treatments and maintenance, lack of facilities for cyclists and limited facilities for pedestrians in urban areas, exacerbated by other adverse conditions all contribute to a high-risk framework for the road use on Georgian roads.
- The expansion and improvements in road infrastructure are a national priority. Road safety components are increasingly featured in infrastructure projects assisted by international donors and financiers (WB, ADB, EIB). Improvements in international highways which carry most traffic have been specifically targeted due to their economic importance. Road safety investments in these corridors and inter-urban roads – the busiest roads – present the best opportunities for intervention and the achievement of road safety results. They have high strategic priority, attract large investment and are particularly amenable to targeted road safety treatments. A small amount of country and donor resource is currently being spent on road safety engineering of the road network – comprising, in the national 2013 budget, less than 2% of the national provision in road infrastructure projects.²³

²³ The UN's Decade of Action Global Road Safety Plan recommends that 10% of infrastructure project spending should be allocated to road safety measures).

- A road safety unit of five people has been established in the Roads Department which carries out safety audit, other safety engineering functions as well as traffic management work as part of the Maintenance Division. While capacity is very limited, there is good understanding that significant improvement in road safety performance could be obtained through implementing evidence-based multi-sectoral measures on targeting high-risk sections of the international and national road network
- Good practice systematic risk analyses of sections and systematic programmes to address high risks along corridors or in urban areas are not carried out nationally. Black spot intervention work has been implemented in various projects with reported good results.²⁴ Safety audit guidelines have been devised and are used in major project investments supported by a range of different donors and financiers who may stipulate different approaches. The choice of standards of safety audit as well as design standards are reported to vary from project to project which indicates that further coordination between international agencies to harmonize approaches would be helpful. There is no evidence of effective multi-sectoral work in project activity (e.g. combined publicity and policy enforcement, implementation of crash injury databases for shared police and roads authority use, health sector involvement). However, good inter-agency cooperation is reported for implementation of engineering work.
- The International Road Assessment Programme (iRAP) has not been used in Georgia to assist network safety management.

The International Road Assessment Programme (iRAP)

The International Road Assessment Programme (iRAP) is an international charity and the umbrella organisation for road assessment programmes worldwide (EuroRAP, AusRAP, KiwiRAP and usRAP). iRAP works in partnership with government and non-government organisations in low, middle- income countries to:

- inspect high-risk roads and develop Star Ratings and affordable Safer Roads Investment Plans. Data on road design and the standard of a road's safety features is collected by drive-through inspections in specially equipped vehicles
- provide training, technology and support that will build and sustain national, regional and local capability
- track road safety performance so that funding agencies can assess the benefits of their investments

Road Assessment Programmes (RAP) are now active in about 80 countries throughout Europe, Asia Pacific, North America, Latin America and the Caribbean and Africa. iRAP is supported by the FIA Foundation, the Road Safety Fund (jointly managed by the FIA Foundation and the World Health Organisation and the World Bank's Global Road Safety Facility.

The iRAP assessment differs from a traditional road safety audit in that it uses a drive-through survey and retrospective video analysis to assess more than 30 attributes known to influence the likelihood and severity of crashes for four road-user groups – vehicle occupants, motorcyclists, pedestrians and cyclists. The surveys assess safety across a network or along a corridor or section, rather than identifying individual black spots or assessing design against roads standards (which may be insufficiently

²⁴ World Bank (2012), *Georgia Partnership Program Snapshot*

sensitive to the safety needs of vulnerable users). There is interest in the Roads Department, both nationally and regionally, in starting to use this tool to assess corridor safety quality.

- The Ministry of Internal Affairs also commits to implementing more safety measures on high-risk road sections.²⁵
- Some limited speed management work is carried out with the use of lower urban speed limits in major projects and speed humps in urban areas such as Tbilisi. Current network speed limits are 60 km/h urban areas, 90 km/h (single carriageway each way roads) and 110 km/h (dual + carriageways). The provision of roundabouts, pedestrian facilities and 30 km/h limits is gradually being introduced.
- The review indicated support amongst road safety professionals for lowering the general 60 km/h limit to 50 km/h in urban sections and areas and better speed management was cited as a key priority for national policy review.
- Substantial increases in front seat belt use have been achieved since the legislation was adopted at the end of 2010. There is no legal provision for the fitment and use of rear seat belts or provision for the fitment and use of child restraints.
- Recent police reforms have enabled a new road safety focus by the PPD and improvements in traffic policing, increased activity and penalty levels are reported. There is good capacity for traffic policing although a need was identified for a special Tbilisi city PPD division to more widely enforce key road safety rules. There are plans to scale up the use of automated traffic control systems and speed cameras on high-volume/high-risk roads..
- There is continuing commitment by the Ministry of Internal Affairs to launching information campaigns in support of compliance with certain road safety rules. The Partnership for Road Safety at non-governmental level has demonstrated effective advocacy and a community engagement role. The scale, scope and coordination of social marketing and community engagement with ongoing police enforcement are, however, very limited and need to be developed. Addressing excess speed, inappropriate overtaking and improving compliance with rules in heavy commercial vehicles operations are cited as key priorities.
- The Ministry of Education has implemented mandatory road safety education in primary and secondary schools which includes a 'safe route to school' module. Monitoring of the scheme and in-service training for teachers is not carried out on road safety due to lack of capacity.

Conclusions and key recommendations

While some good results have been achieved to date through traditional approaches, all agencies involved in infrastructure planning and provision acknowledged the need to move towards systematic, state of the art, proactive approaches to road safety engineering. As in many other countries, road design standards and rules may not always provide for the degree of human vulnerability inherent in the use of the road network. For example, standards for junction design and management in urban and rural areas of the transition

²⁵ Ministry of Internal Affairs of Georgia (2013) *Strategy 2013*.

from high to low speed environments expect vulnerable road users to compete successfully against higher speed, higher mass vehicles, with dire consequences. The *Safe System* approach (See Annex 4) recommended by the World Bank and other international development organizations promotes design and operational solutions that have the potential to reduce systematically inherent dangers in the road transport system.

One particularly notable development is the introduction of compulsory front seat belt legislation which has resulted in high wearing levels in the front seats of cars. However, as in other rapidly motorizing countries, road users are unprepared for the unprecedented and rapid rate of roll out of high-speed vehicles. Social marketing activity is a key tool in supporting police enforcement to deter other dangerous safety behaviours such as speeding, dangerous overtaking, and drinking and driving and needs to be expanded.

- (1) *It is recommended that Georgia starts to move beyond its focus on traditional black spot treatment approaches towards utilising the Safe System approach in road safety engineering. Piloting the iRAP tool in targeted high risk/high volume sections of the network and implementing an ensuing investment plan would be a useful first step in this process. A further useful step would be to reduce and enforce the general urban speed limit from 60 km/h to 50 km/h and implement 30 km/h zones more widely in residential areas, in line with good international practice..*
- (2) *Capacity for state of the art approaches to road safety engineering needs to be developed further. Current plans for the road safety unit to be upgraded to become a stand-alone Division and separate from the Maintenance Division within the Roads Department should be implemented as soon as possible.*
- (3) *Priority policy review should be conducted towards reducing important gaps in user safety legislation e.g. the use of rear seat belts and child restraints in car and other vehicle safety issue, speed limits and speed management, combined publicity and policing programmes to deter unsafe road user behaviours; establishing a penalty points system as used widely internationally.*
- (4) *Intervention needs to be targeted, better resourced and monitored scientifically to determine its effect.*
- (5) *Specific road safety project components are recommended within a proposed road safety project to provide next steps to address these needs.*

2.2.2. Entry and exit of drivers and vehicles

Vehicle standards and compliance

- The average age of the Georgian fleet is reported to be between 16-20 years. This limits the opportunities for the rapid introduction of life-saving crash protection requirements and new technologies available in many European countries into the vehicle fleet, as well as opportunities for reducing vehicle emissions. There is agency interest in reviewing the vehicle imports policy as regards age for safety and environmental reasons..
- The Land Transport Agency of the Ministry of Economic and Sustainable Development takes the lead in matters of vehicle construction and use and import

policy. Georgia has recently signed up to the 1958 Geneva Agreement on Motor Vehicles and will adopt 140 vehicles regulations (including key vehicle safety regulations) by the end of 2013. Key regulations important for vehicle safety are cited below.

Key UN Regulations for vehicle safety

Reg. 12 Steering mechanism - frontal impact (partly covered by Reg.94)
Reg. 14 Seat belt anchorages
Reg. 16 Safety belts and restraint systems
Reg. 17 Strength of seats, their anchorages and any head restraint
Reg. 21 Interior fittings
Reg. 26 External projections
Reg. 44 Child restraint systems
Reg. 94 Occupant protection in frontal collision
Reg. 95 Occupant protection in lateral collision
GTR 7 Head restraints
GTR 8 Electronic stability control
GTR 9 Pedestrian protection

- The safety of commercial road transport operations was mentioned as an issue by several agencies, in view of the growth in this sector and the importance of Georgia's international trade routes.
- Annual vehicle inspection has ceased in recent years (apart from inspection of public service vehicles) which was a cause for concern amongst several stakeholders. The Ministry of Economic and Sustainable Development has set up a working group of cross agency representatives to prepare an action plan to implement periodic vehicle inspection in line with the EU Directive.

Driving standards and compliance

- Several agencies expressed concern regarding novice driver safety,
- The Services Department of the Ministry of Internal Affairs takes the lead on driving standards and compliance issues. Georgia is aiming for full compliance with the EU Driving Licence Directive and would like some technical assistance with this and other areas:
 - implementing new national provisions for on-road testing
 - training driver examiners.
 - setting up an Approved Driving Instructor framework for driving schools.
 -

Conclusions and key recommendations

International experience shows that key vehicle safety and driver standards play a large part in road safety strategies to reduce death and serious injuries. New attention is being given to this area in national policy and the responsible agencies are keen to move quickly to putting into effect the international conventions, agreements and directives which are in the pipeline.

(1) Review and reduce the age of vehicles in the vehicle imports policy to achieve the considerable safety benefits provided for by legislation and consumer testing in recent years.

- (2) *Review the safety of commercial road transport operation and identify any priority steps to improve road safety.*
- (3) *Review the national driver standards framework against international best practice and towards priority implementation steps to improve road safety.*
- (4) *Specific road safety project components are recommended within a proposed road safety project to provide next steps to address these needs.*

2.2.3 Recovery and rehabilitation of crash victims

- Major health sector developments have taken place in recent years and while levels of medical care vary across the country, improvements to the injury surveillance and the emergency medical system are gradually being rolled out.
- A 112 emergency call system is in operation, although other call numbers also exist.
- The major cities have autonomous emergency care provision.
- There are performance requirements (in urban areas) for emergency response times and from crash scene to medical treatment.
- Levels of risk are so high on some road sections that mobile emergency rescue is in operation and this could be extended on other high-risk/high-volume roads.

Conclusions and key recommendations

The health sector is a major beneficiary of efforts to reduce death and serious injury. Effective post-crash care is a crucial determinant of the chance and quality of survival. The aim is to reduce the consequences of injury by efficient emergency notification, fast transport of qualified medical personnel, correct diagnosis at the scene, stabilization of the patient, prompt transport to point of treatment, quality emergency room and trauma care, and rehabilitation services.

- (1) *Establish health sector surveillance of road traffic injury as a priority.*
- (2) *Promote road injury prevention as a major public health strategy.*
- (3) *In the roll out of emergency medical assistance, target high risk/high volume sections of the network and enable first responder schemes.*
- (4) *Specific road safety project components are recommended within a proposed road safety project to provide next steps to address these needs.*

System interventions – general conclusions and recommendations

A range of intervention is being carried out by the key agencies in Georgia and efforts are being made, given the available capacity, to move towards international good practice in several areas. Capacity for wide-scale national implementation of effective road safety intervention is generally weak and needs strengthening. In general, when benchmarked to international good practice, current intervention is fragmented in nature, insufficiently

targeted and resourced due to deficiencies in data collection and analysis and not monitored scientifically to determine its effect.

- (1) *Transport, road, health, education and planning agencies all have responsibilities for different aspects of road safety and need to work together to implement effective multi-sectoral intervention to achieve results.*
- (2) *Significant improvement in road safety performance could be obtained through implementing evidence-based measures on a multi-sectoral basis to improve the safety of motorized and non-motorized users on targeted high-risk sections of the road network which carry a disproportionate burden of deaths and injuries.*
- (3) *Specific road safety project components are recommended within a proposed road safety project to provide next steps to address these needs.*

2.3. Institutional management functions

2.3.1 Governmental leadership and results focus

- Many changes in governance arrangements in Georgia over the last decade (such as in policing reforms and new health provisions) will have a positive impact on road safety work. However, specific arrangements for road safety leadership and coordination following re-organization of key Ministries in the last two years have fallen by the wayside. Currently neither a functioning, resourced lead agency to direct, promote and monitor the national road safety effort, nor a functioning, efficient coordination body to facilitate multi-agency working of all the key agencies exists.
- The Ministry of Economic and Sustainable Development was assigned the lead agency role for road safety in the National Road Safety Strategy. The Ministry of Regional Development and Infrastructure was assigned as lead agency for the coordination of implementation of the National Road Safety Action Plan 2010-2013. The Georgian Transport and Communication Policy Development Commission (which is no longer operational) was reported to the Global Road Safety Status Report to be the national lead agency for road safety in 2010. The Ministry of Economic and Sustainable Development has worked on a regional road safety plan within TRACECA framework. The Ministry of Internal Affairs has also stated the intention to develop a national road safety strategy. While there has been some cross agency collaboration, currently, the lead agency function is not being carried out which requires urgent review.

The functions of a good practice lead agency and related coordination arrangements are set out in Annex 3.

Conclusion and recommendations

While agencies are addressing a range of road safety problems, current institutional management arrangements and activities lack a strong, shared focus on results and related safety management framework to target and monitor results. The absence of a functioning lead agency is impeding Georgia's road safety work.

- (1) *It is recommended that the Government of Georgia adopts a long-term vision for road safety and a commitment to strengthened road safety management to achieve results.*
- (2) *The priority is to designate and establish good practice lead agency arrangements which are formally tasked and funded to direct, promote and monitor the national road safety effort on behalf of government.*
- (3) *Specific road safety project components are recommended within a proposed road safety project to provide next steps to address these needs.*

2.3.2 Coordination

- In 2008 an inter-agency road safety task force was set up and started work under the Georgian Transport and Communication Policy Development Commission in 2009 chaired by the Transport Policy Department of the Ministry of Regional Development and Infrastructure which subsequently moved to become the Transport Policy Unit of the Ministry of Economic and Sustainable Development. The last meeting of the task force took place in Sept 2011. Currently, the coordination function across government is not being carried out which requires urgent review. A recommended good practice coordination model is set out in Annex 3.
- While a range of donor assisted road safety components operate alongside key road infrastructure projects, there also seems to be little inter-agency coordination amongst the concerned international and national donors working to assist country implementation of road safety activity. This is evident in the reported varying design standards selected for corridor improvements, disparities in project road safety performance measures (where they exist) or in the coordination of support for institutional strengthening.

Conclusion and recommendations

Transport, road, police, health, education and planning agencies all have responsibilities for different aspects of road safety and need to work together effectively to implement effective, multi-sectoral intervention in a systematic way to achieve results. The absence of a funded, functioning national coordination body is impeding road safety progress and requires urgent attention..

- (1) *A national road safety coordination body needs to be established comprising the key agencies, supported by a small coordination secretariat sitting within the designated lead agency. The functions of a good practice coordination and a recommended coordination hierarchy for national/project coordination is set out in Annex 3. A specific road safety project component is recommended within a proposed road safety project to provide next steps to address these needs.*
- (2) *Further coordination amongst international and national donors and financiers would be useful to harmonize approaches and wherever possible.*

2.3.3. Legislation

- The Ministry of Economic and Sustainable Development has the role of Georgia of periodically updating the legislative framework for road transport; it negotiates international agreements and conventions and is aligning increasingly with UN regulation and EU Directives in key safety areas.
- A range of legislative and implementation priorities were identified in discussions about intervention and institutional arrangements..

Conclusion and recommendations

The legislative framework is gradually being updated to good effect although there are some important gaps in meeting the road safety task.

- (1) *Priorities include establishing the legislative roles for lead agency and coordination bodies.*
- (2) *Carrying out reviews in key areas of vehicle safety standards (including vehicle age in imports policy, rear occupant restraints, speed limits, driving standards, penalty point system, road safety funding.*
- (3) *A specific road safety project component on policy reviews is recommended within a proposed road safety project to provide next steps to address these needs.*

2.3.4. Funding

- Road safety forms part of general budget allocations and is not specifically allocated other than in road safety components of international and national donor projects.
- Levels of spend of road safety activity in international projects are small.
- The establishment of a road safety fund based on a variety of income sources would assist multi-sectoral road safety work and there are several good practice models.
- There is no mandatory third party insurance scheme in Georgia. Many countries require a small percentage of motor vehicle insurance policies to be allocated to road safety.
- Cost-benefit analysis for resource allocation is not used for road safety

Conclusion and recommendations

Securing sustainable finding for road safety and using well-established resource allocation models such as cost benefit analysis and cost-effectiveness analysis are important for successful road safety work.

- (1) *Current levels of road safety spending in road infrastructure projects need to be scaled-up in line with UN Decade of Action recommendations.*
- (2) *Cost benefit analysis and cost-effectiveness analysis would help to make business cases for increased allocation of road safety resource and should be used in road safety work.*

- (3) *A review of sustainable road safety funding mechanisms benchmarked to international best practice is recommended.*
- (4) *Specific road safety project component recommended within a proposed road safety project could assist in addressing these needs*

2.3.5 Promotion

- No agency is currently actively promoting road safety as a core responsibility across Government and society.
- Some road safety publicity is carried out by the police.
- The Georgian Partnership for Road Safety provides effective national advocacy for key measures and plays an important role in community engagement.

Conclusion and recommendations

The promotion function addresses the broad need to promote road safety as a core responsibility across Government and society requiring high level and multi-agency support.

- (1) *Assisted by its governmental and NGO partners, the designated lead agency should adopt the promotion function to encourage the efforts of its partners across government. It should also be tasked with directing broad social marketing campaigns to foster sympathetic public attitudes towards necessary intervention.*
- (2) *Specific road safety project component recommended within a proposed road safety project could assist in addressing these needs*

2.3.6 Monitoring and evaluation

- While all agencies expressed concern about the current road safety problem during the review, their observations were not universally based on specific monitoring or reliable statistical information.
- Traffic volume and mean speeds across the core network are measured twice a year but the available data was not assessed. Mean speeds of passenger cars do not appear to be monitored in cities and urban areas.
- A high degree of modernization has taken place in recent years with driver and vehicle registries within the Services Agency of the Ministry of Internal Affairs. A unified, computerized system exists which is accessible by all police patrol cars.
- The review identified a range of database and survey needs. The Ministry of Internal Affairs leads in the collection of data for the national road crash injury database. The absence of a modern functioning national crash injury database in the Police Patrol Department and shared use arrangements with the Roads Department and other key agencies is severely impeding road safety work in Georgia. The absence of health

sector monitoring of road injury is an impediment. The lack of survey of behaviours in normal traffic (as opposed to offence data) inhibits the targeting and monitoring of results.

Conclusion and recommendations

Monitoring and evaluation is a vital good practice road safety management function. The measurement of road safety problems, the monitoring of intervention and periodic and transparent reporting is key to a systematic approach to road safety and needs urgent attention. Agencies are concerned that limited crash injury data and other safety performance data is not yet available to allow an informed focus on road safety results and to enable systematic road safety activity.

- (1) A monitoring and evaluation function needs to be established and supported in lead agency arrangements.*
- (2) The international definition of 'within 30 days of the crash' needs to be adopted for a road fatality.*
- (3) A functioning national crash injury database needs to be established urgently by the police and data sharing mechanisms put in place with key partners,*
- (4) National crash injury data needs to be published annually.*
- (5) Health sector surveillance of road traffic injury at national level is urgent.*
- (6) IRAP surveys produce useful data to allow monitoring of as well as targeting improvements in road network safety quality and should be piloted..*
- (7) Behavioural surveys of mean speeds, levels of drinking and driving, seat belt use etc. need to be carried out in normal traffic*
- (8) Capacity in the national research sector should be engaged to develop road safety performance monitoring in conformity with good practice survey protocols.*
- (9) The safety quality of the vehicle fleet can be assessed into the future with reference to European New Car Assessment Programme safety ratings.*
- (10) Specific road safety project component recommended within a proposed road safety project could assist in addressing many of these needs*

2.3.7 Research and development and knowledge transfer

- Capacity for road safety research which once was strong is now very weak.
- There is no national road safety research strategy.
- The research sector proposes that a National Road Safety Research Board be established.
- Knowledge transfer activity is being carried out within an agency framework in different projects.

Conclusion and recommendations

This vital institutional management function has guided the design and implementation of national road safety work that has sustained reductions in road deaths and injuries in the face of growing mobility and exposure to risk. It aims to produce a cadre of international, national and local professionals who can contribute research-based approaches and knowledge to road safety policy, programs , projects and public debate.

- *Road safety research and its management needs to be taken up in designated lead agency arrangements..*
- *Existing capacity for performance measurement in the research sector should be utilized and encouraged to develop further..*
- *Knowledge transfer activity is needed in important areas e.g. results-focused road safety management, lead agency working, road safety engineering combined police enforcement and publicity to create a deterrent effect for key safety behaviours, aspects of vehicle and driver standards..*
- *Specific road safety project components recommended within a proposed road safety project could assist in addressing many of these needs*

Institutional management: Conclusions and recommendations

Institutional arrangements provide the foundation for successful road safety management . While agencies are addressing a range of road safety problems, current institutional management arrangements and activities lack a strong, shared focus on results and related safety management framework to target and monitor results. The absence of a funded lead agency and coordination arrangements to orchestrate agencies' efforts on behalf of government is severely impeding road safety progress.

- (1) *Designate the lead agency for road safety and via the mechanism of a road safety project and project leadership arrangements start to build capacity for this function with international technical assistance..*
- (2) *Establish and operationalize a national coordination body involving the key agencies. Again, within a project framework, a project steering committee would provide a useful next step towards a framework and capacity for this function.*
- (3) *Capacity for other country road safety management functions such as funding and resource allocation, promotion, research and development and knowledge transfer need to be established or strengthened in the key agencies at national and regional/city levels: transport and roads, police, education, health all need to be developed for the long-term. Specific, funded ;learning by doing' road safety project components e.g. project management, policy reviews, developing and implementing targeted multi-sectoral intervention, monitoring and evaluation are recommended within a proposed road safety project to provide first steps towards addressing these needs. A framework for next steps is outlined in Sections 3 and 4.*

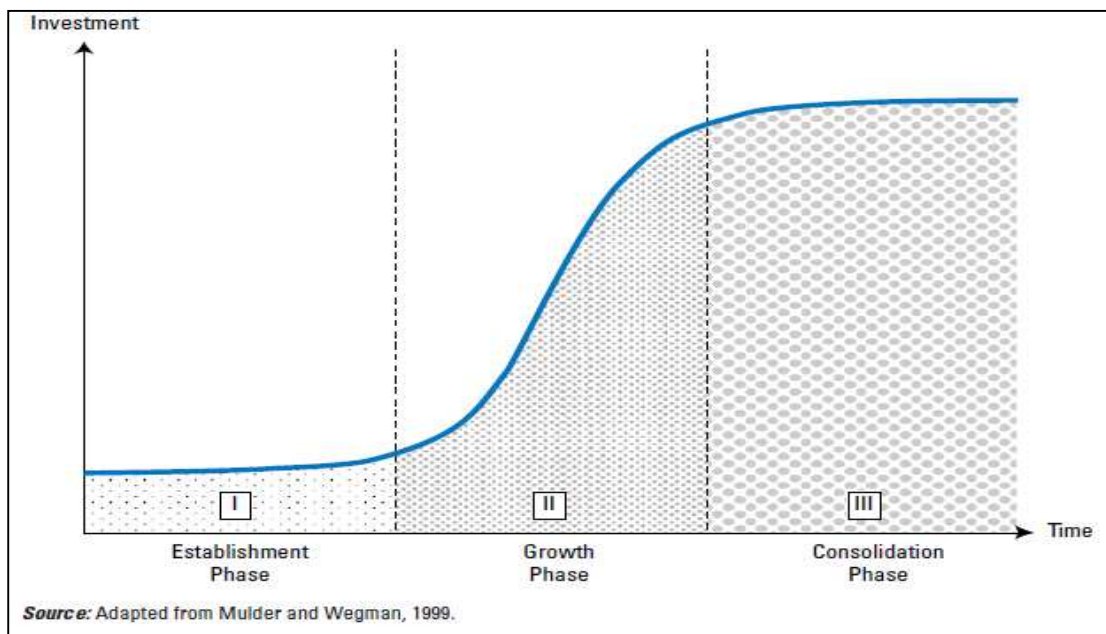
3. Strategic priorities for a long-term investment strategy and establishment phase

Establishing the organizational structures and processes of countries which have been carrying out systematic road safety management for some time and with the best results will not be built overnight in Georgia, although reforms are being implemented very rapidly in many areas. Experience globally indicates that achieving results requires long-term political will translated into road safety investments targeted across a range of sectors and in governance and institutions, infrastructure, vehicle fleets, licensing standards, road safety behaviours and the health system.

To assist jurisdictions in this process and as part of the road safety management capacity review process, World Bank guidelines recommend that a qualitative investment strategy should be outlined for a long term period with three stages: *establishment*, *growth* and *consolidation* phases as outlined in Figure 1.

Here, a sequencing of capacity building can be seen to establish a strong national road safety management system which can deliver sustainable road safety results from initial establishment to consolidation phases. Experience shows that this sequencing is crucial if common pitfalls are to be avoided. Jurisdictions which target results without developing the essential building blocks of governmental leadership, institutional capacity and partnership working to implement effective intervention and a safety performance framework to ensure focus and accountability do not often succeed in producing significant, sustainable results.

Figure 1: The phases of investment strategy: World Bank Guidelines, 2009



The *establishment* phase of a long-term road safety investment strategy addresses capacity strengthening needs identified by the capacity review and focuses on building the core capacity to bring targeted road safety performance under control. This creates a platform

for scaling-up investment to accelerate capacity strengthening goals and achieve improved results across Georgia’s road network. In practice, capacity and knowledge is built in a learning by doing process with appropriate technical assistance for a range of intervention and institutional management activity. This paves the way for the eventual development of an effective targeted national road safety programme. This phase is fundamental and global experience indicates that countries may need several attempts at it if this phase is not carefully prepared and executed initially or overloaded with recommended activity (for which there may be little capacity) which is better suited to the *growth* phase.

In the *growth* phase key priorities are to put in place a robust performance management framework for all participating agencies, to roll-out targeted safety programs across the country and systematically across high-risk sections of the road network, and to implement all the findings of intervention benchmarking and policy reviews.

In the *consolidation* phase key priorities are to extend the performance management framework to regions and districts and to take all the necessary measures to improve management and operational efficiency and effectiveness and seek opportunities for future safety innovations.

Based on the review’s finding, the strategic outlines of a 3–phase investment strategy for Georgia involving all key agencies are outlined in Table 3.

Table 3 : Priority initiatives for Georgia’s long-term investment strategy for road safety

	<i>Establishment</i>	<i>Growth</i>	<i>Consolidation</i>
Results	<ul style="list-style-type: none"> ▪ Include ‘safe’ transport in Georgia’s transport strategy vision statement. ▪ Adopt the long-term <i>Safe System</i> goal for Georgia to eliminate death and serious injury in road crashes recommended by the Global Plan and international development organizations. ▪ Within funded project work, set and agree across agencies quantitative performance targets for high-volume/high-risk demonstration corridors. 	<ul style="list-style-type: none"> ▪ Set challenging but achievable quantitative national targets for outcomes and outputs to provide a safety performance framework for a national strategy. 	<ul style="list-style-type: none"> ▪ In addition to national targets, require the setting of targets at regional, provincial and district levels.

<i>Interventions</i>	<p>Within funded project work agencies to:</p> <ul style="list-style-type: none"> ▪ Implement comprehensive multi-sectoral measures in targeted high-risk demonstration corridors (covering urban and rural sections) in Georgia. ▪ Review and internationally benchmark national road safety policies and interventions and commence implementation of policy reforms. 	<ul style="list-style-type: none"> ▪ Roll-out comprehensive multi-sectoral measures across more high-risk corridors and areas of total road network. ▪ Implement priority reforms of safety policies and interventions and new measures based on international best practice. 	<ul style="list-style-type: none"> ▪ Sustain comprehensive multi-sectoral measures across total road network and extend targeting to less risky roads. ▪ Review and internationally benchmark safety policies and interventions and implement reforms.
<i>Institutional Management Functions</i>	<p>Within funded project work agencies to:</p> <ul style="list-style-type: none"> ▪ Establish and formalize lead agency role and related coordination arrangements. ▪ Manage, monitor, and evaluate road safety results in high-risk demonstration corridors. ▪ Review and internationally benchmark institutional management functions and start to implement institutional reforms. ▪ Establish modern, functioning crash injury databases and survey protocols and carry out surveys of the core network using the iRAP tool. 	<ul style="list-style-type: none"> ▪ Strengthen and refocus lead agency role and functions and related coordination. ▪ Manage, monitor, and evaluate road safety results in high-risk corridors and areas of total network. ▪ Implement ongoing reforms of institutional management functions ▪ Disseminate safety performance data from national crash analysis system and ensure open access to system by stakeholders. 	<ul style="list-style-type: none"> ▪ Review and reform lead agency role and functions and related coordination arrangements. ▪ Extend performance monitoring and evaluation of safety results to less risky roads in network. ▪ Review and reform of institutional management functions. ▪ Upgrade national crash analysis system and extend performance monitoring capabilities.

4. Road safety project component concept for establishment phase

The findings of the road safety management capacity review indicate that systematic, results-focused activity could be facilitated by a substantive and carefully prepared multi-sectoral road safety component (and multi-donor supported road safety project to avoid duplication) which could comprise the establishment phase of a new long-term road safety investment strategy. This work, once completed, will inform the national roll out envisaged in the ‘growth’ phase.

4.1 Project objectives

In line with current World Bank guidance on road safety project design, the road safety project component would be prepared following full engagement with the responsible agencies and would address identified key road safety challenges in Georgia outlined by the capacity review by pursuing the following strategic objectives.

Objective 1

Strengthening road safety management capacity in Georgia to deliver multi-sectoral interventions in targeted demonstration corridors. The main focus would be on ‘learning by doing’ support for lead agency, coordination, promotion and monitoring and evaluation arrangements.

Objective 2

Targeting the key sections of the network where most deaths and serious injuries are to be found with effective multi-sectoral intervention (delivered by all those agencies and organizations that can help to achieve specific results and supported by a range of targeted international technical assistance). Typically, there is a high concentration of road deaths and injuries on a relatively small proportion of the road network where traffic volumes and vehicle speeds are high. This activity would help to provide the dimensions for further roll out nationally and inform the development of measurable outputs and targeted outcomes needed for a national road safety plan in the ‘growth’ phase’.

Objective 3

Conducting any necessary policy reviews to address agreed road safety priorities, again supported by targeted international technical assistance, and make recommendations to improve road safety results which would be implemented in the ‘growth phase’ of the investment strategy.

Objective 4

Accelerating road safety knowledge transfer where appropriate via international expert networks to the key partners for different aspects of the project. A learning by doing approach is recommended where hands-on technical assistance to assist road safety leadership and coordination, as well as affordable, evidenced-based, state of the art intervention.

These four objectives are interrelated and mutually reinforcing. The aim is to create a project which encourages agencies to work together constructively together in a joint project to deliver and evaluate a set of well-targeted, best practice multi-sectoral interventions in identified high-risk corridors, conduct further policy reviews, and accelerating road safety knowledge transfer.

4.2 Project Components

Four project components are specified to reflect the project objectives outlined previously with indicative budget, as follows:

Table 4: Project components

<i>Project component</i>	<i>Summary of core elements of project component</i>
1. PROJECT LEADERSHIP AND MANAGEMENT	Designated project lead agency arrangements and a fully resourced project steering committee to lead and manage the following components 2,3,4 and promote the project.
2. PROJECT INTERVENTION	Multi-sectoral interventions in targeted demonstration corridors
3. PROJECT MONITORING AND EVALUATION	Comprehensive monitoring and evaluation systems for project interventions and components in place.
4. POLICY REFORMS	Policy reviews of agreed road safety priorities.

Project leadership and management (Project Components 1)

The creation of leadership and shared multi-sectoral management processes is viewed as the most vital and valuable activity to be addressed in the project.

Designated lead agency arrangements for project

An essential element will be to create a governmental lead agency role and body for the project that enables it to deliver effectively on its institutional management functions and build and strengthen its leadership and partnership in the process. The project management arrangements should model the vital lead agency contribution to directing and sustaining the production of improved road safety results and be designed to maximize the potential for the lead agency to rapidly assert itself in this role and build its capacity accordingly. If new country lead agency arrangements which can tie in with new project leadership arrangements are not envisaged in the near future, a further, though less optimal approach, might be for a formal review of option for lead agency establishment to be established as part of the project road safety component 4.

Coordination structures and working procedures for project

Project coordination arrangements will need to be established. Coordination structures should engage project participants on at least three decision-making and consultative levels: agency leaders, senior agency managers, and external partners and stakeholders. Basic project management arrangements should at least include a high-level Steering Group comprising agency heads, a Senior Managers' Working Group, and an extended Senior Managers' Consultative Group that includes wider business sector and community representation. These would be supported by expertise and resources provided via the lead agency and associated project technical assistance. A recommended structure for this coordination hierarchy is provided in Annex 3

Project promotion

Promotion of project goals and achievements is essential and should be managed by the lead agency, working through the Steering Group that should take responsibility for the road safety brand and core safety messages, Several organisations may play key roles in their delivery, including the non-governmental sector.

Table 5 sets out key project management functions that are envisaged for the delivery of the road safety project. Possible governmental agency roles are outlined, based on the current role of agencies ascertained during the review. The research and non-governmental sectors e.g. the Technical University of Georgia, the Science Center and the Georgian Partnership for Road Safety could play key roles respectively in project monitoring and evaluation and community engagement and will be key national members of the Project Consultative Group.

Table 5: Project leadership and management functions and agency roles

Project Steering Committee and Working Group Members	Government agency roles for the delivery of Project Components 1-4.
Project lead agency support Agency to be identified by the GoG.	<ul style="list-style-type: none"> • Chair of Project Steering Committee and Project Working Group • Funded support role for: <ul style="list-style-type: none"> – Project leadership – Project coordination – Project funding – Project legislation – Project promotion – Project monitoring and evaluation – Project knowledge transfer, research
Ministry of Regional Development and Infrastructure Roads Department	<ul style="list-style-type: none"> • Highway safety management • Highway safety standards and guidelines • Highway safety audit • Highway safety assessment • Data systems supporting highway safety engineering and planning
Ministry of Economic and Sustainable Development	<ul style="list-style-type: none"> • Transport safety strategy, policy, analysis • Road safety legislation • Heavy vehicle and public transport operations • Vehicle safety policy
Ministry of Internal Affairs	<ul style="list-style-type: none"> • Crash reporting and data systems • Road safety legislation • Road traffic regulation enforcement and penalty system • Road safety reporting • Driver licensing • Vehicle registration and inspection • Road safety promotion campaigns

Ministry of Health, Labour and Social Affairs	<ul style="list-style-type: none"> • Emergency response and treatment • Injury control and prevention programs • Road fatality and injury data surveillance • Road injury prevention campaigns • Work –related road safety
Ministry of Education and Science	<ul style="list-style-type: none"> • School road safety education • School bus safety • Safe school management systems • Road safety promotion campaigns and community engagement
Urban/City/Municipality	<ul style="list-style-type: none"> • Land use/transportation planning • Public transport • Traffic and road safety management • Urban road safety management & emergency services

Project interventions - targeting the network with results-focused, multi-sectoral road safety activities (Project Component 2)

Agencies recognized the significant safety problems on the network as a result of mixed motorized and non-motorized traffic (including unmanaged livestock on international highways), mixed speed road environments and dangerous, unmanaged overtaking behaviour. Crash data provided during the course of the review confirmed this as the priority road safety problem in Georgia on high-risk/ high volume roads..

Agencies supported the proposal to implement multi-sectoral interventions in targeted high-risk, high-volume, corridor(s) which could include both urban and rural sections to obtain some quick results, establish multi-sectoral working and enhance institutional strengthening including knowledge transfer.

Selection criteria and possible candidate(s)

Selection criteria were identified. The corridor(s) needed to be high-volume/high-risk; representative of the Georgian network to provide eventual dimensions for roll-out nationally; demonstrating the range of safety problems and with sufficient scope to allow targeting of results and the availability of medical, educational, community centres to facilitate multi-sectoral intervention. The selected corridor(s) should also have an iRAP assessment and this should be built into the detailed project design..

Improvements in road safety data collection in transport, health and police sectors, data quality and data sharing were highlighted as was the need to establish new databases and surveys. The demonstration corridor(s) provided an opportunity for piloting new arrangements and tools such as new crash injury database software, iRAP and computerized health sector data.

A road safety performance targeting and measurement framework would need to be established for the demonstration projects to allow the setting and monitoring and evaluation of final and intermediate outcome targets.

Possible candidates for corridors were also identified including the high volume/high risk Agara to Zestaponi corridor on the E60 international highway which is around 85 kilometres in length and within which 42 deaths and many more serious injuries occurred

in 2012. Agencies agreed that if the upgrading of major projects were not to be fully implemented within the next 3 years, then road network management measures and other multi-sectoral activity will be required to prevent avoidable loss of life and serious injury. Alternatively, the Roads Department can identify other candidates.

Multi-sectoral road safety intervention components

Several options for the multi-sectoral interventions in targeted demonstration corridors are specified below with recommendations for the proportional share of the budget. Depending on the corridor(s) selected there may be trade-offs between engineering the safety of the corridor or implementing combined enforcement or publicity or a combination of both. Generic components are outlined in Table 6.

○ Systematic infrastructure safety measures

Building on current approaches, these will involve a proactive, systematic approach to road safety engineering to identify corridor safety improvements. Measures will address head-on, run-off road, intersection, and vulnerable road user crashes. Systematic iRAP safety inspection of corridors/corridor sections would identify priorities for affordable *Safe System* engineering investment for these key crash type along high-volume/high risk sections, rather than primarily at high-risk sites.

○ Traffic safety rule enforcement and social marketing

General deterrence-based road safety enforcement programs

Enhanced traffic enforcement campaigns can be designed and implemented in the demonstration corridor(s) to develop more effective general deterrence-based measures to achieve improved compliance with vehicle and road user standards and rules. Measures will include:

- speed management (with a special focus on pedestrian safety) through appropriate devices (such as radar, speed cameras, point to point cameras etc)
- alcohol testing
- occupant restraints
- motorcycle helmets
- heavy vehicle safety regulations (especially lighting, overloading, speeding)

Publicity and awareness campaigns

Social marketing campaigns to improve traffic safety awareness and compliance with safety standards and rules will be designed and implemented to support the enhanced traffic enforcement in the demonstration corridor(s) and surrounding areas. These campaigns will target all relevant parties and use all appropriate media, taking into account local literacy levels and language needs. Media will include local television, radio, newspapers, billboards and posters.

Community development and corporate social responsibility programs

Enhanced work-based, school-based and community-based education programs will be designed and implemented in the corridors and surrounding areas. These will be integrated with the traffic enforcement and social marketing campaigns. The new ISO

39001 road traffic safety management systems standard ²⁶ provides an opportunity for piloting by large commercial organizations along the corridor or regularly using the corridor.

o Improved post-crash response and emergency medical services

It is proposed that enhanced post-crash safety services be designed and implemented in the demonstration corridor(s) and surrounding areas to improve the survivability of road crash victims and their longer-term recovery prospects. These services are likely to include:

- first responder training programs for those aside from local health workers most likely to attend crash scenes (e.g. taxi drivers, local business people and traffic police),
- emergency response systems
- the establishment of trauma registries
- computerized road traffic injury monitoring systems in health facilities

Guidelines produced by the World Health Organization²⁷ can be used to assist further the preparation and implementation of these.

Project monitoring and evaluation (Project component 3)

Performance targets

A safety performance management framework will need to be established for the corridor project(s) to allow the setting and monitoring and evaluation of goals and targets for the long-term and interim. These should take the form of final outcomes²⁸, intermediate outcomes ²⁹, and outputs ³⁰. It is important that performance targets are ambitious and it should be recognized that the project aims to determine what can be achieved with the systematic application of good practice measures as part of its learning by doing function.

Performance measures and periodic surveys

Every effort should be made to obtain reliable baseline estimates of current as well an ongoing performance in the targeted corridors and areas and this will require combining available police and health sector data; iRAP surveys, carrying out periodic

²⁶ ISO (2012) *ISO 39001: International Standard: Road Traffic Safety (RTS) Management Systems - Requirements and Guidance for Use* (see national standardisation body for details of this standard)

²⁷ Mock C., Lormand, J.D., Goosen, J., Hoshipura, M., Peden, M., (2004) *Essential trauma care guidelines*, Geneva, World Health Organization; and Sasser, S., Varghese, M., Kellermann, A., Lormand, J.D. (2005) *Pre-hospital trauma care systems*. Geneva, World Health Organization, 2005

²⁸ Final outcomes can be expressed as a long term vision of the future safety of the road traffic system (e.g. as in *Vision Zero* and *Sustainable Safety*) and as more short to medium-term targets expressed in terms of social costs, fatalities and serious injuries presented in absolute terms and also in terms of rates per capita, vehicles and distanced travelled.

²⁹ Intermediate outcomes are linked to improvements in the final outcomes and typical measures include average traffic speeds, the proportion of drunk drivers in fatal and serious injury crashes, safety belt-wearing rates, helmet-wearing rates, the physical condition or safety rating of the road network, and the standard or safety rating of the vehicle fleet.

³⁰ Outputs represent physical deliverables that result in improvements in intermediate and final outcomes. Typical measures include kilometres of engineering safety improvements, the number of police enforcement operations required to reduce average traffic speeds and the number of vehicle safety inspections. Alternatively they can correspond to milestones showing a specific task has been completed.

surveys of means speeds, drinking and driving, crash helmet use etc. (See Table 5 for examples).

Reporting arrangements

Related to the project management and monitoring and evaluation requirements is the need to reach early agreement on the project performance reporting requirements. Consensus is necessary across the project partnership on the process, content and timing of project reporting arrangements. Performance measures should take the form of final outcomes, intermediate outcomes and outputs, as presented in Table 6.

Table 6: Examples of road safety performance measures for road safety projects

Category	Examples of possible measure
Risk exposure	- Traffic volumes by vehicle and road user type
Final safety outcomes	- Deaths and injuries recorded by police - Hospital data for road deaths and injuries recorded by health authorities - Other sources of death and injury registration
Intermediate safety outcomes	- Average vehicle speeds by road type, summer and winter - Front and rear seat safety belt wearing rates, driver and passengers - Child restraint wearing rates - Motorcycle helmet wearing rates, driver and pillion - Excess alcohol levels - Drug impairment levels - Skid resistance of road surfaces - Road infrastructure crash safety ratings (iRAP risk and protection scores) - Vehicle compliance with testing standards - Vehicle crash safety ratings - Target audience recall and assessed relevance of publicity campaign messages - Community attitudes to road safety - Average emergency medical services response times
Intervention outputs	- Number of safety engineering treatments per section of road network - Hours of police enforcement targeting high risk behaviours - Numbers of police infringement notices issued - Media frequency and reach of publicity campaigns supporting police enforcement - Hours of school-based education activities - Volume of driver licensing and testing activities - Volume of vehicles tested - Number of emergency medical services responses to road network crashes

Policy reforms (Project component 4).

Some discussion also took place of important policy priorities which deserved review, which would take into account what is known to be effective from international best practice and adapting it the Georgian context. It was agreed that the road safety project component could usefully assist with the establishment of strategic reviews of key issues and some recommendations are made for priority topics that might be considered in the first instance. These include heavy commercial vehicle safety, infrastructure safety planning, engineering and speed management, deterrent policing frameworks and the

safety considerations of vehicle imports policy. Assistance with implementing some aspects of international agreements and EU Directives was also identified in these areas (e.g. on-road driver testing). It was also recognized that some of these issues would receive attention and international technical assistance in the demonstration projects. Further possibilities include a review of potential national lead agency arrangements, funding mechanisms etc.

Table 7: Summary of project components and indicative total project costs³¹

<i>Project Component</i>	<i>Project Component and Indicative Costs</i>	
1. PROJECT LEADERSHIP AND MANAGEMENT Designated project lead agency arrangements and a fully resourced multi-sectoral project steering committee to lead and manage the following components 2,3,4 and promote the project.	Designated lead agency arrangements, coordination structures and working procedures and project promotion.	\$US 2 million
2. PROJECT INTERVENTION Multi-sectoral interventions in targeted demonstration corridor(s)	Systematic infrastructure safety improvements preceded by an iRAP assessment.	10% of total infrastructure budget. ³²
	General deterrence-based road safety enforcement programmes. Publicity, awareness campaigns. Community development and corporate social responsibility campaigns	Road policy activity: 20% of total corridor policing budget. ³³ Publicity and awareness campaigns and other programs: minimum of 5% of road policy budget.
	Improved post crash-response and emergency medical services	@ \$US 2 million
3. PROJECT MONITORING AND EVALUATION Comprehensive monitoring and evaluation systems for project interventions and components in place.	Performance targets (long-term goal and interim final and intermediate outcome targets , performance measures and periodic surveys and reporting arrangements. Local piloting of new crash injury database.	\$US 3-4 million
4. POLICY REFORMS Around 4 policy reviews of agreed road safety priorities (interventions and institutional management).	Reviews might include safety engineering and speed management, heavy commercial vehicle safety, deterrent policing and penalty frameworks, aspects of vehicle standards and driving standards, institutional management issues e.g. lead agency, funding.	\$US 1-2 million

³¹ These are rough, indicative costs and, would need to be refined and approved at detailed project description phase.

³² The Decade of Action's Global Plan call for road infrastructure safety to comprise at least 10% of the total road infrastructure budget.

³³ Good practice traffic safety policing which, combined with social marketing delivers high benefits to costs (e.g. Bliss et al, 1998), would comprise around 20% of the total police budget for the corridor and, following mainstreamed road safety infrastructure treatments would be expected to comprise around two thirds of the remaining component costs

5. Detailed project preparation and implementation

Detailed design of the project will commence once agreement has been reached on the project concept, especially the leadership and management structures and processes and monitoring and evaluation arrangements for targeted high-risk demonstration corridor(s).

Successful implementation of the road safety component will hinge on achieving a high level of integration between the four project components. The first component concerns the establishment of project leadership and management groups to manage the other three project components and it is envisaged that close coordination will be maintained between these groups at all levels throughout the planning and implementation of the project.

The demonstration projects will be crucial in terms of creating the results focus for the overall project and achieving improved road safety performance nationally. Where relevant, they will connect with the state policy reviews. Ultimately, sustainable long-term success will hinge on designing demonstration projects that accelerate the transfer of road safety knowledge to participants, strengthen the capacity of participating partners and stakeholders, and rapidly produce improved road safety results that provide benchmark measures to dimension a roll-out program nationwide.

As a priority the detailed project design will need to include a public communications campaign to launch and sustain the new road safety project and promote its objectives by highlighting the tangible project components being implemented to achieve them.

Detailed project preparation is conducted through eight distinctive steps for which guidance is provided in 2009/2013 Global Road Safety Facility World Bank guidelines³⁴
³⁵:

1. Set project objectives
2. Determine scale of project investment
3. Identify project partnerships
4. Specify project components
5. Confirm project management arrangements
6. Specify project monitoring and evaluation procedures
7. Prepare detailed project design
8. Highlight project implementation priorities

³⁴ Global Road Safety Facility, World Bank, 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 Specification of Lead Agency Reforms, Investment Strategies and Safe System Projects, Global Road Safety Facility, World Bank, Washington DC

³⁵ Global Road Safety Facility, World Bank, Bliss T and Breen J (2013, in print). *Capacity Reviews and Safe Systems Projects, Guidelines Supplement*, World Bank Washington DC

ANNEX 1: AGENCIES AND ORGANIZATIONS MET DURING THE REVIEW

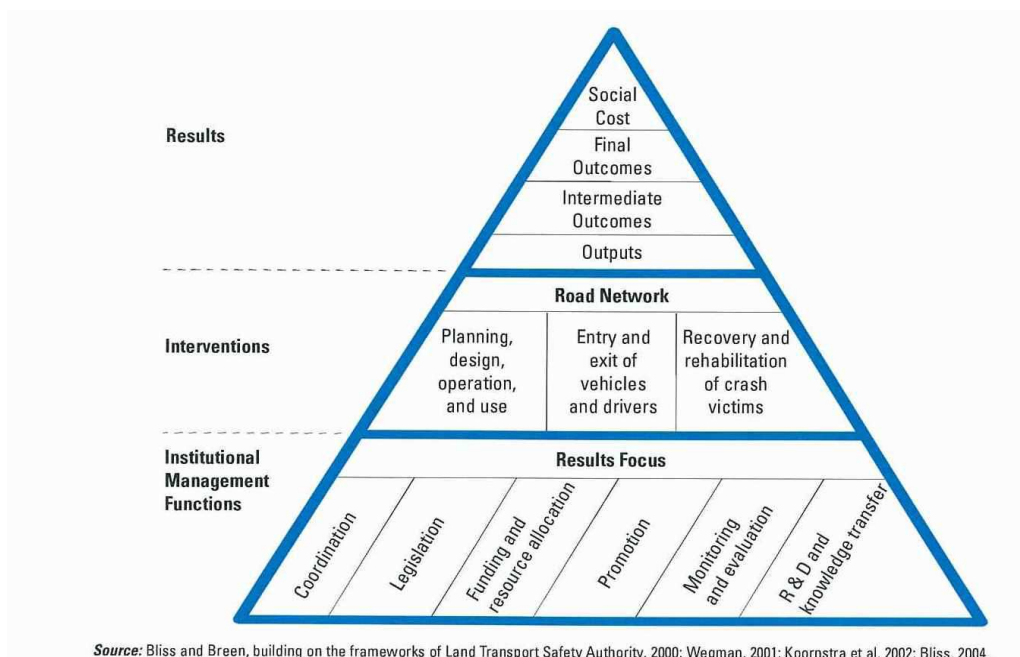
GOVERNMENT AGENCIES		
MINISTRY OF REGIONAL DEVELOPMENT AND INFRASTRUCTURE		
	Mr Shota Murgulia	Deputy Minister
- INFRASTRUCTURE DEVELOPMENT DEPARTMENT	Mr Nodari Mikiashvili	Head of Department
	Mr Giorgi Kharabadze	Deputy Head of Department
- ROADS DEPARTMENT	Mr Irakli Litanishvili	Deputy Chairman
	Mr Nugzar Gasviani	First Deputy Chairman
	Mr Mamuka Patashuri	Head of Road Safety Department
	Mr Tornike Soselia	Road Safety Department
	Mr Spiridon Koxreidze	Road Safety Department
- KUTAISI REGIONAL OFFICE OF THE ROADS DEPARTMENT	Mr Mamuka Tevzardze	Regional issues advisor to Road Department Chairman
	Mr Lievan Tsurtsuma	Senior Specialist/ Technical Supervisor
MINISTRY OF INTERNAL AFFAIRS		
- PATROL POLICE DEPARTMENT	Mr David Tsinaridze (Met briefly – had to attend emergency)	Director of Patrol Police Department
	Mr Tamaz Jikia	Head of Traffic Safety Unit
	Mr David Barbakadze	Deputy Head of Traffic Safety Unit
	Ms Marine Latsabidze	Special Importance Affairs of Analysis Unit
- REFORMS AND DEVELOPMENT AGENCY	Mr Irakli Beraia	Director
	Dr Valeri Lomuashvili	Deputy Director
	Mr George Kiknavelidze	Main Specialist
	Mr Shalva Khabuliani	Main Specialist
- SERVICE AGENCY	Mr Giorgi Mindiashvili	Head of Legal Department
	Mr Imeda Makashvili	Head of Tbilisi Division
- REGIONAL PPD - KUTAISI	Mr Merab Dzabiradze	Head of Division
	Mr Konstantine Zarnadze	Head of Special Cases Division
MINISTRY OF ECONOMY AND SUSTAINABLE DEVELOPMENT		
-TRANSPORT POLICY DEPARTMENT	Mr Gogita Gvenetadze	Deputy Head of Department
	Mr Koba Metreveli	Main Specialist
- LAND TRANSPORT AGENCY	Mr Elizbar Darchiashvili	Head of Qualification Centre
MINISTRY OF HEALTH, LABOUR AND SOCIAL AFFAIRS		
- DEPARTMENT OF EMERGENCY SITUATIONS AND REGIME	Mr Zurab Utiashvili	Head of Department
	Mr David Toruq	Head of Analysis and Planning
	Ms Nino Lochoshvili	Chief expert
MINISTRY OF EDUCATION AND SCIENCE		

- NATIONAL TEACHING PLANING DEPARTMENT AND CIVIL EDUCATION	Ms Mariam Chikobava;	Head of Department
	Mr Nikoloz Silagadze	Departmental expert
TBILISI CITY		
	Mr Malkhaz Chamburidze	Deputy Head of City Transport Service
	Mr Demuri Kvirikashvili	Head of Traffic Organization Unit
	Mr Giorgi Kevkhishvili	Assistant to Head of City Transport Service
PROFESSIONAL INSTITUTIONS/ NGOS		
SCIENCE CENTER	Mr Giorgi Jokhadze	Head of Science Center
	Mr Vasil Rcheulishvili	Deputy Head of Science Center
	Mr Ushangi Sturua	Principal Engineer
GEORGIAN TECHNICAL UNIVERSITY	Mr David Burduladze	Chair of Roads
	Professor Konstantin Mchedlishvili	Roads
PARTNERSHIP FOR ROAD SAFETY / EASTERN ALLIANCE FOR SAFETY AND SUSTAINABLE TRANSPORT (EASST)	Mr Gela Kvashilava	Chairman
	Mr Irakli Izoria	Director
	Ms Lika Merabishvili	Project Coordinator
ELVA	Mr Jonne Catshoek	Director ELVA
	Mr Tom Gagno	Data Analyst ELVA
GEORGIAN CYCLING FEDERATION	Mr Omar Pkhakadze	President (georgiancycling@gmail.com)
	Mr Jumber Lezhavd	Member
	Mr Bichiko Askurava	Member
DONOR ORGANIZATIONS		
ASIAN DEVELOPMENT BANK	Mr Archil Jorbenadze	Project Coordinator
	Ms Nana Soetantri	Transport Specialist, Sustainable Infrastructure Division, Regional and Sustainable Development Department, ADB
EUROPEAN INVESTMENT BANK	Mr Niko Papunidi	Consultant

ANNEX 2: THE ROAD SAFETY MANAGEMENT SYSTEM AND WORLD BANK ASSESSMENT FRAMEWORK AND CHECKLISTS

Road safety management can be viewed as a production process with three inter-related elements: *institutional management functions* that produce *interventions* that in turn produce *results*. Close attention must be paid to all these elements and their linkages as the limits to improving country road safety performance are shaped by their inherent weaknesses and vice versa.³⁶

The road safety management system



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

This systemic management framework derives from New Zealand's 2010 target setting model that linked desired results with interventions and related institutional implementation arrangements.³⁷ Elements of this model were adopted by the European Transport Safety Council which highlighted the specification of results measures³⁸; which were further elaborated by the SUNflower Project that defined implementation arrangements in terms of 'structure and culture'³⁹; and then further extended by the World Bank prototype guidelines which identified key management functions including lead agency and related coordination arrangements on the basis of international best practice as well as the conduct of road safety management capacity reviews.⁴⁰

³⁶ 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 Specification of Lead Agency Reforms, Investment Strategies and Safe System Projects*, World Bank Global Road Safety Facility, Washington DC.

³⁷ Land Transport Safety Authority (2000), *Road Safety Strategy 2010: A Consultation Document*. National Road Safety Committee, Land Transport Safety Authority, Wellington.

³⁸ Wegman Fred, (2001). *Transport safety performance indicators*. Brussels, European Transport Safety Council.

³⁹ Koornstra M., D. Lynam, G. Nilsson, P. Noordzij, H-E. Pettersson, F. Wegman and P. Wouters (2002). *SUNFlower: A comparative study of the development of road safety in Sweden, the United Kingdom and the Netherlands*, SWOV, Dutch Institute for Road Safety Research, Leidschendam. Available on the Internet: <http://www.swov.nl/rapport/Sunflower.pdf>

⁴⁰ Bliss T (2004). *Implementing the Recommendations of the World Report on Road Traffic Injury Prevention*, Transport Note No. TN-1, World Bank, Washington DC.

ROAD SAFETY MANAGEMENT CAPACITY REVIEW CHECKLISTS (World Bank, 2009)

(i) Checklist 1: Results focus at system level

Questions	Yes	Partial	Pending	No
Are estimates of the social costs of crashes available?				
Are data on road deaths and injuries readily available?				
Have the risks faced by road users been identified? <ul style="list-style-type: none"> ▪ Drivers? ▪ Passengers? ▪ Motor cyclists? ▪ Pedestrians? ▪ Cyclists? ▪ Children? ▪ Others? 				
Has a national vision for improved road safety performance in the longer-term been officially set?				
Have national and regional targets been set for improved safety performance? <ul style="list-style-type: none"> ▪ Social cost targets? ▪ Final outcomes targets? ▪ Intermediate outcomes targets? ▪ Intervention output targets? ▪ At risk group targets? ▪ Industry targets? ▪ Other targets? 				
Have all agencies responsible for improved safety performance been identified and are they formally held to account for performance achieved to achieve the desired focus on results? <ul style="list-style-type: none"> ▪ Highways? ▪ Police? ▪ Transport? ▪ Planning? ▪ Justice? ▪ Health? ▪ Education? ▪ Others? 				
Have industry, community and business responsibilities for improved roads safety performance been clearly defined to achieve the desired focus on results?				
Are regular performance reviews conducted to assess progress and make improvements to achieve the desired focus on results?				
Has a lead agency been formally established to direct the national road safety effort to achieve the desired focus on results?				
Is the lead agency role defined in legislation and/or policy documents and annual performance agreements to achieve the desired focus on results?				

Checklist 2: Planning, design, operation and use of the road network

Questions	Yes	Partial	Pending	No
<p>Have comprehensive safety standards and rules and associated performance targets been set for the planning, design, operation and use of roads to achieve the desired focus on results?</p> <ul style="list-style-type: none"> ▪ National roads? ▪ Regional roads? ▪ Provincial roads? ▪ City roads? 				
<p>Are the official speeds limits aligned with Safe System design principles to achieve the desired focus on results?</p> <ul style="list-style-type: none"> ▪ National roads? ▪ Regional roads? ▪ Provincial roads? ▪ City roads? 				
<p>For each category of roads (national, regional, provincial, city) are compliance regimes in place to ensure adherence to specified safety standards and rules to achieve the desired focus on results?</p> <ul style="list-style-type: none"> ▪ Road safety impact assessment? ▪ Road safety audit? ▪ Road safety inspection? ▪ Black spot management? ▪ Network safety management? ▪ Speed management? ▪ Alcohol management? ▪ Safety belts management? ▪ Helmets management? ▪ Fatigue management? 				
<p>Do the specified safety standards and rules and related compliance regimes clearly address the safety priorities of high-risk road user groups to achieve the desired focus on results?</p>				
<p>Do the specified safety standards and rules and related compliance regimes compare favorably with international good practice?</p>				

Checklist 3: Entry and exit of vehicles to and from the road network

Questions	Yes	Partial	Pending	No
<p>Have comprehensive safety standards and rules and associated performance targets been set to govern the entry and exit of vehicles and related safety equipment to and from the road network to achieve the desired focus on results?</p> <ul style="list-style-type: none"> ▪ Private vehicles? ▪ Commercial vehicles? ▪ Public transport vehicles? ▪ Motor cycle helmets? ▪ Cycle helmets? 				
<p>For each category of vehicles and safety equipment</p>				

(private, commercial, public, helmets) are compliance regimes in place to ensure adherence to the specified safety standards and rules to achieve the desired focus on results? <ul style="list-style-type: none"> ▪ Vehicle certification? ▪ Vehicle inspection? ▪ Helmet certification? 				
Do the specified safety standards and rules and related compliance regimes and safety rating surveys clearly address the safety priorities of high-risk road user groups to achieve the desired focus on results?				
Do the specified safety standards and rules and related compliance regimes and safety rating surveys compare favorably with international good practice?				

Checklist 4: Entry and exit of road users to and from the road network

Questions	Yes	Partial	Pending	No
Have comprehensive safety standards and rules and associated performance targets been set to govern the entry and exit of road users to and from the road network to achieve the desired focus on results? <ul style="list-style-type: none"> ▪ Private drivers and passengers? <ul style="list-style-type: none"> ○ Cars? ○ Heavy vehicles? ○ Mopeds? ○ Motor cycles ▪ Commercial drivers? ▪ Public transport drivers? <ul style="list-style-type: none"> ○ Taxis? ○ Buses? ○ Non-motorized vehicles? 				
For each category of driver (private, commercial, public) are compliance regimes in place to ensure adherence to the specified safety standards and rules to achieve the desired focus on results? <ul style="list-style-type: none"> ▪ Driver testing? ▪ Roadside checks? 				
Do the specified safety standards and rules and related compliance regimes clearly address the safety priorities of high-risk road user groups to achieve the desired focus on results? <ul style="list-style-type: none"> ▪ Young drivers? ▪ Older drivers? ▪ Commercial drivers? ▪ Public transport drivers? 				
Do the specified safety standards and rules and related compliance regimes compare favorably with international good practice?				

Checklist 5: Recovery and rehabilitation of crash victims from the road network

Questions	Yes	Partial	Pending	No
Have comprehensive safety standards and rules and associated performance targets been set to govern the recovery and rehabilitation of crash victims from the road network to achieve the desired focus on results? <ul style="list-style-type: none"> ▪ Pre-hospital? ▪ Hospital? ▪ Long-term care? 				
For each category of post-crash service (pre-hospital, hospital, and long-term care) are compliance regimes in place to ensure adherence to the specified safety standards and rules to achieve the desired focus on results?				
Do the specified safety standards and rules and related compliance regimes clearly address the safety priorities of high-risk road user groups to achieve the desired focus on results?				
Do the specified safety standards and rules and related compliance regimes compare favorably with international good practice?				

Checklist 6: Coordination

Questions	Yes	Partial	Pending	No
Are interventions being coordinated horizontally across agencies to achieve the desired focus on results?				
Are interventions being coordinated vertically between national, regional, provincial and city agencies to achieve the desired focus on results?				
Have robust intervention delivery partnerships between agencies, industry, communities and the business sector been established to achieve the desired focus on results?				
Have parliamentary committees and procedures supporting the coordination process been established to achieve the desired focus on results?				

Checklist 7: Legislation

Questions	Yes	Partial	Pending	No
Are legislative instruments and procedures supporting interventions and institutional management functions sufficient to achieve the desired focus on results?				
Are legislative instruments and procedures supporting interventions and institutional management functions regularly reviewed and reformed to achieve the desired focus on results?				

Checklist 8: Funding and resource allocation

Questions	Yes	Partial	Pending	No
Are sustainable funding mechanisms supporting interventions and institutional management functions in place to achieve the desired focus on results? <ul style="list-style-type: none"> ▪ Central budget? ▪ Road fund? ▪ Tolls? ▪ Fees? ▪ Other sources? 				
Are formal resource allocation procedures supporting interventions and institutional management functions in place to achieve the desired focus on results? <ul style="list-style-type: none"> ▪ Cost effectiveness? ▪ Cost benefit? 				
Is there an official Value of Statistical Life and related value for injuries to guide resource allocation decisions?				
Are funding mechanisms and resource allocation procedures supporting interventions and institutional management functions sufficient to achieve the desired focus on results?				

Checklist 9: Promotion

Questions	Yes	Partial	Pending	No
Is road safety regularly promoted to achieve the desired focus on results? <ul style="list-style-type: none"> ▪ Overall vision and goals? ▪ Specific interventions? ▪ Specific target groups? 				

Checklist 10: Monitoring and evaluation

Questions	Yes	Partial	Pending	No
For each category of roads (national, regional, provincial, city) are sustainable systems in place to collect and manage data on road crashes, fatality and injury outcomes, and all related road environment/vehicle/road user factors, to achieve the desired focus on results?				
For each category of roads (national, regional, provincial, city) are sustainable systems in place to collect and manage data on road network traffic, vehicle speeds, safety belt and helmet wearing rates, to achieve the desired focus on results?				
For each category of roads (national, regional, provincial, city) are regular safety rating surveys undertaken to quality assure adherence to specified safety standards and rules, to achieve the desired focus on results? <ul style="list-style-type: none"> ▪ Risk ratings? 				

<ul style="list-style-type: none"> ▪ Road protection scores? 				
<p>For each category of roads (national, regional, provincial, city) are systems in place to collect and manage data on the output quantities of safety interventions implemented to achieve the desired focus on results?</p> <ul style="list-style-type: none"> ▪ Safety engineering treatments? ▪ Police operations? ▪ Educational activities? ▪ Promotional activities? ▪ Driver training? ▪ Vehicle testing? ▪ Emergency medical services? 				
<p>For each category of vehicles and safety equipment (private, commercial, public, helmets) are systematic and regular safety rating surveys undertaken to quality assure adherence to the specified safety standards and rules to achieve the desired focus on results?</p> <ul style="list-style-type: none"> ▪ Vehicle safety rating? ▪ Helmet testing? 				
<p>For each category of post-crash service (pre-hospital, hospital, long-term care) are systematic and regular surveys undertaken to quality assure adherence to the specified standards and rules to achieve the desired focus on result?</p>				
<p>Are regular surveys in place to monitor and evaluate community attitudes to road safety interventions to achieve the desired focus on results?</p>				
<p>Are systems in place to monitor and evaluate safety performance against targets regularly to achieve the desired focus on results?</p>				
<p>Do all participating agencies and external partners and stakeholders have open access to all data collected?</p>				

Checklist 11: Research and development and knowledge transfer

Questions	Yes	Partial	Pending	No
<p>Has a national road safety research and development strategy been established to achieve the desired focus on results?</p> <ul style="list-style-type: none"> ▪ Vehicle factors? ▪ Highway factors? ▪ Human factors? ▪ Institutional factors? ▪ Other factors? 				
<p>Has an independent national road safety research organization been established to achieve the desired focus on results?</p> <ul style="list-style-type: none"> ▪ Vehicle factors? ▪ Highway factors? ▪ Human factors? ▪ Institutional factors? ▪ Other factors? 				

<p>Have demonstration and pilot programs been conducted to achieve the desired focus on results?</p> <ul style="list-style-type: none"> ▪ Vehicle factors? ▪ Highway factors? ▪ Human factors? ▪ Institutional factors? ▪ Other factors? 				
<p>Are mechanisms and media in place to disseminate the findings of national road safety research and development to achieve the desired focus on results?</p> <ul style="list-style-type: none"> ▪ Conferences? ▪ Seminars? ▪ Training? ▪ Journals? ▪ Other? 				

(i) **Checklist 12: Lead agency role and institutional management functions**

Questions	Yes	Partial	Pending	No
<p>Does the lead agency (or de facto lead agency/agencies) effectively contribute to the 'results focus' management function?</p> <ul style="list-style-type: none"> ▪ 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 stakeholder accountability for results? 				
<p>Does the lead agency (or de facto lead agency/agencies) effectively contribute to the 'coordination' management function?</p> <ul style="list-style-type: none"> ▪ 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?? 				
<p>Does the lead agency (or de facto lead agency/agencies) effectively contribute to the 'legislation' management function?</p> <ul style="list-style-type: none"> ▪ Reviewing the scope of the legislative framework? ▪ Developing legislation needed for the road safety strategy? ▪ needs to achieve results in relation to other ▪ Consolidating legislation? ▪ Securing legislative resources for road safety? 				
<p>Does the lead agency (or de facto lead agency/agencies) effectively contribute to the 'funding and resource allocation' management function?</p> <ul style="list-style-type: none"> ▪ Ensuring sustainable funding sources? ▪ Establishing procedures to guide the allocation of resources across safety programs? 				
<p>Does the lead agency (or de facto lead agency/agencies) effectively contribute to the 'promotion' management function?</p> <ul style="list-style-type: none"> ▪ Promotion of a far-reaching road safety vision or goal? ▪ Championing and promotion at high level? 				

<ul style="list-style-type: none"> ▪ Multi-sectoral promotion of effective intervention 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? 				
<p>Does the lead agency (or de facto lead agency/agencies) effectively contribute to the ‘monitoring and evaluation’ management function?</p> <ul style="list-style-type: none"> ▪ Establishing and supporting 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? 				
<p>Does the lead agency (or de facto lead agency/agencies) effectively contribute to the ‘research and development and knowledge transfer’ management function?</p> <ul style="list-style-type: none"> ▪ 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 best practice guidelines? ▪ Setting up demonstration projects? 				

ANNEX 3: BACKGROUND NOTE ON LEAD AGENCY AND INTER-AGENCY COORDINATION ARRANGEMENTS

Road safety is a highly complex issue and experience shows that effective leadership and coordination entails *both* a) the establishment of a lead agency/department for road safety and b) establishment of an effective multi-sectoral decision-making coordination body for which the lead agency for road safety provides a secretariat.^{41 42}

New arrangements need to be put in place in Georgia as a priority to provide capacity for to a range of key institutional management functions to be carried out to manage road safety and bring outcomes under control. This Annex provides background on a good practice framework for establishing such arrangements.

1. LEAD AGENCY ARRANGEMENTS

1.1 Why is a lead agency necessary?

The *World Report on Road Traffic Injury Prevention* jointly released by the World Health Organization and World Bank in 2004, highlights the fundamental role of the lead agency in ensuring the effective and efficient functioning of the road safety management system. The lead agency is key to the efficient functioning of the road safety management system and needs to be formally established with authority to make decisions, manage resources and coordinate the efforts of all participating sectors of government.

As World Bank guidelines on implementing *World Report* recommendations (2009) underline, in the absence of such leadership with a sustained focus on results, efforts aimed at improving, for example, program coordination across government and regionally and locally, funding, and promotion will often be illusory and unsustainable. Road safety management capacity reviews have identified that action plans prepared without a designated agency mandated to lead their implementation and a realistic and sustainable funding base are likely to remain paper plans or fail to be properly implemented and make little positive impact on results .

1.2 What are good practice lead agency functions?

In good practice countries, the lead agency plays a pre-eminent role in most of the key institutional management functions. It takes responsibility for what it is solely accountable for as well as prompting, encouraging and assisting the activities of other key partners and stakeholders. The lead agency plays a dominant role in *results focus* – the overarching institutional management function – which establishes the road safety strategy, targets and

⁴¹ Global Road Safety Facility, World Bank, 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 Specification of Lead Agency Reforms, Investment Strategies and Safe System Projects*, World Bank Global Road Safety Facility, Washington DC.

⁴² OECD (2008) *Towards Zero: Achieving Ambitious Road Safety Targets through a Safe System Approach*. OECD, Paris

implementation framework (whether at project or jurisdictional level) and the related *coordination* function. The lead agency takes responsibility for:

- Establishing and leading road safety projects, programmes and strategies with a focus on results; developing and seeking agreement across the road safety partnership on visions and measurable targets for the long-term and interim and developing the implementation framework to achieve these on behalf of government;
- Horizontal inter-governmental coordination via the national coordination body to deliver projects and programmes;
- Vertical coordination of activity at lower levels of government to deliver projects and programmes;
- Coordination of necessary bi-lateral delivery partnerships between government partners, and coordination of the professional, non-governmental and business sectors and Parliamentary groups and committees;
- Ensuring a comprehensive legislative framework that meets the road safety task;
- Securing sustainable sources of annual funding for road safety and a rational framework for resource allocation;
- High-level promotion of road safety strategy across government and society;
- Monitoring and evaluation of performance based on inputs from the national crash injury database, surveys and other information and the publication of annual reports.
- Direction of research and development and knowledge transfer

Successful practice underscores the need for the agency to be a governmental body and for its leadership role to be accepted and fully supported across government to ensure the development of appropriate funding and capacity for country road safety management. Good governance requirements generally comprise separation of legislative and enforcement functions.

The lead agency would be expected to operate on a 'first amongst equals' basis to enable well-orchestrated road safety management in Georgia. The lead office for road safety would identify and work, in full cooperation amongst senior management and via daily working relationships with the key stakeholders, on national projects and programmes and data needed to inform the implementation of national road safety strategy;

While lead agencies can take different institutional forms as outlined in Section 1.3 , they must be adequately funded to enable them to carry put the key lead agency functions cited above and to be publicly accountable for their performance. A central road safety office with adequate human, technical and financial resources is essential.

For Georgia it is recommended that a small but appropriately resourced road safety department is necessary comprising a minimum of 10-15 people. Recommended next steps within funded road safety project development to facilitate learning by doing are to:

- Designate the lead agency / project lead agency
- Establish and resource a lead agency office
- Establish and operationalize the coordination body/project steering group
- Implement, monitor and evaluate the various road safety project components
- Prepare and approve a national rollout program following the completed project activity.

1.3 What form should the lead agency take?

While the lead agency role can be clearly defined in terms of its contribution to the effective delivery of core institutional management *functions*, organizationally it can take on varied structural and procedural *forms* and there is no single model for this that can be prescribed as being best. Countries must create a lead agency appropriate to their own circumstances given the diversity of country conditions which road safety managers have to meet. Four broad types of governmental lead agency structures are evident in 'good practice' jurisdictions.⁴³ Options 2 and 3 are typically found in most of Europe:

- (i) Designated, stand-alone entity with a coordinating committee or cabinet representing partner government agencies e.g. Land Transport Safety Authority, New Zealand,
- (ii) Transport Ministry department as lead agency e.g. Department of Transport, Great Britain, the Netherlands,
- (iii) Roads authority as lead agency (but having more functions than network and safety engineering management e.g. VicRoads, Victoria, Australia)
- (iv) Stand-alone lead agency office in the Head of State's department e.g. Office of Road Safety Western Australia.

2. INTER-AGENCY COORDINATION ARRANGEMENTS

The *Coordination* function 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 whether for projects or programmes. In good practice road safety management it is addressed across four key dimensions:

- horizontally across central government

⁴³ Global Road Safety Facility, World Bank, 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 Specification of Lead Agency Reforms, Investment Strategies and Safe System Projects*, World Bank Global Road Safety Facility, Washington DC.

- vertically from central to regional and local levels of government
- specific delivery partnerships between government, non-government and business at the central, regional and local levels
- parliamentary relations at central, regional and local levels

To be effective, coordinating arrangements must allow for accountable decision-making at senior institutional levels. These arrangements must be appropriately resourced and include a dedicated secretariat in the lead agency to harmonize delivery arrangements across partner agencies to achieve road safety results and serve as a platform for mobilizing political will and resources.

The immediate priority in Georgia is to re-establish and re-focus inter-agency coordination across levels of central government and a good practice model is recommended below. This model can be used at national level and at project steering group level.

2.1 Recommended composition of the National Road Safety Coordination Council

As set out below, it is recommended that the National Road Safety Coordination Council should comprise a hierarchy of levels. It is important to keep membership to those ministries with daily operational responsibilities for road safety in the upper tiers.

It should comprise a senior executive group of Deputy Secretaries (Transport, Internal Affairs, Roads, Health and Education, City) reporting to their Ministers.

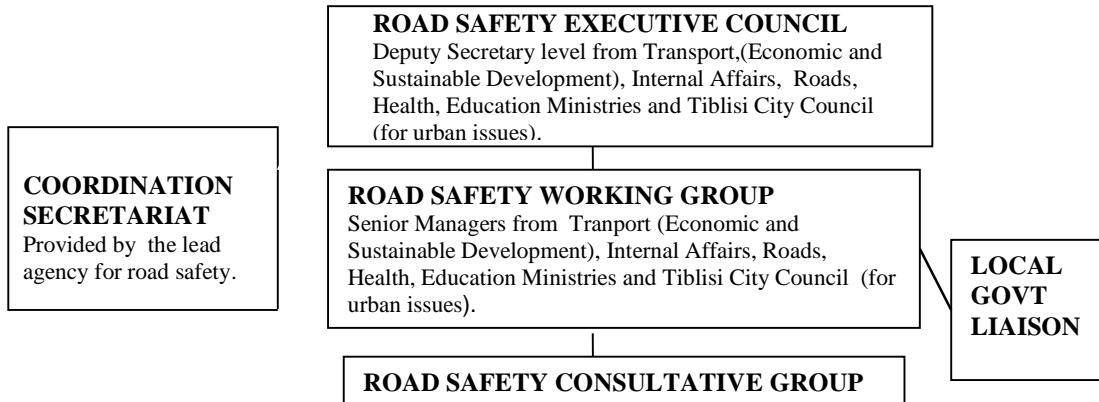
This executive group is supported by senior road safety managers working group from these Ministries/ City. Secretariat functions should be established and provided by the lead road safety agency.

An advisory/consultative group of other government agencies and parties external to government should be set up within the hierarchy. In this way, the coordination body becomes an effective decision-making hierarchy across Government at executive and working levels rather than a discussion forum.

To establish and maintain effective liaison with local governments a special local government consultative mechanism is proposed.

The Council and supporting structure should be mirrored at local level in due course to allow the implementation of local road safety action plans in support of the national road safety strategy. The initial local government liaison arrangements will assist this future step.

NATIONAL ROAD SAFETY COORDINATION COUNCIL/ PROJECT STEERING GROUP



The National Road Safety Council of Georgia would comprise a decision-making hierarchy and partnership for achieving road safety results through the development and implementation of well-developed and coordinated road safety strategy, programmes and projects and targets which have been agreed across Government. The hierarchy comprises three main levels:

The Road Safety Executive Council comprises the Chief Executives (Deputy Secretaries) of the key governmental stakeholders and reports to, supports and receives direction from Ministers. Its role is in communicating, coordinating and agreeing on top-level strategy, programmes and projects between agencies on road safety issues. It monitors and reports progress to the Government through its Ministers. The Group meets approximately 4 times each year and the Chair is occupied by the lead agency for road safety .

The Road Safety Working Group is the hub of the road safety co-ordination meeting monthly and comprises senior managers from Government departments with responsibilities for day to day road safety management. The Chair is occupied by the lead agency for road safety With the lead agency as the key link, the group coordinates implementation of the road safety strategy, develops and implements programmes and projects interventions, reviews identified programmes and promotes and monitors a coordinated country-wide programme of activities.

A Road Safety Consultative Group can also be set up as a consultative body comprising all the main road safety stakeholders, including the non-governmental sector. It meets quarterly and is chaired by the lead agency head of road safety.

ANNEX 4: BACKGROUND NOTE ON THE *SAFE SYSTEM* APPROACH

1. EVOLUTION OF RESULTS FOCUS TO *SAFE SYSTEM* ⁴⁴

Successive shifts in road safety management thinking and practices in high-income countries have been evident over the last fifty years. Rapid motorization and escalating road deaths and injuries began in many OECD countries in the 1950s and 1960s and concurrently the ambition to improve road safety outcomes began to grow. Since the 1950s there have been four significant phases of road safety management which have become progressively more ambitious in terms of the results desired.

(i) Results Focus—Phase 1: Focus on driver interventions.

In the 1950s and 1960s safety management was generally characterized by dispersed, uncoordinated, and insufficiently resourced institutional units performing isolated single functions (Trinca et al, 1988). Road safety policies placed considerable emphasis on the driver by establishing legislative rules and penalties, supported by information and publicity, and expecting subsequent changes in behavior. It was argued that since human error mostly contributed to crash causation it could be addressed most effectively by educating and training the road user to behave better. Placing the onus of blame on the road traffic victim acted as a major impediment to the appropriate authorities fully embracing their responsibilities for a safer road traffic system (Rumar, 1999)

ii) Results Focus—Phase 2: Focus on system-wide interventions.

In the 1970s and 1980s these earlier approaches gave way to strategies which recognized the need for a systems approach to intervention. Dr. William Haddon, an American epidemiologist, developed a systematic framework for road safety based on the disease model which encompassed infrastructure, vehicles and users in the pre-crash, in-crash and post crash stages (Haddon, 1968). Central to this framework was the emphasis on effectively managing the exchange of kinetic energy in a crash which leads to injury, to ensure that the thresholds of human tolerances to injury were not exceeded. The scope of policy broadened from an emphasis on the driver in the pre-crash phase to also include in-crash protection (both for roadsides and vehicles) and post-crash care. This focused road safety management on a system-wide approach to interventions and the complex interaction of factors which influence injury outcomes. It underpinned a major shift in road safety practice which took several decades to evolve. However, the focus remained at the level of systematic interventions and did not directly address the institutional management functions producing these interventions or the results that were desired from them. The strengths of this approach mask its inherent weakness as being viewed as embracing all the essential elements of the road safety management system, whereas the institutional context is not directly addressed. In many ways much of the contemporary debate on road safety is still bounded by the dimensions of the ‘Haddon Matrix’ which only addresses system-wide *interventions* and for this reason institutional management functions and the related focus on results still receive limited attention.

(iii) Results Focus—Phase 3: Focus on system-wide interventions, targeted results and institutional leadership.

By the early 1990s good practice countries were using intervention focused plans setting numerical outcome targets to be achieved with packages of system-wide measures based on the evidence generated from ongoing monitoring and evaluation. It had become clear that growing motorization need not inevitably lead to increases in death rates but could be reversed by continuous and planned investment in improving the quality of the traffic system. The United Kingdom, for example, halved its death rate (per 100,000 head of population) between 1972 and 1999 despite a doubling in motorized vehicles. Stronger expressions of political will were evident and institutional management functions were becoming more effective. Institutional leadership roles were identified, inter-governmental coordination processes were established and funding and resource allocation mechanisms and processes were becoming better aligned with the results required. Developments in Australasian jurisdictions (e.g., Victoria and New Zealand) further enhanced institutional management functions concerning results focus, multi-sectoral coordination, delivery

²² Source: Bliss T and Breen J, Country Guidelines for the Conduct of Road Safety Management Capacity Reviews and the Specification of Lead Agency Reforms, Investment Strategies and Safe System Projects. Global Road Safety Facility, World Bank (2009)

partnerships, and funding mechanisms (WHO, 2004; Bliss, 2004; Wegman et al., 2006; Trinca et al., 1988). Accountability arrangements were enhanced by the use of target hierarchies linking institutional outputs with intermediate and final outcomes to coordinate and integrate multi-sectoral activities. This phase laid the foundation for today's good practice and reflects the state of development in many higher performing countries today. The strengths of this approach can turn into weaknesses to the extent that the focus on safer people, safer vehicles, safer roads and safer systems diverts attention away from the road network where the actual deaths and injuries are incurred. Successful targeted plans have achieved large measurable gains in improved road user behavior and this success helped to reinforce the earlier approach which focused purely on driver interventions. The sharpened emphasis on setting ambitious but achievable targets could also inhibit innovation, to the extent that targets are bounded by what is deemed to be technically feasible and institutionally manageable, thus blunting the aspiration to go beyond what existing evidence suggests is achievable.

(iv) Results Focus—Phase 4: Focus on Safe System long-term elimination of deaths and serious injuries and shared responsibility.

By the late 1990s two of the world's best performing countries had determined that improving upon the ambitious targets that had already been set would require rethinking of interventions and institutional arrangements. The Dutch *Sustainable Safety* and Swedish *Vision Zero* strategies set a goal to make the road system intrinsically safe (Wegman et al., 1997; Tingvall, 1995; Committee of Inquiry into Road Traffic Responsibility, 1999).

The emphasis on effectively managing the exchange of kinetic energy in a crash to ensure that the thresholds of human tolerances to injury were not exceeded (as originally promoted in Phase 2) was revitalized and given an ethical underpinning in the sense that road deaths and injuries were seen as an unacceptable price for mobility. The implications of this level of ambition are still being worked through in the countries concerned and elsewhere. These strategies recognize that speed management is central and have refocused attention on road and vehicle design and related protective features. The blame the victim culture is superseded by blaming the traffic system which throws the spotlight on the shared responsibility and accountability for the delivery of a *Safe System*.

For example, *Vision Zero* aims for an approach in which safe vehicle design delivers a protected occupant into a road system where conflict is minimized by design and energy transfer in crashes is safely controlled. In this system users comply with risk-averse behavioral norms created by education, enforcement and incentives. The emphasis is on the road users' right to health in the transport system and their right to demand safer systems from decision-makers and road and vehicle providers. The strengths of this approach are becoming increasingly evident. What was previously seen as radical and unachievable by many road safety practitioners and policymakers has quickly become the benchmark and central debating point for analyses of what constitutes acceptable road safety results.

The tools and accumulated practices used to support the results management framework for the *Safe System* approach are the same as those used in the past to prepare targeted national plans. Targets are still set as milestones to be achieved on the path to the ultimate goal, but the interventions are now shaped by the level of ambition, rather than vice versa. Innovation becomes a priority to achieve results that go well beyond what is currently known to be achievable. In moving forward the *Safe System* approach reinterprets and revitalizes what is already known about road safety, and raises critical issues about the wider adoption of interventions that have proven to be effective in eliminating deaths and serious injuries (e.g., median barriers). The question becomes one of how to introduce these proven safety interventions more comprehensively and rapidly, and indeed this question applies to all elements of the road safety management system with potential for improvement.

The shift to a *Safe System* approach is also well attuned to the high priority global, regional and country development goals of sustainability, harmonization and inclusiveness. A *Safe System* is dedicated to the elimination of deaths and injuries that undermine the sustainability of road transport networks and the communities they serve. Its focus on safer and reduced speeds harmonizes with other efforts to reduce local air pollution, greenhouse gases and energy consumption. And its priority to afford protection to all road users is inclusive of the most vulnerable at-risk groups such as pedestrians, young and old, cyclists and motorcyclists. These co-benefits of shifting to a *Safe System* approach further strengthen the business case for its implementation.

2. THE RELEVANCE OF SAFE SYSTEM APPROACH TO LOW AND MIDDLE-INCOME COUNTRIES ²³

The *Safe System* approach:

- addresses all elements of the road traffic system in an integrated way;
- emphasizes the reduction of death and long-term injury rather than the prevention of crashes which as the *World Report* highlighted is an unrealistic goal;
- challenges the fatalistic view aptly termed ‘the scandal of tolerance’ * that road traffic injury is the price to be paid for achieving mobility and economic development by setting a societal goal with step-wise targets to eliminate road deaths and serious injuries in the long-term which can motivate and encourage all involved;
- accentuates the shared and accountable responsibility of designers and users of the road network for achieving road safety results;
- addresses limitations in human capacities in the setting of safety standards and rules and related compliance regimes for the planning, design and use of the road network; the conditions of entry and exit of vehicles and road users to the road network; and the recovery and rehabilitation of crash victims from the road network;
- demands equity in addressing the safety needs of both motorized and non-motorized users;
- aligns well with the goals of sustainable development and presents opportunities for achieving co-benefits with other societal objectives such as improved local air quality, greenhouse gas reduction, energy security, poverty reduction, social inclusiveness and occupational health and safety;
- necessitates the strengthening of all elements of the road safety management system, especially institutional management functions, to achieve sustainable success.

* Allsop RE, (2002), *Safer cities: challenges and opportunities, Best in Europe 2002 – Safer Cities, ETSC, Brussels*,

²³ Source: Bliss T and Breen J, *Country Guidelines for the Conduct of Road Safety Management Capacity Reviews and the Specification of Lead Agency Reforms, Investment Strategies and Safe System Projects. Global Road Safety Facility, World Bank (2009)*; OECD (2008) *Towards Zero: Achieving Ambitious Road Safety Targets through a Safe System Approach*, OECD, Paris; World Bank Global Road Safety Facility (2009), Module 1 Road Safety Training Workshop World Bank, Washington DC, June 17-19, 2009

ANNEX 5: ROAD SAFETY MANAGEMENT CAPACITY REVIEW TEAM

Jeanne Breen

Jeanne Breen is a global expert in good practice road safety management and strategy review with 34 years of global, regional and national experience as an influential practitioner in low, middle and high-income countries. Jeanne Breen is the co-author of the World Bank's global country guidance on good practice road safety management (2009), has produced World Bank/SSATP global guidance on the safety management of regional trade corridors in low and middle-income countries and is updating the road safety manual for the World Road Congress (PIARC). She has specific and extensive experience of road safety management capacity review, definition of investment strategy and project design in a wide variety of jurisdictional settings. This has involved successful working with the senior management of governmental agencies to identify strengths and weaknesses in the road safety management system and forging cross-sectoral consensus on next steps. She has worked in this capacity in China, India, Ukraine, Albania, Armenia, Bosnia and Herzegovina, Serbia, Montenegro, and Bangladesh for the World Bank – in the Russian Federation for the European Conference of Ministers of Transport (now ITF) and in New Zealand, for the Land Transport Safety Authority. She led an independent peer review of road safety management in Sweden and stakeholder workshop commissioned by the Swedish Roads Administration and published in (2008) and co-authored a review in Western Australia for the Office of Road Safety (2010). Jeanne Breen has assisted the European Commission in the development of road safety strategies and action programmes (1993-2020) and more recently in the development of an Injuries Strategy (2012/2013). She contributes a range of state of the art road safety reviews and web texts for the European Road Safety Observatory (ERSO) as well as directly for the European Commission. Jeanne Breen was the principal writer of the WHO/World Bank World Report on Road Traffic Injury (2004). She led the UK contribution to the development of ISO 39001 on road traffic safety management systems..

Previous to working as an independent consultant (from 2004) and with a background in road safety research, Jeanne Breen set up and directed two successful independent non-governmental road safety organisations in Westminster and Brussels – the UK Parliamentary Advisory Council for Transport Safety (PACTS) and the European Transport Safety Council (ETSC). Both organizations are associated with the promotion and introduction of a range of evidence-based road safety measures as well as the promotion of targeted road safety strategies and programmes. She started her road safety career as a Research Associate at the University of Birmingham's Accident Research Unit in the UK.