

Tempulli College
Pristina, 24-27 Jan. 2019



International Road Federation
Fédération Routière Internationale
Federación Internacional de Carreteras

Road Safety Management: an overview of international developments

Susanna Zammataro
IRF Director General

www.irfnet.ch

The International Road Federation

Global, Independent, Not-for-profit Organisation

Established in **1948**. Based in **Geneva**, Switzerland

UN Ecosoc status since 1951.

Assisting **public** and **private** stakeholders in Roads & Mobility sector for the past **70 years** with:

3 Strategic Pillars of Activities

1. Knowledge
2. Connections
3. Advocacy



Members & Partners
in more than
90 countries



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Thematic Streams



IRF Road Safety Work: some examples

TOOLS

RADaR

Accident Data Recorder

TRAINING
COURSES



UNIVERSITY OF
BIRMINGHAM

Road Safety Management
Road Safety Auditors
Enhanced First Aid Training

ADVOCACY



UNRSC



KNOWLEDGE
PLATFORM



www.gtkp.com



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GTKP Website and Knowledge Centre

www.gtkp.com

The screenshot displays the gTKP website interface. At the top left is the gTKP logo with the text "global Transport Knowledge Practice" and "powered by IRF". The top navigation bar includes links for Home, About, Themes, Knowledge Center, IRF Proceedings, and Contact. A left sidebar lists various themes such as Environment & Climate Change, Finances & Economics, Governance, Intelligent Transport Systems, Road Safety, Rural Transport, Social Development, Trade & Transport, and Urban Mobility. The main content area features a large banner for the International Road Federation (IRF) with the text "Welcome to the global Transport Knowledge Resource Centre!" and a "Read more" link. Below this is a "Latest additions to the library" section with a grid of document titles and dates. To the right of the banner is a yellow "Register, it's Free!" box with input fields for "Firstname", "Lastname", and "Your e-mail address", and a "Register" button circled in red. Below the registration box is a "Global Plan for Decade of Action" section with a "PILLARS" list containing five items: 1. Road Safety Management, 2. Safer Roads and Mobility, 3. Safer Vehicles, 4. Safer Road Users, and 5. Post-crash Response. At the bottom left, there is a "Registered User Login" box with fields for "Username" and "Password", a "Login" button, and links for "Register now", "Forgot password", and "Troubles? Contact us". Below the login box is a "Search Knowledge Center" box with a search input field and a "Select related theme" dropdown menu.

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14 Nov 2016 Extending Emergency Transport Ser...	24 Oct 2016 Road Safety Management

Most popular

05 Nov 2013	01 Dec 2009
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Global Plan for Decade of Action

PILLARS

- 1 Road Safety Management
- 2 Safer Roads and Mobility
- 3 Safer Vehicles
- 4 Safer Road Users
- 5 Post-crash Response

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Projects

Safe Roads
Safe Kids!



**GLOBAL
ROAD
DATAWAREHOUSE**

Safe Roads, Safe Kids!

- Joint Project with MCM
- Safety around schools
- Focus: Casablanca



- Support from FIA Road Safety Grant Programme
- Collaboration with iRAP and AMEND

الطرق السيارة بالمغرب
Autoroutes du Maroc

SaferAfrica

Setting up a **dialogue platform between Africa and Europe** to create favourable conditions and opportunities for the **effective implementation of actions for road safety and traffic management.**

Funded under EU “Horizon 2020 – Mobility for Growth”

Duration: **36 months**

Funding: **€ 3 million**

Consortium: **16 partners**



[www. safer africa.eu](http://www.safer africa.eu)

Advisory Board



African Road Safety Observatory

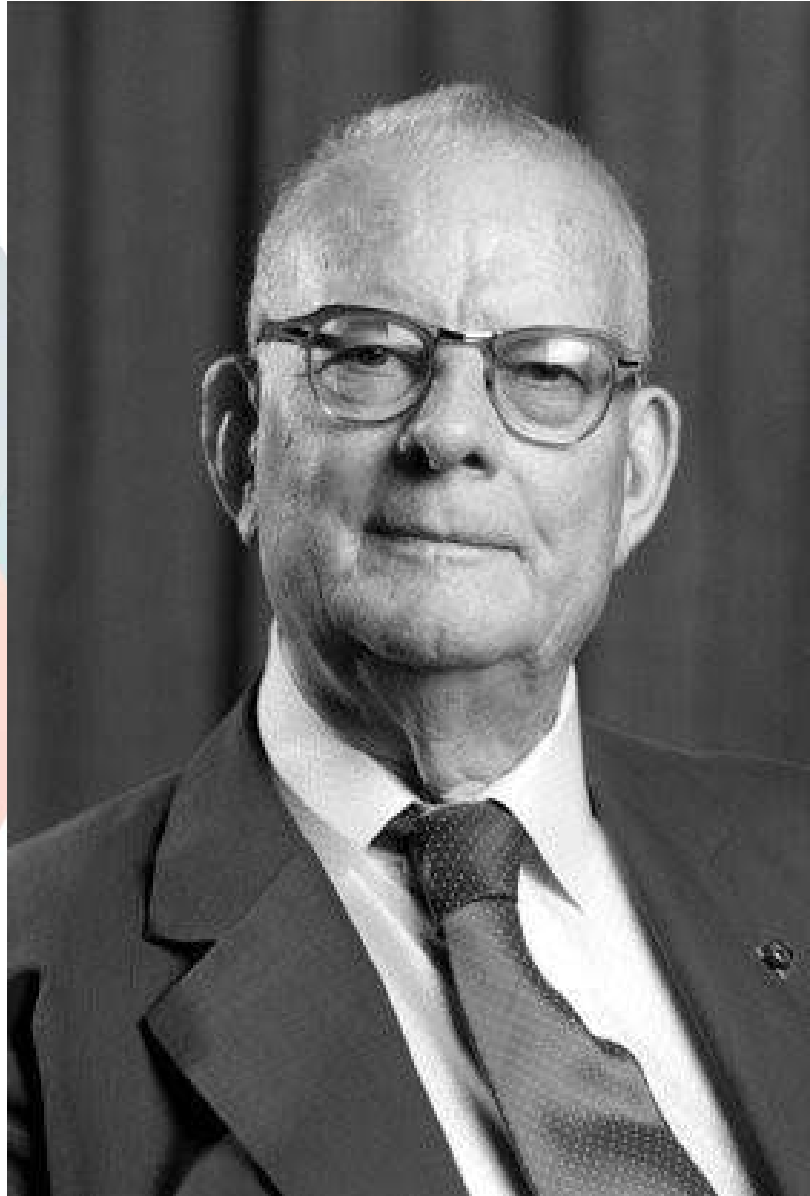
www.africanroadsafetyobservatory.org

- Digital Dialogue Platform to exchange knowledge, experiences and solutions
- Resources and tools (statistics, reports and factsheets)
- Dialogue and crowdsourcing functions





DATA



“Without data
you’re just
another person
with an opinion.”

- W. Edwards Deming,
Data Scientist



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Road Safety Management

Strengthening Data Systems

The importance of data on road traffic fatalities and injuries for **monitoring** country-level trends, **tailoring prevention** efforts, **assessing progress** and comparing the scale of road traffic deaths relative to deaths from other causes cannot be overstated.



www.irfnet.ch

Issues in data collection

- Road safety data is NOT considered a priority
- Little **coordination** between agencies/authorities
- Lack of **skills**, lack of **tools**, lack of a solid **process**
- Not homogenous use of definitions
- No centralized data centre in country, region, continent
- No allocated funding
- Very little attention to rural roads



A positive example

- **Change in law**: recognised importance of Statistics for policy making
- **Specific agency created**
- Clarity on source of data, **methodology**
- Investment on Statistical and IT **training**



IRF World Road Statistics

WRS 2018



Road Networks



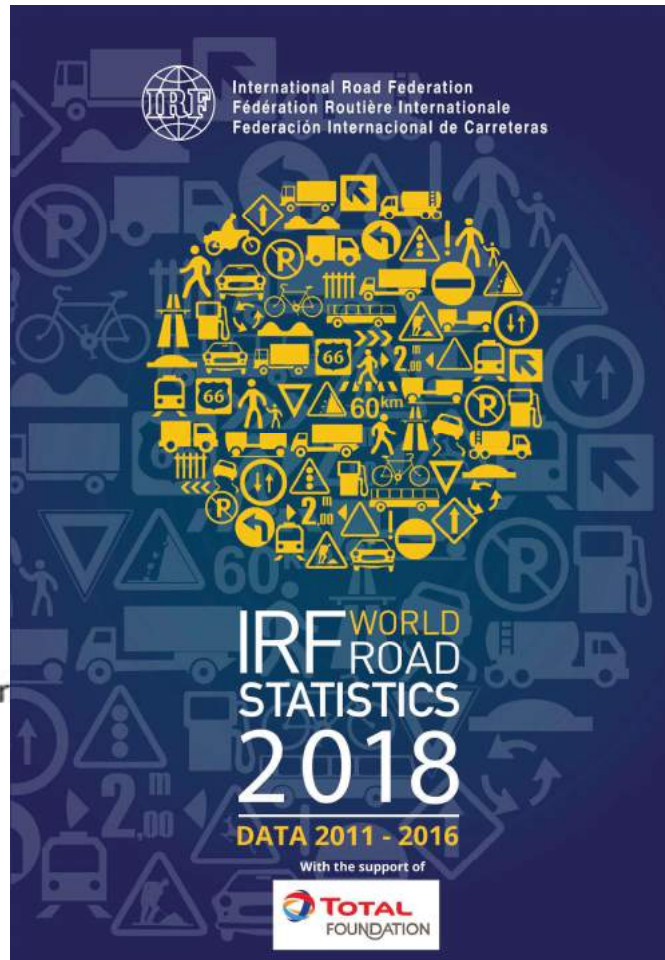
Country Profile



Production, Imports, First
Registration & Export of Motor
Vehicles



Road Traffic



Road Accidents



Multimodal
Traffic Comparisons



Vehicles in Use



Road Expenditure
& Revenue

www.worldroadstatistics.org

WRS in a nutshell

- Edited yearly since 1964 (**55 years**)
- More than **205 countries, 45 indicators**, 9 sections
- Data collected from **primary statistical sources** (Ministries, Road Authorities, National Statistical Offices)
- **Definitions** based on the Glossary of Transport Statistics (ITF/EUROSTAT/UNECE) and The World Bank
- Data used by Governments, Investment & Development Banks, Public & Private Companies, Research Institutes & Universities, NGOs, International Organizations, etc.



THE METHODOLOGY

- **Annual survey** via questionnaire in four different languages (English, French, Spanish and Russian).
- The data collected is **complemented** by using national statistics from **secondary sources** such as official yearbooks.
- **Data is checked** in several ways; comparisons with data from various sources, with historical data, reconciling the definitions of indicators, questionable data



One key point in these statistics:

Ensure that the **data** needed for specific indicators is **consistent** across countries and over time.



**In the light of discussions on
Regional RS Observatories,
How to help?**

Global Road Data Warehouse



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IRF Global Road Data Warehouse



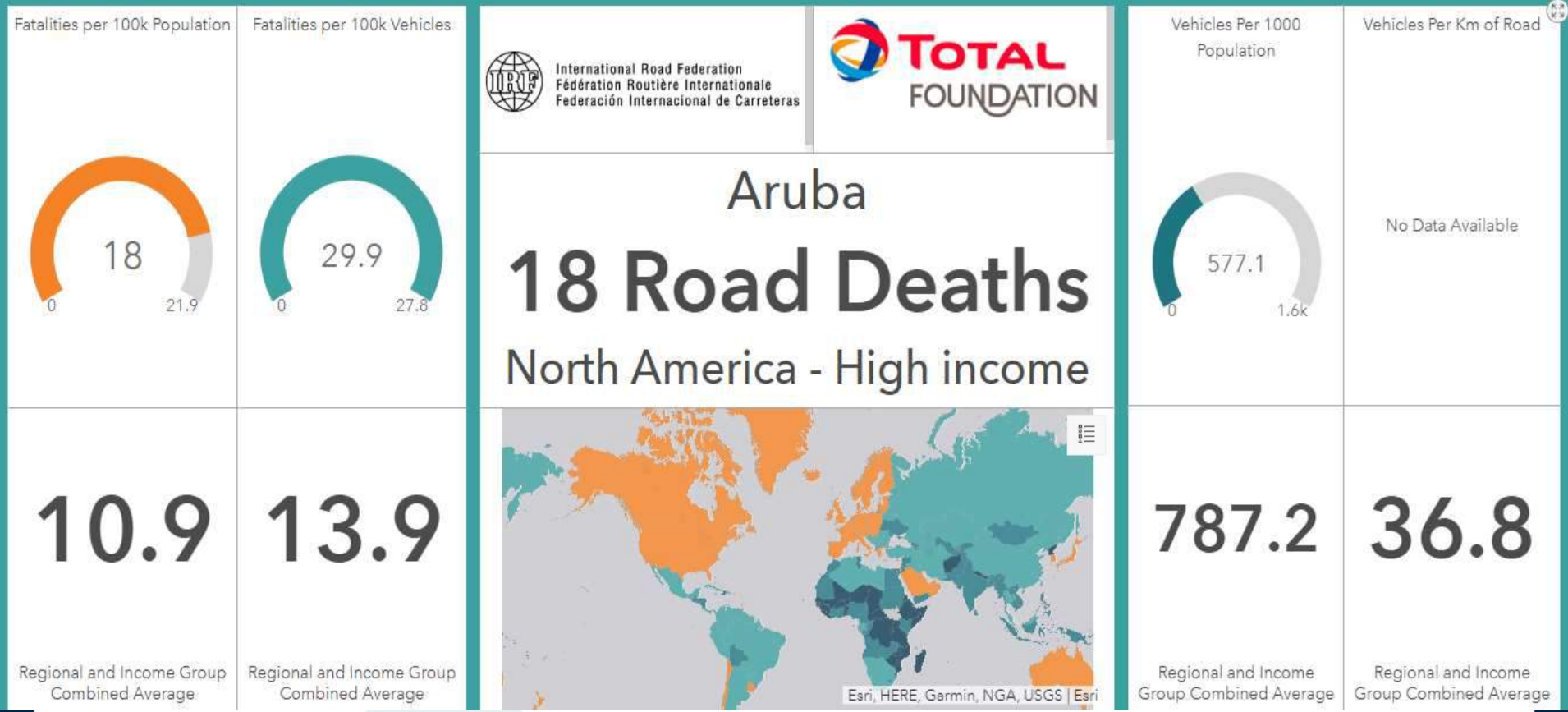
1. Project supported by
2. Multifunction on-line data platform
3. IRF datasets + Dashboards
4. Larger than just Road Safety
5. Can integrate datasets from other sources



World Road Statistics - Global Indicators

(All data is reported directly from official sources)

All



www.irfnet.ch

World Road Statistics - Africa Road Safety Dashboard (All data is reported directly from official sources)

Kenya

Killed persons in road accidents per 100,000 population



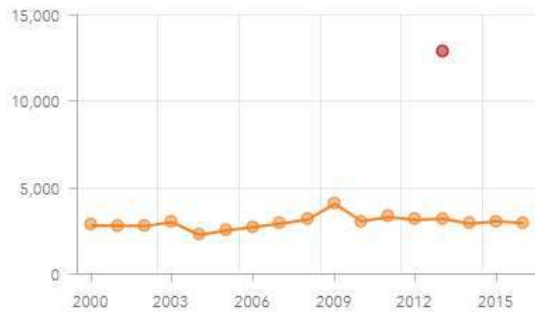
Most recent year 2016

Injury accidents per 100,000 population

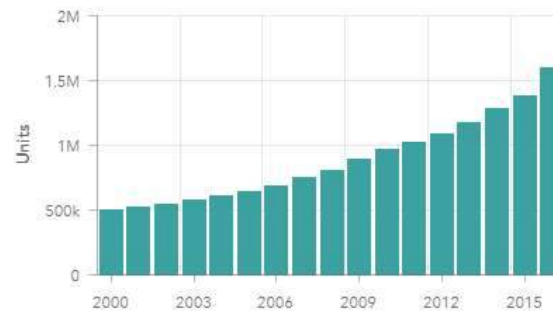


Most recent year 2016

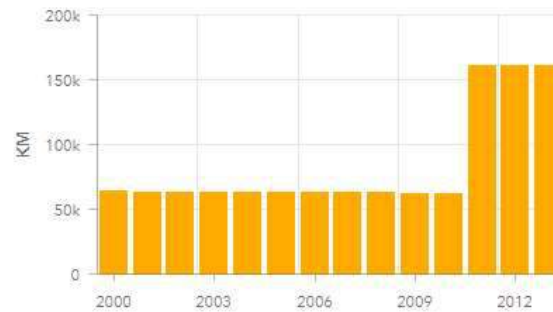
Persons killed in road accidents



Total Vehicles



Total Network Length



Morocco

Killed persons in road accidents per 100,000 population



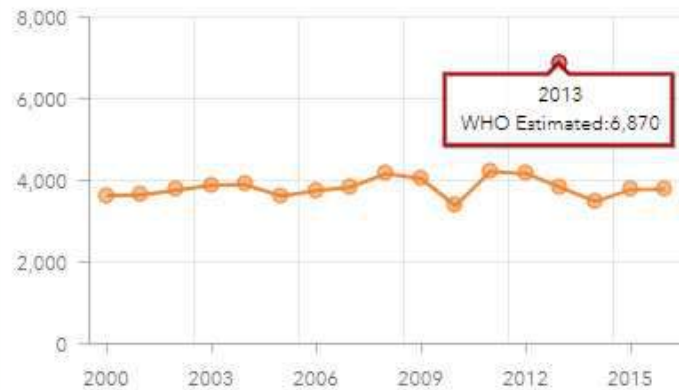
Most recent year 2016

Injury accidents per 100,000 population

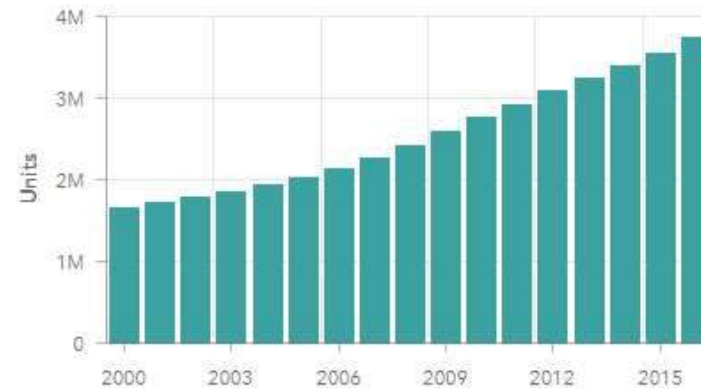


Most recent year 2016

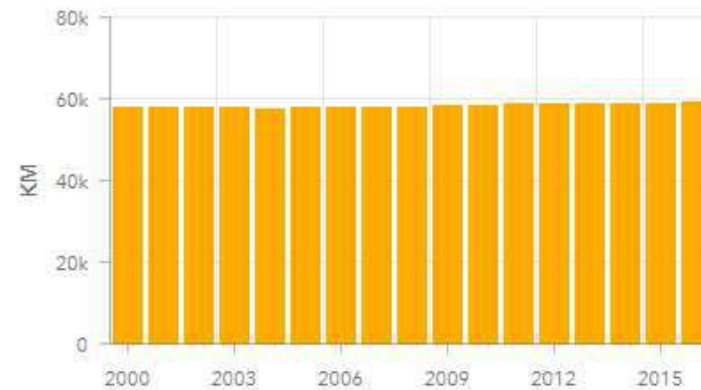
Persons killed in road accidents



Total Vehicles



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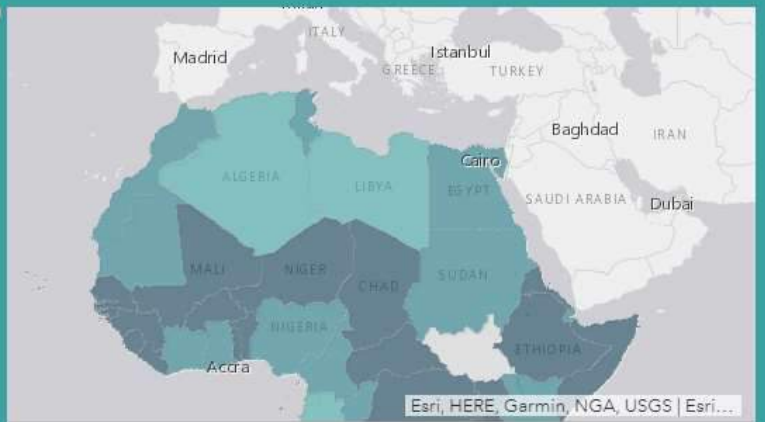
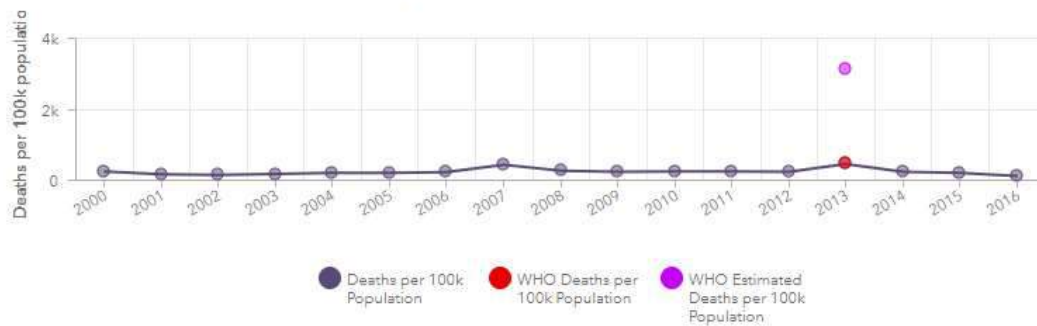


World Road Statistics - Africa Dashboard

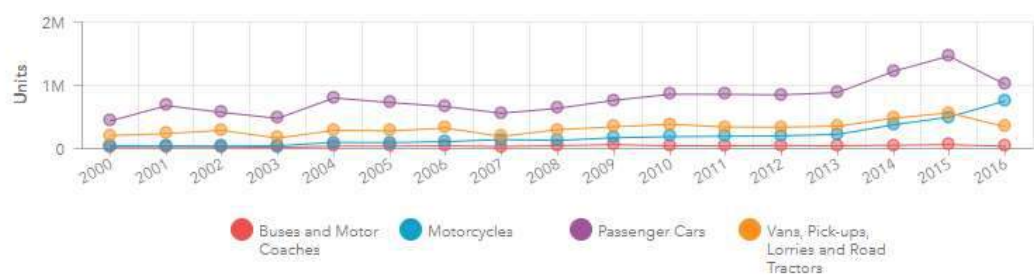
(All data is reported directly from official sources)

All ▼

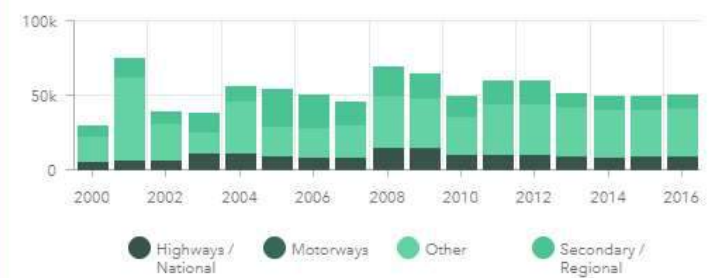
Road Traffic Death Rates - IRF & WHO



Vehicles in Use



Road Network



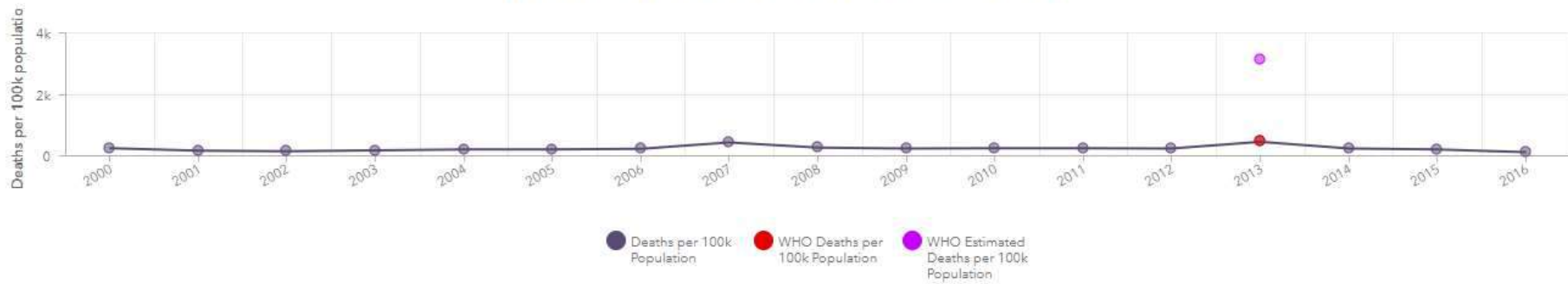
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World Road Statistics - Africa Dashboard

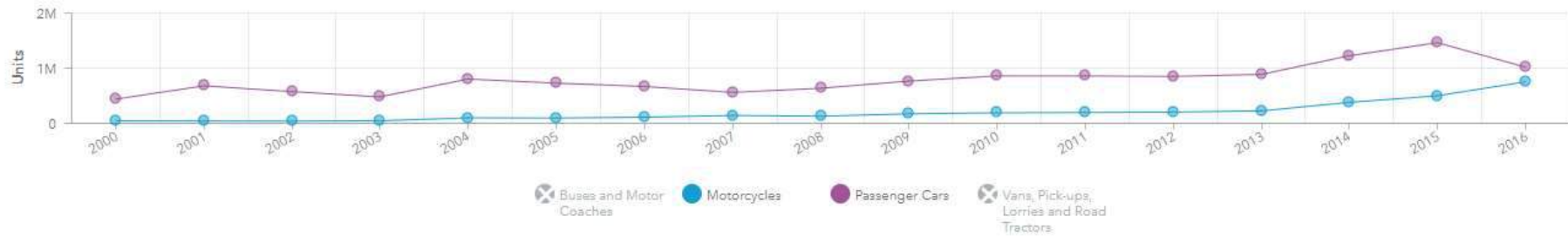
(All data is reported directly from official sources)

All ▾

Road Traffic Death Rates - IRF & WHO



Vehicles in Use



www.irfnet.ch

The expected benefits

1. Data available to countries and Reg. Observatories
2. More robust data validation process
3. Enhanced analysis, communication and advocacy
4. Better serve capacity building efforts at all levels
5. Foster collaboration and coordination by providing the opportunity to integrate different datasets.

What are the challenges today in the Road Safety arena ?

1. Fragmented action
2. Lack and competition for funds
3. Short-term projects with very limited long-term impact.



How to change things?

1. Partnerships (SuM4All, FIA HLP, UNRSC)
2. Voluntary Targets and Indicators
3. Data – Regional Road Safety Observatories
4. UN Road Safety Trust Fund



SUSTAINABLE
mobility™
FOR ALL

www.sum4all.org

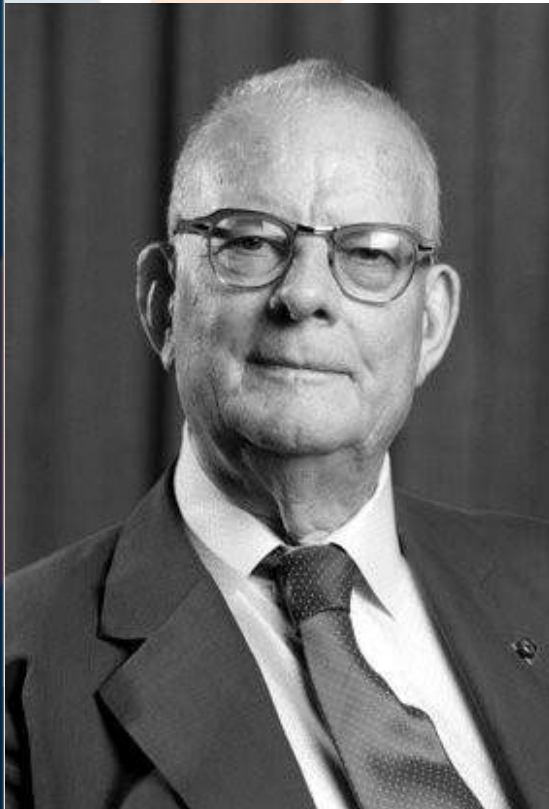
UN Road Safety Trust Fund

UNRSC

**Global Mobility Report
Tracking Framework
Road Map of Action
Consultation**



Voluntary Targets and Indicators



“Without data
you’re just
another person
with an opinion.”

- W. Edwards Deming,
Data Scientist

- **WHO led Process**
- **12 Performance Targets**
- **33 Proposed Indicators**
- **Finalised in Feb. 2018**



www.irfnet.ch



Target	Global voluntary indicators for global voluntary targets
Target 1: By 2020, all countries establish a comprehensive multisectoral national road safety action plan with time-bound targets.	<u>Indicators for target 1:</u> Number of countries with published national action plan with regularly updated time-bound targets for reductions in fatalities and injuries Number of countries that have a national lead agency to coordinate, monitor, evaluate and implement the multi-sectoral national road safety action plan
Target 2: By 2030, all countries accede to one or more of the core road safety-related UN legal instruments.	<u>Indicator for target 2:</u> Number of countries that have ratified or acceded to one or more of the core road safety-related UN legal instruments (FOOTNOTE: <ul style="list-style-type: none">• 1949 Convention on road traffic• 1968 Convention on road traffic• 1968 Convention on road signs and signals• 1958 Agreement on UN Regulations for vehicle type-approval• 1997 Agreement on periodic technical inspection• 1998 Agreement on UN Global Technical Regulations on vehicle construction• 1957 Agreement on transport of dangerous goods by road (ADR))
Target 3: By 2030, all new roads achieve technical standards for all road users that take into account road safety, or meet a three star rating or better.	<u>Indicators for target 3:</u> Number of countries that have implemented technical standards for new roads that take into account the safety of all road users, or that are aligned with the relevant UN Conventions and regulate compliance to those standards Number of countries using systematic approaches to assess/audit new roads
Target 4: By 2030, more than 75% of travel on existing roads is on roads that meet technical standards for all road users that take into account road safety.	<u>Indicators for target 4:</u> Number of countries that have developed and implement a plan for the improvement of the existing roads that take into account the safety of all road users Number of countries using systematic approaches to assess/audit existing roads
Target 5: By 2030, 100% of new (defined as produced, sold or imported) and used vehicles meet high quality safety standards, such as the recommended priority UN Regulations, Global Technical Regulations, or equivalent recognized national performance requirements.	<u>Indicators for Target 5:</u> Number of countries implementing high quality safety standards for new vehicles. Number of countries using systematic approaches for vehicle assessments. Number of countries implementing high quality safety standards for export of used vehicles.

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- ▶ Finances & Economics
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- ▶ Intelligent Transport Systems
- ▶ Road Safety
- ▶ Rural Transport
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- ▶ Trade & Transport
- ▶ Urban Mobility



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14 Nov 2016 Extending Emergency Transport Ser...	24 Oct 2016 Road Safety Management

Most popular

05 Nov 2013	01 Dec 2009
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Global Plan for Decade of Action

PILLARS

- 1 Road Safety Management
- 2 Safer Roads and Mobility
- 3 Safer Vehicles
- 4 Safer Road Users
- 5 Post-crash Response

The UNRSC has developed a Global Plan for the Decade of Action for Road Safety 2011-2020 with input from many partners through an extensive consultation process through meetings and the Internet. The Plan provides an overall framework for activities which may take place in the context of the Decade organized through 5 Pillars. Indicators have been developed to measure progress in each of these areas. Governments, International agencies, civil society organizations, the private sector and other stakeholders are invited to make use of the Plan as a guiding document for the events and activities they will support as part of the Decade.

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2

Safer Roads and Mobility

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Road Safety

Global Plan for the Decade of Action for Road Safety

1. Road Safety Management

2. Safer Roads and Mobility

3. Safer Vehicles

4. Safer Road Users

5. Post-crash Response

Managing the critical risk factors

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1

Road Safety Management

Contents

1. Introduction
2. Road Safety Institutional Arrangements and Processes
3. Road Safety Data Systems
4. Funding Road Safety
5. Country-Level, Regional, and International Road Safety Management Context



ROADSAFE

2. Road Safety Institutional Arrangements and Processes

This section covers publications that provide both a focus on the institutional arrangements and processes around effective road safety management. These publications discuss issues such as the development of road safety national strategies, lead agencies, setting appropriate road safety targets, effective methods for implementing road safety interventions, and several other important topics related to effective road safety management.

Global Status Report on Road Safety 2015:



This joint World Bank and WHO report underscores that that unsafe road traffic systems are seriously harming global public health and development, and are preventable. Recommendations for preventing road traffic injuries are made, and many of these recommendations revolve around improvements in proper institutional road safety management capacity.

Save LIVES: a road safety technical package



Save LIVES: a road safety technical package is an evidence-based inventory of priority interventions with a focus on Speed management, Leadership, Infrastructure design and improvement, Vehicle safety standards, Enforcement of traffic laws and post-crash Survival. The 6 strategies and 22 interventions recommended in the package are interrelated and should be implemented in an integrated manner to effectively address road traffic deaths and injuries.

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:



These guidelines from the Global Road Safety Facility and World Bank provide a pragmatic approach to overcoming road safety related institutional capacity barriers and to achieving positive and sustainable road safety outcomes.

[Environment & Climate Change](#)[Finances & Economics](#)[Governance](#)[Intelligent Transport Systems](#)[Road Safety](#)[Global Plan for the Decade of
Action for Road Safety](#)[1. Road Safety Management](#)[2. Safer Roads and Mobility](#)[FA1. Integrating Road Safety
into Existing Systems and
Policy](#)[FA2. Road Safety Infrastructure
Management: Tools and
Methods](#)[FA3. 'How-to' road safety
solutions](#)[FA4. Road safety engineering
capacity building](#)[3. Safer Vehicles](#)[4. Safer Road Users](#)[5. Post-crash Response](#)[Managing the critical risk factors](#)[Safer People](#)[Safer Vehicles](#)[Case Studies](#)[Rural Transport](#)[Home](#) > [Themes](#) > [Theme pages](#)

2

Safer Roads and Mobility

Many road authorities do not have the staff resources or the expertise to fully understand and apply the best practice safety measures. In order to assist in adopt the vision and objects of Pillar II resources have been drawn together across four key areas, 'focus areas,' related to providing safe road infrastructure and safe travel across the road network.

The Pillar II provides the support and tools needed to achieve safety benefits. The take-up and application of information provided within each of the four key focus areas of Pillar II will assist Governments and road safety practitioners to achieve the goals of a Safe System.

The Focus Areas (FA) and their objectives are as follows:

- FA1: *The Successful integration of road safety into existing systems and policies.*

Objectives: to outline key motivators/incentives to ensure that road safety is fully and successfully integrated into existing systems and policies within government, developments banks, etc., for road planning, design and construction.

- FA2: *The identification and application of Road safety infrastructure management tools.*

Objectives: to identify and provide road safety practitioners with infrastructure management tools to assist them undertake road safety tasks, to enable them to evaluate, prioritize and monitor infrastructure and operational safety performance.

- FA3: *'How-to' road safety solutions.*

Objectives: to provide governments and road safety practitioners with evidence based targeted crash countermeasures in a 'how-to-tips' manner.

- FA4: *A model framework for road safety engineering capacity building.*

Objectives: to provide countries with a practical framework for improving capacity in road safety engineering.

FOCUS AREA

01

Integrating Road Safety into Existing Systems and Policy

- capacity building
- 3. Safer Vehicles
- 4. Safer Road Users
- 5. Post-crash Response
- Managing the critical risk factors
- Safer People
- Safer Vehicles
- Case Studies
- Rural Transport
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safety tasks, to enable them to evaluate, prioritize and monitor infrastructure and operational safety performance.

- FA3: "How-to" road safety solutions.

Objectives: to provide governments and road safety practitioners with evidence based targeted crash countermeasures in a how-to tips manner.

- FA4: A model framework for road safety engineering capacity building.

Objectives: to provide countries with a practical framework for improving capacity in road safety engineering.

FOCUS AREA

01 Integrating Road Safety into Existing Systems and Policy




FOCUS AREA

02 Road Safety Infrastructure Management: Tools and Methods



FOCUS AREA

03 "How-to" road safety solutions



FOCUS AREA

04 Road safety engineering capacity building



- ▶ Environment & Climate Change
- ▶ Finances & Economics
- ▶ Governance
- ▶ Intelligent Transport Systems
- ▶ Road Safety
- ▶ Global Plan for the Decade of Action for Road Safety
 - ▶ 1. Road Safety Management
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 - ▶ FA1. Integrating Road Safety into Existing Systems and Policy
 - ▶ FA2. Road Safety Infrastructure Management: Tools and Methods
 - ▶ FA3. 'How-to' road safety solutions
 - ▶ FA4. Road safety engineering capacity building
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- ▶ Managing the critical risk factors
- ▶ Safer People
- ▶ Safer Vehicles

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FOCUS AREA

01

Integrating Road Safety into Existing Systems and Policy

Authors: Claudia Adriaola-Delgado, Ben Welle, Suzy Charman, Hilda Maria Gomez, Michael Tziotis, Susanna Zammataro, Per Mathiasen, Suprunenko Stanislav, Victoria Marlene Smith

Contents

1. Introduction
2. UN Sustainable Development Goals and road safety
 - 2.1. Brasilia Declaration on Road Safety
3. National and sub-national policies on road safety
 - 3.1. Creating Safer Cities through Sustainable Mobility and Urban and Street Design
 - 3.2. Case Studies
 - 3.2.1. National
 - 3.2.2. Sub-national
4. Opportunities for development banks to influence road safety
 - 4.1. European Bank for Reconstruction Development
 - 4.1.1. EBRD Process
 - 4.2. European Investment Bank
 - 4.2.1. The EIB Action Plan for Road Safety

3.2 Case Studies

Case studies provide a valuable example of the SafeSystem approach at different levels. This section contains notable examples. In addition, iRAP has prepared brief case-study information sheets to summarize progress and celebrate successes of the Decade of Action for Road Safety.

iRAP Global case-studies:

- [Making Safety a Global Standard, Case Study](#)
- [iRAP Global Policy Case Study](#)

3.2.1 National

Sweden: Vision Zero. In 1998, the Swedish parliament enacted a law creating Vision Zero with an 11-point program constructed to implement the legislation (McCarthy 2007). Implementation was based on the scientific principle that kinetic energy is the real cause of deaths and serious injuries on the road (Belin et al. 2012). It was therefore decided that the design of the road system must lower these energy levels and an emphasis must be put on changing the design of the country's most dangerous roads and urban streets. The subsequent construction of 1,500 kilometers of "2+1" roads (each lane of traffic takes turns to use a middle lane for overtaking) has saved around 145 lives over the first decade of Vision Zero (Economist 2014). In addition, 12,600 safe crossings, from zebra striping to traffic calming, are estimated to have halved the number of pedestrian deaths over the past five years. The safety of public transport services was addressed to both lower injuries and promote sustainable modes of transport. These are just a few of the many safety interventions implemented across Sweden that take a comprehensive approach and account for human fallibility.

iRAP National case-studies:

- [IndiaRAP Case Study](#)
- [ChinaRAP Case Study](#)
- [England Case Study](#)
- [El Salvador Case Study](#)

3.2.2 Sub-national

U.S. states deploy Safer Systems: U.S. states deploy Safe Systems: Since 2001, about 30 U.S. states have adopted the goal to reduce traffic fatalities and serious injuries to zero (Munnich et al. 2012). Washington State (2000) and Minnesota (2003) were the first states to adopt a zero road fatalities goal into their road safety plans (Munnich et al. 2012). Minnesota's approach embodies the values found in Safe Systems. The state worked to prioritize safety at intersections and include the design of roads in this effort, in addition to enforcement and other programs. One key success identified in the state's program is its use of performance-based, data-driven methods to locate where safety interventions are needed. Research has shown that U.S. states with Total Zero Death (TZD) programs

Case study title: Abu Dhabi Road Safety Strategy 2016 – 2020 (Towards Vision Zero)

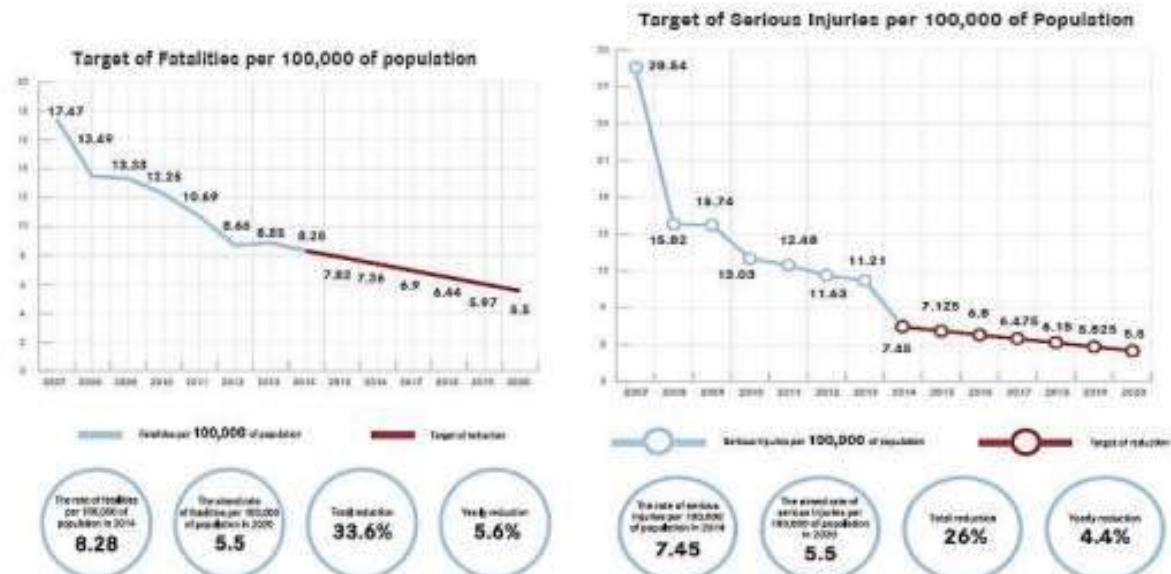
Key pull-out point:

The document is an overview of the AD 2016 to 2020 Road Safety Strategy and a review of the targets achieved from the earlier Road Safety Strategy.

Main Targets:

- ZERO Fatalities by 2030
 - Vision Zero is now a long term initiative of the agencies that are major stake holders to the Abu Dhabi Road Network. The Abu Dhabi Police also have adopted Vision Zero 2030 in their long-term action plan.

- 5.5 Fatalities and serious injuries per 100,000 by 2020



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FOCUS AREA

03

'How-to' road safety solutions

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1. The Global Safety Problem

1.1 Treating 'high' crash locations

The objective in the treatment of crash location is to reduce the incidence and severity of crashes at high crash locations. Fundamental to this objective is the requirement that the treatments match the crash problem, and that the remedial measure/s are proven and cost-effective (forthcoming PIARC 2015).

1.2 Providing a Safe System Road Network

Identifying and treating road elements which may contribute to crash occurrence or crash severity is a major component of the safe system approach to road safety. Adopting a safe system approach to road safety recognises that humans, as road users, are fallible and will continue to make mistakes, and that the community should not penalise people with death or serious injury when mistakes do occur. In a safe system, therefore, roads (and vehicles) should be designed to reduce the incidence and severity of crashes when they inevitably occur.

The safe system approach requires, in part:

- designing, constructing and maintaining a road system (roads, vehicles and operating requirements) so that forces on the human body generated in crashes are generally less than those resulting in fatal or debilitating injury
- improving roads and roadsides to reduce the risk of crashes and minimise harm: measures for higher speed roads including dividing traffic, designing 'forgiving' roadsides, and providing clear driver guidance. In areas with large numbers of vulnerable road users or substantial collision risk, speed management supplemented by road and roadside treatments is a key strategy for limiting crashes

4.1 Intersection crashes

A detailed crash investigation is required to identify crash causation and crash severity factors. This information will form the basis for the selection of the targeted cost-effective remedial treatment options.

The solution selected will ultimately depend upon available budget, prevailing site factors, treatment cost, CRF or CMF and economic worth of the treatment.

The combined effectiveness of multiple remedial treatments is also NOT additive. Refer to Section 1.4 to calculate the expected effectiveness of multiple treatments.

Solutions	Tmt Life (years)	Effectiveness	Cost
Intersection 'Stop' control sign from no control	1-5	✓	\$
Intersection delineation	1-5	✓✓	\$
Sight distance improvements / remove obstruction	10-15	✓✓	\$\$
One-way operation	20-30	✓✓✓	\$\$
Parking improvements[12]	5-10	✓✓	\$\$
Intersection turn-lanes (sig/un-signalised) painted	1-5	✓✓	\$\$
Street lighting (rural)[13]	10-20	✓✓	\$\$
Street lighting (urban)[14]	10-20	✓✓✓	\$\$
Speed management (incl. review of speed limits)	5-10	✓✓✓	\$\$
Sealing shoulders/widening	5-10	✓✓	\$\$\$
Improved skid resistance	5-10	✓✓✓	\$\$\$
Intersection turn lanes (sig/un-signalised) built	10-15	✓✓	\$\$\$
Grade separation from un-signalised intersection	20-30	✓✓✓	\$\$\$\$
Intersection signals	10-20	✓✓✓	\$\$\$\$
Roundabout	10-20	✓✓✓✓	\$\$\$\$

Parking improvements[12]	5-10	✓✓	SS
Intersection turn-lanes (sig/un-signalised) painted	1-5	✓✓	SS
Street lighting (rural)[13]	10-20	✓✓	SS
Street lighting (urban)[14]	10-20	✓✓✓	SS
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Intersection turn lanes (sig/un-signalised) built	10-15	✓✓	SSS
Grade separation from un-signalised intersection	20-30	✓✓✓	SSSS
Intersection signals	10-20	✓✓✓	SSSS
Roundabout	10-20	✓✓✓✓	SSSS
✓ up to 15% reduction ✓✓ 15% to 30% reduction ✓✓✓ 30% to 60% reduction ✓✓✓✓ greater than 60% reduction			
\$ less than US\$25,000 \$\$ US\$25,000 to US\$50,000 \$\$\$ US\$50,000 to US\$100,000 SSSS greater than US\$100,000			

[12]Examples include parking bans and converting angle parking to parallel parking.

[13]Crash reduction expected during the night-time.

[14]Crash reduction expected during the night-time.

To assist identify the most appropriate cost-effective treatment refer to:

- [iRAP Toolkit on Intersections](#)
- [PIARC 2015. Road Safety Manual.](#)
- [Speed Management: a Road Safety Manual for Decision-makers and Practitioners](#), Global Road Safety Partnership (2008).

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FOCUS AREA

04

Road safety engineering capacity building

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Appendices

1. Careers, roles and positions in road safety engineering

1.1 Building capacity

Building capacity in road safety can be successful if those who will be attracted as practitioners can see and understand the range of roles that are available to them. Key roles or skills in many road safety engineering teams are listed below ("Roles in a mature organization"). Often, one person may cover more than one role or skill set.

The list below is a team set-up to aspire to – the reality in many Low and Middle-Income Countries (LMICs) is that only a few people will be shouldering the burden of road safety engineering. Often they are combining it with other duties, sometimes as varied as public transport operations or municipal drainage issues.

The role opportunities listed below can only apply to an organization when it is well developed and relatively mature in road safety activity. Initially, it is necessary to advocate for the introduction of positions specific to road safety engineering and for these roles to be alongside and in addition to the traditional positions in road design, maintenance and operations. Generally, the most needed positions are for engineers and technicians who can cover both:

- road safety and road safety inspections
- issues of crash and injury data collection and crash analysis

In many LMICs, young professionals from an engineering background are or have been taking further studies to specialize in road safety engineering. In high-income countries, those entering the field through crash data and its analysis typically come from a wider background, often with skills and knowledge developed from the behavioral, social or physical sciences and often with a good level of numeracy.

1.2 Roles in a mature organization

This list provides a target and an *aide-memoire* for those seeking to cover skill areas. A small number of individuals may together cover more than one role until the team is established and its value recognized.

a. The road safety engineer – typically the team leader is a professional engineer, usually from a civil engineering background, although many numerate graduates and other practitioners have made a successful transition from a different background into a road safety specialist. The road safety engineer will often be responsible for a programme of remedial



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**All concerned
All responsible**



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