



ATF 2015
AfDB TRANSPORT FORUM
FORUM TRANSPORT DE LA BAD



SUSTAINABLE DEVELOPMENT GOAL 3.6: STAKEHOLDERS WORKING TOGETHER

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iRAP – International Road Assessment Programme



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TABLE DES MATIERES



1. iRAP: what is it and what does it do?
2. Where has iRAP worked?
3. Who has implemented iRAP assessments?
4. What should Africa do?

Road Assessment Programmes



Vision: a world free of high risk roads

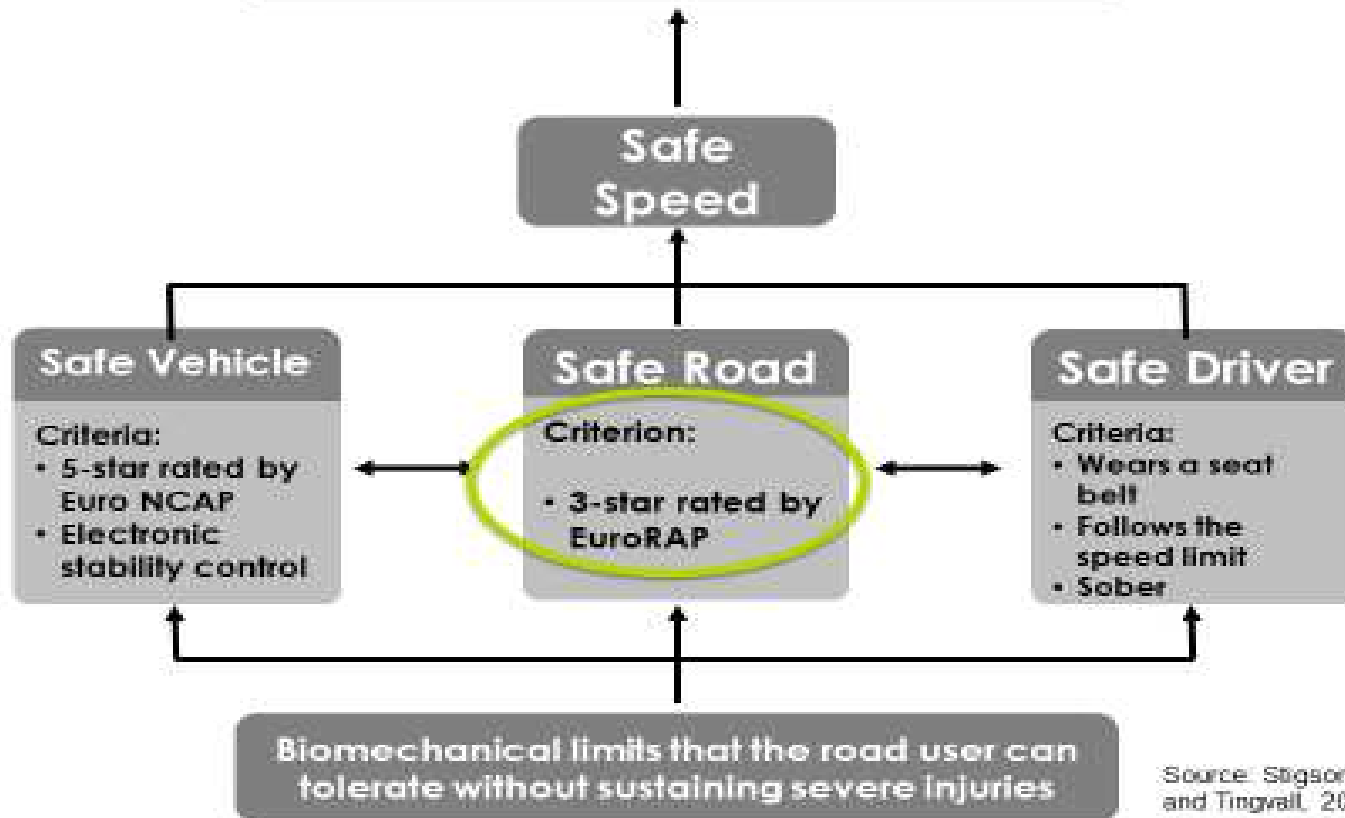
Active in 70+ countries

700.000km+ assessed globally



Swedish Road Administration

A Safe Road Transport System



RAP: PROTOCOLS

THE FOUR WAYS WE WORK



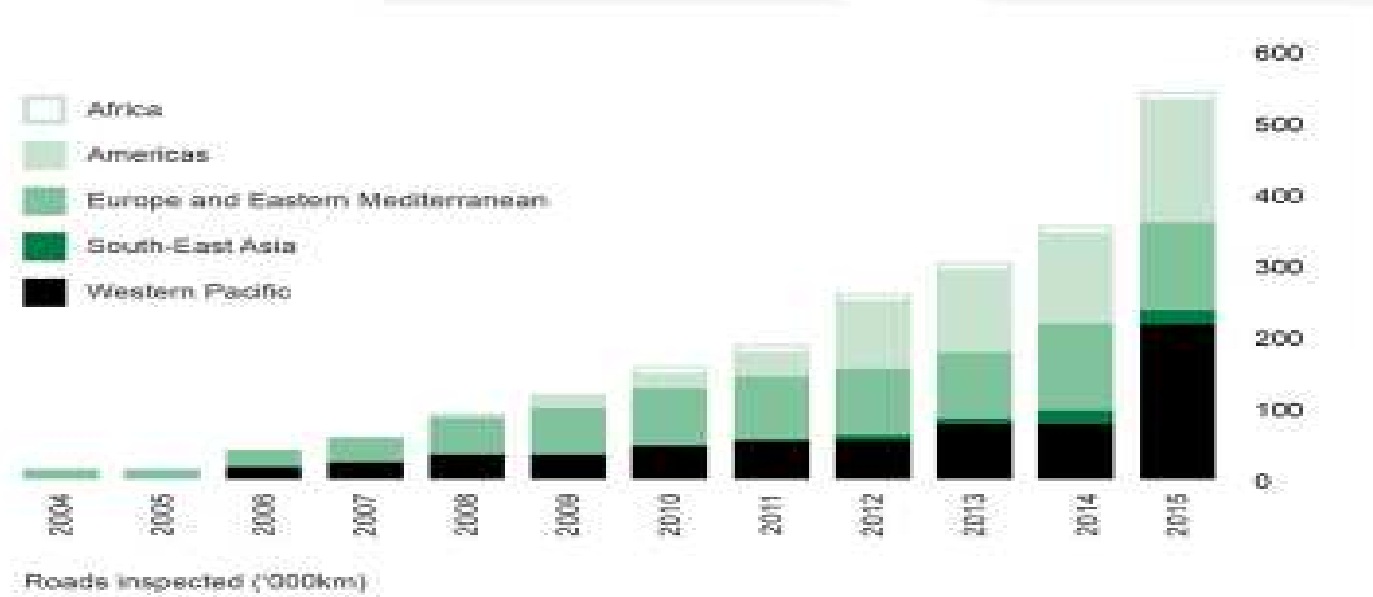
The iRAP Protocols

1. **Risk Maps** use detailed crash data to illustrate the actual number of deaths and injuries on a road network.
2. **Star Ratings** provide a simple and objective measure of the level of safety provided by a road's design.
3. **Safer Roads Investment Plans** draw on approximately 90 proven road improvement options to generate affordable and economically sound infrastructure options for saving lives.
4. **Performance Tracking** enables the use of Star Ratings and Risk Maps to track road safety performance and establish policy positions.

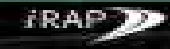
A World Free of High Risk Roads

iRAP

ROADS INSPECTED



A World Free of High Risk Roads



1st AfDB Transport Forum
26-27 Novembre 2015 Abidjan

Africa & Middle East

Egypt – GRSF/Bloomberg

3,200km star rating and investment plan completed in 2014

Nigeria – IRAP/WB GRSF

Demonstration project completed.

Ghana – GRSF/Bloomberg

Cities partnership planned in Accra

South Africa - RTMC

Pilot assessments complete + Star Rating of Schools. Further assessments planned

Qatar - Ashghal

National star rating underway & Star Rating of Designs in 2015

Yemen – World Bank

National project complete

Uganda - IRAP

3,000km+ assessed – road upgrades implemented

Ethiopia – GRSF/Bloomberg

Addis Ababa city project. National assessment being planned.

Kenya - IRAP

\$US100 million plan developed that could cut KSI by 25%

Tanzania – IRAP/GRSF

3,000km+ project completed – Further Bloomberg supported assessments planned

A World Free of High Risk Roads



- About 1.25 million people die each year as a result of road traffic crashes.
- *Road traffic injuries are the leading cause of death among young people, aged 15–29 years.*
- 90% of the world's fatalities on the roads occur in low- and middle-income countries, even though these countries have approximately half of the world's vehicles.
- Half of those dying on the world's roads are “vulnerable road users”: pedestrians, cyclists and motorcyclists.
- *Without action, road traffic crashes are predicted to rise to become the 7th leading cause of death by 2030.*
- *The newly adopted 2030 Agenda for Sustainable Development has set an ambitious road safety target of halving the global number of deaths and injuries from road traffic crashes by 2020.*

WHO Road Traffic Injuries, fact sheet N°358, updated October 2015



STOP PRESS !

65.000 km of federal and secondary roads assessed (Sept 2015)

= 15% of all roads

United States
usRAP Risk Maps on UPlan

2008-2012 Crash Data Safety Index

- 0.9 - 3.2
- 3.3 - 4.8
- 4.9 - 6.5
- 6.6 - 7.2
- 7.3 - 10

U.S. 191 in Arizona State Line

Measure	Value	Road/Other	Percentage	Units
Length	107	100%		km
Location				
Region				
Agency				
Agency Website				
2014 USRA Average AART				
Performance Score				
State Crashes	4			
Total State Crashes				
Total Crash Rate	0.03			
Total State Crash Rate				
2008-2012 Crashes	120			
2008-2012 Average Crashes	7.5			
Total or Average Crash Rate	0.03			
Crashes per mile per year	0			
Crashes per mile per year	0.0			
Crashes per mile per year	0			
Crashes per mile per year	0			
Crashes per mile per year	0			
Crashes per mile per year	0			

Activities in 8 states.
Major UPLAN initiative underway
www.usrap.us

AAA Foundation for Traffic Safety

iRAP

- STOP PRESS !**
- Work undertaken in 9 states (2014), continued in 7 (2015)
 - 800 km in Utah







Led by RIOH and Ministry of Transport
4 star targets.
ADB, World Bank and Chinese
Government investment

**Bloomberg
Philanthropies**

GRSF
Global Road Safety Facility

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iRAP

STOP PRESS !

- 100.000 km assessed
Jan-June 2015



STOP PRESS !

“We will ensure that by the end of 2020 more than 90% of travel on the strategic road is on roads with a safety rating of EuroRAP 3* (or equivalent).

We will ensure that the majority of those roads with 1* and 2* safety rating have improved to 3*. Alongside this we will work closely with the International Road Assessment Programme, the Road Safety Foundation and the Department for Transport to inform the development and adoption of the star rating system.”

**Highways England,
Delivery Plan Commitments, 2015**

India

iRAP being used in projects worth US\$3.5 billion across 7 states

Star Rating Designs
 Karnataka Annuity Roads (550km)
 Existing: 86% 1- or 2-stars
 Design: 2% 1- or 2-stars

Bloomberg Philanthropies

GRSF
Global Road Safety Facility

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iRAP

STOP PRESS !

- 500,000 road crashes a year
- 142,000 road fatalities (2013)
- 12% of global fatalities
- Over half a million injuries.

iRAP calculates that spending US\$ 4.200 m over 20 years could save 43.918 KSI/year (58% reduction).

Australia

22,000km Star Ratings & Investment plans
Integration with crash data.
Before and after star ratings promoted.
Auto-club & road authority partnership.

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Austroads
Australian Government
Department of Infrastructure
and Regional Development
IRAP

STOP PRESS !

Bruce Highway research indicates that crash costs are:

- 40% lower on 2-star than on 1-star roads
- 61% lower on 3-star than on 2-star roads
- 43% lower on 4-star than on 3-star roads.



STOP PRESS !

Slovenia is implementing countermeasures as a result of regular risk mapping and star rating using iRAP methodology.

Outcomes over 20 years:

- Cost €170 m
- 4.494 KSI saved.

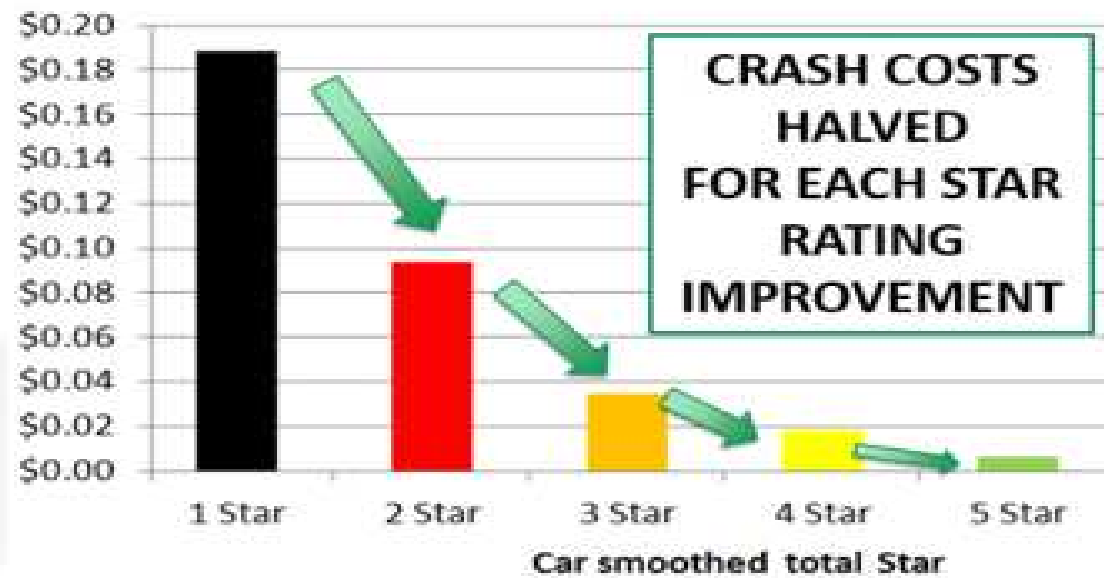
Example:

- Introducing passenger side roadside barriers over 779.8 km could save 1.600 KSI over 20 years.

Star Ratings



Car smoothed Star Rating vs KSI cost per vKt



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BELIZE

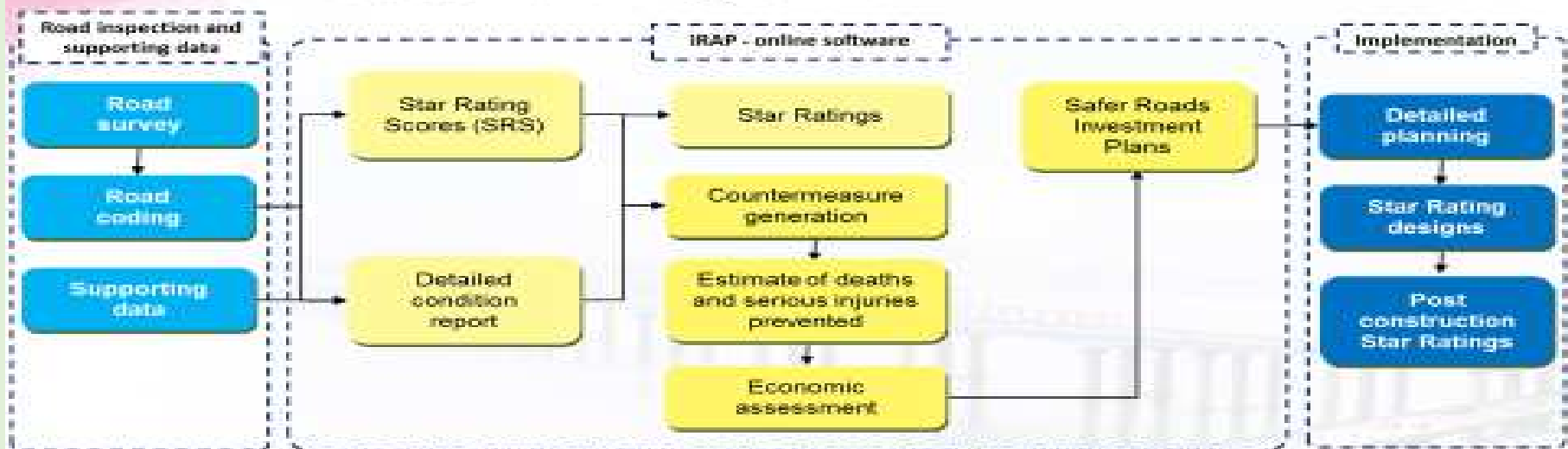
The Problem

- 4th leading cause of death
- Death rate = 24/100,000
- 75% of fatalities are males
- 30% of fatalities aged 16–29
- Economic impact 1.26% GDP



BELIZE

Road Assessment Programme



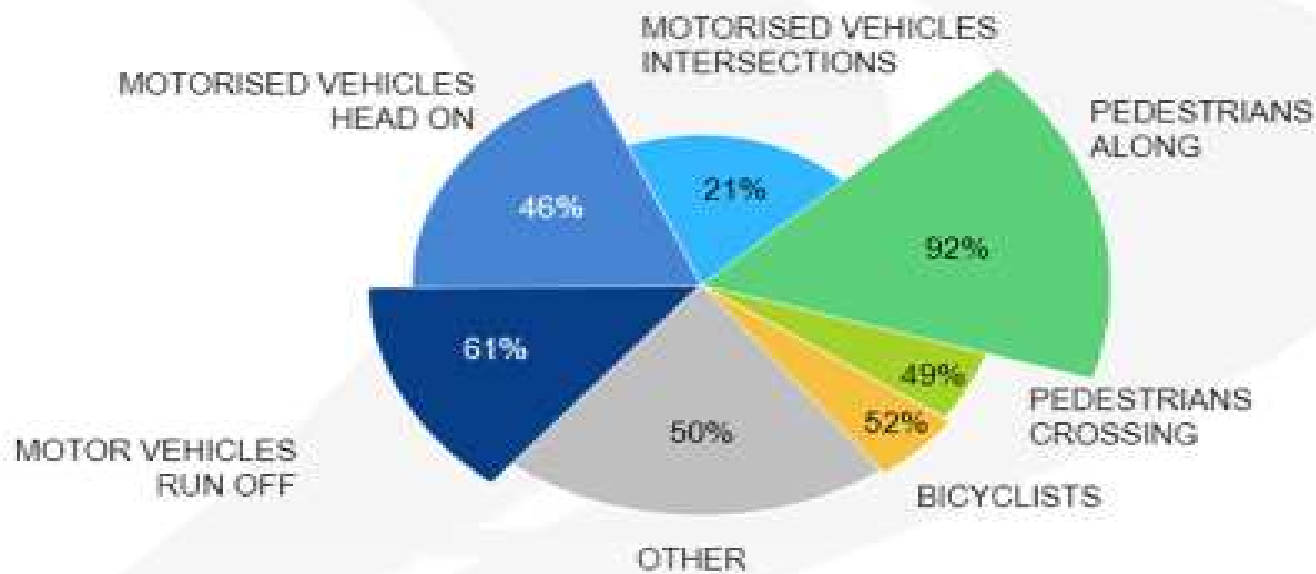
BELIZE

Project Implementation

Pillar	Achieved	Target
Road Safety Management	753 staff trained	1000 staff trained
Safer Roads	71 km of 3-Star roads	82 km of 3-Star roads
Safer Road Users	616 teachers trained 9,850 pupils trained 2 patrol vehicles delivered 30 officers trained 1800 youth trained 2 nd road safety campaign under preparation	800 teachers trained 15,000 pupils trained 2 patrol vehicles delivered 70 officers trained 3000 youth trained 5 biannual campaigns
Post-Crash Response	2 ambulances delivered 450 first responders trained	2 ambulances delivered 650 first responders trained



REDUCTIONS IN ROAD DEATHS AS A RESULT OF BETTER INFRASTRUCTURE



Preliminary: Based on iRAP Assessments in 7 countries, 60,000km

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Safer Roads will pay for themselves

Road crashes cost
2-5% of GDP

Road trauma
accounts for 70% of
spinal injury in Africa

40%-70% of major
trauma in hospitals is
road related



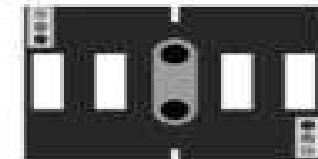
Pedestrian footpaths



Safety barriers



Duplication



Pedestrian crossings

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IRAP

Business Case for Safer Roads



The African Business Case

\$ 22 billion

Safer road investment

\$ 286 billion

Crash cost savings

7,400,000

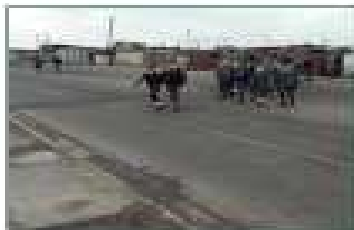
Deaths and serious injuries
saved over 20 years

<http://www.irap.org/en/about-irap-2/a-business-case-for-safer-roads>

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IRAP

African Road Safety Action Plan 2011-20



- **Set road safety targets**
- Develop knowledge management
- Allocate 10% road investment
- **Allocate sufficient financial/human resources to road safety**
- Allocate 5% road maintenance resources to road safety
- Enforce mandatory reporting, standardized data, provide sustainable funding
- **Build capacity for road safety data management**

UNECA, Status of Implementation of the ARSAP 2011-20, July 2015

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iRAP 

African Road Safety Action Plan 2011-20



- Set road safety targets
 - iRAP: star rating, risk mapping
- Allocate sufficient financial/human resources to road safety
 - iRAP: capacity building
- Build capacity for road safety data management
 - iRAP: use VIDA

UNECA, Status of Implementation of the ARSAP 2011-20, July 2015

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AfricaRAP !

AFRICAN ROAD ASSESSMENT PROGRAMME

- **Why?**

- Campaign for road safety policy
- Identify, share best practice

- **How?**

- Road user groups
 - Car clubs, commercial vehicle associations, pedestrian groups
 - Employers
- Insurance companies

- **When?**

- Now!



A World Free of High Risk Roads

iRAP 

Road Assessment Programmes



Vision: a world free of high risk roads

Active in 70+ countries

700.000km+ assessed globally



AfricaRAP



THANK YOU !

www.irap.net

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