

3<sup>rd</sup> AfroSAFE conference | 8–12 June 2026, Lusaka, Zambia

# Evidenced-Based Interventions to Improve and Sustain Safer Mobility for All Users in Africa

NATHALIE CHIAVASSA – INTERNATIONAL ROAD ASSESSMENT PROGRAMME



# About iRAP

- **Charity for a world free of high-risk roads**
- **Global standard and partnerships for safer road infrastructure**
- **Evidence based solutions, tools, training, communications and advocacy to support large-scale action**

The graphic features the iRAP logo on the left, which consists of the text 'iRAP' in a bold, sans-serif font next to a stylized green swoosh. To the right of the logo, the text 'PARTNERSHIPS FOR 2030 IMPACT' is written in a large, bold, green, sans-serif font. Below this, in a smaller green font, is the subtitle 'iRAP's Plan for the 2nd Decade of Action for Road Safety 2021-2030 FOR A WORLD FREE OF HIGH-RISK ROADS'. The main body of the graphic is a dark green horizontal band containing four icons and their corresponding statistics. From left to right: a circular icon with 17 colored segments representing the Sustainable Development Goals, followed by the text 'GLOBAL IMPACT' and 'Working together, our shared success and impact by 2030 will be:'. The first icon is a family of four (two adults and two children), with the text '2,000,000+ people saved from death or injury'. The second icon is a road winding through a forest, with the text '200,000km+ of roads worldwide made safer'. The third icon is a stack of money, with the text 'USD\$200 billion+ of investment influenced to save lives'. The bottom of the graphic features a decorative border of colorful diagonal stripes in red, orange, green, blue, and pink.

**iRAP** **PARTNERSHIPS FOR 2030 IMPACT**

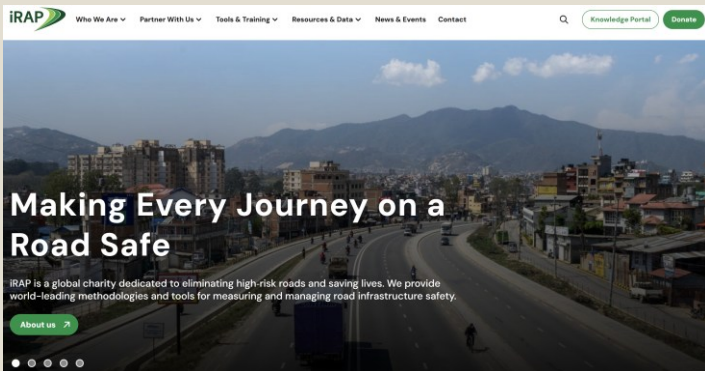
iRAP's Plan for the 2nd Decade of Action for Road Safety 2021-2030  
FOR A WORLD FREE OF HIGH-RISK ROADS

**GLOBAL IMPACT**  
Working together, our shared success and impact by 2030 will be:

- 2,000,000+ people saved from death or injury
- 200,000km+ of roads worldwide made safer
- USD\$200 billion+ of investment influenced to save lives

<https://irap.org/2021/11/irap-releases-plan-for-2nd-decade-of-action/>

# About iRAP



## iRAP Partner impact December 2025

See safer roads progress in  
your country and the world



**140**  
countries assessed



**186**  
countries influenced



**USD \$120 billion**  
of infrastructure  
investment made safer



**860,000**  
lives and serious injuries  
saved\*



**2 million km**  
roads and designs  
Star Rated



**2.2 million km**  
Risk Mapped



**2,475 schools**  
Star Rated using Star  
Rating for Schools (SR4S)  
in 84 countries



**93,000**  
people trained



**284**  
iRAP accredited  
practitioners



**38,000**  
partners



**96**  
3-star or better policies  
in 39 countries



**159**  
innovation  
partners



Major Donor



Supporter



[irap.org](https://irap.org) [in](#) [search iRAP](#) [f](#) [iRAPfb](#) [x](#) [irapsavinglives](#)

\*iRAP Partners' estimated impact 2016-2025 in safer road projects using iRAP tools (Research by Johns Hopkins University published in PLOS One)

# UN Global Road Safety Performance Targets



SUSTAINABLE DEVELOPMENT GOALS

<p><b>1</b> 2020</p> <p>Target 1: By 2020, all countries establish a comprehensive multisectoral national road safety action plan with time-bound targets.</p>	<p><b>2</b> 2030</p> <p>Target 2: By 2030, all countries accede to one or more of the core road safety-related UN legal instruments.</p>	<p><b>3</b> 2030</p> <p>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.</p>	<p><b>4</b> 2030</p> <p>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.</p>
<p><b>5</b> 2030</p> <p>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.</p>	<p><b>6</b> 2030</p> <p>Target 6: By 2030, have the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed-related injuries and fatalities.</p>	<p><b>7</b> 2030</p> <p>Target 7: By 2030, increase the proportion of motorcycle riders correctly using standard helmets to close to 100%.</p>	<p><b>8</b> 2030</p> <p>Target 8: By 2030, increase the proportion of motor vehicle occupants using safety belts or standard child restraint systems to close to 100%.</p>
<p><b>9</b> 2030</p> <p>Target 9: By 2030, have the number of road traffic injuries and fatalities related to drivers using alcohol, and/or achieve a reduction in those related to other psychoactive substances.</p>	<p><b>10</b> 2030</p> <p>Target 10: By 2030, all countries have national laws to restrict or prohibit the use of mobile phones while driving.</p>	<p><b>11</b> 2030</p> <p>Target 11: By 2030, all countries to enact regulation for driving time and rest periods for professional drivers, and/or accede to international/regional regulation in this area.</p>	<p><b>12</b> 2030</p> <p>Target 12: By 2030, all countries establish and achieve national targets in order to minimize the time interval between road traffic crash and the provision of first professional emergency care.</p>

- PILLAR 1: Road safety management
- PILLAR 2: Safer roads and mobility
- PILLAR 3: Safe vehicles
- PILLAR 4: Safe road users
- PILLAR 5: Post-crash response

Following the request of the United Nations General Assembly, on November 22, 2017 Member States reached consensus on 12 global road safety performance targets. For more information: [http://www.who.int/violence\\_injury\\_prevention/road\\_traffic/road-safety-targets/en/](http://www.who.int/violence_injury_prevention/road_traffic/road-safety-targets/en/)



**TARGET 3**  
**2030**

**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.**

**ALL new roads 3-Star or Better**

**TARGET 4**  
**2030**

**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.**

**>75% of travel on existing roads 3-Star or Better**

# How iRAP works



## Risk Assessments

Using iRAP software, including ViDA, risk assessments can be performed for every type of road. The best-known assessments are Star Ratings, which measure the built-in safety of roads and paths for vehicle occupants, motorcyclists, cyclists, and pedestrians, using internationally recognised Star Ratings where 0–star ratings indicate less safe roads, while 5-star roads are the safest.

[Connect to Tools](#)



## Policy, Capacity Building and Innovation

iRAP supports governments and organisations to embed safe system principles into policies, standards, and projects, and we build local capacity to sustain long-term safety improvements. We also enable innovation with AI, data, digital tools, and rapid risk screening approaches.

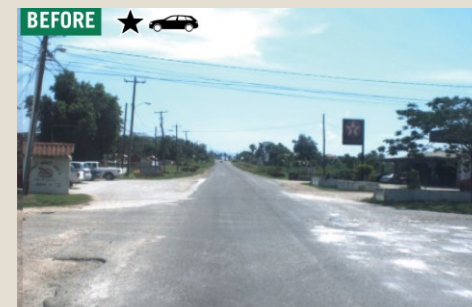
[Connect to Training and Accreditation](#)



## Safer Roads Investment Planning

With ViDA, users can identify and prioritise high-impact safety upgrades – such as safer intersections, median barriers, speed management, and pedestrian facilities – helping partners achieve the greatest reduction in deaths and serious injuries for every dollar invested.

[Connect to ViDA](#)



# iRAP Global Standard – The four main ways we work

## Star Ratings



China  
Bicyclists / e-bicyclists: ★★★★★

- Bicycle lane
- Street lighting
- Good pavement
- No intersection
- No vehicle parking
- Two lanes each direction
- Good sight distance
- 50km/h

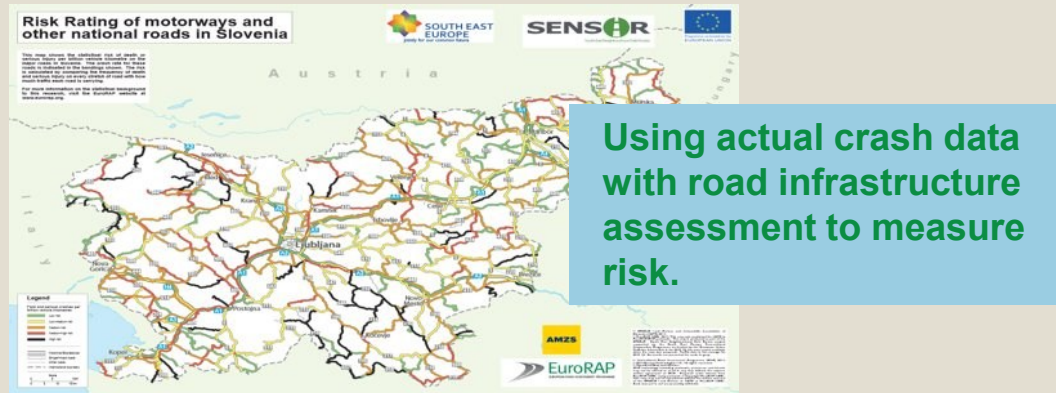
## Safer Roads Investment Plans



Identifying and costing improvement to focus intervention on improving star rating

Bicycle Lane (off road)  
Road name: Av Calle 50\_S2  
Sector: Av Boyaca\_S2  
Catastral: 4.1  
Estimated programme details  
Cost: \$5772160  
PIPs saved: 1.016339  
Cost per PIP saved: \$4391616.82  
BCR: 3.17

## Crash-rate risk maps



Risk Rating of motorways and other national roads in Slovenia

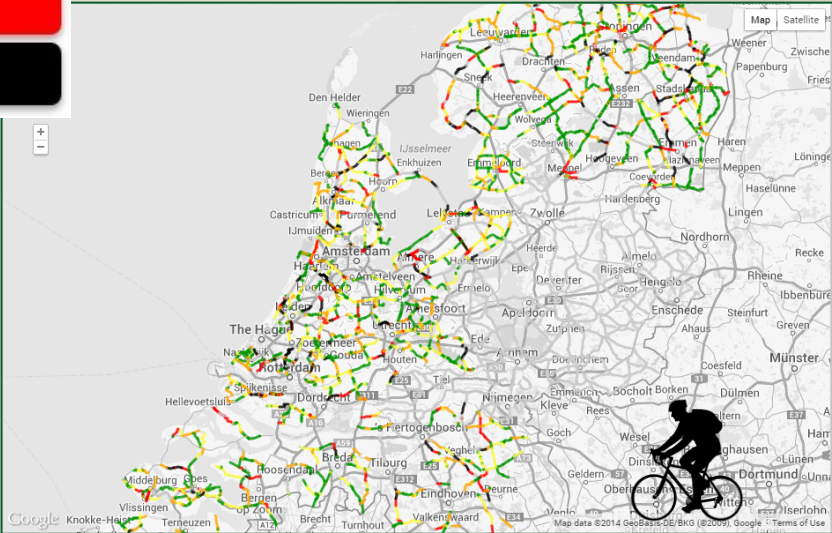
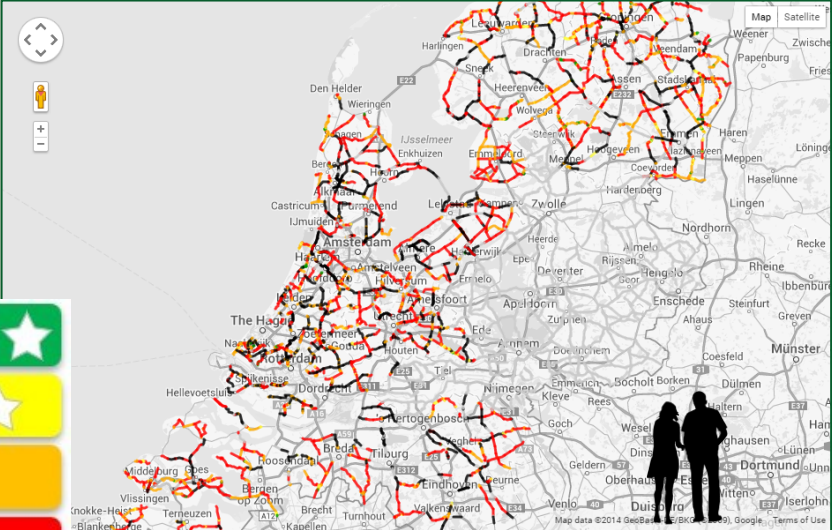
Using actual crash data with road infrastructure assessment to measure risk.

## Performance tracking

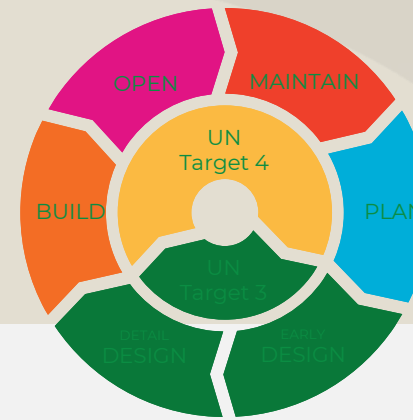


Did it deliver the expected results?

# Road user specific maps



# RAP Star Rating Process



ViDA  
<http://vida.irap.org/>

Source data

Attribute data

Route Review Tool

Source data

```

4A 96 F4 2E C4 45 B4 6F C0 1B 42 C0 0B 5A 55 2B
59 B6 E3 A4 2B 05 F1 90 36 F6 5C CE 99 F1 21 Z4
4C 7B 5D 91 D1 79 53 4B AD 0C D5 9A BE 55 FA 9E
C2 20 6A DB F6 B6 AF A2 6D 1E 64 E4 92 1D EB BA
A7 A5 38 F0 B4 F4 DE 63 B6 99 C6 3D 48 17 63 10
E9 B7 2E 26 D3 55 4C 14 C9 A2 D4 55 4D A6 35 91
7A 52 88 7B D4 B2 5A D1 E2 43 94 AA 84 3A 30 AD
C6 23 D3 A1 62 51 B3 A9 09 D0 85 56 94 B1 D2 85
AD C6 8A 0F A2 C6 8A A4 AA F9 00 C5 49 94 F1 9E
A8 9D 49 3D A2 1D 09 95 51 EB 0E A3 D1 E9 28 73
38 BF A2 16 4C 1D 2D 3A 3B 8E 5F 2C 68 C0 21 F8
15 9B DF 55 1D 9F 93 C4 33 F2 AB 4B 3E 1D 09 09
C1 0A 1D 8B 46 96 D4 6C 70 59 7B B6 E8 73 DC D2
D2 45 4F A7 09 EF AB 68 5D 15 3F D1 59 43 A7 23
    
```

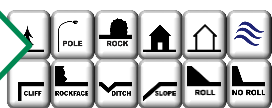
Attribute generation



Road Survey



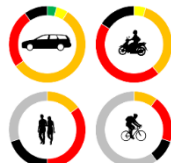
Road coding



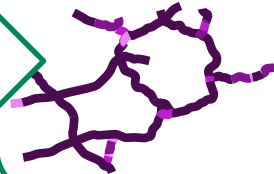
Processing



Star Ratings



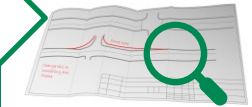
FSI estimation



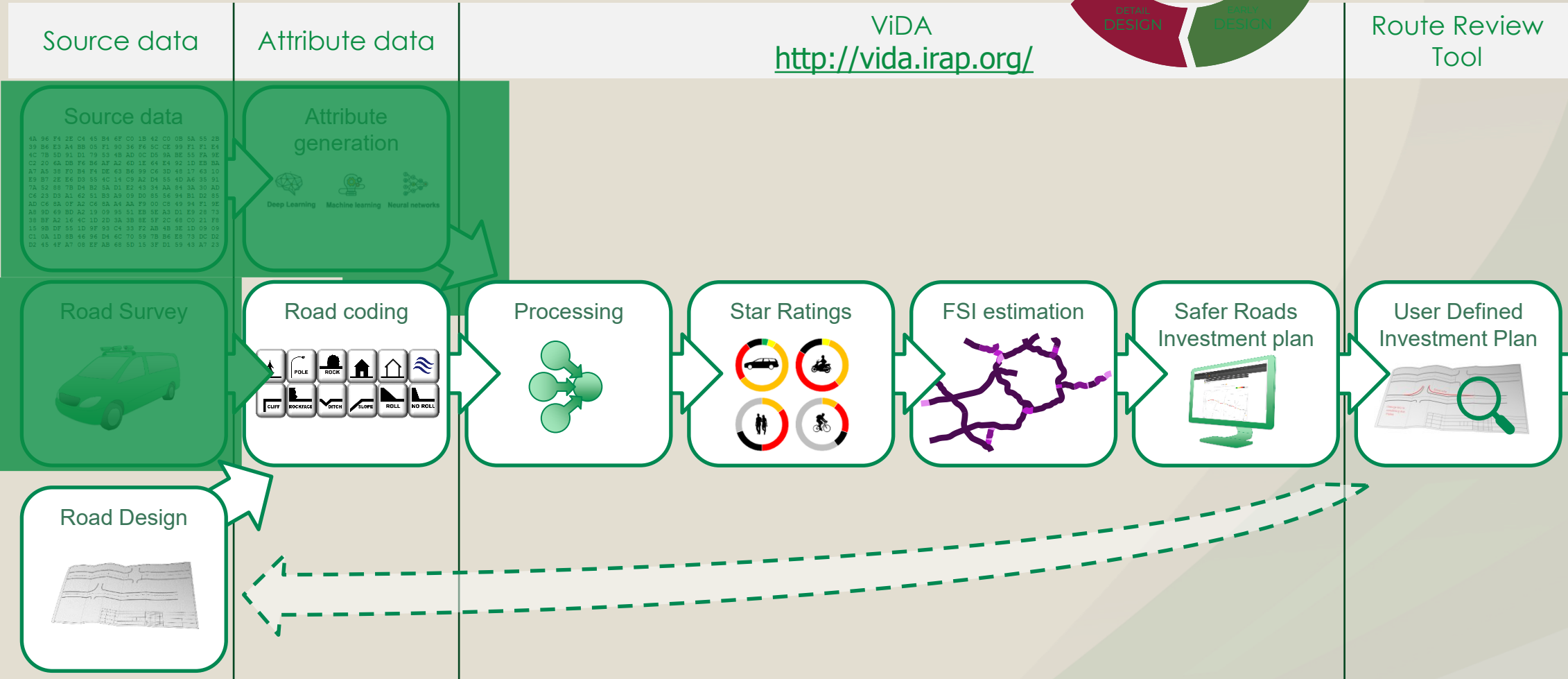
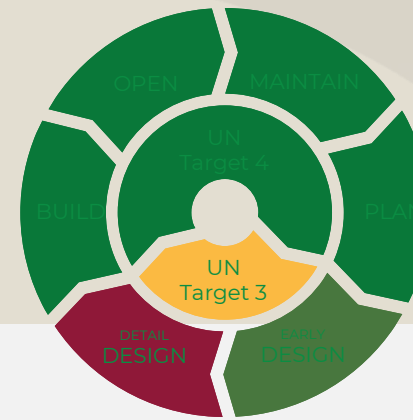
Safer Roads Investment plan



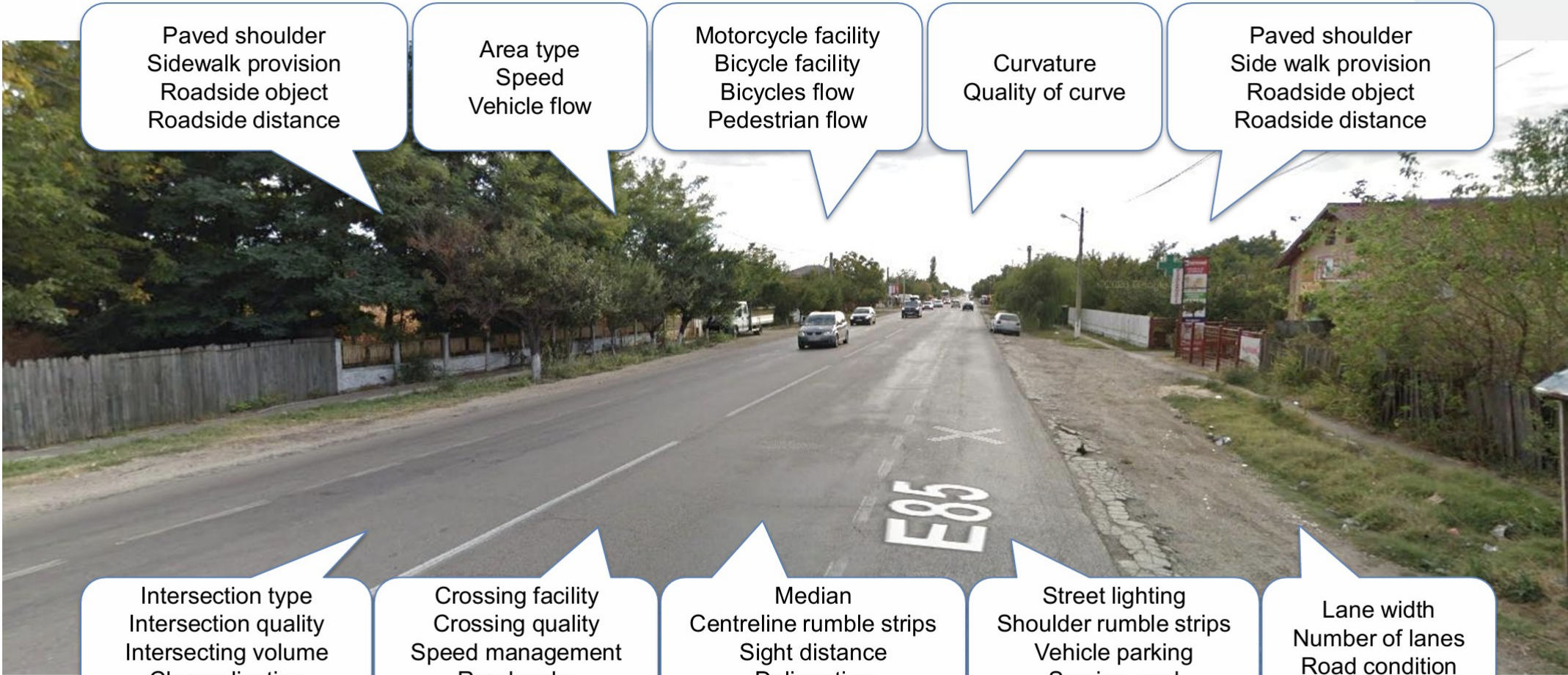
User Defined Investment Plan



# RAP Star Rating Process



# ATTRIBUTES RECORDED (OR CODED) FOR EACH 100M OF ROAD OR DESIGN



Paved shoulder  
Sidewalk provision  
Roadside object  
Roadside distance

Area type  
Speed  
Vehicle flow

Motorcycle facility  
Bicycle facility  
Bicycles flow  
Pedestrian flow

Curvature  
Quality of curve

Paved shoulder  
Side walk provision  
Roadside object  
Roadside distance

Intersection type  
Intersection quality  
Intersecting volume  
Channelisation  
Property access point

Crossing facility  
Crossing quality  
Speed management  
Roadworks

Median  
Centreline rumble strips  
Sight distance  
Delineation  
Grade

Street lighting  
Shoulder rumble strips  
Vehicle parking  
Service road  
Pedestrian fencing

Lane width  
Number of lanes  
Road condition  
Skid resistance

Coder  
Coding date  
Survey date

Image reference  
Road name  
Section

Distance  
Length  
Latitude

Longitude  
Landmark  
Comments

Carriageway label

# Want to know more?

Home / [Crash Type](#) / Intersections

## Intersection

Intersection crashes are one of the most common types of crash problem, particularly in urban areas. In rural areas, or where vehicle speeds are high, the consequence of collisions at intersections can be particularly severe.

The chances of avoiding serious injury or death reduce dramatically above 50 km/h for side impacts for the most modern types of cars, and is far less than this for older vehicles, and particularly for vulnerable road users.

A number of different intersection crash types can occur, including:

- Collisions with [pedestrians](#) and [bicyclists](#).
- Collision between oncoming vehicles and motorcycles, particularly when one is turning across traffic.
- Right-angle collisions, where neither vehicle or motorcycle is turning (often occurring at high speed).
- Right-angle or side-swipe collisions where one or more vehicles or motorcycles are turning.
- [Rear-end](#) crashes.

Typical factors which may add to intersection crash risk include:

- Inappropriate [speeds](#).
- Lack of [footpaths](#), [pedestrian crossings](#) or [bicycle facilities](#).
- Lack of treatment such as [delineation](#) or [roundabout](#).
- Inadequate [sight distance](#) to on-coming vehicles.
- Lack of intersection visibility including a lack of [street lighting](#) (road users are not aware of the intersection).
- Poor pavement [skid resistance](#).
- Lack of gaps in traffic.
- Driver/rider [fatigue](#).
- [Alcohol/drugs/medication](#) impairment.
- Distraction, including inattention due to mobile phone use.
- Overtaking errors, including poor judgement of the approaching vehicle speed.
- Lack of [vehicle safety devices](#).
- Poor condition of vehicle [tyres](#), [lights](#), [brakes](#) and [brake lights](#).

### Case Studies

**Examples of related Case Studies**

- Final evaluation of 80 km/h speed limit on single carriageway roads outside built-up areas in France
- Speed management in Philippines
- Belgaum – Yaragatti State Highway-20 in Karnataka
- Safety Improvement for National Highway G109
- Road Safety – Catalogue Of Case Studies

1 2 3 ... 11 »

[View all case studies »](#)

View all crash type related images here 🔍

An intersection crash between two cars Image credit: iStock

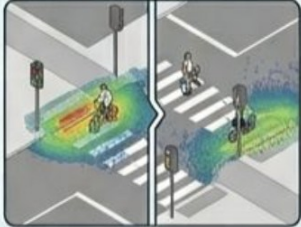
An intersection crash. Image credit: iStock

A 4-leg intersection with poor delineation. Image credit: AusRAP

# New version of VIDA 3.10

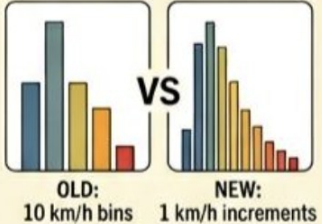

## 1. VULNERABLE ROAD USER (VRU) EMPHASIS

- **SIGNIFICANT UPDATES** to Pedestrian & Bicyclist models.
- **ENHANCED ACCURACY** of VRU risk assessments.
- **NEW 'Bicyclist Crossing'** crash type included.





## 2. ENHANCED DATA GRANULARITY

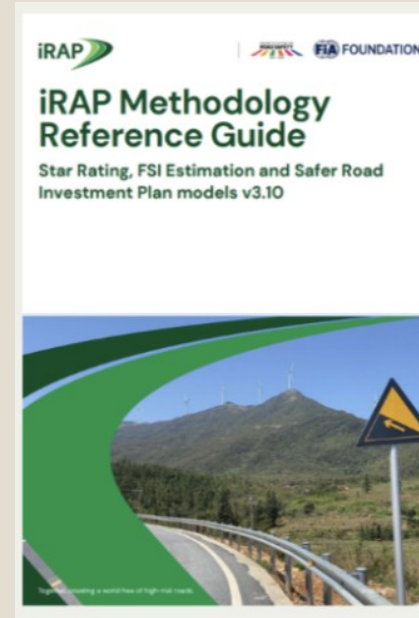
- **1 km/h SPEED INCREMENTS** (instead of bins).
- **1,000 VEHICLE-PER-LANE** increments.
- Allows for **MORE NUANCED** analysis.



## 3. NUANCED SCORING & BANDING

- **UNIFIED BANDING** for all VRU models.
- **INTRODUCTION OF 'ZERO STAR' BAND** for extreme high risk.
- **DECIMAL STAR RATINGS** (e.g., 2.3\*) for precise tracking.





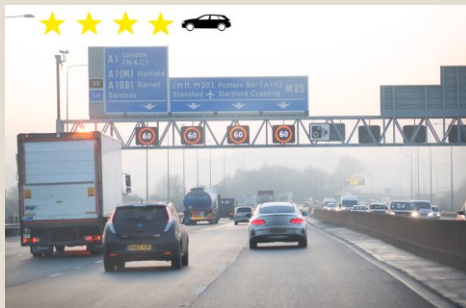
The iRAP Methodology Reference Guide (Version 3.10) is now the primary source of methodology information.

It will replace the standalone Methodology Fact Sheets.

Link to the webinar:

[https://youtu.be/Y\\_IhzJoYyI0?si=Pkv8qeCA-VJLgSP-](https://youtu.be/Y_IhzJoYyI0?si=Pkv8qeCA-VJLgSP-)

# Examples of Road upgrades saving lives and serious injuries every day



BOPHIRIMA PRIMARY SCHOOL, BOTSWANA

BOPHIRIMA PRIMARY SCHOOL, BOTSWANA

# CASE STUDY: UK



## CASE STUDY RAP PARTNERSHIPS SAVING LIVES Great Britain

Great Britain



Collaboration led by RSF with Highways England, Ageas & DfT

2020 target: 90% of travel on strategic road network 3-star or better

£175 million fund for 50 highest risk local authority A roads

690,000km Risk Mapped cumulatively in annual assessments

Annual publication of Risk Mapping results

Data released in Interactive Road Crash Index

### ROAD CRASH INDEX

Reveal crash numbers in your area. Secure investment for safer roads.

A collaborative project:

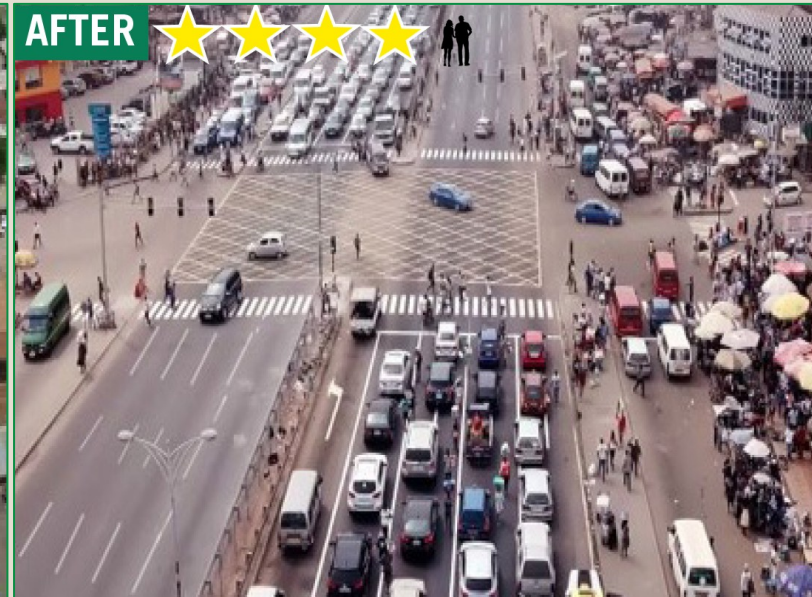
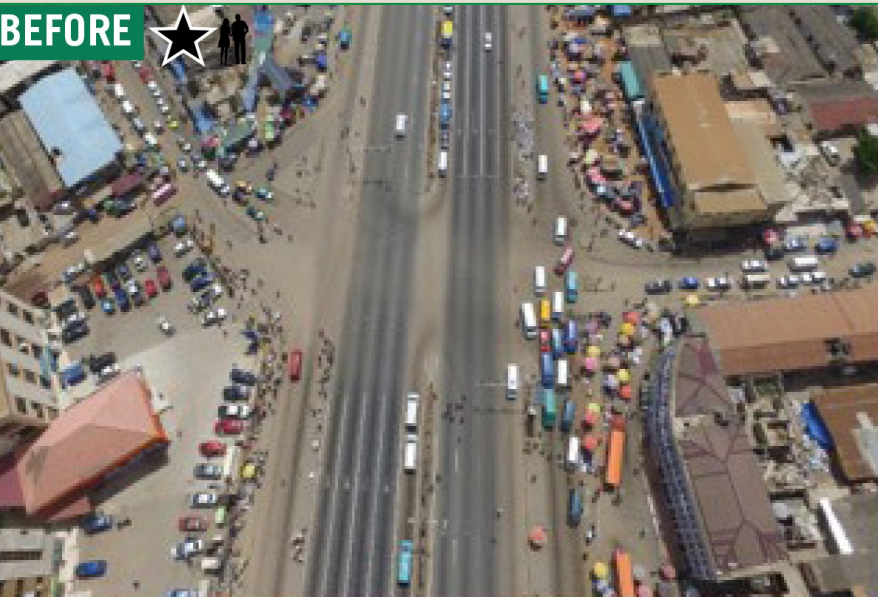


# ACCRA, GHANA

## Lapaz Intersection, N1 Highway



- In 2015, a person died every fortnight at the Lapaz intersection.
- Pedestrians and cyclists mixed in 14 lanes of traffic travelling at speeds of 90-120 kms/hr.
- An iRAP supported upgrade project vastly improved safety, funded by Accra Metropolitan Assembly (AMA) and the Bloomberg Philanthropies Initiative for Global Road Safety.



# QUEENSLAND, AUSTRALIA

## Bruce Highway



Australian Government

- 82% reduction in fatal and serious injuries and risk of death and injury more than halved
- Safety jump from 2-stars to 4 and 5-stars
- Reduction in head-on, run-off-road and intersection crashes



Images credit: TMR

# Shanghai, China

## Yangpu District



- Shanghai's Yangpu District is transforming its streets through world-class design.
- This project delivered 5-star safety for bicyclists and pedestrians.
- It's the first project to prioritise green transport and safety for students.



Images credit: BIGRS

Check out the video - <https://vimeo.com/327857274>

**Keen to see more safer roads saving lives?**

**Come with us on a road trip!**  
**with our Google Earth Story**

# Thank you very much !

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International Road Assessment Programme – iRAP  
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<https://irap.org/>



[www.ictct.net/afrosafe](http://www.ictct.net/afrosafe)

