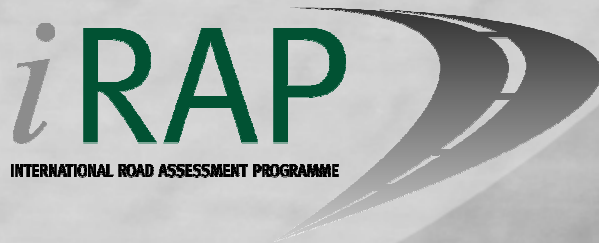


# Reducing the loss from road accidents



John Mumford  
Director

# The world road safety problem



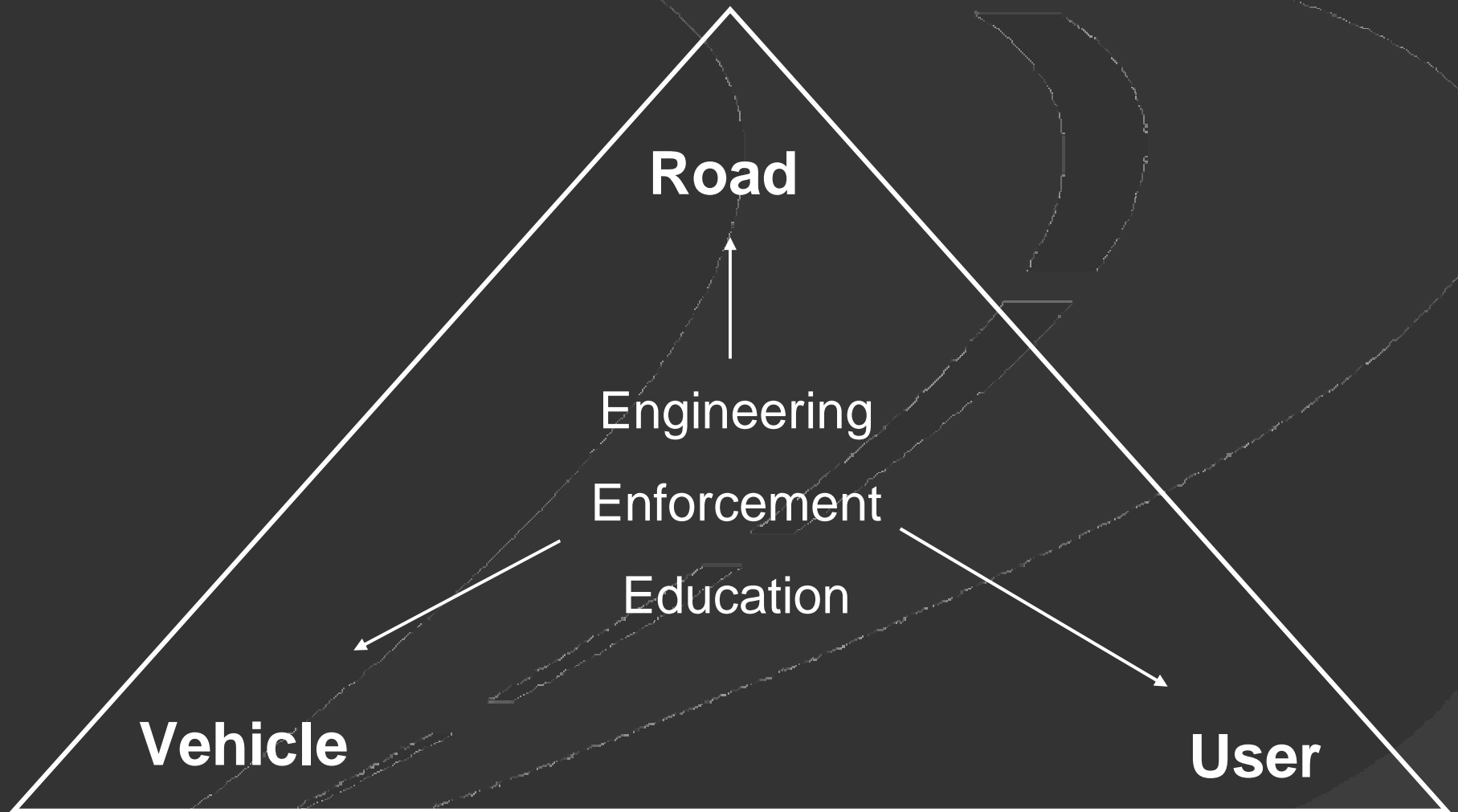
- 1.2 million killed every year
- 50 million seriously injured
- 3% GDP lost each year

Medical basics – the human body cannot survive uncushioned impact above 40 kph



- Its about managing energy

# The safe system

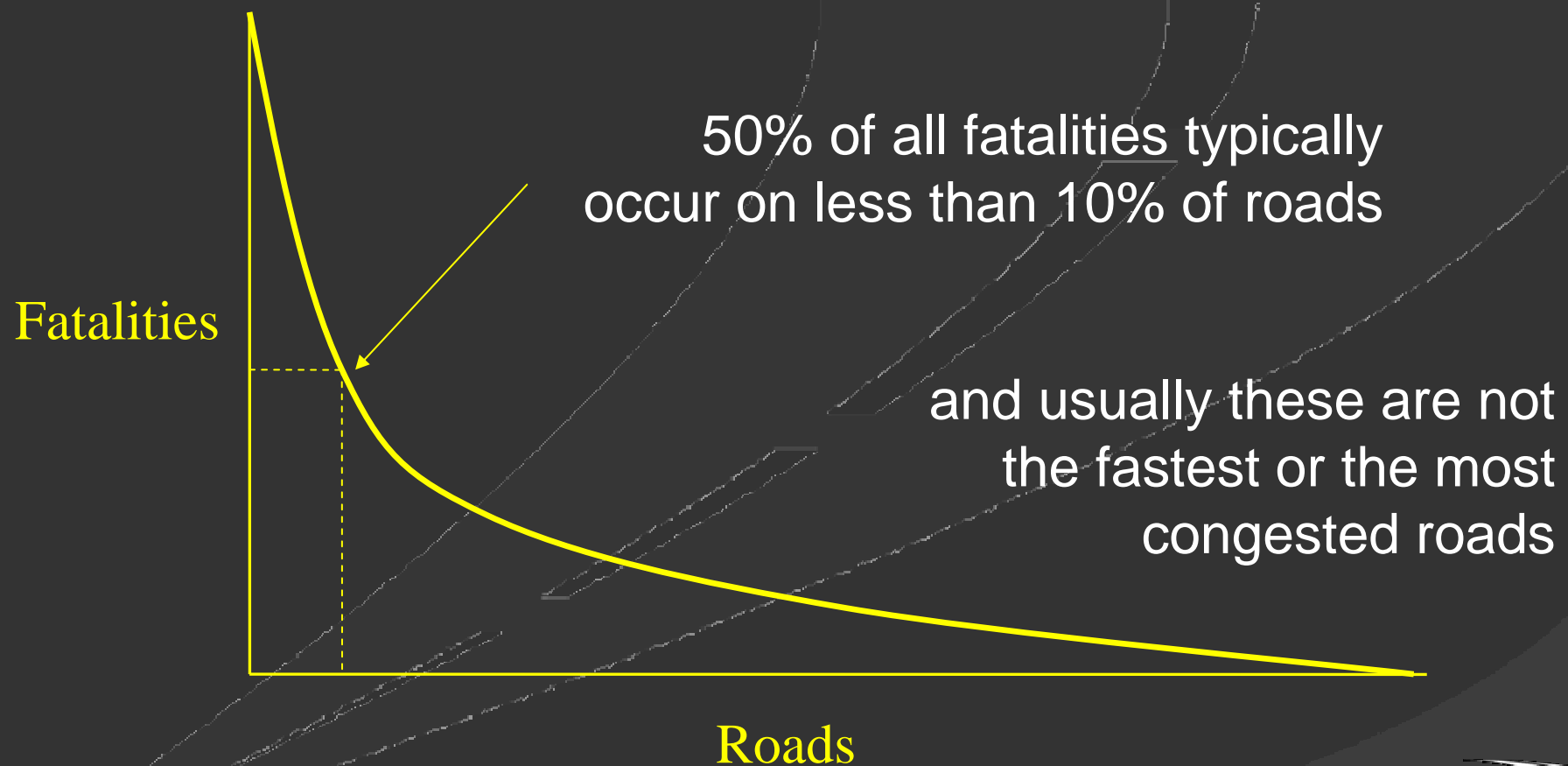


**A shared responsibility**

# Approaches work as a system

	Engineering	Enforcement	Education
Vehicle	Crumple zones, road holding, anti-lock brakes	NCAP Standards Vehicle inspections	Engineering capacity building
Road	Barriers, lines, signs, roundabouts, turning pockets, crossings	Road Assessments Black spot monitoring	Engineering capacity building
Users	Seatbelts, airbags & helmets	Clamp downs on dangerous driving, speed, alcohol, mobiles	Driver training, schools programmes, and public awareness campaigns

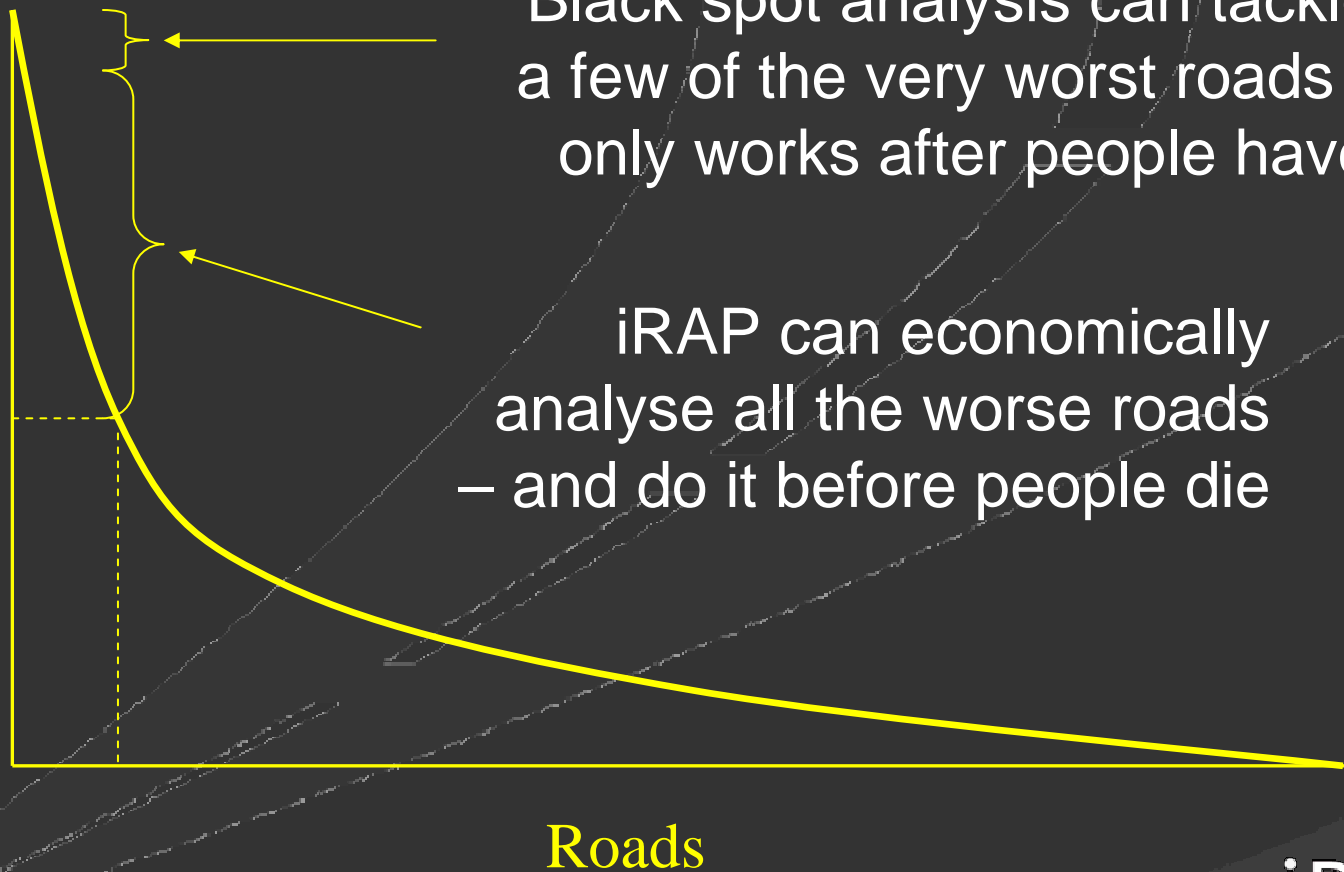
# Are roads really the problem?



# Analysing the road risk

Black spot analysis can tackle only a few of the very worst roads – and only works after people have died

Fatalities



Roads



# Crashes that kill pedestrians and bicyclists

Crossing and moving along roads



→ *We need safe footpaths,  
safe crossings*



# Crashes that kill car occupants and motorcyclists

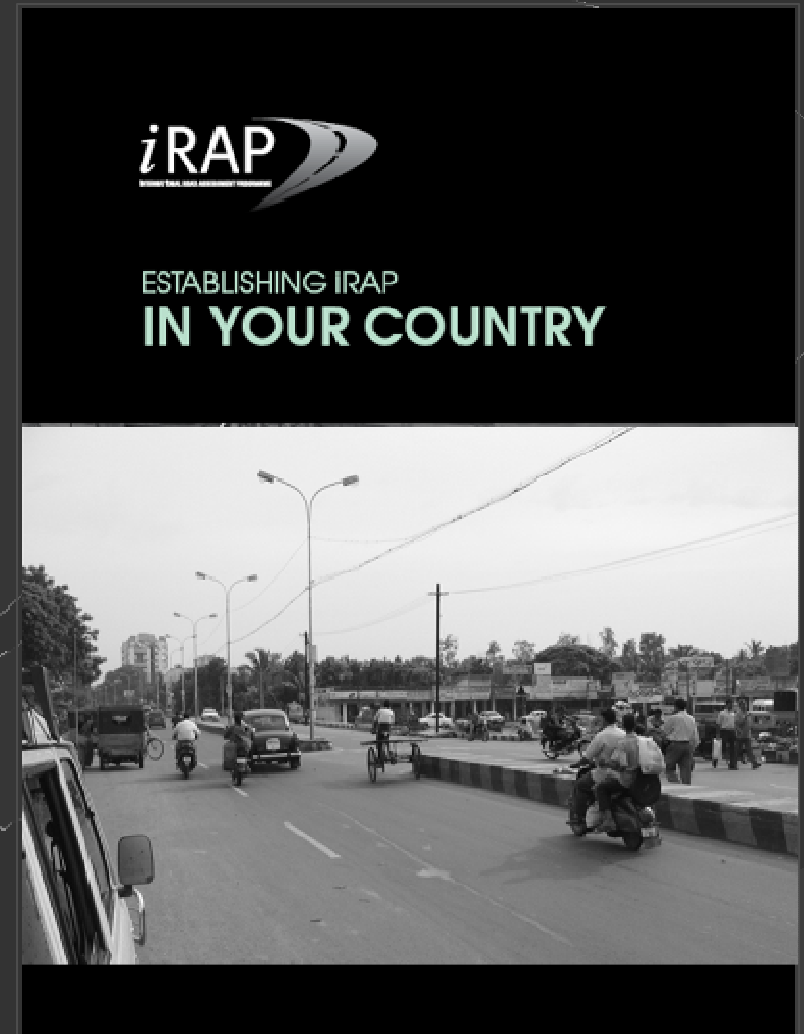


- Head-on crashes
- Brutal side impacts at junctions
- Run-off road impacts with roadside objects

→ *We need safe overtaking, junctions, roadsides*

# iRAP Process

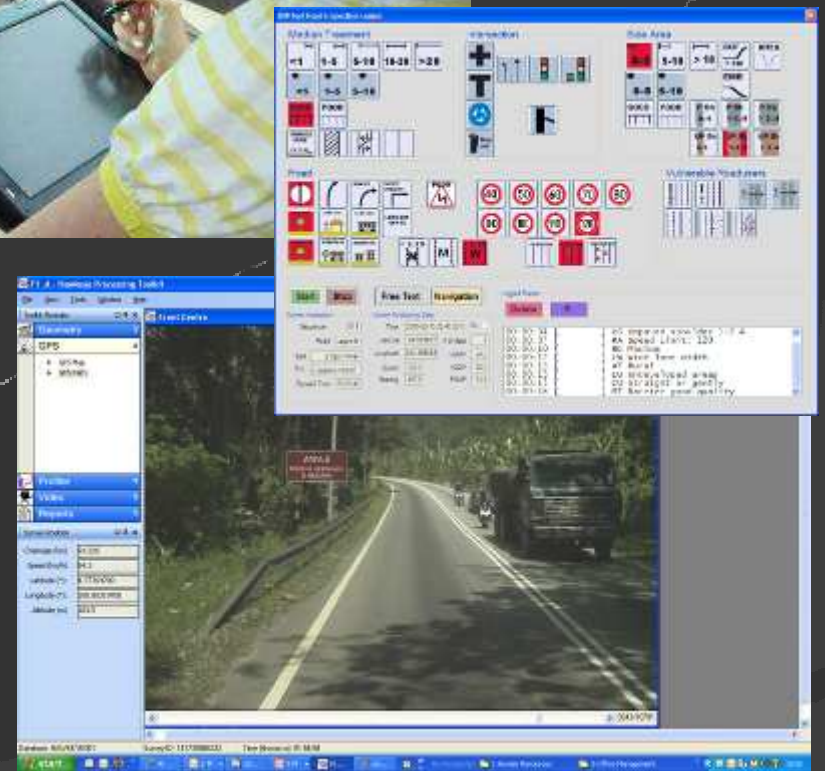
PROJECT STAGE	TIMEFRAME
<b>Phase 1: Establishing a project</b> <ul style="list-style-type: none"> <li>• Feasibility assessment</li> <li>• Workshop &amp; Steering Committee</li> <li>• Finalise network</li> <li>• Detailed project planning</li> <li>• MOU signing and project launch</li> </ul>	3 months
<b>Phase 2a: Inspecting and rating roads</b> <ul style="list-style-type: none"> <li>• Road inspections</li> <li>• Training and rating</li> </ul>	4 months
<b>Phase 2b: Collecting supporting data</b> <ul style="list-style-type: none"> <li>• Traffic volumes and speeds</li> <li>• Mapping and assessment management</li> <li>• Road safety countermeasure costs</li> <li>• Crashes</li> </ul>	3 months
<b>Phase 3a: Star ratings and Programme Definition</b> <ul style="list-style-type: none"> <li>• Detailed analysis</li> <li>• Production of initial results</li> <li>• Training in use of RAP software</li> </ul>	4 months
<b>Phase 3b: Review and reporting</b> <ul style="list-style-type: none"> <li>• Review of star ratings and plan</li> <li>• Production of report, presentation of results and launch</li> </ul>	3 months
<b>Phase 3b: Review and reporting</b> <ul style="list-style-type: none"> <li>• Review of star ratings and plan</li> <li>• Production of report, presentation of results and launch</li> </ul>	3 months
<b>Phase 3c: Implementation and support</b> <ul style="list-style-type: none"> <li>• Additional training</li> <li>• Contract Specification Support for Programme Implementation</li> <li>• Stakeholder workshops</li> </ul>	Ongoing
	<b>18 months</b>



# Inspecting Roads



- 30 + attributes important to safety every 100m
- Independent of crash data



# Targeted Road Safety Plan

- More than 70 proven life saving measures tested
- affordable, economically sound
- mainly low-cost  
eg pedestrian refuges
- plan can be tracked
- Road Safety Toolkit  
[www.irap.net/toolkit](http://www.irap.net/toolkit)



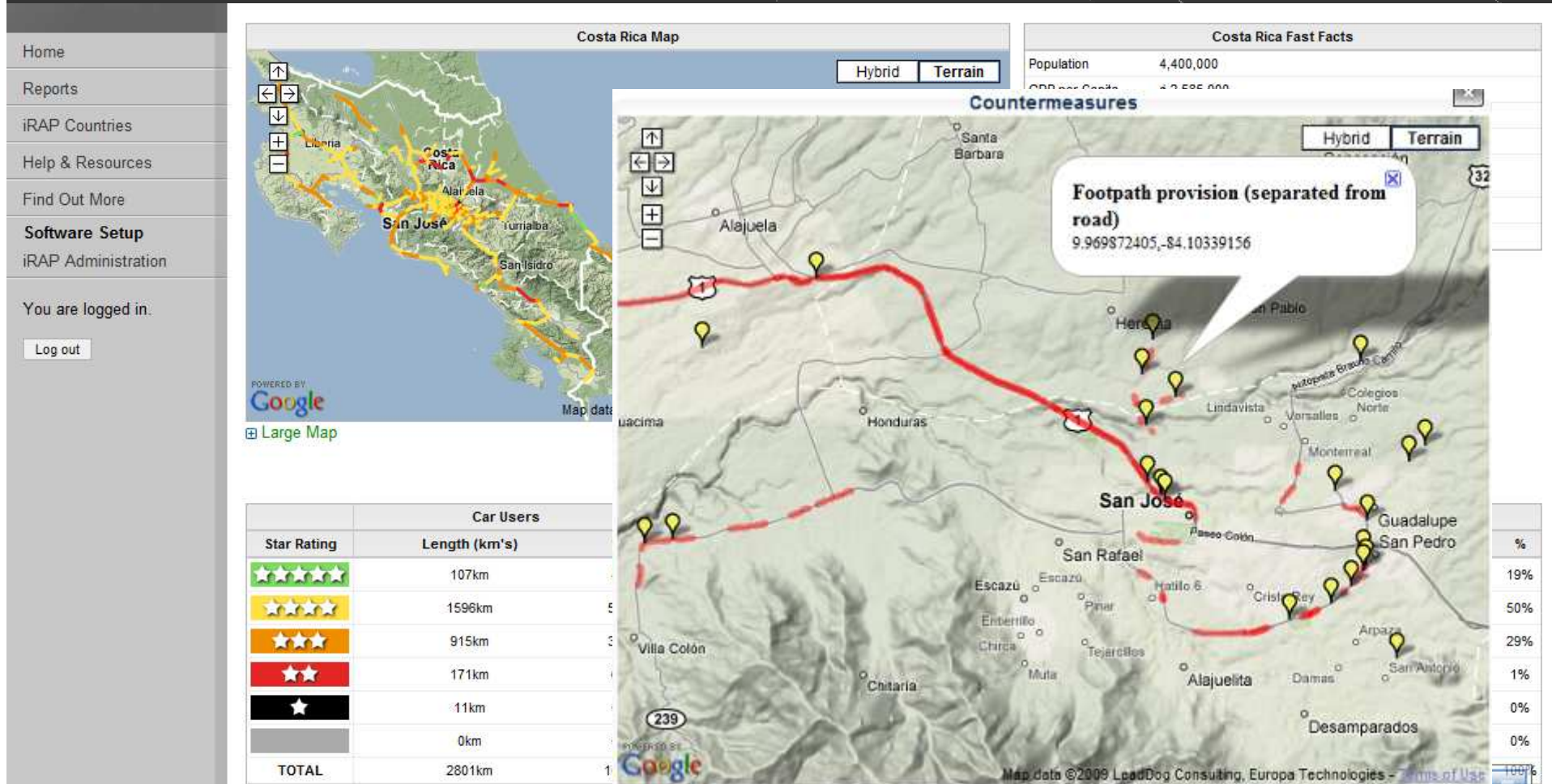
**Motorcycle lanes**



**Save 82 lives**



# Road Safety Report – With Countermeasures



# Predicted Casualty Savings

iRAP  
INTERNATIONAL ROAD ASSESSMENT PROGRAMME

## iRAP Costa Rica Predicted Casualty Savings Report

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Costa Rica Fast Facts	
Population	4,400,000
GDP per Capita	€ 2,585,000
Road Network	29667km
Fatalities (2006)	616
Serious Injuries (2006)	3522
Est. Crash Cost (2006)	€ 302,660,000,000
Traffic Mix	High bicycle and pedestrian flow common



### KSI SAVED PER KM OVER 20 YEARS

Colour	Band
Green	0
Yellow	>0 - 2
Orange	>2 - 5
Red	>5 - 15
Black	>15

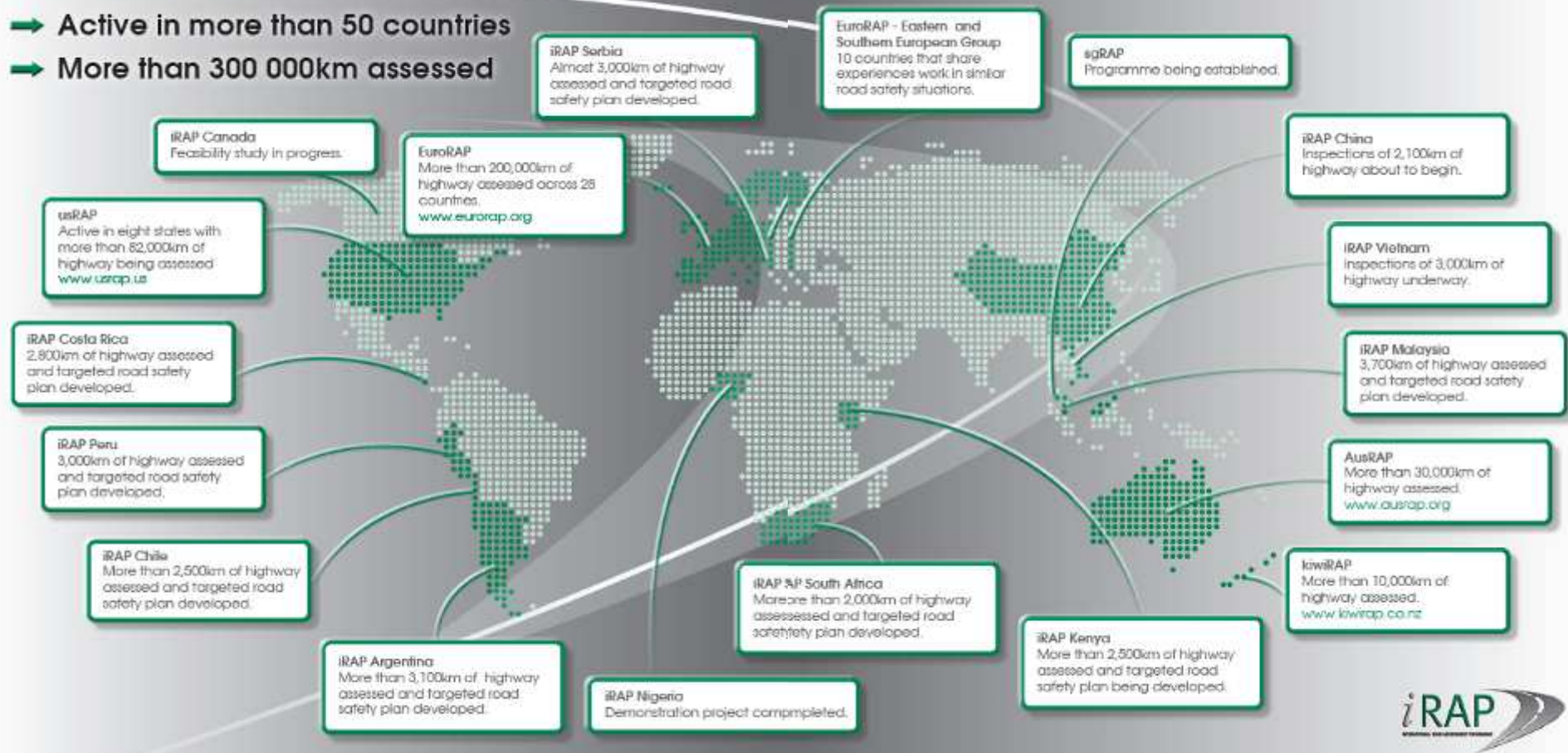
iRAP  
INTERNATIONAL ROAD ASSESSMENT PROGRAMME



# Large scale, globally consistent

➔ Active in more than 50 countries

➔ More than 300 000km assessed



# ***Decade of Action***

- cutting deaths by 50%



2000

**1.9 million deaths  
(with no action)**

**0.8 million deaths  
(with action)**

2020

# iRAP Projects to Date

23,000km

Length of road assessed

\$US 500 million

Investment over 20 years

89,000

Deaths and injuries that would be avoided over 20 years

\$US 8,000 million

Benefit over 20 years

# Safer Roads Contribution

- deliver 1/3<sup>rd</sup> global target?
- iRAP's contribution
  - focus on risky roads where deaths concentrated
  - help build safety into new road and rehabilitation plans
  - Help evidence based policy  
eg speed management  
project management



→ *iRAP could help  
double the fix rate*

