

24 July 2020

The Committee Secretariat  
Department of the Senate  
PO Box 6100  
Parliament House  
CANBERRA ACT 2000

Dear Joint Select Committee on Road Safety

**iRAP Submission to Joint Select Committee on Road Safety**

iRAP, as a global charity with the vision for a world free of high-risk roads, welcomes the opportunity to provide this detailed submission on the Joint Select Committee on Road Safety Terms of Reference following my appearance at the hearings on Tuesday 21 July.

400,000 Australians will be killed and injured in road crashes between now and 2030 based on current trends. Every community and every electorate will share that tragedy. The cost to the Australian economy, business and families will be more than \$300 billion. The solutions are both cost effective and proven and an urgency and scale to our response is essential.

As one of the Special Advisors to the Inquiry into the National Road Safety Strategy 2011-2020 led by Dr Crozier and Dr Wooley I congratulate the Government on the actions so far. I also note that many of the actions outlined underneath each of the recommendations have yet to be implemented at the scale and speed required to make a difference. Follow-through on these existing actions remains a priority.

Please find attached my opening statement delivered to the Joint Select Committee and response to the specific Terms of Reference. As always, iRAP stands ready to partner with the Australian Government to unlock the full potential of safer roads and safer speeds to save lives and reduce injuries across every corner of Australia and play a valuable international road safety leadership role in our region.

Yours sincerely



Rob McInerney

## **iRAP Opening Statement to the Joint Select Committee on Road Safety**

Good afternoon Honourable Ministers and Senators. My name is Rob McInerney and I am the Chief Executive Officer of iRAP, the International Road Assessment Programme, a global charity that is working in partnership with governments, the road industry and NGO partners in over 100 countries around the world. This includes EuroRAP, usRAP, BrasilRAP, ChinaRAP, IndiaRAP and KiwiRAP amongst others.

As an Australian I would like the AusRAP programme here in Australia to be the best! There are some great things happening here with over 200,000km of star rating data already available as part of the existing partnerships between Austroads, ARRB, AAA and iRAP. This includes:

- the TIC approved national targets for 90% of travel on the National Highway to be 3-star or better by 2020;
- The Midlands Highway, Bruce Highway and Princes Highway investment that is delivering 3, 4 and 5-star performance levels and an 80%+ reduction in road trauma in some cases;
- the BHP led upgrades to public roads in Queensland (and around the world) to reduce risk to their staff;
- the AAA and state-club advocacy, Risk Mapping and Star Rating for Schools work;
- the local government investment partnerships like Eurobodalla Shire and the local roads of regional significance
- the TAC / iRAP Injury Dashboard and Impact Investment work that is shining a light on the true human impact and cost to the health system of road trauma, and
- international partnerships like the AusRAP and IndiaRAP twinning and work to support the new Australia-India Infrastructure Council discussed recently by Prime Minister Modi and Morrison.

But as with many road safety initiatives in this country we lack coordination, are duplicating effort, being more protective of our political image than the humans who use the roads, and simply not doing enough of the proven things that work. We still lack the urgency and scale of response that is needed – but we can fix that.

In simple terms 400,000 Australians will be killed and injured on our roads over the next 10 years. Based on analysis we have completed in partnership with the TAC in Victoria 27,000 people will suffer brain injuries; 85,000 will suffer severe bone fractures and over 100,000 will suffer soft tissue injuries.

So, what would applying the best-in the world look like for AusRAP. Building on what we have done already there would be:

- An AusRAP hub (similar to ANCAP) to coordinate national partnerships, data, innovation, communications and reporting
- AusRAP Crash Risk Maps of the National Highway and major state networks would be published every year like the UK and Spain have done for 20 years and we'd have urban risk mapping for pedestrians and cyclists like KiwiRAP
- Proactive Star Rating and Investment Plan assessments of the National and State Highway network systematically every 3-5 years that measure progress against the targets and shapes the investment pipeline for the future as completed by Mexico, China and is now specified by the European Union.
- A large-scale Safer Roads Fund would be mobilised like the “Highway Safety to Cherish Life” programme in China, DoT investment for county roads in the UK, and the new private sector partnerships in Brazil that are taking existing roads and upgrading them to 3-star or better performance levels.
- Kids would be provided with 4 and 5-star journeys to school like those happening in Vietnam, USA, Uruguay and Zambia to name a few.
- The before and after star rating and fatality estimates would be routinely reported for all road upgrades – like the 3, 4 and 5-star targets being applied by Highways England and the Multi-lateral Development Banks are doing from Fiji to El Salvador and India to Ethiopia.
- And we would celebrate success..... with you and your Ministerial colleagues, ribbon cutting every upgraded 3-star or better road like the urban roads in Shanghai that achieved 5-star for pedestrians and cyclists through to the rural roads in India that have hit the minimum 3-star global targets

Throughout the Covid-19 crisis I have heard commentators talk about the trade-off between Protecting Lives and Protecting Livelihoods. When investing in road trauma reduction there is no trade-off.

Systematic investment in 3-star or better roads for all road users will save lives, save money and create jobs in every corner of this country. We can Protect Lives and Protect Livelihoods. We must Protect Lives and Protect Livelihoods.

## Contents

Introduction and background .....	5
Australian Road Assessment Programme – Example Outputs & Partnerships .....	6
TOR a. Effectiveness of existing programs and Safe System Opportunities .....	8
Response to the Inquiry into the National Road Safety Strategy .....	8
Safe System Opportunities .....	9
TOR b. Impact of road trauma on the nation – including remote and regional areas .....	11
The Impact in Rural and Remote Regions.....	12
TOR c. Parliamentary Standing Committee on Road Safety and its functions .....	13
TOR d. Measures to ensure government road infrastructure investment incorporates safe system principles.....	14
AusRAP Hub .....	14
Minimum Star Rating Standards for new roads.....	16
TOR e. road trauma and incident data collection and coordination .....	19
Annual Risk Maps and Performance Tracking .....	19
Harmonisation, detail and timeliness of injury data.....	22
TOR f. recommended strategies, performance measures and targets for next Strategy .....	24
Road Infrastructure Key Performance Indicators using the iRAP Global Standard .....	25
Australian Infrastructure Safety KPI Data Snapshot .....	32
Global Road Safety Performance Targets .....	33
TOR g. recommendations for Office of Road Safety role.....	34
How to mobilise the \$3bn Road Safety Fund .....	34
TOR h. other measures with a focus on the Inquiry Recommendations.....	36

## Introduction and background

iRAP is a UK registered global charity with the vision for a world free of high-risk roads. The charity provides the global standard for infrastructure safety performance monitoring as recommended by WHO Member States, UN agencies, the International Transport Forum of the OECD, Global Infrastructure Hub, the World Bank, PIARC (the World Road Association), European Investment Bank and other national governments and multi-lateral development agencies. The specifications, systems and supporting software are provided in a free-to-air environment for all partners to use. Global partners contribute to the continuous enhancement and improvement of the programme for the mutual benefit of all partners.

The AusRAP programme in Australia has been active since 2004 and was the first RAP programme outside Europe. The programme is currently governed by an MOU agreement between the Australian State, Territory and Local Government road agencies represented by Austroads, ARRB, AAA and iRAP. Austroads research has helped underpin the global evidence base used in the models. The associated ANRAM metrics and theory are based on the iRAP methodology, coding manual, star rating, fatality estimation, investment planning and attribute specifications that form the basis of infrastructure KPI reporting globally. It is noted that many practitioners have major misunderstandings of this link and do not appreciate the significant iRAP intellectual property and partnership that is provided for free that supports the integrated AusRAP/ANRAM solutions.

Australian experts have also helped shape the global programme that now reaches 100+ countries, 1,000,000km+ of roads and has made over \$100 billion of road investment safer worldwide from school entrances to major freeways and toll-roads.

An approximate estimate of work already completed by the partners in Australia is provided below:

STATE	STAR RATING & INVESTMENT PLANS (since 2012)	RISK MAPPING (crash maps)	STAR RATING OF ROAD DESIGNS (new since 2019)
Australian Capital Territory	1,000km+	40,000km+	350km+
New South Wales	24,000km+		
Northern Territory	2,000km+		
Queensland	50,000km+		
South Australia	13,000km+		
Tasmania	800km+		
Victoria	28,000km+		
Western Australia	40,000km+ (light data)		

## Australian Road Assessment Programme – Example Outputs & Partnerships

The AusRAP Hub will build on an extensive platform of local experience and application by State and Local Government Agencies, Motoring Clubs, Austroads and ARRB. The partnership benefits from, and contributes to, the global iRAP partnerships that are in place in over 100 countries worldwide. Examples of AusRAP partner activity in Australia are provided below.



### NATIONAL ROAD SAFETY ACTION PLAN 2018-2020

**2 Target infrastructure funding towards safety-focused initiatives to reduce traumas on regional roads**

**Commonwealth States and territories Local government**

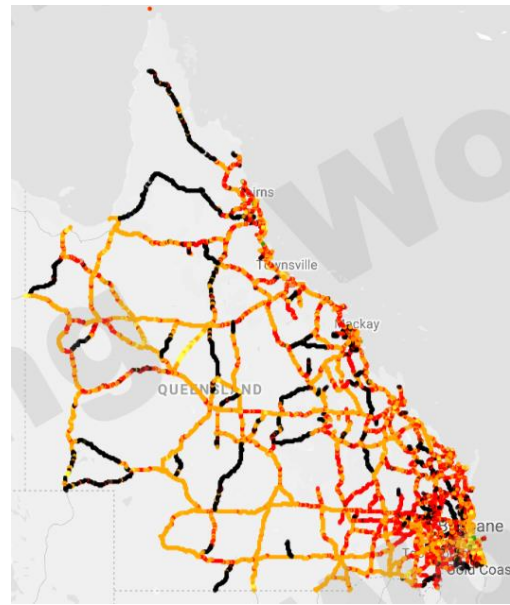
**3, A, B**

**Why**  
Australia has many high speed regional roads that are key routes and where crash risk is high. There were 843 people killed on regional and remote roads in 2016, representing 65% of all road crash deaths.

**Outcome by 2020**  
Increase safety treatments on roads with highest risk of death and injury. Actions 2 and 3 (together with A and B) collectively aim to improve the star ratings across the whole road network, with the aim to achieve 3-star AusRAP ratings or better for 80% of travel on state roads, including a minimum of 90% of travel on national highways.

**Implementation**  
The Commonwealth, states and territories, and local governments will work together to develop and deliver regional road safety initiatives within infrastructure investment frameworks.

- Upgrades to start with corridors/routes with the highest death and serious injury risk.
- Apply mass action treatments (e.g. barriers, wide medians, audio-tactile line markings) for state and local roads with the highest risk of fatality and serious injury.
- Accelerate and/or redirect funding to focus on highly beneficial mass action treatments as part of the delivery of funded infrastructure programs/projects, and use pilot projects to demonstrate the benefits to the community.



6 NATIONAL ROAD SAFETY ACTION PLAN 2018-2020

**National Star Rating Policy Targets – TIC**

**Statewide Vehicle Star Ratings – TMR**

**Safer Roads Investment Plan**

Currency: \$AUD - Analysis Period: 20 years

Total FSIs Saved	Total PV of Safety Benefits	Estimated Cost	Cost per FSI saved	Program BCR
2,081	1,188,575,999	545,419,904	262,081	2

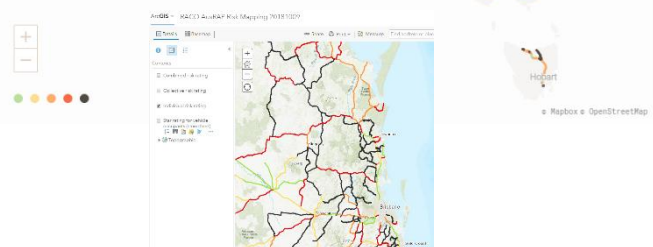
  

Countermeasure	Length / Sites	FSIs saved	PV of safety benefits	Estimated Cost	Cost per FSI saved	Program BCR
• Cold Resistance (paved roads)	350.00 km	685	265,521,677	88,391,771	199,126	3
• Roadside barriers - driver side	517.00 km	446	254,859,467	154,119,857	343,858	2
• Clear roadside hazards - driver side	1,051.00 km	265	151,258,133	45,177,539	151,704	4
• Clear roadside hazards - passenger side	1,005.00 km	289	132,316,251	99,219,479	165,855	3
• Blue/white barriers - passenger side	551.00 km	251	131,050,019	100,711,814	454,100	1
• Central median barrier (no duplications)	10.00 km	72	41,221,727	9,729,297	92,110	0
• Central median barrier (with duplications)	159.00 km	65	56,615,005	30,915,486	375,694	2
• Shoulder rumble strips	123.00 km	49	20,231,919	18,909,322	402,406	1
• Central median barrier (r+1)	15.10 km	46	26,151,749	16,076,064	564,550	2
• Traffic calming	47.50 km	45	25,188,379	12,219,598	270,891	2
• Protected turn lane (ungrated) < 4kg	72 sites	36	20,566,855	6,425,992	178,185	3
• Engine Detonation	158.50 km	34	19,828,955	7,518,728	219,707	2
• Front-end protection driver side (exposed to road)	48.20 km	18	10,104,759	6,506,884	367,770	2

**Safer Road Investment Plan – TAC**



**Before and After Star Ratings – VicRoads**



**AusRAP Crash Risk Maps – AAA / RACQ**





## Midland Highway 10 Year Action Plan

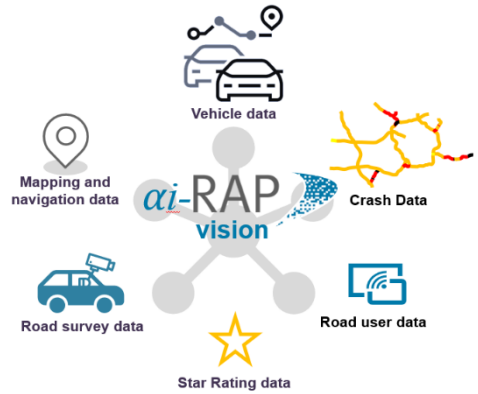
About the action plan

### We're taking action to improve safety on the Midland Highway

The Midland Highway 10 Year Action Plan sets out the Australian and Tasmanian governments' key priorities for investing \$500 million over 10 years to upgrade the highway and improve road safety and save lives on Tasmania's key north-south freight route. We will improve road safety and decrease driver frustration by providing a safer road with more overtaking opportunities.

### We'll do this by delivering a 3-star safety rating for the Midland Highway

The objective of our 10 year investment in the Midland Highway is to deliver a minimum 3-star rating for the highway's entire length. The Australian Road Assessment Program (AusRAP) is part of the International Road Assessment Program (iRAP) that uses star ratings to measure the safety of a road's infrastructure. Each road is assigned a star rating which tells us how safe the



Global first Ai-RAP Partnership to use big data and artificial intelligence to generate low-cost, scalable RAP data underway with MRWA, Transport for NSW and the iMove CRC will support AusRAP KPI measures

<https://www.midlandhighway.tas.gov.au/about the action plan>

Bruce Highway Cooroy to Curra Section B, Queensland, Australia

## CASE STUDY RAP PARTNERSHIPS SAVING LIVES Bruce Highway Cooroy to Curra B

Queensland Government

Australian Government

BUILDING OUR FUTURE

Safety jump from 2-stars to 4 & 5-stars (20% 5-star)

82% reduction in fatal and serious injuries

Reduction in head-on, run-off-road and intersection crashes

Risk of death and serious injury more than halved

AUD\$1.43+ billion invested in safety

<https://www.vaccinesforroads.org/case-studies-of-success/>

## TOR a. Effectiveness of existing programs and Safe System Opportunities

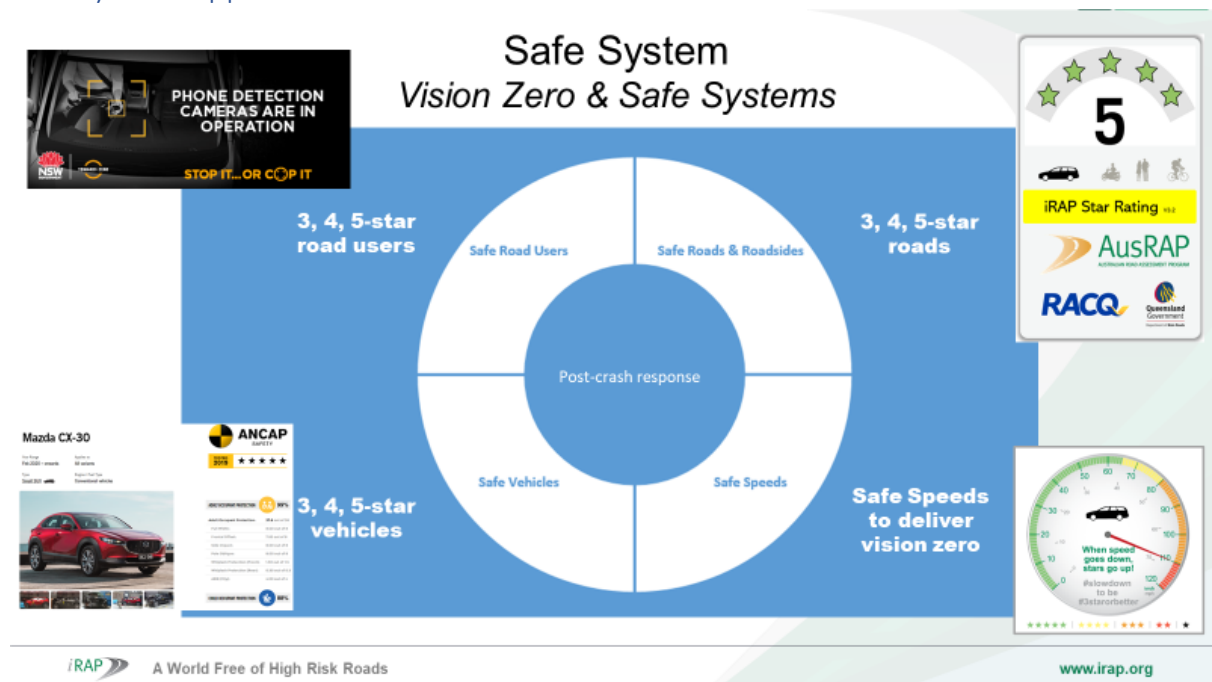
### Response to the Inquiry into the National Road Safety Strategy

While slow, we are pleased to see positive progress on some of the Inquiry Recommendations however there are a few major areas to address:

- Recommendation 3 with the commitment to the minimum \$3 billion a year road safety fund
- Recommendation 5 with the commitment to the key performance indicators – that should as a minimum align with the [Global Road Safety Performance Targets](#) agreed by WHO Member States including Australia – with baseline assessments completed this year; along with the establishment and resourcing of a national road safety observatory
- Recommendation 8 for speed management initiatives that support harm elimination (e.g. [Auckland Transport recent activity](#))
- Recommendation 9 for all new roads to be 3-star or better for all road users; include the AusRAP data in the Infrastructure Australia audit; establish a long-term Safer Roads Fund and establish a national AusRAP programme/hub to complement the ANCAP partnership that already exists.
- Recommendation 12 to elevate and coordinate DFAT aid and trade partnerships with a focus on road safety outcomes in the Indo-Pacific Region, support for global initiatives including the Global Road Safety Facility, UN Road Safety Fund and key enablers like the multi-lateral development banks, Global Network for Road Safety Legislators, iRAP and Global NCAP.



## Safe System Opportunities



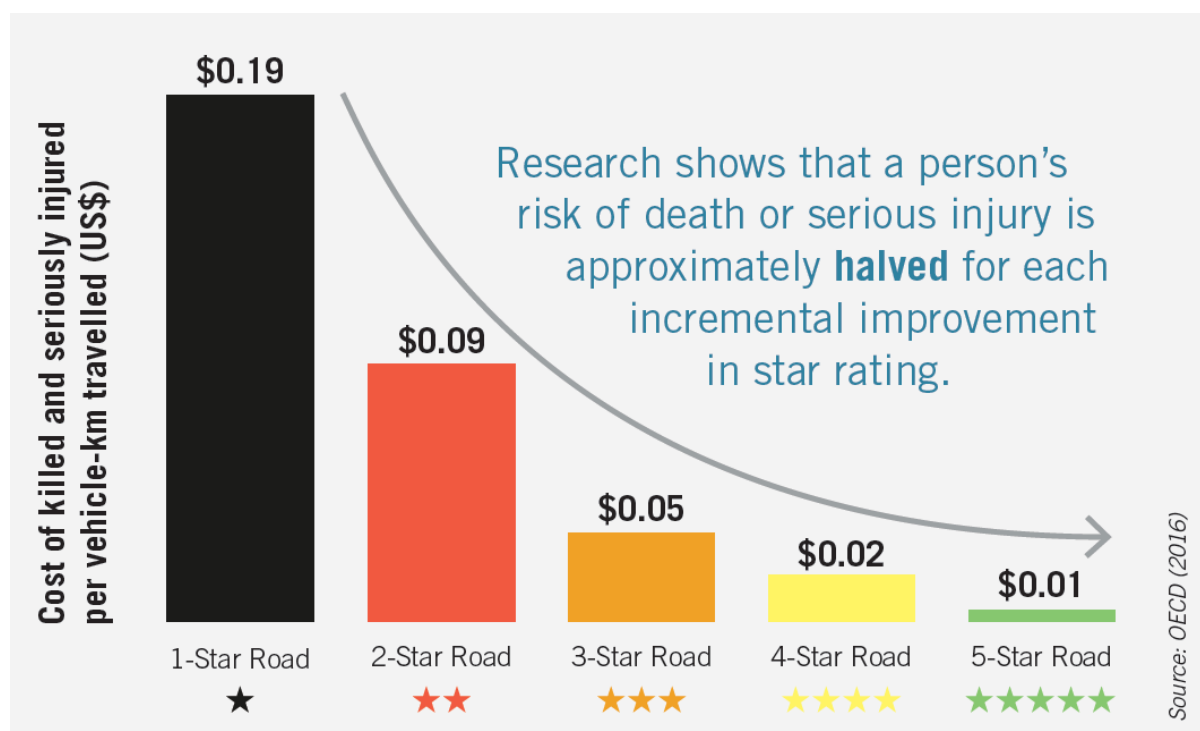
In simple terms, Vision Zero and Safe System outcomes will be achieved when we have 5-star road users, in 5-star vehicles on 5-star roads and the safe speeds to ensure no one is killed or injured.

From an iRAP perspective, key areas to integrate these safe system principles include:

- Corporate, industry and community use and access to AusRAP Risk Mapping and Star Rating Data to provide the safest route and mode-choice for their journeys (as suggested by Hon Minister Thistlethwaite).
- Spot star ratings completed at fatal and serious injury crash scenes and routinely reported to the Standing Committee, Office of Road Safety and in the public domain to support discussions like those mentioned by Ms Bird on Picton Road. “The crash happened on a 1-star road and the driver in the 5-star car survived and the 3 occupants in the 3-star vehicle were killed. None of the fatal five behaviours were evident.”
- Design for outcomes not a design to ‘standards’. This would involve a new approach where the starting point for designs is a 5-star performance level and design teams and funding agencies must then justify anything less than 5-star highlighting any ‘cost savings’ associated with the increased death and injury expected over 20 years and why it is the design recommended.

- Integration of Safe System and AusRAP data and knowledge in the education system (e.g. a driver is 6 times more likely to crash on a sharp curve; crash risk is halved for each incremental improvement in road star rating)
- Building on [TAC / iRAP Injury Dashboard](#) engage health Ministers and professionals to understand lifetime cost of road trauma and impact on resources.

### The relationship between Star Ratings and crash costs per kilometre travelled



<https://www.oecd.org/publications/zero-road-deaths-and-serious-injuries-9789282108055-en.htm>

## TOR b. Impact of road trauma on the nation – including remote and regional areas

iRAP believe that a lack of visibility of the true human impact of road crashes has created the apathy and under-investment we have seen to date. Shining a spotlight on the true impact of road trauma has been a focus of the charity, and partnerships with organisations like TAC have enabled that to happen.

The [Vaccines for Roads](https://www.vaccinesforroads.org) resource has been designed to support this discussion.

### The Human Impact in Australia

The Human Impact of Road Injuries every year		
NEW VICTIMS EVERY YEAR	HUMAN IMPACT	NEW COSTS EVERY YEAR
1,351	Lives Lost	\$ 4.9 billion
299	Severe Acquired Brain Injury	\$ 3.3 billion
5,923	Fractures - Limb	\$ 2.1 billion
3,599	Internal Injuries	\$ 1.7 billion
2,484	Brain Injury (Mild) / Head Injury	\$ 1.3 billion
10,349	Soft Tissue (Neck / Back) / Whiplash	\$ 974 million
19	Quadriplegia	\$ 599 million
2,632	Fractures - Other	\$ 591 million
7,500	Contusion / Abrasion Laceration	\$ 341 million
827	Dislocations	\$ 307 million
447	Other Spinal	\$ 279 million
29	Paraplegia	\$ 257 million
3,642	Other Injuries	\$ 178 million
321	Degloving	\$ 162 million
1,449	Sprains / Strains	\$ 109 million
894	Concussion	\$ 68 million
43	Amputations	\$ 40 million
55	Burns (Severe / Moderate)	\$ 16 million
13	Nerve Damage	\$ 4 million
5	Lost Of Sight / Eyes	\$ 1 million
<b>41,881</b>	<b>TOTAL</b>	<b>\$ 17.2 billion</b>


<https://www.vaccinesforroads.org/global-impact-of-injuries/>

The human impact of road trauma is also personal.....

### Limb Fractures

**Julie**


"I don't mind if I can't move it that well I just want to keep my leg", Julie was in an induced coma for eight days after her head-on crash left her trapped in the vehicle. "Every part of my limb has been rebuilt"



How Safe?  
...are undivided roads and provision for active road users.

**Bridget**


"...who is going to take care of my family? My children need me. How will I go to work?" Bridget was run over trying to cross the road as a pedestrian.



7,620,000 Limb Fractures a year worldwide.  
How many in your country?

**Ken**

"Why did it happen to me?" Ken considered self-harm after being struck by a car while on his bicycle crash on a rural road. With help, he is positive and things are working again.

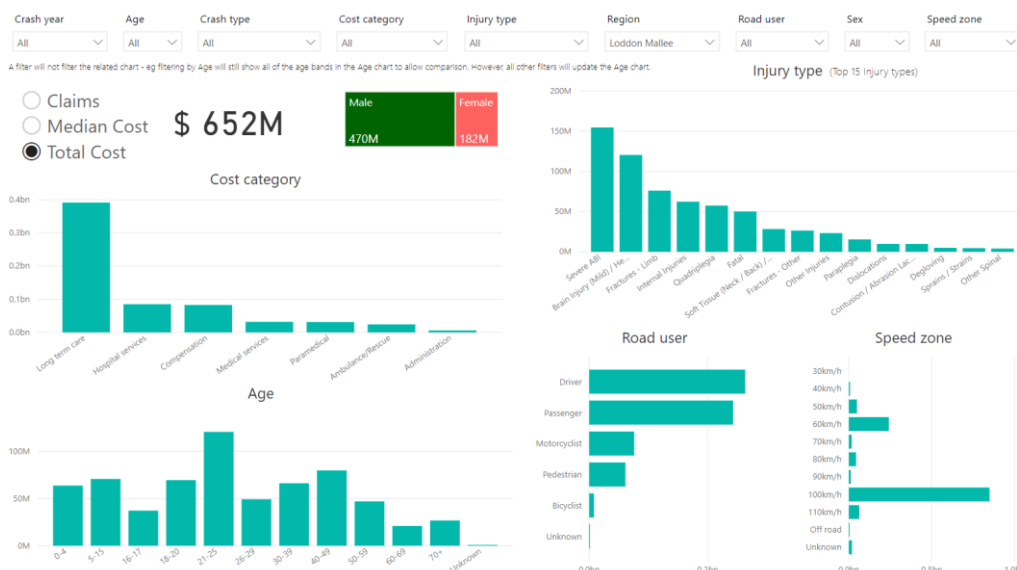


Business Case -  
The win-win investment in divided roads and cycle lanes.

<https://www.vaccinesforroads.org/human-impact/>

## The Impact in Rural and Remote Regions

The public version of the TAC iRAP Injury Dashboard allows the human and financial impact of road crashes to be explored by region. The example below shows the rural region of Loddon Mallee and highlights severe brain injuries are the largest costs, more than half of the claim costs happen more than 2 years after the crash as part of long term care of the crash victims and 21-25 year olds are the most impacted. More detailed dashboards linking the AusRAP data and claim costs are used for internal planning and programme management.



<http://www.tac.vic.gov.au/road-safety/statistics/online-crash-database/irap-road-injury-dashboard>

## TOR c. Parliamentary Standing Committee on Road Safety and its functions

The measurement and accountability for the achievement of key road safety KPIs over the next ten years is critical to ensuring that 400,000 Australians are not killed and injured during that period. Ensuring that accountability is set at the right level of Government and related stakeholders requires good governance, transparency of reporting, resourcing, action and measurement of success.

iRAP support the establishment of a Parliamentary Standing Committee on Road Safety to perform this function as it relates to the Federal leadership responsibilities agreed nationally. This will also help ensure that the right level of financial and human resources are mobilised to this preventable problem that will cost our economy more than \$300 billion over the next ten years.

An important part of this function is to make sure that the 2021-2030 National Road Safety Strategy currently under development includes clear accountability, well defined and measurable targets and a commitment to measure and report on progress. Soft language, unambitious targets and blurred accountabilities must be avoided in the next Strategy. This will simplify the role of the Standing Committee in providing the necessary leadership and oversight of Australia's performance, sharing of success and refocussed action and learnings when performance is poor.

## TOR d. Measures to ensure government road infrastructure investment incorporates safe system principles

The Actions associated with the Inquiry Recommendations 3, 4, 5, 8 and in particular Recommendation 9 are reinforced.

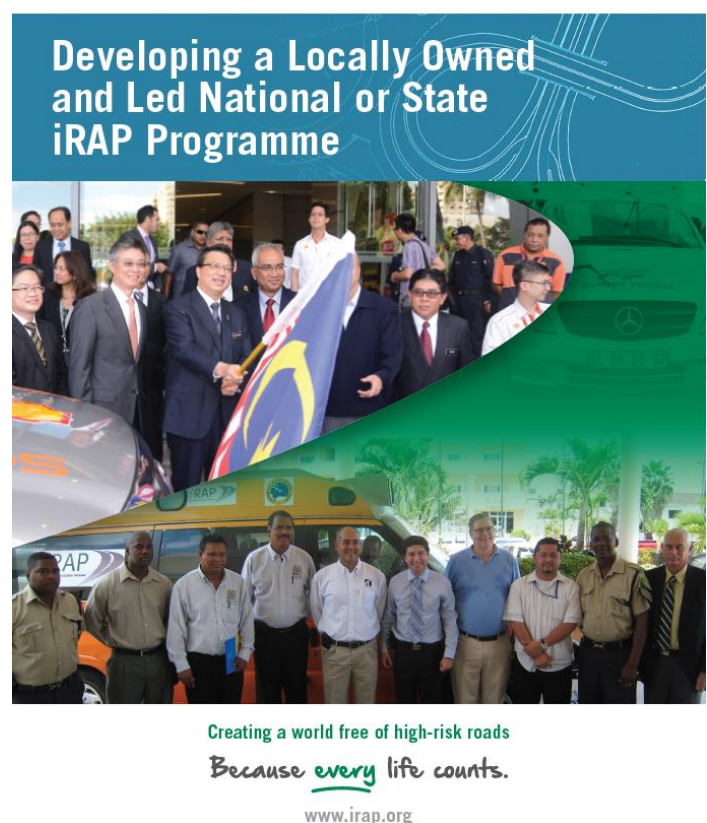
### AusRAP Hub

The establishment of an AusRAP hub within the Office of Road Safety, or supported as a separate entity like ANCAP, has the support of all of the existing local AusRAP partners including Austroads, AAA and ARRB.

The process by which this can happen is straight forward and follows well-established [global guidance by iRAP](#). Local ownership and leadership by relevant government, research and consumer partners is encouraged in all countries and supports the transparent reporting of infrastructure safety performance and the important optimisation of investment to maximise lives saved.

Concept papers on how AusRAP can be structured have been shared with the Australian Government and Office of Road Safety teams (refer excerpt on following page). Other key stakeholders including Roads Australia, Infrastructure Australia and ACRS could also play important roles.

Some recent examples from the [UK](#) and [Brazil](#) show how this can be undertaken and launched as a positive initiative for road safety.





Other ORS/ BITRE  
Safe System KPI's and  
Performance Management

## AusRAP Hub - Infrastructure Safety Concept Paper

Other ORS  
Responsibilities

**Office of Road Safety & AusRAP – Australia free of high-risk roads**  
Maximising the life-saving potential of Australia's \$30 billion+ per year investment in road infrastructure for the benefit of all Australians

### Programme Leadership



- National Policy Coordination in support of Vision Zero target
- Coordinate and monitor infrastructure-related KPIs for safety
- Collate national road network risk assessment data
- Secure and Deploy Federal Infrastructure Funding to eliminate high-risk roads
- National Performance Tracking

#### AusRAP – Implementation Leadership



- Investment Planning / Optimisation
- Construction and Maintenance
- Collection and Provision of Data
- Before and After Measurement



- National Research
- National Policy Advice
- National Guidelines on design, construction and management

#### AusRAP – Global Support



- Global Policy, Programme, Technical Product, Innovation and Event Support

#### AusRAP – Communications Leadership



- Ribbon Cutting Project Success
- Results – Internal
- Results – External
- Media and Events Coordination
- Star Rating for Schools

#### AusRAP – Technical Leadership



- Global Technical Committee
- Training and Accreditation
- Quality Assurance / Certification
- Infrastructure Australia Audit
- Star Rating for Designs
- Evaluation Studies
- Data Cleansing / Calibration
- Innovation (e.g. AI, Smart Motorways, Urban, Safe System)

## Minimum Star Rating Standards for new roads

BITRE reports as early as 2014 propose the use of the Star Rating global standard as a simple and immediate evidence-based measure to apply to road infrastructure investment. This includes the concept that road funding would be subject to meeting a minimum 3, 4 or 5-star standard as required. It is noted that significant Australian research underpins the global RAP models that form the basis of the global Star Rating standard used in over 100 countries worldwide.

Road agencies have already applied the star rating standard on new projects (e.g. Midlands Highway, Prices Highway) and Austroads has included the star rating standard in a number of their peak guidance documents.

It is noted that the Star Rating standard for pedestrians, cyclists and motorcyclists is available and in wide use around the world but has had limited application by key agencies so far in Australia. While a lot of safe system work and discussions in Australia is focussed on passenger vehicles, the inclusion of the 3, 4 and 5-star performance targets for vulnerable road users is a simple and immediately available solution for enhanced outcomes for all road users in Australian infrastructure investment. **For example, any new Metro public transport projects could include a requirement that the 1km radius around the passenger stations are 5-star for pedestrians and cyclists.**

Together with the World Bank and FIA Foundation, iRAP developed the dedicated and freely available Star Rating for Designs software solution that allows road designs to be assessed in a simple and systematic way (<https://www.irap.org/star-rating-for-designs/>).

Safe system can be characterised as 5-star users, in 5-star vehicles on 5-star roads. Speed is a key component of each part of the system. In terms of road design, Government can specify that a 5-star facility must be designed and any departure from that 5-star standard must be justified along with the associated trauma levels expected. Australian state road agencies are already working with iRAP to integrate the safe system reporting of both star rating and key attribute reporting (e.g. protected roadsides for run-off road crashes, protected medians for head-on crash risk) in their road projects.





The key elements for success to ensure government road infrastructure investment incorporates safe system principles include:

- A national policy target for the % of travel on 3-star or better road infrastructure that will support the setting of star rating targets for all road infrastructure investment
- Associated targets for travel on 5-star roads that supports full safe system outcomes on high-volume strategic roads where Vision Zero outcomes are desired by 2030, on the journey to Vision Zero everywhere by 2050 (refer Recommendation 4 of the Inquiry).





As an example, the following clause can be added to all Federal road funding allocations for both major projects and road safety targeted funding. Similar approaches are being adopted by high-income governments and low and middle-income country governments via the multi-lateral development banks.

“The new road shall be built to an ‘x’-star standard for all road users. This includes for pedestrians, cyclists, motorcyclists and vehicle occupants where present. The before and after star rating and the before and after fatality and serious injury estimates shall be reported.

**Before Star Ratings and Fatal and Serious Injury Estimate**

Road User	★	★★	★★★	★★★★	★★★★★	FSI Estimate
						
						
						
						

**After Star Ratings and Fatal and Serious Injury Estimate**

Road User	★	★★	★★★	★★★★	★★★★★	FSI Estimate
						
						
						
						

The Federal Department and the Standing Committee could then have simple annual reports detailing the length of road and kilometres of travel moved to a 3, 4 and 5-star standard across the entire funding portfolio. This will provide good governance and reporting supportive of the current national targets agreed by Ministers for increasing the percent of travel on 3-star or better roads across Australia.

Within the safe system context iRAP is working with the European Union and other partners to ensure the combined performance of new driver assistance technologies, vehicle safety standards, road design standards and technology / ITS deployment are implemented to minimise the occurrence of death and injury. For further details see <https://eurorap.org/slain-project/> and <https://www.irap.org/2017/12/event-snapshot-innovation-2017/>. As part of the global programme all AusRAP partners will immediately benefit from any breakthroughs and methodologies and global partners will benefit from Australian ingenuity.

While not the core expertise of iRAP, the approaches for the other elements of the safe system can be easily included. For example:

- All Federal Government National Highway investment shall include point to point speed cameras, distraction and seat-belt monitoring and rest areas to support safe user behaviour.
- In line with Federal Government leadership of vehicle safety (refer Recommendation 7 of the Inquiry Recommendations) to support ANCAP, Heavy Vehicle Regulation and rapid adoption and alignment with minimum European vehicle standards all major projects can include targeted communications with communities along new corridors about vehicle safety standards and potential incentives for after-market retrofit technologies.

## TOR e. road trauma and incident data collection and coordination

### Annual Risk Maps and Performance Tracking

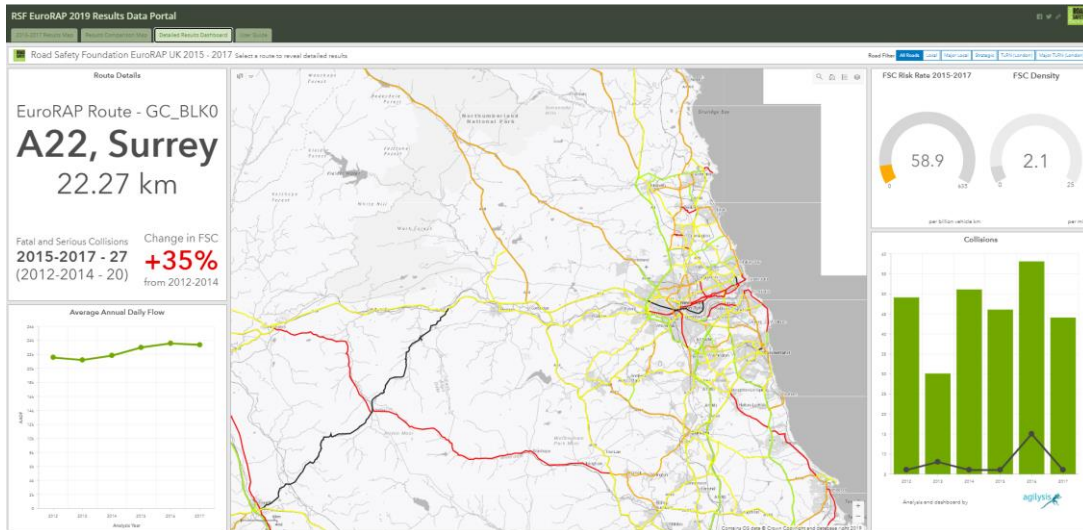
The use of the AusRAP Risk Maps as an annual reporting tool to provide crash data in a map-based format will provide high-value for all Australians. This includes the new Office of Road Safety and potential Standing Committee in measuring performance of the Australian National Road Safety Strategy. The risk maps – prepared in accordance with the iRAP global standard - will provide the ultimate measure of success in reducing crash rates over time from all action areas and allow benchmarking within Australia and across other leading countries in Europe.

The Risk Maps will also benefit fleet managers, companies and community members in understanding some roads are safer than others. As mentioned by Minister Thistlethwaite this can ultimately support the introduction of apps to allow the safest route and mode choice from A to B to be mapped for all journeys for all Australians.

Ready examples of this annual risk mapping approach are available from countries like the UK and Spain and highlight the potential of this approach to support transparent performance tracking. This can ensure success can be celebrated when high -risk roads become low-risk – and also to continuously target any persistently high-risk roads.

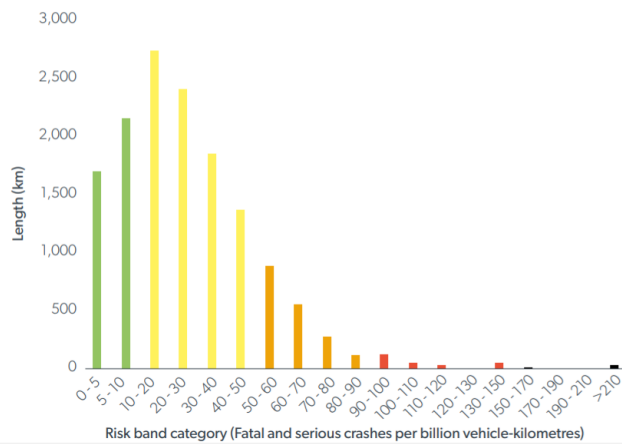
Refer to the following overseas examples for more information:

- <https://roadsafetyfoundation.org/project/how-safe-are-you-on-britains-main-road-networks-eurorap-results-2019/>
- <https://eurorap.org/wp-content/uploads/2020/01/20170608-5-EuroRAP-in-Spain-L-Puerto.pdf>
- [http://www.kiwirap.org.nz/risk\\_maps.html](http://www.kiwirap.org.nz/risk_maps.html)



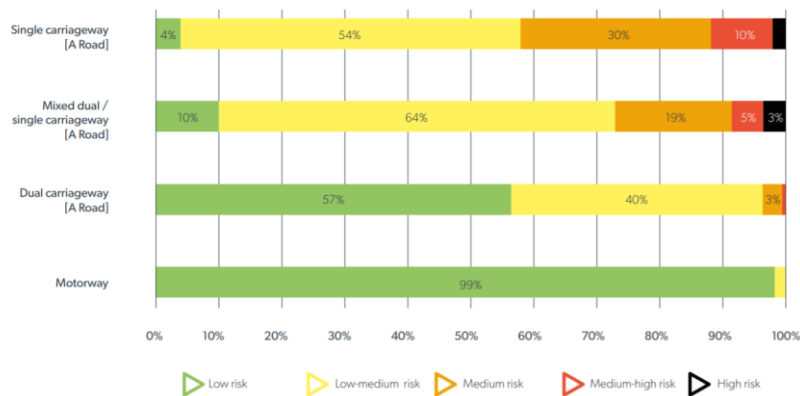
### [EuroRAP UK Risk Mapping Dashboard](#)

**FIGURE 1: RISK RATE DISTRIBUTION FOR ENGLISH SRN AND MRN COMBINED (TOP), SCOTTISH STRATEGIC ROADS (MIDDLE) AND WELSH STRATEGIC ROADS (BOTTOM)<sup>7</sup>**



### Risk Distribution per billion kilometre travelled ([UK](#))

**FIGURE 3: PERCENTAGE OF TRAVEL ON SECTIONS WITH HIGH-LOW RISK BANDINGS BY ROAD TYPE**



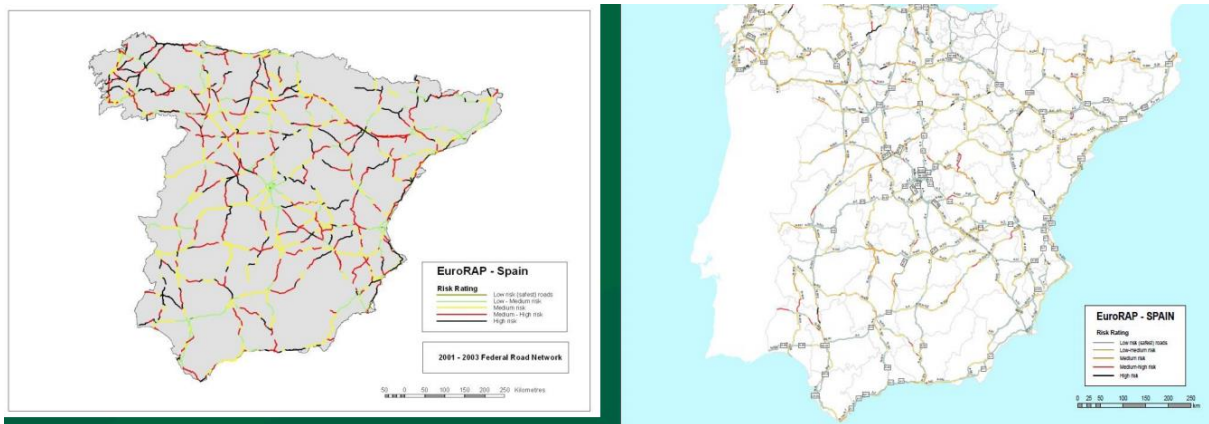
### % of travel on low to high crash rates by road type ([UK](#))



**Table 1:** Most improved road links

Site Name	Region	07-11 Crashes					12-16 Crashes					Difference in F+S
		Fatal	Serious	F+S	Collective Risk Band	Personal Risk Band	Fatal	Serious	F+S	Collective Risk Band	Personal Risk Band	
SH 1 from Kaikoura to Waipara	Canterbury	5	46	51	Medium	Medium-High	7	23	30	Low-Medium	Low-Medium	-21
SH 77 from Ashburton to Darfield	Canterbury	6	21	27	Low-Medium	High	1	5	6	Low	Low	-21
SH 2 from Takapau to Hastings	Hawke's Bay/ Manawatu-Whanganui	10	29	39	Medium-High	Medium	6	13	19	Low-Medium	Low	-20
SH 2 from Featherston to Upper Hutt	Wellington	2	32	34	High	High	3	13	16	Medium-High	Medium	-18
SH 2 from Takapau to Woodville	Manawatu-Whanganui	6	20	26	Medium	Medium	1	10	11	Low-Medium	Low	-15
SH 1 from Timaru to Oamaru	Canterbury/Otago	10	20	30	Medium	Low-Medium	6	9	15	Low-Medium	Low	-15
SH 1 from Warkworth to Wellsford	Auckland	9	17	26	High	Medium-High	2	11	13	Medium-High	Low-Medium	-13

Performance Tracking ([KiwiRAP](#))



[Spanish Risk Maps](#) – the improvement from 2004 – 2014

## Harmonisation, detail and timeliness of injury data

iRAP fully support the harmonisation of injury data collection and the essential work of Austroads, RACS and other partners in enabling this work.

In addition, it is very important that the Human Impact of Road Trauma is adequately communicated with the Australian population. The accountability, scale and urgency of our response – from politicians to business, from road agencies to road users – requires a much better understanding that deaths are just the tip of the iceberg.

The TAC and iRAP has already completed world-leading work to shine a spotlight on the human impact of road trauma as detailed in the images below.

### The Australian Impact of Road Injuries every year (projected)

The Human Impact of Road Injuries every year		
NEW VICTIMS EVERY YEAR	HUMAN IMPACT	NEW COSTS EVERY YEAR
1,351	Lives Lost	\$ 4.9 billion
299	Severe Acquired Brain Injury	\$ 3.3 billion
5,923	Fractures - Limb	\$ 2.1 billion
3,599	Internal Injuries	\$ 1.7 billion
2,484	Brain Injury (Mild) / Head Injury	\$ 1.3 billion
10,349	Soft Tissue (Neck / Back) / Whiplash	\$ 974 million
19	Quadriplegia	\$ 599 million
2,632	Fractures - Other	\$ 591 million
7,500	Contusion / Abrasion Laceration	\$ 341 million
827	Dislocations	\$ 307 million
447	Other Spinal	\$ 279 million
29	Paraplegia	\$ 257 million
3,642	Other Injuries	\$ 178 million
321	Degloving	\$ 162 million
1,449	Sprains / Strains	\$ 109 million
894	Concussion	\$ 68 million
43	Amputations	\$ 40 million
55	Burns (Severe / Moderate)	\$ 16 million
13	Nerve Damage	\$ 4 million
5	Lost Of Sight / Eyes	\$ 1 million
<b>41,881</b>	<b>TOTAL</b>	<b>\$ 17.2 billion</b>

<https://www.vaccinesforroads.org/global-impact-of-injuries/>

In addition to the public projections more detailed analysis and dashboards have been developed for the public to access (<http://www.tac.vic.gov.au/road-safety/statistics/online-crash-database/irap-road-injury-dashboard>) and also for TAC internal use.

Individual human impact stories have also been shared to demonstrate the personal impact of every crash one by one.



## A world free of high-risk roads THE HUMAN IMPACT OF INJURIES

*"Statistics are people with the tears wiped away"*

Dr. Irving Selikoff, public health clinician

Micaela, Chelsea, Julie, Bridget, Ken, Antonio, Daniela, Josh, Joel, Hilary, Simon, Pariyada, Anthony, David, Guido, Sarah, Angela, Dita, Anariá, Scott, Victor.



<https://www.vaccinesforroads.org/human-impact/>

In addition to the TAC work in Victoria, the extensive work of Transport for NSW, Centre for Road Safety in providing valuable road safety data and performance metrics for the benefit of all NSW stakeholders is a great example of best practice in Australia.

## TOR f. recommended strategies, performance measures and targets for next Strategy

First and foremost, the new Strategy must implement the 12 Inquiry Recommendations and associated actions in full and the key elements of the many submissions and consultations that have occurred over recent years. **Accountability and Action, Urgency and Scale are the key themes that must drive action.**

The core elements of Road Safety Management, Safe Speeds, Safe Roads, Safe Vehicles, Safe Road Users and Improved Post Crash Care are globally accepted and aligning with this proven structure is essential. This will also align with State-level strategies and also allow global best practice to be mobilised here also.

Within the Road Safety Management action area it is essential that the new strategy is very clear on accountabilities. As a special advisor to the National Inquiry we recommended a national governance review. What we expected was a simple outline of where the Federal Government should lead – and where the established expertise and ownership of actions at a State, local and non-government area are clearly articulated and understood.

As an example, the Federal Government should lead on:

- Owning the National Road Safety Strategy and accountabilities.
- Owning KPI reporting through national road safety observatory functions and harmonised data reporting and incentivising data collection and reporting from other relevant stakeholders
- Supporting safe system national coordination through ANCAP, AusRAP, National Road Rules and Trauma Registry hubs / functions
- Leading on vehicle standards and vehicle import requirements and the accelerated uptake of new technologies
- Providing enabling funds (Recommendation 3 – the \$3 bn a year road safety fund) for National Highway 5-star investments and for local government to bring roads to 3-star or better standards. This can be targeted using the annual Risk Maps and Star Rating benchmarks every 3-5 years as mandated in Europe.
- Supporting initiatives for research, capacity development / efficient delivery mechanisms for local government in particular, innovation and key enablers.

Importantly the National Strategy should recognise the state-level leadership and strategies in their areas of clear accountability – and not try and duplicate or cross-over those issues. The well-set, ambitious, optimised and resourced work to achieve the key performance indicators will provide the ultimate coordinating function for national action and accountability.

### Road Infrastructure Key Performance Indicators using the iRAP Global Standard

The following pages outline the global Safer Roads / Road Infrastructure KPIs recommended for use globally as part of the iRAP Global Standard and the Global Road Safety Performance Targets. This work is informing target and KPI setting across Europe and worldwide through the Regional Road Safety Observatories in Latin America, Africa and Asia. Global alignment on these KPIs will also ensure Ai-RAP initiatives to ensure big-data approaches to streamline data collection is immediately available for all partners to benefit from in Australia.

Australian adoption of these targets as a minimum requirement will ensure the significant investment in AusRAP data collection nationally already (100,000km+) provides a great starting point for performance tracking across Australia. The approach will also allow simple benchmarking with other countries (e.g. performance of Australian motorways versus French, Spanish and UK Motorways; pedestrian star ratings in inner CBD areas comparing Stockholm versus Sydney).

It is worth noting that the Federal Government may choose to undertake independent measurement of National Highway performance but in most cases all data collection will be undertaken by States using full, high tech Ai-RAP or light data AusRAP methodologies as required. The same data is the basis for any ANRAM crash FSI data estimates.

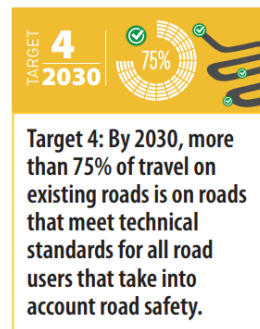
Given the \$100 billion investment in infrastructure by the Federal Government over the next ten years ensuring good road safety data drives investment decisions and measurement of success is a very small element when considered as an integral part of each multi-million dollar project and funding allocation.

## Road Infrastructure Key Performance Indicators using the iRAP Global Standard

Harmonisation of road safety data is a major focus of all stakeholders across the world. This includes fatality and injury data; road infrastructure performance data; vehicle performance data; road user behaviour data; and post-crash response data.

The recommended road infrastructure Key Performance Indicators (KPI's) will ensure harmonised collection of data in support of the following:

- the [United Nations Sustainable Development Goals](#)
- the [12 Global Road Safety Performance Targets](#) agreed by Member States;
- the [EU RISM Directive](#);
- the [Regional Road Safety Observatories](#);
- [WHO Global Status Report on Road Safety](#);
- the [Sum4All initiative](#); and
- policies and strategies set by Governments, development organisations, donors and NGOs worldwide.



[Member State agreed Global Road Safety Performance Targets](#)

<https://www.who.int/roadsafety/publications/en/>

### About iRAP

iRAP is a registered charity. The iRAP specifications, methodologies and software provide the global standard with all resources published in the public domain for free use by partners globally (<https://www.irap.org/resources/>). The iRAP methodologies are overseen by an independent [Global Policy Advisory Committee and Global Technical Committee](#), and are supported with training courses and an accreditation scheme for partners and suppliers worldwide.



## The iRAP Global Standard

iRAP methodologies have been applied by partners in more than 100 countries across more than 1 million kilometres of road. These safety assessments are informing more than US\$75 billion of road investment and provide harmonised road infrastructure KPI's for the mutual benefit of all stakeholders worldwide. Local ownership and application of the iRAP Global Standard is encouraged and supported in every country. To date, more than 25,000 people have participated in training, workshops and presentations on iRAP content.

The global iRAP standard provides numerous benefits including:

- an objective, evidence-based approach to assessing infrastructure related risk that all jurisdictions and stakeholders can access;
- a way to benchmark performance between jurisdictions and road classes;
- a mechanism to fast-track safety assessments through innovative initiatives such as linkages to road asset data; [Ai-RAP](#) and the [light data methodology](#); and
- alignment with the UN, WHO, EU, PIARC and multi-lateral development bank policies and recommendations.

### Achieving UN Targets 3 and 4 by 2030 will mean



To understand what achieving the KPIs would mean for your country, see iRAP's [Business Case for Safer Roads](#).

### For more information

- To learn more about iRAP and its global programmes and activities, visit [irap.org](http://irap.org)
- To apply the Step by Step Approach to Safer Roads with the KPIs providing the confidence to invest and the metrics to measure success, visit [vaccinesforroads.org/take-action/](http://vaccinesforroads.org/take-action/)
- To understand the human impact of road crashes, how safe the world's roads are and what is possible for your country – in terms of fatal and serious injuries prevented and economic savings that could be achieved by maximising the percentage of travel on 3-star or better roads by 2030 - explore iRAP's Big Data Tool at [vaccinesforroads.org](http://vaccinesforroads.org)
- To learn about or establish an iRAP programme in your country or state, contact your local representative by visiting the where we work map at [irap.org/about-us/](http://irap.org/about-us/)
- For details on iRAP's protocols and how to apply them to your infrastructure projects, visit [irap.org/how-we-can-help/](http://irap.org/how-we-can-help/)
- For training to support achieving the KPIs, visit [irap.org/training/](http://irap.org/training/)



## GLOBAL ROAD INFRASTRUCTURE KEY PERFORMANCE INDICATORS (KPI'S) – EXISTING ROADS

### Crash Data

iRAP Global Standard	Protocol / Attribute	Primary KPI	Current Global Performance	2030 Target	Extended Metrics (with primary performance measure in bold)
<a href="#">Crash Risk Mapping</a>	Collective Crash Risk Maps	Percentage of road length with < XXX fatal and serious crashes per kilometre per year		To be set by jurisdiction	% in each category ( <b>low, low-medium</b> , medium, medium-high and high risk)
<a href="#">Crash Risk Mapping</a>	Individual Crash Risk Maps	Percentage of road length with < XXX fatal and serious crashes per billion vehicle kilometres travelled		To be set by jurisdiction	% in each category ( <b>low, low-medium</b> , medium, medium-high and high risk)

### Infrastructure and Speed Management for existing roads ([Global Road Safety Performance Target 4](#))

iRAP Global Standard	Protocol / Attribute	Primary KPI (Refer <a href="https://www.vaccinesforroads.org/">https://www.vaccinesforroads.org/</a> for sample of global and national performance)	Current Global Performance	2030 Target	Extended Metrics (with primary performance measure in bold)
<a href="#">Star Rating</a>	Pedestrian Star Rating	Percentage of travel on 3-star or better roads for pedestrians	12 %	>75%	% of length and % of travel in each category ( <b>5-star, 4-star, 3-star</b> , 2-star, 1-star)
<a href="#">Star Rating</a>	Bicyclist Star Rating	Percentage of travel on 3-star or better roads for cyclists	14 %	>75%	% of length and % of travel in each category ( <b>5-star, 4-star, 3-star</b> , 2-star, 1-star)
<a href="#">Star Rating</a>	Motorcyclist Star Rating	Percentage of travel on 3-star or better roads for motorcyclists	33 %	>75%	% of length and % of travel in each category ( <b>5-star, 4-star, 3-star</b> , 2-star, 1-star)
<a href="#">Star Rating</a>	Vehicle Occupant Star Rating	Percentage of travel on 3-star or better roads for vehicle occupants	56 %	>75%	% of length and % of travel in each category ( <b>5-star, 4-star, 3-star</b> , 2-star, 1-star)



## INFRASTRUCTURE ATTRIBUTE PERFORMANCE KPIS – BY ROAD LENGTH\*

iRAP Global Standard	Protocol / Attribute	Primary KPI (Refer <a href="https://www.vaccinesforroads.org/">https://www.vaccinesforroads.org/</a> for sample of global and national performance)	Current Global Performance	2030 Target
<a href="#">iRAP Coding Manual</a>	Sidewalk; Operating Speed	Percentage of roads where pedestrians are present and traffic flows at 40km/h (25mph) or more <b>have formal footpaths or sidewalks</b>	15%	To be set by jurisdictions
<a href="#">iRAP Coding Manual</a>	Pedestrian crossing – inspected road; Operating Speed	Percentage of roads where pedestrians cross and traffic flows at 40km/h (25mph) or more <b>have pedestrian crossing facilities</b>	8%	
<a href="#">iRAP Coding Manual</a>	Pedestrian crossing quality; Operating Speed	Percentage of pedestrian crossings that <b>are adequately signed or maintained</b>	88%	
<a href="#">iRAP Coding Manual</a>	Facilities for motorised two wheelers; Operating Speed	Percentage of roads where motorcyclists are present and traffic flows at 60km/h (40mph) or more <b>have dedicated motorcycle facilities</b>	1%	
<a href="#">iRAP Coding Manual</a>	Bicycle facility; Operating Speed	Percentage of roads where bicyclists are present and traffic flows at 40km/h (25mph) or more <b>have dedicated bicycle facilities</b>	9%	
<a href="#">iRAP Coding Manual</a>	Median Type; Operating Speed	Percentage of roads where traffic flows at 80km/h (50mph) or more <b>have divided carriageways</b>	19%	
<a href="#">iRAP Coding Manual</a>	Roadside severity (object & distance); Operating Speed	Percentage of roads where traffic flows at 80km/h (50mph) or more <b>have low-risk roadsides</b>	21%	
<a href="#">iRAP Coding Manual</a>	Curvature; Operating Speed	Percentage of roads where traffic flows at 80km/h (50mph) or more <b>do not have sharp curves</b>	97%	
<a href="#">iRAP Coding Manual</a>	Intersection Type; Operating Speed	Percentage of intersections where traffic flows at 60km/h (40mph) or more <b>have turning provision</b>	27%	
<a href="#">iRAP Coding Manual</a>	Intersection Type; Operating Speed	Percentage of railway crossings where traffic flows at 60km/h (40mph) or more <b>have active protection</b>	47%	
<a href="#">iRAP Coding Manual</a>	Number of lanes; Operating Speed	Percentage of roads where traffic flows at 80km/h (50mph) or more <b>have dedicated overtaking provision</b>	35%	
<a href="#">Star Rating for Schools</a>	Pedestrian Star Rating	Percentage of school star rating data points that are <b>3-star or better for children</b>	? %	

\* potential to present by % of travel where volume data is available and reliable.



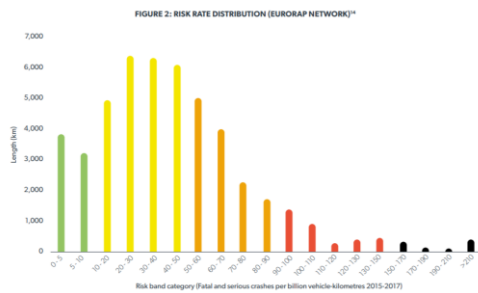
## GLOBAL ROAD INFRASTRUCTURE KEY PERFORMANCE INDICATORS – NEW AND UPGRADED ROADS

### Infrastructure and Speed Management for New and Upgraded Roads ([Global Road Safety Performance Target 3](#))

iRAP Global Standard	Protocol / Attribute	Primary KPI (Refer <a href="https://www.vaccinesforroads.org/">https://www.vaccinesforroads.org/</a> for sample of global and national performance)	Current Global Performance*	2030 Target	Extended Metrics (with primary performance measure in bold)
<a href="#">Star Rating</a>	Pedestrian Star Rating	<b>Percentage</b> of travel on new or upgraded roads that are 3-star or better roads for pedestrians	? %	100%	% of length and % of travel in each category ( <b>5-star</b> , <b>4-star</b> , <b>3-star</b> , 2-star, 1-star)
<a href="#">Star Rating</a>	Bicyclist Star Rating	<b>Percentage</b> of travel on new or upgraded roads that are 3-star or better roads for cyclists	? %	100%	% of length and % of travel in each category ( <b>5-star</b> , <b>4-star</b> , <b>3-star</b> , 2-star, 1-star)
<a href="#">Star Rating</a>	Motorcyclist Star Rating	<b>Percentage</b> of travel on new or upgraded roads that are 3-star or better roads for motorcyclists	? %	100%	% of length and % of travel in each category ( <b>5-star</b> , <b>4-star</b> , <b>3-star</b> , 2-star, 1-star)
<a href="#">Star Rating</a>	Vehicle Occupant Star Rating	<b>Percentage</b> of travel on new or upgraded roads that are 3-star or better roads for vehicle occupants	? %	100%	% of length and % of travel in each category ( <b>5-star</b> , <b>4-star</b> , <b>3-star</b> , 2-star, 1-star)

\* Regular measurement of existing road networks (e.g. every 5 years as legislated in Europe) will provide an opportunity to measure progress; World Bank GRSF is currently undertaking a worldwide project measuring progress; The recently launched Star Rating for Designs tool supports performance tracking.

## Risk Mapping Examples



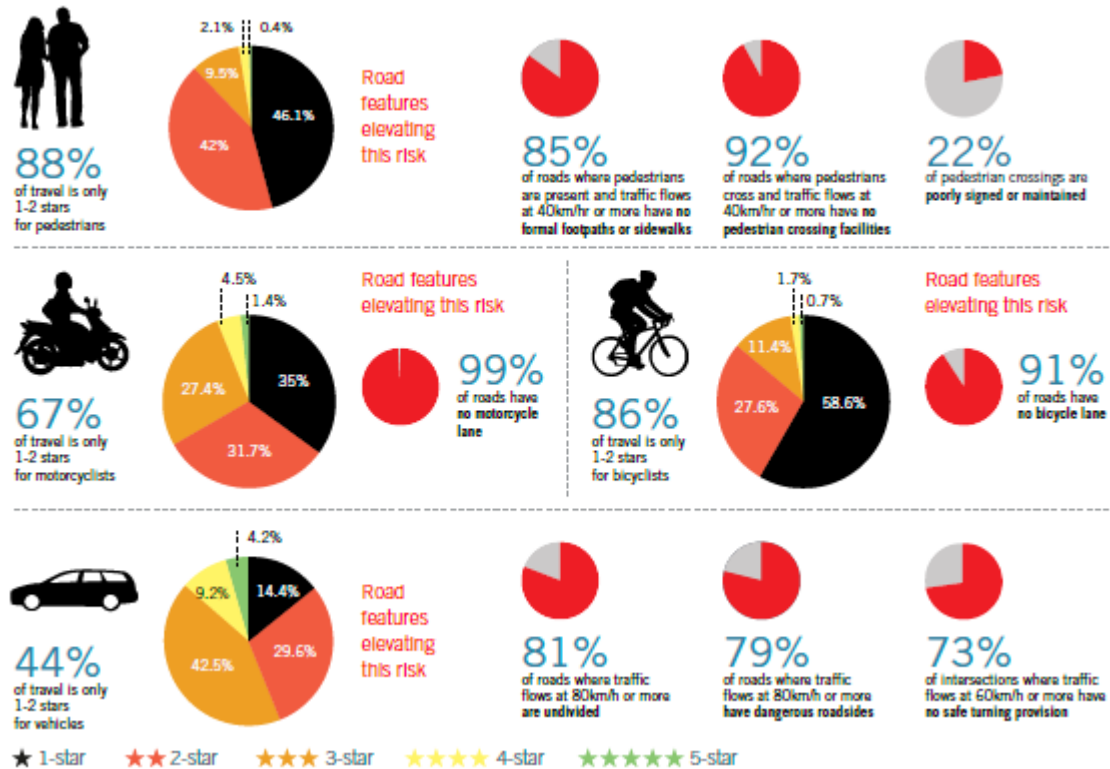
### [EuroRAP UK Risk Mapping](#)

Period		High	Medium-High	Medium	Low-Medium	Low	Total
2002-2006	Percentage	29%	12%	22%	18%	20%	100%
	Length (km)	339	136	254	217	233	1,179
2007-2011	Percentage	10%	22%	28%	25%	15%	100%
	Length (km)	118	270	332	306	178	1,204

### [KiwiRAP Risk Mapping](#)

## Star Rating and iRAP Attribute Data Examples

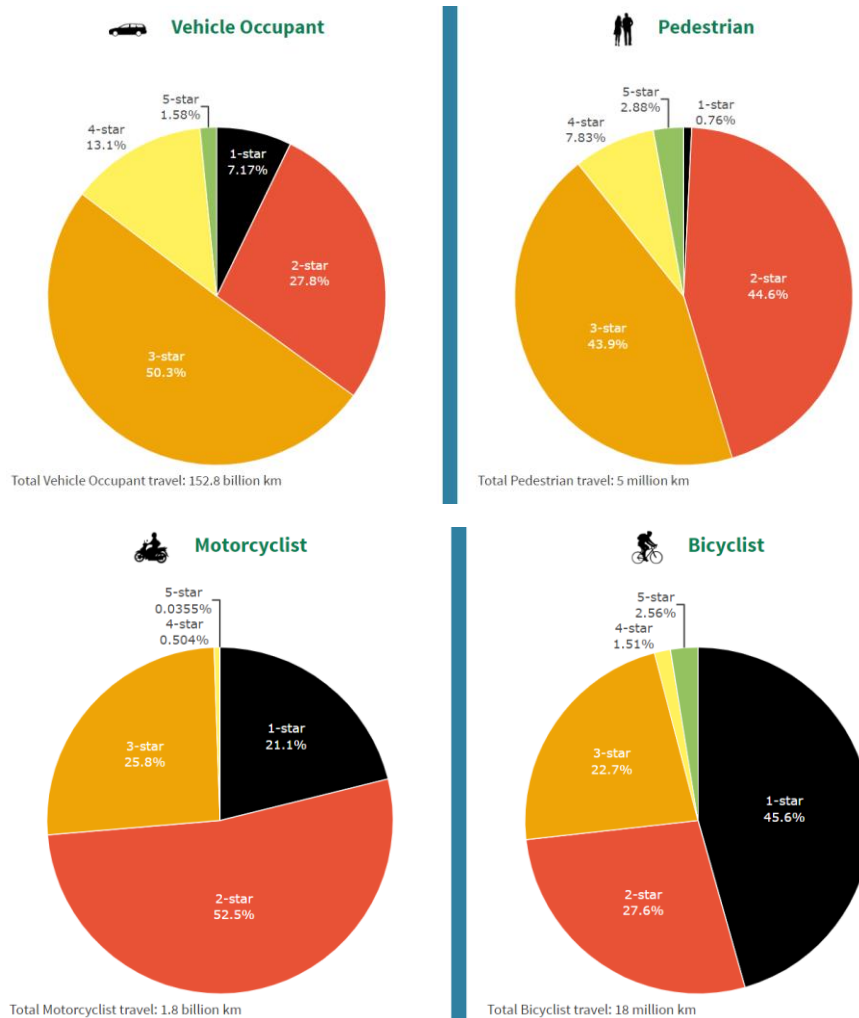
BASED ON 358,000KM OF ROADS ACROSS 54 COUNTRIES:



[vaccinesforroads.org/how-safe-are-the-worlds-roads/](http://vaccinesforroads.org/how-safe-are-the-worlds-roads/)

## Australian Infrastructure Safety KPI Data Snapshot

In general, many of our roads do not provide a safe workplace for Australians who use the roads each and every day. As an example (noting that the source data is a sample only of AusRAP data collected up to 2018), the Australian Star Rating and KPI attribute data performance is provided below.



- 73% of the high-speed roads assessed have dangerous roadsides - typically 30% of deaths in Australia come from run-off road crashes
- 91% of the high-speed roads assessed are undivided - typically 20% of deaths in Australia are head-on crashes
- 62% of intersection have no safe turning provision - typically 20% of fatal crashes happen at intersections
- 15% of roads have no footpaths and 76% of the road length provides no facility for a pedestrian to cross the road safely - typically 10% of fatalities are pedestrians
- 91% of roads assessed where bicycles are present have no dedicated bicycle facilities - the June data published by BITRE highlights an 83% increase in bicycle fatalities this year.














## Global Road Safety Performance Targets

In terms of all safe system activities the performance targets should, at a very minimum, allow Australia to systematically report against the Global Road Safety Performance Targets agreed by Member States at the global level – including Australia – and the WHO Global Status Report on Road Safety.

See <https://www.who.int/roadsafety/publications/en/> for further details.

### GLOBAL ROAD SAFETY PERFORMANCE TARGETS

 <p><b>TARGET 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>TARGET 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>TARGET 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>TARGET 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>TARGET 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>TARGET 6</b> 2030</p> <p>Target 6: By 2030, halve the proportion of vehicles travelling over the posted speed limit and achieve a reduction in speed-related injuries and fatalities.</p>	 <p><b>TARGET 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>TARGET 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>TARGET 9</b> 2030</p> <p>Target 9: By 2030, halve 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>TARGET 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>TARGET 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>TARGET 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/)

## TOR g. recommendations for Office of Road Safety role

The Office of Road Safety role must be elevated within the Department. Without the authority to convene and support a potential Standing Committee for Road Safety the desired impact of national leadership and governance will not be achieved.

A number of key initiatives have been enacted by the Federal Government already in relation to the Inquiry Recommendations. In many cases the scale of the individual elements are not yet at the level envisioned as part of the Inquiry Recommendations.

While the Inquiry authors did not specifically prescribe where and how budgets should be allocated for the \$3 billion Road Safety Fund, seeing this an important function of the new national leadership team, high-level work was done to consider where funding should be allocated and is provided below for information.

### How to mobilise the \$3bn Road Safety Fund

<b>Pillar</b>	<b>Per annum budget</b>	<b>Areas of investment</b>
Road Safety Management	\$ 500 million	ORS (\$50m), National Road Safety Observatory (\$50m), Trauma Registry (\$50m) Baseline Data and KPI measurement and incentives (\$50m), R&D Innovation (\$150m) and Enablers / Capacity Development Fund (\$150m)
Safer Roads	\$ 2 billion	AusRAP hub; National Highways Safety enhancement (\$1 billion on top of existing commitments); Local Government Safer Roads Fund to raise roads to 3-star or better (\$1 billion).
Safer Vehicles	\$ 300 million	ANCAP, Vehicle Regulations (\$100 million); ADVI, coordinated trials and new technologies (\$100 million); Accelerated deployments incentives (\$100 million)
Safer Road Users	\$ 50 million	Funds to support road user behaviour technology trials, speed management on National Highway; research and sharing between jurisdictions (\$50 million)
Safer Speeds	\$ 50 million	Incentive funding for State-based acceleration of safe system speed management initiatives across all roads
Post Crash Care	\$ 100 million	Trauma Centre; TAC / T4NSW data extension Australia wide; NDIS links; Insurance reform (\$100 million)

As highlighted in the previous sections on the strategy development the Office of Road Safety role should include:

- Accountability for the national road safety strategy and the setting of ambitious targets
- Accountability for the management of the \$3 billion a year funding and the associated governance and performance of outcomes supported with that funding
- Setting and monitoring national KPIs and ensuring accountability for the achievement of those KPI targets across all jurisdictions and annual reporting on progress
- Accountability for vehicle safety – of all vehicle types
- Establishing funding criteria with star rating and safety performance outcomes for the infrastructure funding support for States, Territories and Local Government
- Accountability for convening the multi-stakeholder forums within the Federal Government including Transport, Health, Education and DFAT portfolios.
- Coordinating international engagement and support for our neighbours in the Pacific and Asian regions who can benefit from Australian road safety expertise, aid and trade opportunities.

## TOR h. other measures with a focus on the Inquiry Recommendations

iRAP is already actively supporting the Global Infrastructure Hub and also DFAT with positive economic, aid and trade related activities including but not limited to:

- The G20 Quality Infrastructure guidance
- The Australia-India Infrastructure Council
- Road infrastructure safety in Vietnam
- AusRAP and IndiaRAP twinning partnerships

This could be actively expanded with PacificRAP and AusRAP partnerships to deliver 3-star and better roads across the Pacific; Integrating the IndonesiaRAP development in Indonesia with the KIAT activities and the IndiaRAP and AusRAP twinning expansion for industry level cooperation and partnerships.

The Australia Government should recommit/commit to important global initiatives including the World Bank Road Safety Facility and the UN Road Safety Fund.

The Australian Government should also ensure, as a shareholder of the multi-lateral development banks, that their investment is in line with the Global Road Safety Performance Targets.

Long term, results-based financing partnerships with low and middle-income countries to bring their roads to 75% of travel at the 3-star or better global standard will be a win for health, for transport, for poverty alleviation and government to government relationships. Both aid and trade outcomes can be significant if managed with the focus on win-win outcomes for all.

The recommended actions from the Inquiry Recommendations are reproduced here for information.

- » Establish an international road safety consultative committee that draws on the expertise of numerous Australian and international road safety specialists. The committee would inform DFAT of road safety priorities and strategies.
- » Continue to support the United Nations Decade of Action for Road Safety and the Sustainable Development Goals with particular focus on the Indo-Pacific.
- » Ensure all development projects using Australian finance and capital include minimum standards and outcomes that support the UN Global Road Safety Targets. Importantly, these must not increase death and injury on affected roads.
- » Provide seed funding for targeted international road safety collaboration, research and demonstration programs and partnerships. These include the Global Road Safety Facility, Global Network for Road Safety Legislators, iRAP, GNCAP and the UN Road Safety Fund.