Roads Australia

Accelerating Australia's road safety goals

Outcomes Report

September 2024

About Roads Australia

Roads Australia is the national peak body for roads within an integrated transport system.

Our 120+ member organisations include Australia's transport agencies, asset owners and operators, major contractors and consultants, material suppliers, service and technology providers.

Our role is to facilitate and curate important conversations, create opportunities for engagement and support a high-performing transport sector.

We are committed to being future focused, deeply in tune with what matters to our members and connected to global best practices and perspectives.

Alongside our members, we are passionate about road safety and reducing trauma on Australia's roads. This is a key national policy priority and a core activity of RA's **FY25 National Policy Plan.**

'Accelerating our road safety goals' was facilitated by RA's Safety Working Group, proudly supported by Transurban

Transurban

Expert presenters and facilitators

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Aimee Wescombe

Business Group
Leader, Transport,
GHD

Safety is a national policy priority of Roads Australia. It is a core pillar of our new three-year corporate strategy and a major focus of our policy program that is designed by public and private sector leaders across Australia's transport and infrastructure sector.

We have convened a new Safety Working Group, Chaired by RA Board Director, Group Executive, Australian Markets at Transurban, Nicky Green, to define a safety agenda that RA and our members can pursue together.

This report details outcomes from the 'Accelerating Australia's road safety goals' Workshop led by Roads Australia on 20 August 2024.

Accelerating Australia’s road safety goals

On 20 August 2024, RA’s Safety Working Group led a national conversation, hosted by RA member Transurban, to determine how members could uniquely accelerate road safety goals to reduce death and serious injuries on Australian roads.

More than 100 public and private sector members from 40 member and partner organisations from across Brisbane, Sydney and Melbourne, and virtually across Australia took part.

A timely discussion following one of the deadliest 12 months on our roads

Australia was the first jurisdiction in the world to introduce mandatory seatbelts and bicycle helmets. We were the first to have roadside testing for alcohol and drugs, and we've been at the forefront of child restraints and graduated licensing systems for new drivers.

However, the latest Bureau of Infrastructure and Transport Research Economics figures [1] show 1,322 people died on Australian roads in the year to 31 August 2024 . This is an increase of 9.2% from the 12-month period ending August 2023, making it one of the deadliest 12-month period on Australian roads. A further 40,000 people are seriously injured each year.

With the National Road Safety Strategy goal of reducing road deaths by 50% and reducing serious injury by 30% by 2030 against the 2018/19 base year, Australia’s road safety goals are being challenged.

[1] https://www.bitre.gov.au/sites/default/files/documents/rda_aug2024.pdf

Safety gains have stalled, new approaches are needed

With a membership that spans infrastructure planners, designers, constructors, policy makers, asset owners, operators and maintainers, RA has an opportunity to work together to influence behaviour and outcomes through how we design, manage and operate our networks.

The workshop was an opportunity to determine what's required to achieve a real step change and ensure RA and our sector takes full advantage of the opportunity to provide input to the Australian Government's National Road Safety Action Plan when it's updated ahead of 1 January 2026.

Reducing deaths and serious injuries on our roads

Local and global evidence was provided by safety and engineering experts at the ‘Accelerating Australia’s road safety goals’ Workshop .

This was supplemented by interactive and facilitated discussions that demonstrated how industry and governments can work together.

The session identified the following ways to reduce trauma on Australia’s roads:

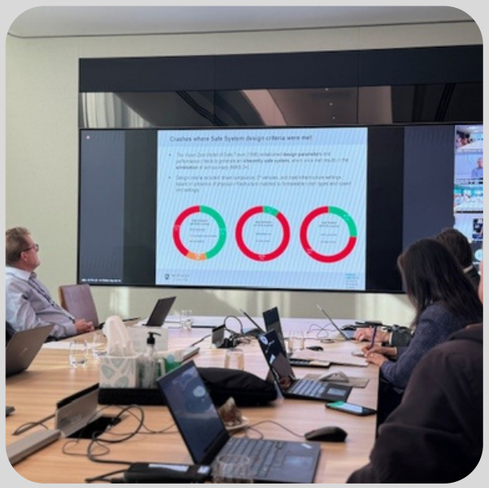
- **Managing road function** to safely cater for different uses, and vulnerable road users, through broadly applying movement and place frameworks.

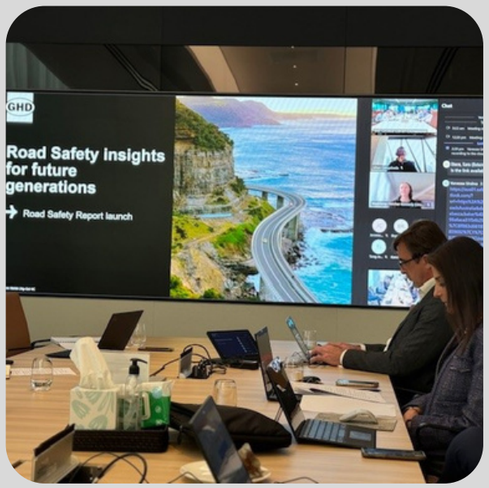
- Recognising the **role infrastructure plays** in influencing driver behaviour - ensuring infrastructure designs out serious consequences from crashes and reduces impacts when drivers make a mistake. This includes ensuring infrastructure design standards and **education** to **uplift industry capability** are updated in line with the latest in road safety research and evidence of effective interventions.

- Recognising the **efficacy of applying different countermeasures** to drivers, vehicles and infrastructure, placing high priority on energy management measures. Lower default speeds matched to the available road infrastructure and road function, with higher speeds only set following assessment, is seen as an optimal way to manage risk.

- **Greater use of real-time data and advanced technologies** to better understand road use and provide evidence-based measures to treat high risk areas sooner.

- This extends to greater use of automated enforcement to support driver compliance with speed limits and deter other risky behaviours such as inattention, tailgating and seatbelt misuse.





The latest from the experts

Associate Professor Michael Fitzharris from the Monash University Accident Research Centre shared a systems perspective on serious injury crashes, highlighting the critical role of infrastructure and '*safety by design*' to improve road safety outcomes.

Michael leads a research program centred on measures that prevent crashes, mitigate injury, and improve post-crash health outcomes.

Michael and his colleagues at MUARC (with input from international experts) analysed the data, witness statements, reconstructions, police reports and toxicology test results pertaining to 400 serious crashes.

They have used this work to develop the Safe System Failure Analysis Framework.

Key points and findings

- Reductions in serious injuries rely on meeting criteria for all three elements of safe system design concurrently: safe drivers, safe vehicles and safe roads.
- Blaming the driver has been a longstanding issue, but the research found that even compliant drivers are being let down by the 'system', that is, their vehicles and Australian roads that do not meet current best practice.
- During a crash, the driver has no ability to influence the injury severity outcome. Once a crash is inevitable, the injury severity outcome depends on the safety performance of the vehicle and what the road infrastructure provides in terms of energy management.
- Most crashes that result in hospitalisation occur at speeds above the ability of a vehicle to protect the driver and occupants from serious injury. There is a fundamental mismatch between impact speed and the safety of a vehicle, even for five-star vehicles. A key factor is the collision object and the speed at impact. Crashes involving a heavy vehicle are especially severe, and high speed exacerbates the force.
- System failure is an energy problem waiting to be solved. With the right settings we can create an inherently safe road system where, if someone makes a mistake, they won't be seriously injured.

What does this mean for infrastructure design and delivery in Australia?

Infrastructure is central to the safe operation of the road transport system and reducing road trauma through the boundaries it sets.

It influences both crash prevention and severity.

Safety by design can play a vital role in preventing crashes, constraining impact types, managing energy in the crash and influencing vehicle movements post-impact.

Road design shapes and influences driver behaviour, choice, and error.

We need road designs that better account for human factors and **support safe decision-making** while also allowing for movement where system design and operations prevent crashes or limit the severity of crashes when they do occur.

Just 26% of the roads analysed in the MUARC study met all the criteria for being 'safe'.

Meeting the standard doesn't mean a road is safe or risk free and it should only be the starting point for design.

Aimee Wescombe, Business Group Leader, Transport at GHD presented a preview of a soon to be released GHD global road safety research report

(launched on 5 September 2024)

Aimee Wescombe shared global research conducted with colleague Adam Wilmot at GHD to uncover barriers and identify solutions to help transport agencies create safer roads.

More than 1.3 million people die each year on the world's roads, and another 20 to 50 million are seriously injured. Despite continued and increasing efforts in the past decade, road trauma rates have increased globally.

A survey of more than 80 road safety and transport consultancies across the **USA, UK, Canada, New Zealand and Australia**, plus policy reviews, transport professional surveys, case studies and in-depth interviews identified three key areas that have the potential to make the greatest improvement in road safety.

Key areas with potential for improvement in road safety

1. Speed management: setting and enforcing appropriate limits

2. Funding, access and allocation: securing funding and channelling it to appropriate projects, and in ways that maximise safety benefits, and

3. Community and political leadership: the level of support and acceptance from the community and elected representatives was found to have a large bearing on the success or failure of road safety initiatives.

To read the full report, please visit:
www.ghd.com/en/insights/road-safety-insights-for-future-generations

Road safety insights for future generations | GHD - The Power of Commitment

GHD is a global, multidisciplinary professional services network committed to addressing the world's biggest challenges in the areas of water, energy and communities around the world. ”

GHD

Which high impact areas related to infrastructure have the greatest potential to eliminate death and serious injuries at scale?

- **Industry capability:** by ensuring infrastructure designers are aware of the role they play, and lifting capability across the sector by providing the latest evidence to ensure infrastructure design and operations prevent crashes or limit the severity of crashes when they do occur.

- **Safe system thinking:** by sharing real-time data and insights from across the road network to reaffirm and build on what we collectively know, and using this to improve road infrastructure design, the effectiveness of interventions and ensure consistency across the road sector in Australia.

- **Safety by design:** by influencing driver behaviour through safer speed limits; improving intersection designs, traffic flow and lane markings; mandating best practice safety measures for road users and road workers.

- **Address the funding challenge:** by advising on how to integrate project delivery with operations and maintenance, and improving funding for regional and rural areas – informed by road risk ratings and use.

- **Road user engagement:** by introducing star rating signage on roads, and communicating emerging issues and important priorities (e.g. speeding) by engaging with road users in new ways and placing special focus on vulnerable roads users.

- **Improve regional roads:** by increasing investment, applying design standards and safe system thinking, for example, by installing roadside and centre line barriers, enhanced centre line marking and widening shoulders.

- **Self-explaining infrastructure:** by supporting good decision making by road users (with and without technology).

- **Education and enforcement:** by using technology and other tools to educate road users and/or enforce safety measures such as variable speed limits.

What action needs to be undertaken to make a difference in the short term?

Infrastructure designers / maintainers

- Stay abreast of **latest road safety in design** research.
- Document safety improvements that can be implemented as part of infrastructure **maintenance and renewal** programs (network or site specific). Log these into a register for prioritisation and funding.
- Create a **consistent user experience** through roadwork sites.
- Improve design of **level crossings**.
- Increase the use of **smart technologies at intersections**.
- Consider large **freight** vehicles and allow for their movements.
- Incorporate **technology** into infrastructure improvement projects, e.g. side road warning signs, speed advisory signs and other advanced technologies, such as, AI-driven detection systems.

Policy makers / transport authorities

- Integrate **road safety design** and improvement into infrastructure **maintenance and renewal** programs.
- Reduce **speed limits** on high risk/ low volume roads and assess major arterial roads to develop prioritised treatment plans.
- Continue to gather and analyse **real-time data** e.g. black spots and routes, heat maps to predict crash risks, determine the efficacy of interventions and utilise connected vehicle data and detection devices in road infrastructure to provide more insights on road safety performance and issues.
- **Segregate** cyclists from road vehicles and improve pedestrian and bicycle facilities in urban areas.
- Ensure **communication campaigns** are effective, aligning with policy, strategy and interventions across infrastructure, enforcement and behaviour that appeal to people's motivations and beliefs.

Name three key objectives where the RA Working Group can play a unique role to eliminate deaths and serious injuries.

1. Influence policy and support governments to target investment decisions as a partner in reducing road trauma by:

- Providing a clear logic on how road infrastructure design can reduce serious injury crashes and protect road users and workers.
- Sharing world's best practice with the infrastructure design and construction community and advocating to ensure it is applied to the local context.
- Advising (and being a central knowledge source) on key priorities for safer infrastructure interventions on Australia's roads, including real-time data and advanced technologies.
- Bringing key public and private sector decision makers to the table for discovery sessions with experts and roads authorities.
- Educating decision makers and recommending key priorities and infrastructure countermeasures needed, e.g. urban roads to be 3 stars or better; how to better accommodate and protect vulnerable users; barrier treatments, wide shoulders, low-cost intersection treatments.
- Being a united voice across a broad industry constituency, particularly making sure transport infrastructure caters for vulnerable users of the network.

2. Capacity building by helping encourage and convert research and innovation into improved road infrastructure design and reduce hospitalisations by:

- Communicating and championing improvement opportunities relating to infrastructure design, driver behaviour and technology options.
- Celebrating effective safety improvements implemented in Australia and overseas.

3. Collaborate with the road and standards authorities on the minimum standard of safer road design and key success factors for road safety.

- Recognising that current road design standards represent minimum requirements, work with jurisdictions, Austroads and standards bodies to achieve evidence-based, safety-focused design standards for road infrastructure, lower default speeds and provide for greater use of enforcement technology.

How can the RA Safety Working Group can deliver on each of these objectives?

Three core themes emerged:

Leveraging partnerships to develop a nationally **capability upskilling program** for industry that builds knowledge and **capacity** to apply road safety design in road infrastructure

Promoting world's best **road safety design expertise, design standards** and **star ratings.** This includes real-time **data** and **insights**, use of smart **technology** and global **benchmarks** shared via a common **knowledge** platform

Road safety to be an **overarching principle for road infrastructure projects** with mandated safety **design criteria** and project-specific **KPIs for road safety**, including **energy management,** creating **reportable road safety outcomes** (across all three levels of government tiers)

Including for infrastructure maintenance and renewal programs

Action RA will take now

The RA Safety Working Group - along with our members - is uniquely positioned by the diversity of its membership to play a key role in reducing deaths and serious injuries on Australia's roads.

Informed by the core themes arising from this session, RA is developing a national plan that defines the goals and objectives for the Safety Working Group and key actions that will be taken to achieve them. These will be discussed and shared with our members and actioned.

For more information go to **https://roads.org.au/policy/**

Acknowledgements

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