



28 August 2024

Briefing note: WA Road Safety Summit – 2 September 2024

Roads Australia (RA) is the national peak body for road stakeholders in an integrated transport system.

We represent 120+ members working across the transport and infrastructure sector, including transport agencies, major contractors and consultants, material suppliers and technology providers.

Safety is a national policy priority for RA, is a core pillar of its 3-year corporate strategy and is currently a major focus for the policy program that engages public and private sector leaders across Australia.

On 20 August 2024, RA led a national conversation to determine how members could uniquely accelerate road safety goals across Australia. RA member, Transurban, supported the session by hosting members in Brisbane, Sydney and Melbourne, and virtually across all jurisdictions through interactive and facilitated discussions – demonstrating how industry and governments can work together.

Local and global evidence provided by safety and engineering experts at this session resulted in identifying ways to reduce trauma on Australia's roads.

These include:

- Managing road function to cater for different uses safely (including vulnerable road users) through broad application of Movement and Place frameworks.
- Recognising the role infrastructure plays in influencing driver behaviour, ensuring infrastructure designs out foreseeable crashes and reduces impact limits during a crash for when drivers make a mistake. This includes ensuring infrastructure design standards and industry capability are updated in line with the latest in road safety research.
- Recognising the efficacy associated with different countermeasures applied to drivers, vehicles and infrastructure, with energy management measures having high priority. Lower default speeds matched to the available road infrastructure and road function is seen as an optimal way to better manage risk.
- Greater use of advanced technologies to better understand road use, the development of lead indicators, use of evidence-based measures to treat high risk areas sooner, and automated enforcement to enhance driver compliance with speed limits and other risky behaviours.

What we heard from the experts

Associate Professor Michael Fitzharris, from 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 Monash University with input from international experts analysed the data, witness statements, reconstructions, police reports and toxicology test results pertaining to 400 serious crashes and 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; that is, 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 Australia's 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 is dependent on the safety performance of the vehicle and what the road infrastructure provides in terms of energy management.
- The majority of hospitalisation crashes 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 while exceeding the speed limit simply exacerbates the problem of inappropriately high speed limits.
- System failure is an energy system 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?

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 assist safe decision-making while also allowing for movement where crashes are foreseeable.

Just 26% of the roads analysed in the 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 global road safety report

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

A survey of 80 road safety and transport consultancies across the US, UK, Canada, New Zealand and Australia and in-depth interviews identified three key areas that have the potential to make the greatest improvement in road safety.



Key points and findings:

- 1) Speed management: setting and enforcing appropriate limits.
- 2) Funding, access and allocation: securing funding and directing it to appropriate projects, and in ways that maximise safety benefits.
- 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.

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