

**Submission
No 132**

INQUIRY INTO USE OF E-SCOOTERS, E-BIKES AND RELATED MOBILITY OPTIONS

Organisation: National Transport Research Organisation (NTRO)

Date Received: 15 August 2024

15 August 2024

The Honourable Cate Faehrmann, MLC
Chair
Portfolio Committee No. 6 – Transport and the Arts

Dear Ms Faehrmann,

Inquiry into use of e-scooters, e-bikes and related mobility options

For 60 years, the National Transport Research Organisation (NTRO), has been delivering independent advice to Australia's road agencies about road transport strategy, policy and best practice guidance to road practitioners in State and Local Government. Our role includes working with each of the three tiers of government to collect data and undertaking analysis about the performance of the nation's road networks.

Our guidance to practitioners has included all aspects of road safety, policy and action. Our recent experience of collaborating with Transport for New South Wales regarding e-scooter trials and the development of an E-Scooter Road Safety Guideline gives relevance in responding to the terms of reference of this inquiry.

NTRO welcomes the opportunity to provide the Committee with input about this important area of inquiry. There are many opportunities to prevent road trauma associated with e-scooters, e-bikes and related mobility, but there needs to be strong support from the State Government to encourage and develop the capability. We hope that our submission provides the Committee with some insight to identify pressing actions required to improve the road safety of e-scooter trials.

There is so much more that can be done to ensure that Australia delivers on a future free of death and serious injuries on our roads. As a nation we need to learn from crashes that continue to occur; we need to set challenging but achievable targets to plot the path to success and to measure our performance against these to ensure we remain focused. We hope that our input, via this submission, and our ongoing collaboration with state and local road agencies, the federal government, and with community and organisational stakeholders will continue to make a difference.

Please do not hesitate to contact me at _____
arrange a time to meet and discuss any of the matters raised in our submission.

if you would like to

Regards,

**Chief Technology Leader,
Safer Smarter Infrastructure**

Inquiry into use of e-scooters, e-bikes and related mobility options

The terms of reference for the Inquiry into the use of e-scooters, e-bikes and related mobility options were referred to Portfolio Committee No.6 – Transport and the Arts by the Legislative Council on 6 June 2024 to report on the following:

- a) the current and anticipated role of all three levels of government in enabling and encouraging safe electrified active transport options
- b) opportunities to reform the regulatory framework to achieve better and safe outcomes for riders and the community
- c) local council, industry and stakeholder perspectives on the utilisation and impact of e-mobility devices in the community
- d) opportunities to improve mobility, the customer experience, safety for users and the community
- e) the potential benefits and risks of existing regulatory and policy settings, including the Roads Act 1993, Road Rules and Road User Space Allocation Policy and other related legislation regarding safety, traffic, and personal convenience
- f) the extent that e-mobility devices have positive community benefits such as encouraging mode shift, relieving congestion, addressing social disadvantage and tourism
- g) opportunities across government to improve outcomes in regard to e-scooters, e-bikes, and related mobility options
- h) best practice in other Australian and international jurisdictions
- i) the economic analysis of e-mobility contribution to safe transport at night for shift workers and women, to mode shift and to first and last mile transport, and
- j) any other related matters.

NTRO has structured its submission to address Inquiry items a, g and j.

a) the current and anticipated role of all three levels of government in enabling and encouraging safe electrified active transport options

The National Transport Research Organisation (NTRO) in collaboration with Transport for New South Wales (Transport) developed a novel safety framework that includes actions relating to e-scooter road safety for stakeholders representing state and local government, e-Scooter trial providers, emergency services and local health districts.

The intention of the Guideline is to assist Transport in monitoring and evaluating future e-scooter trials. To ensure safe movement for all road users and transport modes, implementation of the Guideline will progressively identify which systems and processes are required by Transport to continue the promotion of safely using active transport in New South Wales.

Encouraging active transport and increasing the uptake of micromobility is part of the Minister for Transport's focus for Transport in New South Wales. Transport's e-Scooter framework requires NSW councils to conduct full road safety audits (RSAs) for existing roads to demonstrate the safety of trial operations and trial locations. Transport sought a simplified approach that eases the task of conducting RSAs.

This resulted in the first iteration of the E-Scooter Road Safety Guideline (the Guideline) in February 2023. The Guideline provides eighty-eight safety prompts in a checklist format based on the Safe System approach (Safer people, Safer roads, Safer speeds and Safer vehicles) and RSA principles.

A paper was presented on this concept by NTRO and Transport at the 2023 Australasian Road Safety Conference titled *Eighty-eight ways to safer micromobility*, pp467-469, ACRS, Canberra, ACT, accessed 13 August 2024.

The Guideline advocates shared responsibility, and in accordance with the NSW E-Scooter Shared Scheme Trial Guide, requires councils in consultation with Transport to form, lead, and coordinate an e-scooter working group and implement the Guideline. Stakeholders include Council, Transport, the e-scooter shared scheme provider,

Local Police Area Command, Local Health District and emergency services. This checklist encourages collaborative discussion, sharing of information and data, reporting of trial progress, reporting on e-scooter incidents and injuries to Transport and the undertaking of specific roles and tasks.

Communication plans prepared by councils and the use of e-scooter technology can facilitate the education of safely using micromobility to the community. The Guideline's safer people checklists specify the communication of amended road rules, expected user behaviours and risky e-scooter behaviours to be avoided. Users and non-users will be informed on e-scooter safety and their respective responsibilities when traveling on path infrastructure. Information regarding available customer contact channels to the council and the e-scooter provider is necessary. This facilitates reporting on trial issues, infrastructure condition, incidents and injuries resulting from e-scooter crashes. The key outcomes of this approach are:

- advocacy of safe e-scooter use through the development and implementation of evidence-based
- communication plans for users and non-users, recognition of New South Wales Police being responsible to enforce E-Scooter legislation and
- establishing communication mechanisms to report e-scooter incidents and injuries.

Regarding Safer roads, Transport and councils are responsible for the safety of their respective network infrastructure. The safe roads checklist is classified by infrastructure type, i.e. shared paths, bicycle paths and bicycle lanes. Safer outcomes can be delivered by implementing maintenance plans for paths and road related areas. Careful consideration of signage and pavement markings can contribute to facilitating safe active travel for all users on the trial routes. Planning, implementation, and management of e-scooter parking facilities in strategic locations will contribute to unimpeded paths of travel on the shared path or cycling infrastructure.

Transport has set the maximum operating speeds of e-scooters to 10 km/h for shared paths and 20 km/h for bicycle paths and bicycle lanes. The safer speed checklists require e-scooter providers to comply with the road rules via application of geofencing measures (and sharing with NSW Police for enforcement activities) and e-scooter technology to control vehicle speed. This helps to maintain a safe travel environment for all path users. The key outcomes of this approach are:

- compliance of power and speed of e-scooters with New South Wales Legislation,
- providing 'Novice go slow' modes on e-scooters for inexperienced users and
- geofencing trial areas to control the speed of e-scooters.

As part of ensuring safer e-scooters (being the safer vehicles component of the Safe System), the checklist ensures that e-scooter providers are responsible for e-scooter compliance with legislation. E-scooter safety features (e.g. helmets, e-scooter apps advising on safe practices, battery management systems, speed limiters and braking systems) must provide safer outcomes for their users and protect pedestrians and cyclists. E-scooter technology facilitated by the provider should enable safe use of the e-scooter, coupled with geofencing, among other technologies, to ensure a safe trial environment.

g) opportunities across government to improve outcomes in regard to e-scooters, e-bikes, and related mobility options

There is a lack of consistent, accurate data regarding the involvement of e-scooters, e-bikes and other mobility devices in road crashes. While there have been a number of studies into mobility device injuries and deaths, including those by the Australian Institute of Health and Welfare's [Mobility scooter-related injuries and deaths in 2019](#), AIHW, Canberra, ACT, accessed 13 August 2013, and the Jamieson Trauma Institute's e-scooter and e-bike injury research highlighted by the Royal Automobile Club Queensland's article [Data shows e-scooter riders still not taking safety seriously](#), RACQ, Brisbane, QLD, accessed 13 August 2024. these studies are all snapshots in time and do not allow ongoing reporting and monitoring of trends.

Generally, state and territories are not collecting data specific to mobility device users, including e-scooter and e-bikes. The exception to this is the Brisbane City Council who have "contracted in" the release of data sets from each of the e-scooter providers to the Council. This valuable data set ensures that the Council can map the more than one million trips each year and ascertain the speed, location and crash history for the fleet of e-scooters in operation. With the adoption of Personal Mobility Devices (PMDs) into the Australian Model Road Rules (ARRs),

upon which all states and territories base their road rules, the opportunity now exists for specific data to be collected by Police at the site of a crash, in line with the definitions provided in the ARR. This will allow state/territory reporting of involvement in crashes, development of a national dataset to support a national understanding, investigation into the trends and causes of these crashes and importantly, tracking of crash numbers over time.

It should be noted that as part of this project, the National Transport Commission found that Motorised Mobility Devices and PMDs and their users are inherently different. The policy papers presented to Ministers for PMDs was endorsed, and the policy for MMDs was not endorsed.

The Queensland Department of Transport and Main Roads' *Queensland Road Crash Weekly Report* TMR, Brisbane, QLD, accessed 13 August 2024 have already implemented a change in the capture of crash data to collect personal mobility device fatalities as a separate category since 1 November 2022. It is recommended that similar changes be implemented across all states and territories.

Australia needs both a National crash (Safe System) review framework and a Nationally standardised crash database. The establishment of the Federal Road Safety Data Hub is an excellent first step toward national crash data harmonisation – but we have a long way to go. NTRO has sought to form partnerships in order to foster a specialised investigative and research element to assist at federal and state/territory levels to deliver key road safety outcomes based on learnings of real-world crash experiences. There needs to be established a cooperative and collaborative arrangement to deliver a world leading Blameless Crash Investigation Framework for Australia. This will deliver a step change in the understanding of road crashes in Australia which will enable the ongoing evolution of predictive risk metrics and predictive estimates for crash reductions expected for road safety treatments (crash reduction factors).

j) any other related matters.

Food Delivery Riders (FDRs) is another related area NTRO wishes to highlight as these deliveries are often made by motorbike / scooter or bicycle, including e-bikes. Reducing the risk to FDRs is the shared responsibility of industry, OH&S regulators, the road authority, Police, and the individual rider.

Motorcycle and cyclist safety are difficult areas for these groups to tackle. Kinetic energy combined with minimal protective systems in a crash (no restraints, no airbags and no crashworthy crumple zones) means that the majority of the crash energy is absorbed by the motorcyclist or cyclist. In crashes with other vehicles, riders can be seriously injured or killed – even when the crash is not their fault.

For this reason, the primary aim of any FDR safety program should be to achieve crash avoidance (rather than crash mitigation) as far as practicable. Discussions surrounding the protection of the FDR workforce are evolving in both Victoria and NSW, with one of the first steps in mitigation related to likely regulatory requirements for food delivery riders to wear high-visibility ('hi-vis') apparel, namely hi-vis vests.

In first for the industry, NTRO has developed a novel training program – in both English and Mandarin – for the food delivery industry on behalf of a major industry partner. Delivered in June 2021 the content was prepared in response to the new NSW food delivery rider (draft) guidelines and is bespoke for this new and growing industry. In developing this training module, it has become evident that there are major gaps in road safety leadership and organisational safety culture across this industry. This engagement has made clear there is little to no technical guidance with respect to the apparel or equipment used by food delivery riders during their work. Collaboration between road agencies and the WHS agencies to drive traditional safety change management will go a long way toward improving the status quo. The protection of FDRs on the road requires a holistic approach. Improvements to licencing, vehicle selection and driver education and training are all important aspects.