Living Streets Canberra

Automated vehicle safety reforms consultation

SUBMISSION FROM LIVING STREETS CANBERRA

via email to automatedvehicles@ntc.gov.au

11 June 2024

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Living Streets Canberra

Living Streets Canberra is a grassroots organisation that works for everyone to be able to enjoy public spaces and walk* easily, safely and conveniently. We work for everyone – whether young or old, fast or slow; walking, sitting, commuting, shopping, between appointments, or out on the streets for exercise, leisure or pleasure.

Our work includes advocating for:

- ***all*** environs where people may use active travel (that is, human-powered transport such as walking, rolling or riding) to ***be*** – *and* ***feel*** – ***safe, accessible, comfortable and convenient*** – for ***everyone*** to use regardless of age, ability, gender, sexual orientation, race, culture, socioeconomic status or mode of travel. (The environs include the infrastructure, vehicles (particularly motor vehicles), and other people's behaviour.)

- mobility options – including all streets, paths, crossings, and public transport stops – to comply with or exceed anti-discrimination legislation and accessibility standards.

We want to see:

1. walking as the natural choice for everyday local journeys
2. Australia as an inviting, safe and comfortable place for people to be out and about, walking* and being in public spaces full of walking-friendly communities
3. people being supported and encouraged to choose to walk*, particularly for transport.

Living Streets Canberra works with various organisations and allies locally, nationally and internationally. Locally, these include Advocacy for Inclusion, Council on the Ageing ACT, ACT Council of Social Service, Pedal Power, Public Transport Association of Canberra, SEE-Change and Conservation Council ACT Region. Nationally, these include Better Streets and Climate Action Network Australia. Internationally, these include the International Federation of Pedestrians.

- Walking is natural...so walking should be a natural right.
- Every journey involves some walking.*
- Walking* is a legitimate use of public space.
- Walking* is an essential part of sustainable mobility.
- Walking* improves the health and liveability of communities.

* We focus on people who get about without a vehicle. When we use the term ‘walking’, we include any form of human-powered mobility that is not a bicycle: walking; using a wheelchair or other personal mobility device, including those with motors that can travel up to 10 km/h); pushing a pram; wheeling luggage; riding a scooter, skateboard, tricycle or rollerblades. This is the definition used in the Australian Road Rules.

Introduction

Living Streets Canberra welcomes this opportunity to provide advice on Australia's automated vehicle safety reforms.

This submission provides some broad principles and issues of concern and should be read in conjunction with our submission on pathways to net zero emissions.

Introduction of automated vehicles into public spaces in Australia is a big issue for the safety of people not in motor vehicles, yet it seems relevant groups are unaware of this consultation. We have therefore requested further consultation opportunities and would like those other relevant groups to be included.

We would also welcome the opportunity to discuss this submission further.

Regulation of autonomous vehicles should facilitate - not hinder - active travel

Amongst other things in our submission on pathways to net zero emissions, we make the following points that are relevant to regulation of autonomous vehicles:

- Governments must focus on facilitating shifts away from modes that contribute most to damaging our climate to those that contribute less - not just on electrification of motor vehicles. In particular, they need to enable and facilitate people in Australia to use active, shared and public transport more: for more trips and more often.
- Getting more people to travel actively, more often, requires overcoming numerous barriers and consistently addressing several key issues in broader legal, policy and real-world contexts, including:
    - Safety
    - Equity, inclusion and accessibility
    - A clear hierarchy of travel modes and users
    - Convenience, comfort and physical attractiveness

Safety

We therefore welcome the statement in the consultation paper that ‘All road users, including drivers, riders, passengers, pedestrians, cyclists, and others such as mobility device users, need to be able to use public roads safely.’ (p8).

We welcome the safety opportunities offered by automated vehicles being able to have good compliance with speed limits when the driving environment encourages people to drive faster than the speed limit.

We also note that automated vehicles can avoid collisions in environments that are high quality and predictable.

However, autonomous vehicles may have higher crash rates than ‘manually’ driven vehicles.[1]

It seems they are not particularly good at avoiding crashes in environments that are low quality and/or situations that are unpredictable or that have not been tested and programmed[2], for example:

- someone, perhaps a child, running onto a street close to an automated vehicle
- dark-skinned people
- people running or moving very slowly, people using mobility aids
- branches, balls or other objects being airborne onto streets close to the vehicle

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[1] Bieber, C. 2024. ‘93% Have Concerns About Self-Driving Cars According to New Forbes Legal Survey’, *Forbes Advisor*, 13 February 2024, https://www.forbes.com/advisor/legal/auto-accident/perception-of-self-driving-cars/, accessed 11 June 2024.

[2] See, for example, 1-800 Injured. 2024. ‘Self-driving car accident statistics’, https://1800injured.care/self-driving-car-accident-statistics/, accessed 11 June 2024; Kisling, Nestico & Reddick. n.d., ‘Self-driving car accident statistics’, https://www.knrlegal.com/car-accident-lawyer/self-driving-car-accident-statistics/, accessed 11 June 2024; Lee, Gober & Rayner. 2023. ‘Examining Autonomous Car Accidents and Statistics’, 16 December 2023, https://www.lgrlawfirm.com/blog/examining-autonomous-car-accidents-and-statistics/, accessed 11 June 2024; Sandt, L. & Owens, J.M. 2017. ‘Discussion Guide for Automated and Connected Vehicles, Pedestrians, and Bicyclists’, Pedestrian and Bicycle Information Center. Chapel Hill, NC, August 2017, https://www.pedbikeinfo.org/cms/downloads/PBIC_AV_Discussion_Guide.pdf, accessed 11 June 2024; Ramos, J. 2024. ‘Cities are not ready (yet) for self-driving cars: these are the key aspects holding them back’, https://www.tomorrow.city/self-driving-car-accident-rate/, accessed 11 June 2024; The Royal Society for Prevention of Accidents. 2021. ‘Road Safety Factsheet, Autonomous Vehicles, May 2021, https://www.rospa.com/media/documents/road-safety/factsheets/autonomous-vehicles.pdf, accessed 11 June 2024.

- road markings and signs that are non-existant, in poor condition and/or are unusual
- traffic lights not working
- poor light
- poor quality road surfaces
- vehicles close to or over lane markings or centre lines

This is on top of technology errors or cybersecurity threats.[3]

Some features already on modern motor vehicles can be so rigidly automated that they contribute danger, instead of avoiding it; for example, keeping the vehicle in the middle of a lane or a certain distance from a road edge even when it is not safe such as when approaching a vehicle that is wide or over the centre or lane line.

We also note that, despite autonomous vehicles already on public roads in the USA, a recent survey found that 93% of Americans have concerns about some aspect of self-driving cars, with safety and technology malfunctions topping the list.[4] In light of our similar driving cultures and environments, we suspect that a similar result would be found in Australia.

Technology will not necessarily solve all these problems.

As Joe Cortright has said:

> Not all of our problems can be solved with better technology. At some point, we need to make better choices and design better places, even if it means not remaking our environment and our communities to accommodate the more efficient functioning of technology.[5]

Speed limits kept below 30 km/h can reduce the damage to people, vehicles and infrastructure in most of these crashes, especially when coupled with aerodynamic (not square-fronted) vehicle design.

That is why we advocate for:

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[3] Lee, Gober & Rayner. 2023. 'Examining Autonomous Car Accidents and Statistics', 16 December 2023, https://www.lgrlawfirm.com/blog/examining-autonomous-car-accidents-and-statistics/, accessed 11 June 2024.
[4] Bieber, C. 2024. '93% Have Concerns About Self-Driving Cars According to New Forbes Legal Survey', *Forbes Advisor*, 13 February 2024, https://www.forbes.com/advisor/legal/auto-accident/perception-of-self-driving-cars/, accessed 11 June 2024.
[5] Cortfight, J. 2023. 'Pedestrian Safety: There's No Technical Fix', *Strong Towns*, 5 June 2023, https://www.strongtowns.org/journal/2023/6/5/pedestrian-safety-theres-no-technical-fix, accessed 11 June 2024.

Evidence-based standardised speed limits and designs for urban areas for the safety of all road users:

- **30 km/h as the evidence-based maximum default safe speed for streets** (and for which there is now a global move toward)[6,7,8]
- Streets and roads are permitted to have higher design and designated speeds only where the need is clear and specifically designated and only if accompanied by fully separated paths on both sides with convenient priority crossings or people walking, rolling and riding. Australia could adapt processes from other countries to decide which streets or roads *need* to have faster motorised traffic and to ensure that those streets and roads are sign-posted accordingly and have convenient and fully accessible pedestrian-priority crossings joining footpaths on both sides of streets.
- giving particular attention to the separation of different travel speeds and to ensuring the safety of the most vulnerable people - those not surrounded by a metal cage, and especially children and people who are frail and/or have a disability.

Equity, inclusion and accessibility

Automated vehicles can improve transport equity of people who cannot drive or easily use active transport.

We note, though, that this option is only available to those people who can afford autonomous vehicles and who travel in places with road infrastructure for suitable for such vehicles to be driven safely.

It is important to ensure that facilitating autonomous vehicle use does not make it more difficult or dangerous for people not in motor vehicles, particularly people with dark skin, who have mobility and/or intellectual issues, or who are small or short.

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[6] World Health Organisation. 2021. 'Campaign launched to make 30 km/h streets the norm for cities worldwide', 22 March 2021, https://www.who.int/news/item/22-03-2021-campaign-launched-to-make-30-km-h-streets-the-norm-for-cities-worldwide

[7] World Health Organisation. n.d. 'Decade of Action for Road safety 2021-30, https://www.who.int/news/item/22-03-2021-campaign-launched-to-make-30-km-h-streets-the-norm-for-cities-worldwide

[8] World Health Organisation, 'Global Plan for the Decade of Action for Road Safety 2021-2030', 20 October 2021, https://www.who.int/publications/m/item/global-plan-for-the-decade-of-action-for-road-safety-2021-2030

A clear hierarchy of travel modes and users: walking on top

We are concerned that the consultation document says:

> Existing road rules placed on drivers, pedestrians and bicycle riders about causing a traffic hazard will be updated so these road users must not illegally obstruct the path of automated vehicles as well as other road users. (p39)

What does 'illegally obstruct' mean here?

We need more clarity of priority - not continuation of ambiguity.

We also need a focus on safety of the most vulnerable road users and on increasing sustainability of transport modes.

We reiterate the point in our submission on pathways to net zero emissions that:

> A clear transport hierarchy, reflected in clear legislation, is key to safe, active travel and good practice for urban planning and transport. Everyone must have a clear idea of the priority of travel modes and users. We all need to know what and who has priority. We need to know this whether we are citizens or visitors; or travelling, governing, planning, designing, building or maintaining, educating or enforcing. The basic and most vulnerable mode of travel, walking, must be the top priority.

and

> In a car- and individual-oriented culture and environment, considerable change will be needed to change behaviour and attitudes to be focussed on community and care for others (particularly the most vulnerable).

That is why we call for (amongst other things):

> **A clear road hierarchy that is legislated and national** (like the UK has recently done)[9] for:

- clarifying priority (instead of current confusion, contradictions, gaps and the normalisation and dominance of driving)
- improving:
    - safety of vulnerable road users

[9] UK Government. 2022. 'The Highway Code: 8 changes you need to know from 29 January 2022' January 2022. https://www.gov.uk/government/news/the-highway-code-8-changes-you-need-to-know-from-29-january-2022

- flow of traffic in different modes
- planning, design, construction and maintenance of transport infrastructure and urban areas

We are concerned that the tone of the consultation paper's statement ('illegally') could indicate the opposite of this. When viewed in combination with the century-long influence of the car industry (including the way it has already restricted people crossing the street, even to the extent of creating the jaywalking laws), we worry that it could mean:

1. continuing the ambiguous legal situation (which, in a car-dominant culture means cars assume and are given right of way),
2. giving way to autonomous vehicles, including possibly having them top of the transport hierarchy, and even
3. further formally restricting where and how people can cross the street (jaywalking laws).

Convenience, comfort and physical attractiveness help safety of vulnerable road users

As we point out in our submission on pathways to net zero emissions:

> Routes, infrastructure and allocation and treatment of spaces affect convenience, comfort and physical attractiveness of active travel as well as equity, inclusion, accessibility and safety.

Formal restrictions of how people outside motor vehicles can use streets can affect the convenience of those people - yet humans have an in-built drive for efficiency, so convenience often takes precedence over safety (sometimes with tragic results).

Regulating autonomous vehicles needs to take account of real-world circumstances. It needs to facilitate - not hinder - active travel that is convenient, comfortable and physically attractive…which also helps it to be safe.

Living Streets Canberra

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SUPPLEMENTARY

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24 June 2024

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Introduction

This submission:

- supplements our 11 June 2024 submission and follows up a meeting we had with the National Transport Commission; Department of Infrastructure, Transport, Regional Development, Communication and the Arts; WeRide Australia and Better Streets on 14 June 2024.
- welcomes the Consultation paper's acknowledgement of the danger associated with the operation of autonomous vehicles and many of the potential proposed legislative inclusions are very sensible.
- supports most aspects of the paper and recommends that the reforms drive improvements in three critical areas:
    1. improve how road safety legislation is framed - to avoid injury to people, including by creating an explicit hierarchy of safety considerations that is determined by people's vulnerability and is not in any way linked to the legality of action by any person.
    2. create strong and certain financial incentives that drive corporations to make vehicles increasingly safe.
    3. ensure that operation of autonomous vehicles improves, and does not reduce, priority and space allocation for people walking, rolling, riding bikes, and using public transport.
- endorses the submission by Better Streets, noting that Living Streets Canberra is a member of the Better Streets alliance.

We would also welcome the opportunity to discuss this submission and our original submission further.

Consistency of policy direction

Depending on how they are regulated, automated vehicles (AVs) have the potential to help the shift to net zero and improve mobility for many people - or to derail our efforts to help more people to walk, ride, scoot and use public transport more.

For a variety of reasons, Australian governments need and want to facilitate more people in Australia to use active, shared and public transport more: for more trips and more often.

Regulation of autonomous vehicles should help, not hinder, this shift to more active and sustainable travel. We must not see perverse outcomes. For example, we are advised that the push for autonomous vehicles stopped a bus lane in California - the opposite of what we need to see.

Of most concern are:

- More regulation **favoring machines over people** (for example, the consultation document made almost no mention in consultation document of people outside AVs)
- AVs may have higher **crash rates** than ‘manually’ driven vehicles - particularly **in environments that are low quality and/or situations that are unpredictable or that have not been tested and programmed** for the AV - as we often have on Australian public roads and streets
- AV features (eg lane assist or braking) that can **increase danger in certain circumstances**

Hierarchy of road users

The primary (Commonwealth) national legislation must include a clear hierarchy of road users, with walking* top, riding second - like UK has with its updated Highway Code:

Presumption of strict liability prioritising vulnerable road users would help drive the hierarchy of responsibility and shift the driving culture towards taking more care and responsibility for the people most likely to be injured. The Netherlands has been suggested as a model to follow.

Increasing safety by reducing danger

Danger and perceived danger can be mitigated by good design and use of infrastructure and vehicles:

- Physical separation by mode and/or speed reduces danger. Separating AVs from vulnerable (and possibly other) road users would reduce the dangers that AVs pose to those road users.
- Anecdotal evidence suggests that people are more willing to accept AVs if the AVs are kept separate to other road users (eg on dedicated shuttle roads).
- Speed limits kept below 30 km/h can reduce the damage to people, vehicles and infrastructure in most of these crashes, especially when coupled with aerodynamic (not square-fronted) vehicle design and street design that facilitates everyone traveling below 30km/h.

Regulating Automated Driving System Entities (ADSEs)

Prosecution and penalisation of offences (such as breaches of safety laws) would be easier if the laws:

- **require each ADSE to have a corporate presence in Australia** (that is, the Consultation paper's Option 1 – The corporation must be an Australian registered company with its centre of operations in Australia, p. 19). There are plenty of examples in other sectors of how multinational companies hide their money and responsibility overseas in order to avoid taxes, penalties and responsibilities.
- **include 'a prescriptive duty that an ADSE must ensure**, so far as is reasonably practicable, **the safety of remote operation of a vehicle**, where remote operation is performed in connection with its ADSs' (p. 31)
- **require that any remote operation of AVs is provided in a safe way**, including:
    - *minimising and avoiding risks to people and property outside the ADS and people inside it* (p. 31)

- ‘perform remote operation with care for their own safety and the safety of others affected by their acts or omissions’ (p. 32)
- requiring remote operation to be done from within Australia with operators experienced in Australian norms and behaviours *including and rules and behavioural norms of people (especially vulnerable road users) outside the ADS* as well as experience in driving here (p. 32)

It is important that the legislation incentivise ADSEs to not put AVs (and associated systems) that are not safe (particularly for vulnerable road users) on our roads and to not slow down regulatory processes. Straight-off, large fines for inferior technology could achieve this.

Clarify all important terms

Language and terms must not be clear, not vague or ambiguous. Clarification of some important terms is needed, for example:

- ‘**Third party interferences**’
  - This must not be limited to hacking, unauthorised work on AVs, or ensuring that it does not capture actions reasonable in case of temporary emergency (such as after a collision).
  - How do people walking, animals etc fit in? AVs colliding with people or animals, or vice versa, must not be considered ‘third party interference.
- **‘Illegally obstruct’**
  - What is being envisaged for ‘Existing road rules placed on drivers, pedestrians and bicycle riders about causing a traffic hazard will be updated so these road users must not **illegally obstruct** the path of automated vehicles as well as other road users’ (p.39)?
  - While the road rules have both contradictions and gaps and therefore can be unclear, care is needed with ‘improvements’ and ‘updates’.
  - Depending on how it is done, ‘updating’ the road rules to clarify ‘causing a traffic hazard could make walking, rolling and riding much harder (such as by prohibiting being on or crossing a road except in particular, controlled situations) - or easier (such as recognising the human right of freedom of movement, that roads and streets are public places).
  - Any changes must reverse the culture (and in some cases legal situation) favoring machines over people.

- A clear, legislated hierarchy of road users (as described earlier in this submission) must guide updates of road rules.
- It could also help to clarify the rights of people who are not in motor vehicles. For example, the right to be on the road is especially important for where there are no paths, where paths unusable, for crossing a street, or in the case of emergency such as after a collision.
- People exercising their human right of freedom of movement and people colliding with AVs (or vice versa) must not be considered illegally obstructing vehicles.

Consultation paper - further issues and questions

With our limited reading of the Consultation paper and discussions with colleagues, we have identified (a) some further questions that it has not raised and (b) some other issues in the paper. These include:

1. How to determine if the vehicle will be safe for other road users, especially vulnerable road users & 'unusual' situations? (p. 15)
2. What ADS should be allowed on what roads/circumstances? (p. 15)
3. 'Manage safety risks' would be better than 'minimise safety risks'. (p .16)
4. What about risks to vulnerable road users etc? (p. 16)
5. 'How people will interact with an ADS' misses 'How people outside the ADS (especially vulnerable road users) will interact with an ADS. (p. 16)
6. Safety risks to be managed include risks to people and property outside the ADS and people inside it. (p. 31)
7. Who will have responsibility for ensuring compliance with safety & other requirements? (pp. 35-36)
8. Speed zones - lawful is not necessarily reasonable (safe).
9. Subtle cues between people road users (even in vehicles) are really important for anticipating movement and behaviour and as social norms - yet are currently missing from AVs and their detection systems. How will AVs and regulation of them deal with this?
10. Social norms change over time, so AVs should be expected to change with them.
11. Effective regulation, testing and enforcement will require very technical expertise, likely at scale, so:
    a. How will it be developed, funded and regulated?

b. How will it see all that AVs do (especially the decisions that the artificial intelligence used in AVs), when even AV creators don't understand all about how AVs work because of the AI?

c. How will the technical expertise/knowledge be kept separate from industry, so there is neither a revolving door nor the current power imbalance?

12. How to force disablement of AVs (for example, if there is safety problem or an ADSE becomes non-existent)?

13. What are the practicalities of disablement etc needed for safety reasons? For example, if it affects a significant proportion of vehicles, how will it be handled in the face of economic and/or political implications/imperatives if, say, 10% of trucks need to be disabled?