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Issues Paper

Barriers to safe use of innovative vehicles and mobility devices

Thank you for the opportunity to respond to the NTC's Issues Paper.

Assistive Technology Suppliers Australia Ltd (ATSA) is the peak industry organisation representing over 125 Australian suppliers of assistive technology (AT, historically known as aids and equipment) to people with disability and seniors.

Our members include businesses and not-for-profit organisations of varying sizes who provide Australian-made and imported AT solutions that increase the independence and life choices of users and make their everyday living easier. ATSA works to ensure the Australian AT market is competitive, efficient, viable and appropriately regulated.

ATSA believes that the current regulatory framework for Motorised Mobility Devices (MMDs) is outdated and not fit for purpose.

Yours sincerely,



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Assistive Technology Suppliers Australia Ltd (ATSA)

Response to

The National Transport Commission Issues Paper **Barriers to safe use of innovative vehicles and mobility devices**

8th of March 2019

List of questions for comment

1. What characteristics need to be considered when defining what an innovative vehicle is?

The definition of what is an innovative vehicle is constantly evolving. What is innovative today can easily be considered the norm tomorrow. Technology is fast moving and will accelerate over time and to design legislation around innovation is problematic.

If innovation is defined as “applying a new approach to a current need/problem or circumstance”, then under this context the focus should be on the purpose of the device, not innovation or its design.

MMD's are built to provide mobility to the end user and not primarily as transport replacement vehicles. MMDs are personal devices intended to provide mobility options to those who need it. How this is achieved will change over time through innovation and the evolution of new technologies. The current market is full of alternatives and there are many more on the drawing board.

The existing regulatory environment for MMDs (i.e. prescriptive methods that do not allow for innovative solutions) is encouraging businesses to shy away from introducing new, innovative MMDs into Australia.

ATSA recommends the use of international standards to be the accepted set of parameters for the safe the design of MMDs. The application of these Standards to be international and should remain in place until there is available and reliable data that provides a justifiable reason on why Australia would need to move away from these standards.

2. What differences between motorised wheelchairs and mobility scooters need to be recognised by this project?

International standards for MMDs are structured under a safety framework that enables effective design and does not differentiate between mobility scooters and power wheelchairs. These devices have the same primary purpose, to provide mobility to persons who need it. The difference between the two types of devices relates to the need to accommodate individual requirements of the user. Therefore, each type of device should meet the same guidelines.

It is also important to note that in some circumstances a mobility scooter is a stepping stone to an electric wheelchair for many users as their degree of disability increases.

The main difference between the two types of devices is the level of the disability that needs to be accommodated by the design of the device.

A wheelchair is used by a person who is largely immobile without the device and they are designed to be used in close quarters as well as in open areas. The difference between an electric wheelchair and a manual wheelchair, is one has a mechanical device to aid in its propulsion and the other relies on the user or carer to propel the device. However, a manual chair can have powered assist devices attached, this provides options to remain mobile dependant on the set of circumstances they are faced with without moving into a powered only wheelchair.

Mobility scooters are generally used by people with a degree of independent mobility and are suited to traversing distance. Their inherent design assumes a level of mobility that enables mounting and dismounting of the device unaided. Mobility scooters are not often used in close quarters. The person with limited mobility would likely use a walking stick or walking frame, or walk unaided for short distances in close quarters, such as inside a home (e.g. chair to table to bathroom).

A recent survey of AT suppliers, both retail and wholesale highlighted significant differences between electric wheelchairs and mobility scooters when it comes to device assessment/specification and funding.

- 93%+ of scripted electric wheelchairs are fully or partially funded by government agencies or insurance.
- 95%+ of scripted wheelchairs involve an independent allied health practitioner during assessment and delivery/setup.
- Excluding government contract sales, only 23% of sales of mobility scooters are fully or partially funded by government agencies or insurance.

- Excluding government contract sales, only 20% of sales of mobility scooters involve an independent allied health practitioner during assessment and delivery/setup.

This suggests that sales of scripted electric wheelchairs involve additional safeguards to ensure the devices are fit for purpose, properly setup and that users are appropriately trained in safe use.

There are some technical differences with the types of controllers used between the two types of devices, in general an electric wheelchair would use joystick controllers, due to the fine level of control required for them to manoeuvre in tight situations. Scooters generally use tillers as the level of control and dexterity is less critical. However due to innovation, the method of control may change, e.g. weight shifting, voice activation, sensory technology, etc. Therefore, ATSA would caution in applying the current technical status quo to any definition.

Mobility devices fall into five or more groups,

- a) Ambulatory – rollators, crutches, walking sticks etc.
- b) Manual Wheelchair – a highly manoeuvrable, often lightweight device that is used by a person with reduced mobility, that is propelled by the user or carer and may at times incorporate an add on a power assist device.
- c) Electric Wheelchair – a highly manoeuvrable powered device that is used by a person with reduced mobility and who may not be mobile without it.
- d) Mobility Scooter - a device that is limited in its manoeuvrability that is used by a person with mobility limitations to traverse distance
- e) Other Powered Device – Segway® type devices, high speed recreational devices, off road devices etc.

ATSA again reiterates that any regulation should focus on the intended use, to remove the risk of innovative MMDs being withheld due to prescriptive regulations are focused on types of devices rather than their purpose.

This approach would overcome the questions such as, how to regulate a “clip on power device” to a manual wheelchair that aids in its propulsion. Under the current rules the primary device is a manual chair, therefore is not restricted, however it could be argued that while the clip on is a motor connected to a wheelchair therefore should be classified as a powered wheelchair.

3. What uses of innovative vehicles need to be considered as part of this investigation?

Vehicles that are to be used as an alternative to transport or for recreation should be considered in a different light to MMDs. It is important not to confuse vehicles which are devices that enable choice in the type/mode of transport, with MMDs that are essential to a person's mobility.

The current legislation is not suitable to cover the use of footpaths (or roadways when a footpath is not available), therefore the focus should be to find a solution for devices that could be or will be used in pedestrian spaces.

4. What key factors need to be considered when determining safe rules of operation (including speed) for innovative vehicles on roads and road-related areas?

The use of MMDs on the roadway is only necessary when there is a lack of pathway infrastructure. In Australia, the likelihood that footpaths will be available at all times is doubtful. For this reason, consideration must be given to enable MMDs to travel on the roadways.

MMDs need to be able to travel at a speed relative to the conditions. The speed should be greater than what would be appropriate in a high pedestrian space, i.e. faster than a walking pace as it will be sharing with other users who will be going at relatively higher comparative speed than a walking pace. ATSA is not aware of any specific studies on this however it is guided by the international experience of speeds between 12 to 15kmph as a minimum.

However, if you consider the level of safety of a pushbike that is not speed limited when used on the roadway, the rider is expected to obey the road rules. The rider is also expected to ride to the conditions. It is important to note that a push bike rider is not required to undergo any training, carry a licence, nor do they require to have their bike registered.

There are clip on devices that alter the characteristics of a manual wheelchair, which results in a device that is more like a powered assisted push bike with safe designed characteristics that enable higher travelling speeds, e.g. 30kmph. These are growing in popularity as it provides additional choices for the manual wheelchair user to get around without the need to use a car or public transport. The devices provide a secondary benefit, the reduction in the number of transfers to and from a device (e.g. wheelchair to car seat to wheelchair) which in turn reduces the risk of both shoulder injuries and pressure injuries.

Any consideration of what rules that are imposed on MMDs must not be discriminatory, and not based on the device per se but the space it is being used in when determining the requirements for safe use.

The safety functions/features of the device would need to be considered e.g. its ability to stop, can it be seen at night etc. In addition, the stability of the device relative to its speed needs to be a determining factor of how the rules would be applied.

5. What are the practical and measurable outcomes required from a nationally consistent policy and regulatory framework for innovative vehicles?
 1. Australian legislative alignment to internationally accepted usage and standards to allow for a broader access to a variety of devices.
 2. A framework that has compulsory data capture of events that enables better future decision making e.g. future legislation and improved design.
 3. Legislation relating to MMDs that is not discriminatory or impedes the human rights of the user
 4. Broader education of all footpath users.
 5. Any intended legislation needs to be structured to the purpose of the device and not its design. This would allow the opportunity for innovative solutions to be introduced and minimise exclusion of potential improvements and evolution of the design.

6. What evidence-based distinctions between acceptable and unacceptable levels of risk associated with the use of innovative vehicles could be considered to inform the way innovative vehicles are regulated?

ATSA is not aware of any studies in evidence-based distinctions between acceptable and unacceptable levels of risk in respects to MMDs.

The current focus on the injury/death rates of MMD users in comparison to push bike riders or road deaths indicates a higher level of safety expectation for the MMD user. However, despite the number of studies into this matter, the data is fragmented and inconclusive as to what actions are required to reduce or minimise the risk without impeding the mobility and basic human rights of users.

All MMDs are required to go through rigorous standards testing and registration with the Therapeutic Goods Administration prior to being made available for sale in Australia. There is a structure in place to identify product faults and failures. Consideration is required to capture when design failures contribute to a death or injury. The lack of data on incidents is removing the opportunity to improve the design the MMDs.

The 2018 Senate Inquiry; RURAL AND REGIONAL AFFAIRS AND TRANSPORT REFERENCES COMMITTEE; Regulation of mobility scooters, also known as motorised wheelchairs

The findings of the 2018 Senate enquiry concluded in its recommendations that more comprehensive data needs to be gathered to enable suitable legislation to be developed.

Recommendation 1

4.44 The committee recommends that the Australian Government ensure that Austroads has adequate funding to undertake research and consultation activities to inform the establishment of a nationally consistent regulatory framework for motorised mobility devices.

As far as ATSA is aware, despite the Senate's conclusion, there is still no meaningful data gathering of death or injuries related to MMDs at a level that would enable real investigation on what is required to enhance the safety of both users and the people around them. It would appear that new regulations are under consideration without valid, real world data.

The expectation is that no death or injury is acceptable. The approach should not be what is the level of acceptable risk, but what is in place that will supply the facts to enable suitable actions to mitigate future deaths or injuries as they come to light. This is done for the motor vehicle industry, why not for all types of vehicles?

7. What barriers and health or safety risks are associated with the use of a motorised mobility device that does not meet the needs of a user because of the current restrictions?

The current weight restrictions that are in place, if adhered to, would restrict some MMD users if they had the need for a non-basic MMD, i.e. due to the additional functionality that adds weight.

Here is one example of an MMD user who is currently faced with home detention in his accommodation facility who wishes to apply the current NSW road rules to all resident users of MMDs. This is a section from his letter to the facility explaining the issue. Names have been withheld as this is a current matter.

I have quadriplegia which was sustained in 1970.

As a user of a "Motorised Wheelchair" as you refer to Power Wheelchairs, this policy, if implemented and enforced, will impact very adversely on my health and lifestyle. I believe it is discriminatory (despite some provisions mirroring the NSW and Australian Road Rules). The policy seems to be based on safety grounds, but whose safety is not specified.

If this draft policy is voted on by residents and implemented, it seems I will have four choices:

1. **Move to another location** – actually, it's not an option as we cannot afford to do so,
2. **Purchase and use a chair that weighs less than 110kg.** This is certainly NOT a viable option. The Power Wheelchair that I use has been prescribed for me based on my clinical needs and is heavy because those needed features add weight to the chair.

The features are designed to maintain my health by allowing me to tilt the chair to relieve pressure on areas of skin to prevent pressure ulcers which can result in months of hospital stay or even death.

The chair is also designed to correct my posture and prevent my scoliosis from becoming more severe.

My power wheelchair gives me the ability to independently get into and out of bed, to drive my motor vehicle, to travel by public transport (buses, trains, light rail, and ferries).

My power wheelchair enables me to participate in the community by volunteering at Parramatta Computer Pals for Seniors, to attend a monthly Book Club meeting with colleagues at Parramatta City Library, to participate in Parramatta Council's Access Advisory Committee, to attend theatre events

at Riverside Theatre and attend plays produced by the Sydney Theatre Company, among other activities.

3. ***Be confined to my unit*** – effectively being sentenced to “house arrest”. I would not be able to visit doctors, family, friends, catch the bus, hire a taxi, get my hair cut. Nothing that cannot be done in my home will be possible, except at great expense.

The effect on my mental health would be extreme.

All of the benefits in point 2 would be lost to me.

4. ***Lodge a complaint*** of discrimination with the NSW Anti-Discrimination Board and or with the Human Rights Commission.

I understand your concern re safety, and I concur. Safety of all is paramount. But how much danger is there from users of power wheelchairs?

While this is only one case, it reflects the reality of the situation that Australian users of MMDs are currently facing. If not for the fact that most authorities and funding bodies are turning a blind eye when it comes to the current road rules, there would be a high number of MMD users who would be under “house arrest”.

It is important to reiterate that based on information supplied to ATSA, 93% of scripted electric wheelchairs are funded through a government or insurance-based funding body with only 23% of mobility scooters (excluding government contract sales).

As previously noted, the involvement of a allied health practitioner (AHP) in the selection of a MMD, varies between an average 96% for the selection of an electric wheelchair compared to mobility scooters where it an average 20% (excluding government contract sales).

These circumstances do not take into consideration a MMD user having access to specialised devices that provide recreational pursuits, such as experiencing off road and beaches. A device that is required to traverse across roads and pathways to get there, which the average Australian takes for granted would likely fall foul of the current rules.

8. How do current classifications of drivers of wheelchairs as both 'pedestrians' and 'vehicles' in the Australian Road Rules create confusion?

MMDs are used in a variety of areas including footpaths, inside shops, on the road and in homes due to the user's mobility needs. To the uneducated, they often view the MMD as a vehicle and not a mobility aid.

The lack of awareness across the general public regarding the purpose of a MMDs needs to be addressed. These devices enable a basic human right, i.e. the device enables a person to be mobile, they are not a vehicle, but a medical device.

It is important that MMDs users are treated as pedestrians to ensure they are not discriminated against when using public areas and accessing public transport.

Consideration should be made for a universal insurance coverage of pedestrians to ensure there is suitable financial support available in the event of injury.

9. Is there a need for construction and performance requirements for motorised mobility devices to ensure safe use on public transport infrastructure?

There is a requirement for a manufacturer of MMDs to demonstrate through standards testing protocols of their adherence to international standards that include performance parameters such as;

Stability, climbing angle, braking and manoeuvrability.

ATSA cannot identify any need to duplicate what is already in place internationally.

10. What evidence is available on the road safety risks associated with motorised mobility devices that could be used to inform the way motorised mobility devices are regulated?

ATSA is not able to provide any new evidence but strongly support new and suitable data gathering to provide the real facts of the situation to shape both policy and legislation rather than acting on limited to no data or simple assumptions.