Inquiry into e-mobility safety and use in Queensland

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Personal Mobility Devices (PMD's) are a popular innovation of a modern society. It's understandable that they bring concerns, as have other culturally transformative innovations like the railroads, automobiles, the printing press, social media and artificial intelligence. Adapting to a future that includes technological innovation will require change, and that change should be balanced and responsive to the underlying need, rather than reactive to the consequences of our existing constructs.

As a family, we have three electric scooters and an E Skateboard. I also ride a motorbike, and am well familiar with the related dangers, safety considerations and appropriate protective gear. A family member was involved in a pushbike vs car incident while training for a triathlon, which had life changing impacts, at a speed of just 32km/h. The car was at fault. The rider paid the price. This experience serves as a constant relevant reminder of the risks of injury at relatively low speeds, and the fragility of life in general.

As with most successful innovations, the popularity of PMD's is attributed to their capability and effectiveness of fulfilling the job to be done. If they did not have such strong positive benefits, the market forces would not have enabled them to become popular enough to be subject to an inquiry such as this.

Some of the notable key benefits of PMD's often discussed include:

- Very low energy use per person / km moved.
- Reduction in car use, traffic and parking congestion.
- Supporting accessibility of public transport, with last-mile connectivity.
- Closer connections to nature, the outdoors and community than closed vessel transportation.
- Minimal garaging, stowage and transportation space required for ownership.

Some of the key concerns discussed are:

- Increasing injury and fatality rates
- Sidewalk clutter and impact to pedestrians
- Environmental impact of batteries, production and waste
- Regulation and enforcement

I believe a Win-Win outcome for Queensland would involve enhancing and scaling these benefits, while reducing the impact of key concerns.

Enhancing the benefits

E Mobility in general is, I believe in a relatively early stage of the innovation lifecycle. I anticipate with relevant infrastructural improvements like active transport corridors already in design and development, the rate of utilisation will experience significant growth.

If growth is inevitable, the industry needs more of this infrastructural support that prioritises the safety and convenience of the these devices along popular commutes, particularly where the existing options are deficient.

This infrastructure should be prioritised to support the three key tiers of transport category, from low speed pedestrian activity as the priority for safety, to mid speed pushbike, scooter and PMD activity, and finally full speed vehicular traffic. The current distinction in rules between mid-speed devices such as push bikes and E-Scooters seems artificial and arbitrary, rather than grounded in safety.

A scooter used by a commuter along a popular thoroughfare may have a similar impact to safety and vehicular traffic to that of a pushbike. The rules for scooters indicate these two devices should be treated very differently. The rules on roads exceeding 50km/h - such as the Nicklin Way on the Sunshine Coast, allow a bike to travel in the bike lane, while the scooter would be required to transit the footpath at a maximum of 12km/h while navigating shop entrances, driveways and other hazards to both the rider and community. This road currently has very little infrastructure to cater for the mid speed traffic safely, or to treat this traffic as a collective type. Additionally If the safety priority started with pedestrians and moved upward, the bike lane on the road would seem a more appropriate pathway for the scooter to traverse, prioritising safety of the pedestrian space.

The limitation on the speed of an E-Scooter to 12km/h on a narrow footpath on a residential block crossing driveways is relevant to safety of both the rider and pedestrian community. That same rule when applied to a wide shared pathway with no intersections and good visibility clear of pedestrians, is less relevant. In similar situations I've been overtaken by leisurely pushbikes riders and well paced joggers. Perhaps the rule would be more relevant by targeting speeds when riding **near pedestrians** on shared pathways, and be equally applied to all mid speed transportation devices, not just E-scooters.

There is a section of the Nicklin Way connecting to Caloundra Road which is 100km/h. This should reasonably restrict any access to any mid speed transport modes. In this stretch there is a dedicated wide shared pathway running parallel to, but well separated from the road. As this is technically a shared pathway, a scooter on this section would be restricted to 12km/h, despite fantastic visibility, and in general a lack of actual pedestrian activity. It’s difficult to provide a legitimate argument on safety benefits of this speed in this location, except when in the presence pedestrians. Guidance restricting to 12km/h on shared pathways in the vicinity of pedestrians, or consistently on standard footpaths with driveways, shopfronts or residential housing would make much more sense.

Reducing the impact

The primary concern of these devices appears to be safety. A significant portion of injuries could be alleviated through compliance with existing rules. Lack of compliance, such as helmet use, doubling, speeding, and unsupervised under age riding account for a significant number of paediatric injuries, and load on the health care infrastructure. (https://doi.org/10.1016/j.anzjph.2025.100245)

Some estimates indicate half of the existing safety incidents could be prevented entirely through a robust approach to absolute compliance of the most basic safety rules.

If existing rules are not followed, additional rules are not likely to support improved health benefits through modified behaviours. For those rules that are generally deemed relevant and necessary for safety, the communication needs to focus on both intrinsic desire and extrinsic penalties.

Australia has a history of impacting intrinsic motivations through communicating the dangers of road safety, drink driving, speeding, and even smoking, with highly visual and emotive marketing campaigns. A connection needs to be made between the rules and the natural consequences they aim to prevent as a part of education efforts.

Similarly the penalties need to be apparent. On the Sunshine Coast, It's become quite normal to see multiple instances of behaviour that is not compliant with PMD legislation. On each occasion the message being communicated is that this is culturally normal and accepted behaviour.

Targeted approach using push bikes, motorbikes and drones appear to have shown promise for enforcement. Focusing on school and sporting corridors, and office hour commuting for both education and enforcement will likely have an elevated impact, providing both a larger sample, and greater visibility toward demonstrating Queensland is now serious about the need for safety compliance to the existing rules.

Education opportunities in this space can be as simple as council street signage indicating expectations, pathway prints, through to print, web and advertising material. Industries which have experienced similar innovation management, such as CASA with their drone compliance methods may be worth exploring. CASA provide free online drone registration, training and testing for commercial use remote pilots, provide brochures in retail box sales specifying rules and expectations, and appear to follow up with penalties of breaches after the fact, through photographic evidence.

Issuing grants for programs, infrastructure and support to schools and community groups such as sporting organisations could also provide valuable networks and communication channels and build necessary guiding coalitions toward positive adoption and use of devices.

Education is an essential component for change, however to improve safety across the health statistics in the non compliant space, Queensland need make it clear that there is an

expectation PMD's abide by the laws that exist, even if that means a disproportionate investment into enforcement effort in the short term. Addressing this measurable category will have a significant impact and benefit to safety now, and prepare a better foundation for any future initiatives.