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c/o www.ntc.gov.au/current-projects/developing-technology-neutral-road-rules-for-driver-distraction/
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# Developing Technology Neutral Road Rules for Driver Distraction

## Victorian Motorcycle Council Submission
## February 2019

# About this submission:

The Victorian Motorcycle Council welcomes the opportunity to make a submission to the NTC – Developing Technology-Neutral Road Rules For Driver Distraction Dec 2018 project, via the NTC's web page: https://www.ntc.gov.au/current-projects/developing-technology-neutral-road-rules-for-driver-distraction/

The Victorian Motorcycle Council was created to represent the interests of all motorcyclists, motorcycling organisations and relevant stakeholders in Victoria. The Victorian Motorcycle Council is represented on the Australian Motorcycle Council, the peak motorcycle body in Australia.

This submission takes into account the extensive knowledge and thinking of a diverse group of experienced, representative and interested motorcyclists. The VMC would like to expressly acknowledge the support and input of the Motorcycle Council of New South Wales in preparing and discussing key aspects of this submission.

The information included in this submission is for all intents and purposes, factual, correct, accurate and relevant. The VMC and/or its associates, are available to expand on any of the points contained within this submission, or available to consult further on related motorcycling matters not covered in this submission.

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## OPENING STATEMENT - OBSERVATIONS/SUMMARY

The Victorian Motorcycle Council (VMC) found the issues paper to have been written in a particularly closed style, seemingly leading the reader towards specific conclusions, possibly suggestive of the preferred direction the NTC has on a particular point. Examples are provided.

We find the lack of motorcycle/powered two wheeler (PTW) specific discussion concerning. Disappointingly the NTC actually has form in this area given that past NTC papers on greenhouse vehicle emission, C-ITS and automated vehicle legislative framework, failed to mention and consider PTW's in their deliberations. Motorcycles/PTW's are a bonafide and legitimate road user group with unique characteristics and must be considered in any matter of transport policy. Car-centric policy is often at odds with and counterintuitively incompatible with the task of riding and managing motorcycle safety. Then as now, the VMC stands ready to be consulted as a stakeholder in this space.

Given the broad nature of distraction, eg in-vehicle technology, scene changing billboards, in-vehicle alarms, mobile phones, children/occupants, events outside the vehicle, changes in road and traffic conditions, etc., there would seem to be a need for both prescriptive and performance based road rules around distraction. The NTC may also need to consider changes to related legislation limiting distractions provided by external / environmental factors, such as size and placement of advertising signage. The VMC supports specific technology based road rule/s, particularly in regards to phone use, as some technology is already known to present an obvious distraction. We also suggest that there be additional performance based road rule/s to cover the broad range of conventional distractions.

## DISCUSSION

Motorcycle Specific Distractions Not Noted:

Development of helmet Heads Up Displays is progressing at pace. Clip on HUD projectors such as from NUVIZ, or integrated built in HUD's such as built into the Skully helmet or being trialled by BMW, are available now and being further developed. Smart helmets with voice activated commands providing a range of functionality promise improved rider safety as a result of not having to take one's eyes off the road or hands off the bars. Typically HUDs feature key information such as speed and RPM, but certainly not limited to this. Some riders consider a HUD in and of itself as potentially and intrinsically distracting, particularly if busy. Smart helmet functionality creep may unintentionally introduce other distractions. It's a space to watch.

Rider assist technologies are touted as the way forward for rider safety, such as Intelligent Speed Adaption, cornering assist, lane assist, automatic emergency braking etc., all of which are examples of forcing car-centric technologies on to PTW's. They all have the potential to distract the rider from the riding task particularly if they malfunction or messages and warnings are delivered by haptic sensory means. For example, vibrating

seats, pegs or hand grips in specific patterns related to specific alerts, such as has been experimented with in Europe with the SafeRider project. Another example of a rider assist distraction might be Intelligent Speed Adaption engaging at a critical time during an overtaking manoeuvre or while navigating a bend, ie., cornering, causing the motorcycle to become unstable. A rider attending to this critical matter is no longer focused on the road and the environment they are riding through, leading to an increased risk of a crash.

Driver Assist Distractions:

Driver assist technologies on a motorcycle can have unintended counter intuitive consequences as touched on above, which is something that a non-rider would be hard pressed to appreciate.

Whilst the issues paper does acknowledge the potential distraction provided by in-vehicle driver assist technologies, and we specifically wish to highlight blindspot, merging, crash detection alerts and other in vehicle warning alarms as examples, the topic appears to be insufficiently treated in the issues paper.

Blindspot warnings tend to be a light or indicator outside of the primary field of view - while observing such an alert, the driver may lose situational awareness. Crash warnings can sometimes be false positives, such as caused by large direction chevron signage on approach to a high speed roundabout, or when navigating around a stopped vehicle that is indicating to leave the road. Collision avoidance alerts are attention grabbing by design therefore potentially distracting the driver from the driving task.

Combinations of active driver assistance technologies can leave the driver with little to do, such as the combination of adaptive cruise control and "lane keeping" assistance. If the vehicle is essentially driving itself by pacing the vehicle ahead and automatically remaining in its lane, this may allow the driver's focus to be totally redirected, say to a conversation, reading or their phone. Alternatively, such semi-automated driving could generate such low levels of stimuli that the driver disengages and falls asleep, thus creating a hazard in itself. This is what is meant by driver assistance technologies potentially having unintended consequences.

Eating and other Conventional Factors:

Eating is one example of where the issues paper seemingly leads the reader to conclude that eating should be banned. Granted, the act of eating or taking a drink could provide a distraction, but so could the loss of focus from a driver who is hungry and/or thirsty. Imposing a "sterile cockpit" rule in which all conventional distractions are banned and the driver is limited to only tasks directly related to driving, could lead to potential unintended consequences.

There are surely many examples of crashes caused by drivers being distracted by children fighting or becoming sick - such are the realities of life. Surely no-one is contemplating

banning children from being in the car, but perhaps these real world occurrences should direct the roadrules to including performance based rules against distraction in a more general sense. Enforceability however, may be highly problematic.

## LIST OF QUESTIONS FOR COMMENT:

### *Defining the driving task*

*1. Does the proposed definition include all the key functions required to safely perform the driving task?*

In respect of driving, the definition on page 12 does appear to include all the key functions, however it may under emphasise some key aspects of safe motorcycling, such as managing control inputs to maintain machine stability, assessing surface and traction conditions, and maintaining a mental map of traffic around the PTW to name a few.

### *A common definition of driver distraction*

*2. Does the proposed definition capture all the behaviours that lead to driver distraction and a reduction in driving performance?*

While the definition posed on pg 13 is definitive, it's also all encompassing. In respect of PTW's, some secondary activities beyond the immediate controlling of speed and direction are essential information gathering activities for the purposes of riding safely. Any rules that impact such tasks should be avoided or be carefully drafted. For example, a truck ahead labouring up a hill may not be a distraction in and of itself, but may lead to the rider considering actions to avoid the predicted knot of vehicles developing around the slowing truck. Such planning could in the worst case, take a rider's focus off the immediate environment. It would seem that if the traffic itself is the primary distraction, any road rule regarding distraction will need to be carefully drafted.

Alternatively, the rules need to allow for and recognise that attention is a limited commodity that needs to be at times shared between activities and varied as driving demands fluctuate. More research may be needed to understand why at times the correct level of attention lags behind or is mismatched to the required demand to better inform the creation of any required road rules. Otherwise arbitrary rules may be created which may set an unreasonable and potentially unenforceable requirement for a driver to keep focussed on the road ahead at all times.

### *Types of driver distraction*

*3. How could a distinction between manageable and unmanageable levels of driver distraction be used to inform the way distraction is regulated? What evidence-based distinctions could be considered?*

Evidence based is the best form of regulation. Regulating which distractions are allowed and which are not will be highly problematic. It is for this reason that performance based rules should be included to supplement clearly pragmatic existing rules targeting phones and visual display units.

The era of automated vehicles is particularly problematic. Auto driving cars are likely to leave a driver free to be completely distracted and unable to regain control should a situation present itself that the automated systems cannot manage. Great care will be needed to craft rules in this space.

***Clear and consistent approach in the Australian Road Rules***

*4.Should conventional and technology-based causes of distraction be treated equally in the Australian Road Rules? Why?*

In short, both forms of distraction need to be treated equally, but in different ways; pragmatic prescriptive rules and less defined performance based rules. Not all conventional distractions are immediately, overtly and inherently hazardous. A rider stretching a leg or scratching an itch, or a driver taking a drink, are examples of momentary distractions which a conscientious road user will choose an appropriate time to perform. This is perhaps an opportunity to consider introducing a "highway code" such as they have in the UK, where the road rules and good roadcraft supporting the road rules are explained in an easy to read in plain English language. Some of these more subtle aspects can be explained and lead to a better informed and performing road user.

***Responsibility for distraction***

*5.Can you provide examples of effective non-regulatory approaches to driver distraction that assist drivers to self-regulate their behaviour in a dynamic driving environment?*

The UK highway code, as mentioned above, may be an example of leading to better educated roadusers who can make better choices. Another path is including more roadcraft elements in driver and rider training which focus more on the craft and art of driving as opposed to how to comply with the road rules. Some phone apps have the ability to lock themselves out or alternatively put the phone on divert if motion is detected – they require the driver to set that function "on".

***Shared responsibility***

*6.Can you provide examples of strategies successfully implemented by other international jurisdictions and industries (for example, aviation) that could be applicable to driver distraction?*

Again, the UK's highway code is offered as an example. And whilst we recognise the Australian Road Safety Strategy and the NTC paper have a focus on the "Safe Systems" approach, one of the fundamental flaws of the safe systems approach is in regards to the "safe people" pillar, which is focussed on people compliance to the road rules, rather than the fundamental upskilling / improved training of the road user. This is perhaps one untapped area for improvement.

Australia's driver training falls well below other jurisdictions which have an involved driver training program. That said, Victoria's recently revised Motorcycle Graduated Licensing Scheme has provided a new bench mark where learner rider training includes many "road craft" elements as part of the mandatory syllabus, and has been designed to help produce a better quality learner rider from the get go.

***The concept of chain of responsibility***

*7.Are there other parties besides the vehicle driver who can influence the risk of driver distraction? If so, are there mechanisms to ensure those parties are doing all that is reasonably practicable to ensure safety?*

Advertising industry associations and their management of Road side advertising standards may be an area that needs focus. So would the laws and regulations around this form of advertising. Vehicle designers and the Australian Design Rules may need to focus more on human performance factors, similar to the human factors path taken in Aviation and Major Hazards facilities.

The VMC is not able to comment on potential or available mechanisms.

***Technologies that can assist with (and distract from) the driving task***

*8.Can you provide examples of effective strategies for ensuring that new in-vehicle technology and mobile apps minimise driver distraction?*

Developing better Human Machine Interfaces may possibly be a source minimising distractions provided by technology. Some of the negatives of driver assist technologies have already been mentioned. The VMC is not in a position to be able to comment further.

***Transition towards automation***

*9.Can you provide examples of strategies to ensure that users of partially automated vehicles are fully informed about their responsibilities, and the limitations of their vehicle's technology?*

Examples are not immediately available, however as more vehicles move this way, road authorities have a key role to play in creating general awareness of such issues by way of public education campaigns. Alternatively it could be made the responsibility of vehicle manufacturers and retailers to offer such awareness training, after all, many owners shun the dryly worded typically thick owner's manuals that come with modern vehicles and are therefore not aware of the limitations of the employed technology. Some luxury marques such as Lexus, have already taken action in this space, by including owner training as part of the delivery experience.

***Prescriptive and performance-based approach to regulation***

*10.What evidence is available in support of a performance-based approach or a prescriptive approach for managing the risks of driver distraction?*

Clearly the VMC's submission has highlighted the potential need for both types of regulation, rather than the "or" logic utilised in the question. The evidence to support such approaches is a little more problematic to provide, except to say that logic alone may make the combination of approaches self-evident.

**CONCLUSION:**

The Victorian Motorcycle Council recognises the broad nature of distraction, eg in-vehicle technology, dynamic advertising billboards, in-vehicle alarms, mobile phones, children/occupants, events outside the vehicle, changes in road and traffic conditions, etc., which suggests a need for both prescriptive road rules targeting specific distractions such as mobile phones, and performance based road rules targeting conventional and non-specific forms of distraction. The NTC may also need to consider changes to related legislation limiting distractions provided by external / environmental factors, such as size and placement of advertising signage.

VICTORIAN MOTORCYCLE COUNCIL