14th February, 2019

National Transport Commission
Att'n: Luis Gutiérrez
Public submission – Developing technology-neutral road rules for driver distraction

Level 3, 600 Bourke Street,
Melbourne, VIC, 3000

Submissions to: www.ntc.gov.au

Subject: TIC submission to the National Transport Commission's – Developing Technology-Neutral Road Rules for Driver Distraction - Issues Paper, released December 2018

The Truck Industry Council (TIC) is the peak industry body representing manufacturers and distributors of heavy commercial vehicles (that is, with Gross Vehicle Mass above 3.5 tonne) or trucks in Australia. TIC members are responsible for producing, or importing and distributing 16 brands of truck for the Australian market, totalling more than 41,000 new heavy on-road vehicles sold in 2018. Of those vehicles, TIC members supplied to market over ninety-nine (99) per cent of trucks above 4.5 tonne Gross Vehicle Mass (GVM) last year. Additionally, TIC members also included two dedicated engine manufacturer members and two dedicated driveline manufacturer members who supply major engine and driveline systems for both on highway and off highway truck applications.

In this submission TIC will respond only to issues that relate to heavy road transport vehicles (that is, with GVM above 3.5t), however TIC believes that a united and uniform approach must be taken for both light vehicle and heavy vehicle regulation for driver distraction.

Defining the driving task
To provide a definition that outlines the tasks required from a human to safely operate a vehicle, the NTC proposes the driving task for the purpose of this project could be defined as:
A complex, multi-task activity that involves the following functions:

- *route finding*
- *route following*
- *lateral motion control*
- *longitudinal motion control*
- *monitoring the driving environment*
- *manoeuvre planning*
- *responding to objects or events*
- *making other road users aware of the driver's presence; and*
- *complying with road rules.*

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

TIC comment: TIC believes that the NTC's proposed definition is lacking two important functions that the driver must be responsible for when driving a vehicle, they being:

- *Appropriate speed control (not simply legal/signposted speed) for the environment (weather, road conditions, traffic density, pedestrians and other vulnerable road users, etc)*
- *Self-monitoring of fitness to drive (a driver's ability to recognise whether he, or she, should be driving and is not fatigued, under the influence of drugs or alcohol, etc)*

A common definition of driver distraction
The NTC proposes that, for the purpose of this project, driver distraction is defined as follows:
Driver distraction is the voluntary or involuntary diverting of attention, in a visual, manual, auditory or cognitive sense, away from the driving task to focus on a competing secondary activity.

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

TIC comment: TIC supports the NTC's proposed definition for Driver Distraction.

Types of driver distraction
The NTC detailed that distractions can be technology-based, such as using navigation systems and mobile phones, or more conventional such as interacting with passengers or eating.
The NTC sets out and defines, four broad categories of distraction from the driving task:

- **Visual distraction:** tasks that require the driver to look away from the roadway to visually obtain information (National Highway Traffic Safety Administration, 2010)
- **Manual distraction:** tasks that require the driver to take a hand (or both hands) off the steering wheel and manipulate a device (National Highway Traffic Safety Administration, 2010)
- **Auditory distraction:** occurs when the driver focuses their attention on auditory signals rather than on the road environment (Regan, Hallett and Gordon, 2011)
- **Cognitive distraction:** tasks that are defined as the mental workload associated with a task that involves thinking about something other than the driving task (National Highway Traffic Safety Administration, 2010).

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?

TIC comment: TIC believes that it will be very difficult, if not impossible, to define/quantify manageable and unmanageable levels of driver distraction, as distraction is person (individual) dependant. Some persons will find a non-driving secondary task more distracting than another person. Or the same person may find the same non-driving secondary task more distracting at a particular time due to say, personal fitness and/or fatigue. Having said that, TIC believes that there are obviously some non-driving secondary tasks that are significantly more distracting than others and these tasks would distract ANY human driver. In particular, any secondary task that diverts the driver's vision from the driving task for more than a second, or two, would have to be considered unmanageable.

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?

TIC comment: TIC believes that there should be no differentiation in the source of distraction and that conventional and technology-based causes of distraction should be treated equally in the Australian Road Rules. However, the type of distraction must be considered and treated differently, with Visual Distraction (tasks that require the driver to look away from the roadway) considered to be the most dangerous and likely to cause a crash and injury.

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?

TIC comment: TIC supports a regime of regulatory and non-regulatory measures to prevent, or at least, reduce driver distraction. Non-regulatory measures that TIC supports include, training programs, awareness campaigns, targeted advertising, etc

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?

TIC comment: Typically the most successful strategies implemented by other international jurisdictions and industries, that TIC is aware of, involve "removing" the distraction from the operating environment, or automating (completely, or partially) the operating process (in this case the driving task). Technologies and systems that monitor the driving environment and/or the driver, that then warn/prompt the driver when he/she is showing signs of driver distraction, or to warn the driver of a potential safety event, are also successful strategies.
Also, secondary (crash) vehicle safety has improved noticeably over the past 10 years, more so over the past 5 years (examples are the inclusion of an increased number of SRS air bags in vehicles, increased crash testing of vehicles, safety rating systems, etc). Survival rates and reduced injury severity, in the event of a crash, are noticeably better for the occupants of such new vehicles. However, Australia has an old vehicle fleet, with the average age twice that of most European countries, this leads to poor safety outcomes for many Australian road users. A successful strategy would be to increase the take-up of newer vehicles fitted with these advanced secondary safety systems, by reducing the age of the Australian on-road vehicle fleet.

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?

TIC comment: TIC believes that where the owner of a commercially operated truck is not the driver, that vehicle owner should have a responsibility to ensure that any equipment and systems fitted to the truck, particularly inside the cabin (the driver's environment), are of such design, function and location, so as to minimise driver distraction when truck is in use. Equally this applies to an owner/driver truck operator. However, in the former case, the driver may not be in a position to directly influence the fitment, function and operation of equipment and systems provided by the vehicle owner, that may result in added distraction/s for the driver.

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?

TIC comment: The NTC has rightly pointed out that vehicle manufacturers take steps to ensure human factors principles are considered during the design phase of in-vehicle equipment and systems. The NTC's comments however, somewhat understate the level of investment that vehicle manufacturers commit to, in the research, development and testing of all in-vehicle equipment and systems. A key purpose of this development is minimising driver distraction. However personal portable devices such as mobile phones and navigation systems, can be brought into the driving environment unregulated and without any testing, or evaluation, as to the level of distraction these devices/systems cause. Many of these portable devices negate the millions of dollars vehicle manufacturers spend each year on providing a minimised driver distraction environment. TIC

believes that more responsibility must be taken by the organisations and that such personal portable devices are developed and tested within the vehicle/driver's environment, to ensure that their functionality does not increase driver distraction. Responsibility should also be taken by the driver, to ensure that any personal portable device brought into and used within the vehicle/driver's environment does not increase driver distraction.

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?

TIC comment: Automated vehicle systems and technologies are still very much in their infancy, with no clear direction, or pathway, to a specific solution to the issues raised in the NTC's Issues Paper. However, many vehicle manufacturers are researching and developing autonomous vehicle systems that would bring an autonomous, or partially autonomous vehicle, to a safe halt in the event that an inattentive driver does not respond, or is unable to respond, to vehicle prompts to take back "manual" control of the vehicle. Such systems would minimise, or largely negate, the need to inform the vehicle user about their responsibilities and/or the limitations of their vehicle's autonomous systems. As with the many questions being raised about the transition to vehicle automation, only with time, can some of these issues be adequately answered, or resolved.

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?

TIC comment: TIC believes that as exists currently, both prescriptive and performance-based regulation will need to be used to provide adequate management of the driver distraction risk, in the future. TIC believes that the key to minimising the risks associated with driver distraction will be regular review and updating of both prescriptive and performance-based driver distraction regulations. This regular analysis must include review of both Australian and global technologies and regulations. Driver distraction is a common and significant issue for all vehicle environments where a human driver is legally given responsibility for the full, or partial, control of an on-road vehicle. Australia is a "technology taker" in the "manual" and "autonomous" vehicle domain, we need to constantly look globally to find solutions to this problem and where ever possible align with the methodology, if not the specific regulation/s, that are deployed in key global vehicle markets, particularly Europe, Japan and the USA, as those global regulations will go hand-in-hand with the autonomous vehicle technologies and systems developed for vehicles produced equally for those markets and for Australia.

I trust that you find TIC's submission acceptable and that the issues that have been raised in this document will be considered in the review and development of technology-neutral road rules for driver distraction in Australia.
Please contact the undersigned, on 0408 225212 or m.hammond@truck-industry-council.org for any questions about this submission.

Yours faithfully,

Mark Hammond
Chief Technical Officer