

**BICYCLE
NETWORK®**

Developing technology- neutral road rules for driver distraction

**Bicycle Network submission to the
National Transport Commission**

February 2019

*Prepared by Craig Richards, CEO and
Anthea Hargreaves, General Manager – Public
Affairs*



Who is Bicycle Network?

With nearly 50,000 members, Bicycle Network is one of the top five member-based bike riding organisations in the world. With a proud history reaching back more than 40 years, we are committed to improving the health and wellbeing of all Australians by making it easier for people to ride a bike.

Operating nationally, we have a measurable and large-scale impact in community participation and the promotion of healthy lifestyles through bike riding.

We achieve this through:

- improving the bike riding environment by working with government at all levels to provide better infrastructure, data, policies, legislation and regulations
- delivering successful, large-scale and measurable behaviour-change programs such as Ride2School and Ride2Work
- providing services that support bike riders through membership
- running mass participation bike riding events such as Around the Bay and the Great Vic Bike Ride
- acting as a key spokesperson on issues related to cycling and physical activity.

Bicycle Network welcomes the opportunity to make a submission the National Transport Commission's inquiry into *Developing technology-neutral road rules for driver distraction*.

Craig Richards
CEO
Bicycle Network
craigr@bicyclenetwork.com.au

Anthea Hargreaves
General Manager – Public Affairs
Bicycle Network
antheah@bicyclenetwork.com.au



Executive Summary:

There's no doubt that distracted drivers cause crashes. Any activity that diverts a driver's eyes away from the road should be as socially unacceptable as drink driving, yet it's apparent that road safety education measures aren't working. Drivers are continuing to take their eyes off the road and use their phones, in-car screens, tend to personal hygiene or eat and drink while behind the wheel.

While there are many types of driver distraction, illegal mobile phone use is the most pervasive, posing the greatest risk to all road users. Smartphone technology, its prevalence within everyday life and our urge to use it, has created new challenges in the road safety environment.

Driver inattention due to illegal mobile phone use is now one of the leading causes of road crashes in Australia and a huge area of concern for vulnerable road users. According to a Bicycle Network survey of 2,158 bike riders, it is also the most commonly witnessed distracted driver activity. Alarming, people who ride bikes also blame illegal mobile phone use for more more than 80 per cent of near misses and 22 per cent of crashes.

Unless we take drastic action to intervene and curb distracted driving due to mobile phones, The Bureau of Infrastructure, Transport and Regional Economics (BITRE) has predicted that road deaths will increase by 14% and serious injuries will increase by 25% by 2030 [1].

It is unfair to put the burden of enforcing illegal mobile phone or device use solely on state and territory police. We need a combination of software, hardware and orgware alongside the rapid implementation of direct interventions that remove temptations and takes personal technologies out of drivers' hands.

As Australia's biggest bike riding organisation with nearly 50,000 members, Bicycle Network is calling for the National Transport Commission to consider eight key recommendations in the development of technology-neutral road rules for driver distraction:

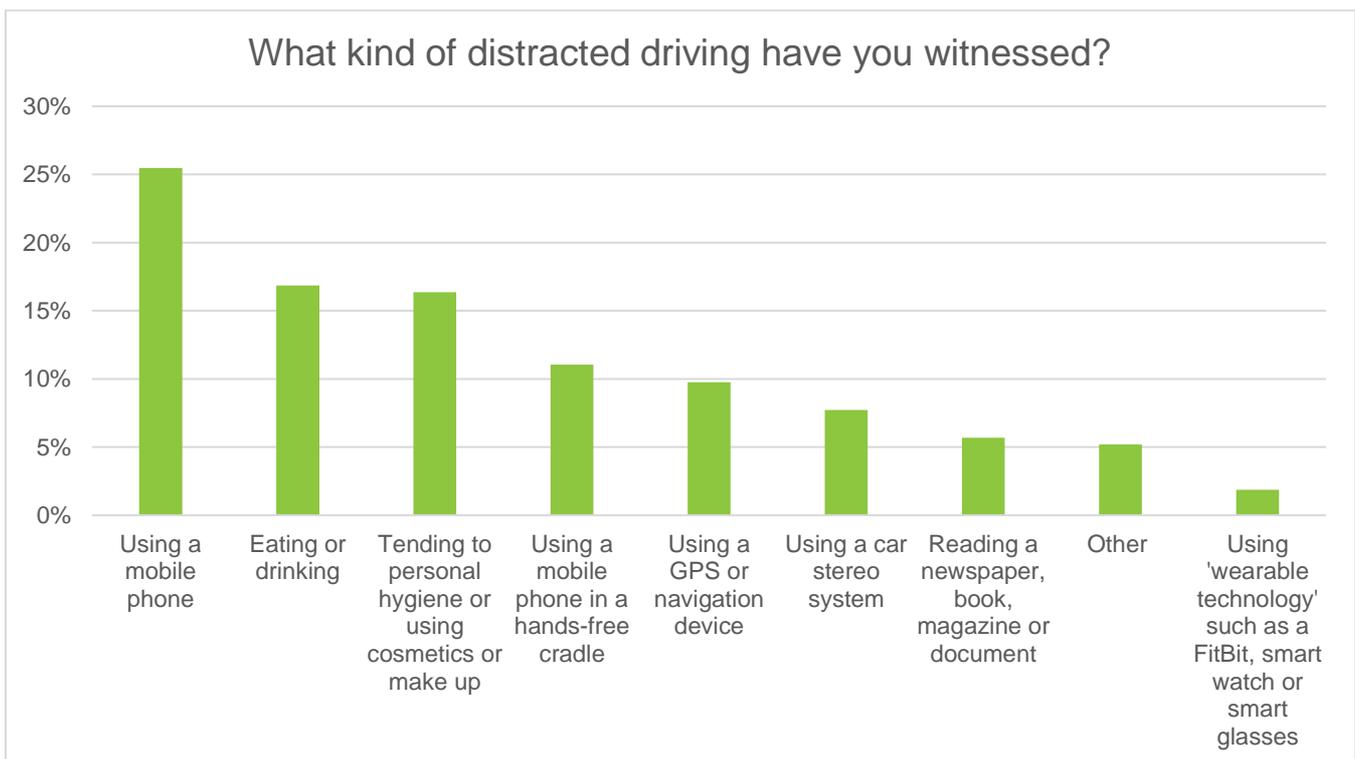
1. The rapid roll out of hi-tech traffic camera technologies and legal reforms that make it easier for police to enforce distracted driving laws.
2. A national advertising campaign to highlight the kinds of distracted driving and their consequences.
3. Higher penalties for distracted driving with consistency across states and territories.
4. Fast-track in-vehicle mobile phone blocking technologies and its mandated implementation across all new vehicles sold in Australia.
5. In-built opt-out '*Do not disturb while driving*' apps automatically activated in all smartphones sold in Australia.
6. Implement autonomous safe-vehicle technology such as emergency braking and lane departure warnings in all new cars sold in Australia.
7. Establish a national crash database to track the causes of crashes and the impact of distracted driving.
8. Research into the motivations of distracted driving with a focus on smartphone use.

1. Bike riders have a unique view of our roads

People who ride bikes are in a unique position when it comes to witnessing distracted driving behaviours. Sharing the road, while sitting higher than most vehicles, gives people who ride a clear view of how drivers are behaving behind the wheel.

In a recent survey of 2,158 bike riders, Bicycle Network found that more than 98 per cent had witnessed distracted driving of some kind while riding their bike. Alarming, more than a third (35 per cent) reported that they witnessed distracted driving every time they ride.

The three most common types of distracted driving activity witnessed by bike riders was using a mobile phone, eating or drinking and tending to personal hygiene. However, it's clear that distraction due to illegal mobile phone use posed the greatest risk to people who ride. 76 per cent of riders surveyed identified that illegal mobile phone use while driving was the blame for a near miss while 22 per cent believed that it was distracted driving that caused a crash.



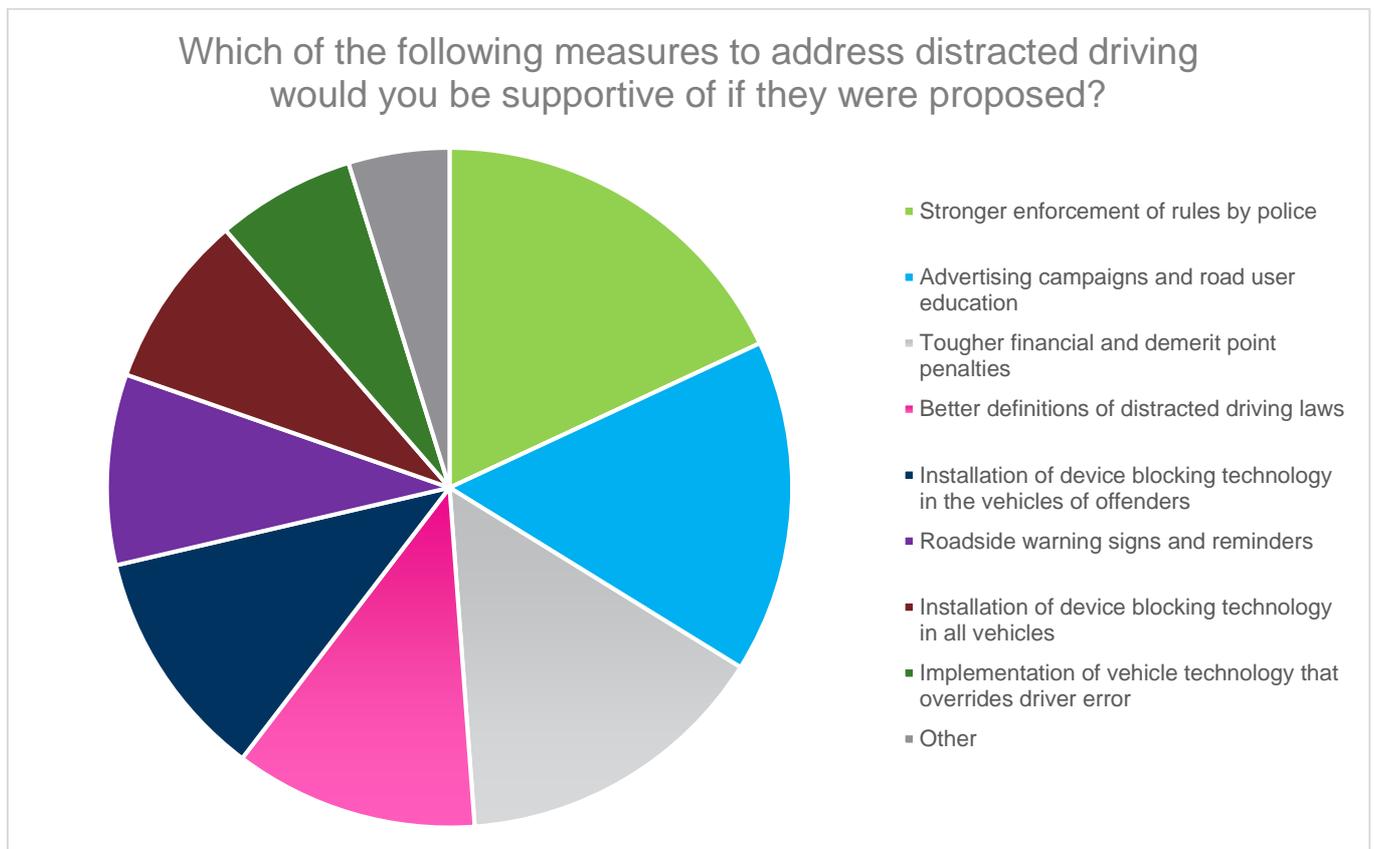
To reduce risk on our roads, people who ride bikes have been forced to proactively modify their behaviour on the road. More than 56 per cent reported that they now choose to ride on roads with less traffic, at times when there is less traffic or in entirely off-road environments.

Many bike riders are also reacting out of frustration when they witness distracted driving behaviours. 36 per cent reported that they immediately voiced concerns to the driver, with more than a quarter responding directly in anger.

1.1 Bike riders want to see greater police enforcement

People who ride bikes are tired and frustrated by a perceived lack of enforcement, education and low penalties around distracted driving in Australia.

When asked, the most popular measure to address distracted driving among bike riders was stronger enforcement of the road rules by police. Alarmed by the regularity in which they witness poor driving behaviour, bike riders believe that high visibility policing and enforcement plays an important role in influencing road user behaviour.



For example, NSW Police has had success with the use of motorcycle units as well as high-tech cameras to detect hand-held mobile phone use. In a three-month trial in 2018, more than 300,000 drivers were caught illegally using a phone with the new camera technology [2]. The NSW state government is also currently investigating the use of manual and automatic camera systems, electromagnetic field analysers or smartphone detection applications. Similarly, Victorian Police Assistant Commissioner Doug Fryer has called for legal reforms that would allow police to use similar cameras to fine offending drivers in Victoria [3].

Effective enforcement is also reliant on police working with road safety researchers to identify areas of driver distraction where policing may provide a positive impact.



Bicycle Network acknowledges the challenges faced by police in enforcing distracted driving laws that aren't inclusive of all distracting behaviours. Consistency and clarity around the definition of distracted driving within the road rules will serve to help and support enforcement, research and an understanding of consequences through driver education.

The survey results also show that alongside enforcement, people who ride bikes strongly supported a national road user education and advertising campaign to generate greater visibility to the issue of distracted driving as well as tougher financial and demerit point penalties.

Bicycle Network believes that driver education, when partnered with both enforcement, greater penalties and structural interventions, can have long term success in changing undesirable road user behaviours.

Recommendation 1: The rapid roll out of hi-tech traffic camera technologies and legal reforms that make it easier for police to enforce distracted driving laws.

Recommendation 2: A national advertising campaign to highlight the kinds of distracted driving and their consequences.

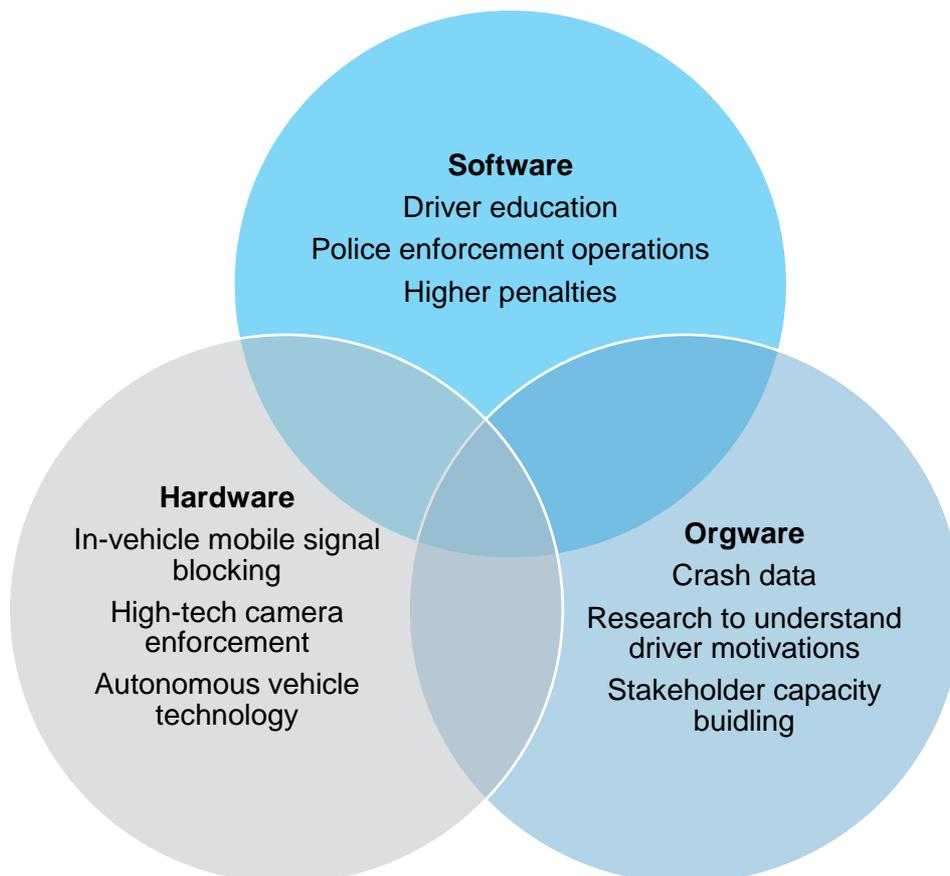
Recommendation 3: Higher penalties for distracted driving with consistency across states and territories.

2. Combatting driver distraction will take a multi-faceted approach

In order to successfully combat distracted driving on Australian roads, we need road rules that are not only inclusive but responsive to the challenges of changing technologies, lifestyles and road environments.

To address the risk, causes and motivations of distracted driving, law makers must adopt a multi-faceted approach that considers all elements of processing information—software (education, enforcement), hardware (infrastructure and intervention technologies) and orgware (the capacity to understand people’s mindsets and behaviour). This combined approach is necessary where drivers are unwilling to modify their behaviour. The following diagram shows the interconnected relationship between technical and behavioural interventions for distracted driving.

Combatting distracted driving behaviours



The challenge of disrupting mobile phone use while behind the wheel also lies in the technology’s addictive nature. Software such as an education campaign or enforcement program won’t work in isolation where driver attitudes and expectations around behaviour are entrenched. Any software programs must be supported by structural and technological interventions as well as the capacity to understand driver behaviour and motivations.



2.1 Mandated phone blocking technologies to remove driver temptation

A key part of the hardware that can proactively address the issue of illegal mobile phone use is signal blocking technologies. Bicycle Network strongly believes that technological intervention must be mandated alongside behavioural change where people cannot control or self-regulate their compulsion to touch their phones while driving.

2.1.1 In-vehicle mobile signal blocking technologies

In response to a government report which highlighted that distracted driving will be a key driver in the increase of road fatalities and serious injuries in Australia over the next 12 years, Bicycle Network called for mobile phone blocking technology to be fitted in vehicles [4].

The new technology, which is also being considered by the Department of Transport in the UK, would block phone signals when the vehicle is in motion. This technology mitigates the actions of drivers using their phones and is already in use in some forms in the United States.

In recognising the growing risk of driver distraction, car manufacturers are also working on the adoption of signal blocking technology with Nissan developing a prototype '*Signal Shield*' which is an internal compartment that blocks all mobile, Bluetooth and wi-fi signals [5]. This technology would still allow passengers to use their phones.

Recommendation 4: Fast-track in-vehicle mobile phone blocking technologies and its mandated implementation across all new vehicles sold in Australia.

2.1.2 Smartphone applications that involuntarily disable a phone's function

Many smartphones are already fitted with apps or tools that block or disrupt mobile phone use. Existing apps such as *SafeTexting*, *Drive Safe Mode*, *SafeCell* and *PhoneGuard* can disable or freeze phones when the car is in motion using GPS technology.

Both Apple and Google smartphones have '*Do not disturb while driving*' technology which detects when a phone is in a vehicle and connected to Bluetooth. When the feature is turned on, incoming calls and texts are rejected, and the caller or sender is notified that the person they are trying to reach is driving. The issue is that many smartphone users do not know the feature exists and those who do, don't know how to physically activate it.

Bicycle Network would like to see the feature be mandatory on all smartphones sold, so users must opt-out rather than opt-in. That way devices are automatically disabled unless the user overrides it.

Recommendation 5: In-built opt-out '*Do not disturb while driving*' apps automatically activated in all smartphones sold in Australia.



2.2 Introduce autonomous in-vehicle road safety technology

In order to address all types of distracted driving beyond mobile phones, Bicycle Network would like to see the widespread introduction of in-vehicle road safety technologies that serve to minimise human error. Many of these emerging autonomous technologies are in development or already implemented in new or luxury vehicles.

The following in-car technologies serve to monitor speed, the way the car is being driven, alertness and braking to avoid collisions:

- **Lane departure warnings** – designed to warn drivers when they are drifting into another lane without indicating by monitoring the markings on the road. More advanced versions of this technology can intervene with corrective braking or steering.
- **Autonomous emergency braking (AEB)** – identifies when the brakes are being applied in a panic through force and initiates the maximum brake. According to the European Commission, the widespread use of this technology can reduce the normal stopping distance by 45%.
- **Frontal collision warning systems** – using sensors scanning the distances between vehicles, pedestrians, bike riders and other objects, the system is designed to detect impending frontal collisions and help to prevent crashes or the impact of crashes. If a collision is anticipated, the system may warn the driver or autonomously apply the brakes. It is already being used in many Volvo, Hyundai, Toyota and Volkswagen models.
- **Electronic stability control** – uses intelligent sensors to monitor driving patterns and is ready to autonomously take over the car if the driver loses control.

Recommendation 6: Implement autonomous vehicle technology in all new cars sold in Australia.



2.3 Improved crash data and better methods of identifying the exact motivations of mobile phone and device use while driving

Authorities are currently limited by a lack of insight into bicycle crashes and their causes. While we know that most bike rider fatalities occur when a rider is hit by a vehicle driven by a person, there's no centralised or detailed data around the nature of the crash or whether distracted driving was the cause.

Data does exist in various sources such as police reports and coroners' reports, but these are limited, disconnected and not thoroughly analysed. Consistency in data collection is essential to ensuring that a national approach is taken to reducing deaths, serious injuries and crashes.

Our understanding of the behaviours relating to distracted driving is also immature relative to other road safety risks. Smartphone use presents a particularly complex challenge to overcome, where the technology itself taps into our basic yearning as humans – connection. Unless we appreciate and unpack the true motivations of distracted driving, the success of any software and hardware intervention is limited.

If our governments are to make effective changes to our external environments and laws that make it safer for all road users, we need reliable crash data.

Recommendation 7: Establish a national crash database to track the causes of crashes and the impact of distracted driving.

Recommendation 8: Greater research into the motivations of distracted driving with a focus on smartphone use.



Conclusion:

Australian road rules, regulation and enforcement have not kept pace with the convergence of technology, lifestyles and vehicles. While technology has made the driving experience easier and more enjoyable, distracted driving, in all its forms poses one of the biggest risks on our roads.

We need urgent and progressive action to address and prevent any activity that diverts the driver's attention away from the road.

With input from more than 2,158 bike riders, Bicycle Network has made eight key recommendations to help address and reduce distracted driving:

1. The rapid roll out of hi-tech traffic camera technologies and legal reforms that make it easier for police to enforce distracted driving laws.
2. A national advertising campaign to highlight the kinds of distracted driving and their consequences.
3. Higher penalties for distracted driving with consistency across states and territories.
4. Fast-track in-vehicle mobile phone blocking technologies and its mandated implementation across all new vehicles sold in Australia.
5. In-built opt-out '*Do not disturb while driving*' apps automatically activated in all smartphones sold in Australia.
6. Implement autonomous vehicle technology in all new cars sold in Australia.
7. Establish a national crash database to track the causes of crashes and the impact of distracted driving.
8. Research into the motivations of distracted driving with a focus on smartphone use.

Bicycle Network thanks the National Transport Commission for considering our submission.

If you have any further questions about anything contained in this submission, please contact us directly.

Craig Richards
CEO
Bicycle Network
craigr@bicyclenetwork.com.au

Anthea Hargreaves
General Manager – Public Affairs
Bicycle Network
antheah@bicyclenetwork.com.au



References

- [1] Bureau of Infrastructure, Transport and Regional Economics, "Modelling Road Safety in Australian States and Territories," Department of Infrastructure and Regional Development, Canberra , 2018.
- [2] T. Jacks, "Spike in learners and P-plate drivers using phones behind the wheel," The Age, 4 January 2019. [Online]. Available: <https://www.theage.com.au/national/victoria/spike-in-learners-and-p-plate-drivers-using-phones-behind-the-wheel-20190104-p50pk2.html>. [Accessed 7 February 2019].
- [3] ABC News, "Victoria Police call for more powers to fine drivers taking selfies, using mobile phones," ABC News, 14 May 2018. [Online]. Available: <https://www.abc.net.au/news/2018-05-14/victoria-police-push-to-use-cameras-to-fine-drivers-on-phone/9758906>. [Accessed 6 February 2019].
- [4] Bicycle Network, "Block devices before they drive up road deaths," Bicycle Network, 24 May 2018. [Online]. Available: <https://www.bicyclenetwork.com.au/newsroom/2018/05/24/devices-drive-up-road-deaths/>. [Accessed February 2019].
- [5] Press Association, "Nissan builds signal blocker into cars to eliminate phone distractions," The Telegraph, 3 May 2017. [Online]. Available: <https://www.telegraph.co.uk/technology/2017/05/03/nissan-builds-signal-blocker-cars-eliminate-phone-distractions/>. [Accessed 7 February 2019].