

Inquiry into progress under the National Road Safety Strategy 2011-2020
Submission from Katasi Inc
'Reducing the Growing Incidence of Distracted Driving Accidents'

EXECUTIVE SUMMARY

Despite concerted efforts by road safety stakeholders, the National Road Safety Strategy 2011–2020 (NRSS) is unlikely to meet its core target of reducing Australia's annual number of road deaths and serious injuries by at least 30% by 2020 – UNLESS this opportunity is taken to do something different.

Katasi Inc is pleased to provide this submission to the Inquiry into progress under the NRSS by highlighting an opportunity to significantly reduce vehicle accidents caused by **Distracted Driving** from drivers using their mobile phones – widely recognised as causing approximately 25% of all vehicle accidents.

Katasi's Distracted Driving solution tackles the problem at source – the telecommunications provider – by preventing distractions from ever reaching the phone. Unlike Distracted Driving apps which are easily thwarted by the driver, Katasi's solution is seamless and 'just works' whenever the driver starts driving. Most importantly, the solution is Proven, Affordable, and Available.

We have concluded our submission with **four Recommendations** for consideration by the Inquiry.

THE ISSUE

The National Road Safety Strategy 2011–2020 (NRSS) has a specific target of reducing Australia's annual number of road deaths and serious injuries by at least 30% by 2020.

It is universally agreed that achieving this target is proving increasingly elusive and that the recent increase in road accidents is due, in large part, to Distracted Driving caused by drivers using their mobile phones.

While official statistics are hard to come by, various road safety organisations, research reports, police and ambulance authorities consider that approximately 25% of all vehicle accidents in Australia are caused by Distracted Driving (perhaps up to 40% for [younger drivers](#)).

Based on the cost to the Australian economy of road accidents of ~\$32b pa, ~\$8b therefore relates to Distracted Driving accidents.

Following a comprehensive review of progress of the NRSS in 2014, an Action Plan for the three years from 2015 to 2017 was developed cooperatively by Commonwealth, state, and territory transport agencies, and was endorsed by the Transport and Infrastructure Council in November 2014.

The high-level Directions outlined in the NRSS Implementation status report in relation to *Safe Roads, Safe Speeds, Safe Vehicles and Safe People* states (p16) state:

Elimination of illegal mobile phone use while driving.

“Most jurisdictions are engaged in a range of activities to deter illegal mobile phone use including mass media campaigns, police enforcement activity and in some cases increased penalties.

QLD is investigating mobile device crash risk and the potential for technological solutions to provide deterrence.

WA introduced unmarked traffic patrol motorcycles to target in mobile phone offences in metropolitan locations.

The Australian Government and Austroads have conducted initial research into better addressing driver distraction and from mobile phones and other in-vehicle technologies. This will inform further action through the Action Plan for 2018-2020.”

Point 24 of the NRSS 2011–2020 states that by 2020, the strategy aims to *“Investigate technology-based options to minimise driver distraction from in-vehicle devices... vehicle technologies that help drivers avoid the harmful consequences of distraction... investigating the use of new technologies to minimise driver error and automatically monitor driver performance.”*

CURRENT SOLUTIONS

Education, Enforcement, Demerit Points, and Fines

The increasing rate of Distracted Driving accidents seems to be largely immune from the investment in education against using mobile phones while driving (see ads from TAC, [NRMA](#), RACQ, [Queensland Government](#), [NSW State Government](#)...), and from the increase in demerit points and fines (together with increased police enforcement and judicial process).

For example, [Victoria police](#) issued 26,164 fines for using a mobile phone while driving last year (which indicates that perhaps 1,000 times that number actually use their phones while driving – but have not been caught), and a [Daily Telegraph](#) camera placed on the Sydney Harbour Bridge over the 2017/2018 Christmas period photographed a driver using a mobile phone every 30 seconds – and these were only those drivers that the camera could capture.

Police are also resorting to special cameras to capture drivers using phones. Again, while laudable, this is merely catching offenders (and wasting precious police resources) rather than preventing drivers from using phones in the first place.

According to the NRSS 2011-2020 (p87): *‘Effective deterrent and publicity measures, such as a combination of police enforcement and public education campaigns, can motivate road users to change their behaviour, if they are concerned with being ‘caught’ and having to deal with the consequences. This concern is driven by the perceived probability of being caught and the efficacy of the penalty. Because many drivers believe their risk of crashing is very low, fear of penalties is often more effective than the fear of being involved in a crash.’*

Solutions to prevent crashes are often expensive and driver-unfriendly. For example, a recent Austroads study found that cutting speed limits at intersections to 30km/h would reduce fatal road crashes. According to The Advertiser ([28/1/2018](#)):

“RADICAL measures including cutting speed limits to 30km/h at intersections and using sensors on country roads to warn drivers of oncoming traffic are part of a national plan to make roads safer and lower the number of crashes and deaths.

It found 30 per cent of crashes causing serious injury and death on Australian roads occur at intersections, but little had been done to design safer intersections.

Co-author of the report, Adelaide University road safety expert Jeremy Woolley, said it was imperative to cut speeds at intersections.

“We are trying to say if you want to guarantee safe outcomes (at intersections) you have to bring speeds down to 30km/h or 50km/h somehow,” Mr Woolley said.

“Now that could be by speed limits, or road design.”

The report recommends nine designs or “innovative solutions” to road engineers, including a number of safe roundabout designs, changing the approach angle of intersections, raised intersections and reduced speed limits.”

The report’s “innovative solutions” are all infrastructure-based, are very expensive, and further reduce speeds (ie impact driver experience) – whereas the issue may be that drivers are distracted by mobile phones when stopped, stopping, or entering roundabouts which plays a significant role in causing these types of crashes. It does not appear that the study looked at reasons why drivers crash more at intersections – rather, it only sought ways to improve the intersections themselves. In other words, the symptoms are being treated, not the underlying cause.

A solution to reduce Distracted Driving may have an immediate impact in lowering the number of crashes and deaths – and would be significantly less expensive, quicker to implement, and less intrusive for the driver.

According to [Transport for NSW](#): ‘Recent research suggests that at least 14% of all crashes involve the driver being distracted by something inside or outside the vehicle. As many as one in ten fatalities have been directly attributed to driver distraction. Yet even though surveys have indicated that 98% of people believe that using a mobile phone while driving, for example, is very dangerous, 28% of people admit to doing it themselves.’

Technological Distracted Driving solutions

Most solutions to prevent drivers using their phones are based on apps, such as Apple’s iOS11 *Do Not Disturb While Driving (DNDWD)* App. While [apps](#) like these are important, they are easily thwarted by the driver turning the app off, disconnecting Bluetooth, or similar. As such, several telecommunications providers have abandoned their Distracted Driving apps as being ineffective.

Car manufacturers have also attempted to solve this problem.

“[Nissan](#) builds signal blocker into cars to eliminate phone distractions: A car manufacturer has developed a compartment that blocks mobile phone signals. Nissan says the prototype Signal Shield, built into the arm rest of its Juke crossover vehicle, will eliminate distractions caused by incoming calls, messages and social media notifications.”

However, these kinds of solutions often require voluntary driver action and, accordingly, are also easily thwarted.

POLICY

On 6 February 2018, **NSW Premier, Gladys Berejiklian**, announced tough new NSW road safety rules, and, in relation to Distracted Driving, noted that *“Distraction is a huge concern in relation to deaths on our roads and that is a trend that is continuing.”*

NRMA spokesman Peter Khoury said the public wants tough action to reduce the escalating road toll.

The **Hon Barnaby Joyce MP**, Deputy Prime Minister and Minister for Infrastructure and Transport, recently [said](#) that mobile phone use is a major cause of motor accidents.

Former Minister for Infrastructure and Transport, Darren Chester, said that research would help governments find new ways to reduce the numbers of fatalities and serious injuries on the nation's roads.

“Nobody should die or be seriously injured on our roads, and I have serious concerns about drug use while driving, and people being distracted by their mobile phones,” Mr Chester said.

“I recently met with state and territory road safety ministers and senior police, and there was widespread agreement that both drug-driving and mobile phone use while driving were priority areas to address.

“Investing in road upgrades, installing speed signs, and improving vehicle safety help address the number of road deaths and injuries, but we need to continue building our understanding of road safety issues.”

To deliver on the NRSS Action Plan to deliver *Safe Roads, Safe Speeds, Safe Vehicles and Safe People*, billions of dollars are being spent on improving infrastructure - our roads (including blackspots).

Barnaby Joyce queried whether a reduction in import tariffs for vehicles was warranted so that our older vehicles (in Australia, in 2016 the average age of our vehicles is 10.1 years) can be replaced sooner by newer vehicles with the latest safety technology. This, too, may work, however it will take many years to replace the current fleet – and at significant cost to the Federal government (and fleet owners/consumers).

HOWEVER, there is a solution now available to enable our current fleet of vehicles – and its drivers – to become safer by retrofitting them with inexpensive, innovative, proven technology – while at the same time ensuring that newer vehicles also have this technology. And, at no cost to government....

DISTRACTED DRIVING SOLUTION ENabler

TELEMATICS

According to *'The Retrofit Future of The Connected Car - Why Internet-Of-Things Devices That Retrofit "Dumb" Cars Will Remake Personal Transportation Experiences'* (by Frank E. Gillett with Pascal Matzke, Laura Easton, and Ian McPherson, June 6, 2016):

'Retrofit Devices Enable Any Player, Not Just Automakers, To Build New Transport Services. A new class of inexpensive devices is emerging. These devices retrofit used cars with a rich set of connected car experiences that will empower brands to build new relationships and new personal transportation service offerings.' The connected car uses telematics, together with in-vehicle sensors.

'Telematics' – the technology of sending, receiving, and storing information relating to remote objects, such as vehicles, via telecommunication devices, can connect the vehicle to the internet (via the Cloud) and provide real-time information on vehicle and driver behaviour that will increase their safety – and the safety of other drivers, pedestrians, and property.

Michael Kilgariff, Managing Director, [The Australian Logistics Council](#) (ALC), recently said: *"Today's discussions had a particular focus on the role new technologies will play in enhancing safety. Conversations about the capacity of on-board telematics devices that capture data relating to speed, driver fatigue and vehicle load limits to improve road safety have been occurring for years. ALC believes the time has come for decisive action in this area, and urges the NSW Government to play a leading role in persuading the next meeting of the Transport and Infrastructure Council (TIC) to recommend the immediate development of laws requiring the mandatory use of telematics in heavy vehicles."*

For example, **Caltex** released a Telematics Solution in the Australian market to provide fleet owners and managers with real-time engine diagnostic alerts, driver mechanical behaviours, and a predictive failure and maintenance capability. It is also claimed to offer standard location-based features available in traditional GPS/Telematics systems.

And in a media announcement on 6 February, 2018, ALC's Managing Director, Michael Kilgariff, who met with new **Linfox Logistics** CEO Mark Mazurek the previous week, said:

"Both ALC and Linfox have long advocated the use of telematics devices that capture data relating to speed, driver fatigue and vehicle load limits in heavy vehicles as being central to any effort to improve safety."

"Such devices genuinely have the capacity to save lives on our roads, and with the technology becoming more affordable and user-friendly by the week, there can no longer be any excuse for not incorporating their compulsory installation and use as part of the Heavy Vehicle National Law (HVNL)."

Toll Group Managing Director, Michael Byrne, recently called on the government to make [six issues](#) a priority to affect real improvements in driving the road toll down, including the following:

- Incentivise and reward safe, modern fleets with life-saving technologies
- Make telematics mandatory for regulatory purposes.

Mr Byrne sent his letter to the Prime Minister and *“all Road and Road Safety Ministers across Australia with the view to driving collaboration across governments. As Australia’s largest provider of road freight logistics, Toll stands ready to work with all governments to make these six points a reality”*.

The increasing availability of Telematics will deliver a breadth of functionality to the vehicle, driver, fleet owner, fleet manager and community and, perhaps no more importantly, the ability to PREVENT DISTRACTED DRIVING.

Note that Telematics was mentioned only **once** in the 38 page NRSS report.

GROOVE (BY KATASI) DISTRACTED DRIVING SOLUTION

[Katasi](#) is a software company (based in Boulder, Colorado, USA, with offices in Australia) which has devised the only effective, non-thwartable, Distracted Driving solution (called **Groove**).

While there may be a number of Distracted Driving solutions available, we have provided here a summary of the rationale for Groove, (what it does, and how it can be implemented without delay to significantly decrease the number of vehicle accidents caused by Distracted Driving), so that the Inquiry can be more familiar with how such a solution is feasible.

Background

1. The rationale to find an effective solution(s) to Distracted Driving is described above.
2. Current solutions, while all laudable, are proving less than effective, including:
 - a. Fines
 - b. Demerit points
 - c. Public service announcements / driver education
 - d. Mobile phone apps (which are easily thwarted).
3. As telecommunications providers (‘telcos’) originate the Distracted Driving elements, namely, phone calls, texts, and data (the latter which includes maps, music streaming, WhatsApp, email, SnapChat, Facebook, Instagram, Twitter, and the like), **an effective Distracted Driving solution requires the telcos to prevent these mobile phone distractions from ever reaching the mobile when the user is driving**. And, in a manner that is seamless to the driving experience and is not capable of being thwarted by the driver.
4. Groove (by Katasi) is the only proven Distracted Driving solution that knows when a driver is driving, tells the driver’s telco to hold/prevent/block all (or selected) mobile phone distractions, and then tells the driver’s telco to release these distractions once the driver stops driving.
5. Groove does this by knowing:
 - a. when the driver’s car is moving (speed, location etc); **AND**
 - b. when the driver’s mobile phone is moving (speed etc) from the same location; **AND**
 - c. using its algorithms to deduce that that driver is driving his/her car.

6. Because all drivers' needs are not the same, Groove can be configured by the driver (or parent/fleet manager) to:
 - a. **Block everything** (calls, text, and data) – important for P/L platers and certain fleets where WH&S policies require *'engine on, phone off'*; **OR**
 - b. **Not block selected items** (eg, allow Bluetooth calls, calls to whitelisted numbers (the driver's parent, child, partner, manager...), maps, music streaming etc).
7. Irrespective of what is blocked, emergency calls to Triple 0 always get through.

How Groove works

1. To enable Groove's Distracted Driving solution, two things are required:
 - a. the driver's vehicle need to be connected via telematics to the Cloud; **AND**
 - b. the driver's mobile phone needs to be with a telco that has enabled the Groove solution in its network.
2. **Connect your vehicles**
 - a. Either the driver's vehicle is already connected to the Cloud via telematics, in which case Groove piggybacks off that data by engaging with the incumbent telematics provider; **OR**
 - b. If the driver's vehicle is not connected to the Cloud, Groove will introduce the driver to one of Groove's telematics partners, or Groove will supply the connectivity itself via an OBD-II device or similar.
3. **Connect your mobile phones**

As it currently stands, Australian telcos (Telstra, Optus, and Vodafone) have the sophistication in their networks to selectively block/unblock data applications (such as maps, music streaming, WhatsApp, email, SnapChat, Facebook, Instagram, Twitter...), as well as to block texts (SMS) and phone usage.

However, integrating these capabilities so as to be triggered by knowledge that a subscriber is driving, (or in some cases, refining the capabilities to be able to support the prevention of distracted driving), each telco must configure their network to some degree to provide blocking when notified that a subscriber is driving.

From lengthy discussions with the telcos, this configuration is relatively straightforward, requires from 3-9 months to reconfigure, and at a cost that can range from \$1m to \$6m, per telco (which is not significant in relation to the ~\$8b annual cost of Distracted Driving accidents to the economy).

- a. So, if the customer/driver, has a phone plan with a telco which has configured its network to enable Groove, he/she needs do nothing; **OR**
- b. If the customer/driver is with a telco that hasn't configured its network to enable Groove; **EITHER**
 - i. that network needs to do so; **OR**
 - ii. the customer/driver needs to switch his/her phone plan to a telco that has configured its network to enable Groove (in which case the customer/driver will retain his/her existing number and Groove will facilitate the changeover).

It is widely understood by Australian government and industry Distracted Driving experts, that regardless of which telco first configures its network to deploy Groove (to gain a competitive advantage), the other telcos will rapidly follow suit as a result of social, brand perception, and competitive pressures.

The Groove Distracted Driving Ecosystem

There are a number of stakeholders that benefit from Groove's Distracted Driving solution:

Compulsory

1. Telco – to enable their networks to deploy the solution, as described above.
2. Telematics provider – to enable vehicle connectivity (this can be Katasi).
3. Katasi.
4. Customers.

Optional

1. Fleet management companies.
2. Insurance providers – keen on deploying insurance models (eg User Based Insurance) which reward good drivers (including those not distracted by mobile phones) by reducing premiums or similar.
3. Roadside membership organisations (eg RACQ, NRMA etc) which are keen to connect their members' vehicles and offer incentives for safer driving.
4. Federal and state governments (as well as road safety organisations and community action groups) who are keen to reduce the cost (human and financial) of Distracted Driving accidents.
5. Fleet owners and consumer drivers (including parents of younger drivers).

The Commercial Model

The Groove Distracted Driving solution has **three cost components**:

1. **CapEx cost to deploy the solution** borne by Katasi, the telco, and any integration with other parties, such as telematics provider, insurance company, fleet manager etc. These costs are not significant, nor is the effort considerable.

This CapEx cost can be borne by the Telco (by a business unit and/or 'social good' funds), subsidised by the Government, subsidised by insurance companies (one has already expressed interest), and/or paid for by Katasi.

2. **Cost of the telematics device** (IF the vehicle is not already connected to the Cloud). This device can take a number of forms, from those installed in the vehicle engine to OBD-II units that can be plugged into the vehicle's dashboard by any driver. An OBD-II unit costs less than \$100, is a one-off cost, and can be borne from the benefits of other telematics products.
3. **Cost for providing** the Groove service (a few dollars per month) could be incorporated as a result of other telematics products, subsidised by insurance companies, or paid for by the fleet companies from the other benefits from telematics.

For the cost of a <\$100 module in the vehicle (or a previously connected vehicle, either by an OEM connection or other fleet telematics connection), Distracted Driving prevention can be guaranteed.

Business Opportunity + Doing the Right Thing versus Mandatory Regulation: Carrot or Stick?

While Katasi has been building a coalition of the willing – namely, partners who would all benefit financially (and ethically) from deploying Groove, the prime challenge in deploying the solution has been the telcos.

The telcos are an Advantage and Hurdle for Groove:

- **Advantage** - because the fact that Groove is a telco network solution makes it uniquely effective in preventing distractions reaching the driver's phone without allowing the driver to easily thwart the solution; and
- **Hurdle** – because the telcos need to invest effort and money in configuring their networks to deploy Groove.

This is not to say that the telcos have been disinterested in deploying Groove – quite the contrary. For example, Telstra ran a successful Groove pilot with Linfox and the Victorian Police.

Evidencing to the telcos and other stakeholders that there are potential customers willing to purchase the Distracted Driving solution (including government fleets), will assist in their business case planning.

HOWEVER, there is also the opportunity for Federal/State Governments to '**mandate or encourage**' that all **P/L platers** and **repeat offenders** have a Distracted Driving solution, like Groove – and thereby, require the telcos to configure their networks to enable the deployment of solutions, like Groove. By so doing, the telcos are guaranteed a minimal viable customer base (eg P/L platers and repeat offenders), even before marketing the solution to other segments, such as fleet, young drivers, and the general consumer sector.

The Australian community would likely be very supportive of such regulation.

This approach was initially adopted by the California State Legislature which circulated draft legislative wording, which would "**require a mobile telephone carrier, as defined, to provide customers with the ability to disable, at the network level, the distracting capabilities of their mobile telephones when notified that the customer is driving a motor vehicle.**"

(Language to Present to CA Legislative Council Regarding AB-970. Subject - Vehicles: Distracted Driving. Originally Introduced by Assemblyman Frazier on February 16, 2017 in the CA Legislature - 2017-2018 Regular Session). Note that this draft was later amended and then dropped once some telcos agreed to reconfigure their networks voluntarily.

RECOMMENDATIONS

We have proposed a few practical recommendations for consideration by the *Inquiry into progress under the National Road Safety Strategy 2011-2020* relating to **deploying a solution to reduce the growing incidence of Distracted Driving accidents:**

With reference to the four **Terms of Reference (TOR)** of the *Inquiry into progress under the National Road Safety Strategy 2011-2020*:

RECOMMENDATION 1

(**TOR One:** Identify the key factors involved in the road crash death and serious injury trends including recent increases in 2015 and 2016).

Acknowledge, based on multiple sources of information, that vehicle accidents caused by Distracted Driving from mobile phone use is a significant percentage of the causes of all vehicle accidents – and is growing despite public education campaigns, demerit points, fines and thwartable apps.

RECOMMENDATION 2

(**TOR Two:** Review the effectiveness of the National Road Safety Strategy (NRSS) 2011-2020 and supporting 2015-17 Action Plan, with particular reference to the increase in deaths and serious injuries from road crashes over the last two years).

Acknowledge that insufficient attention / action has been placed on point 24 of the NRSS 2011–2020 which states that by 2020, the strategy aims to “*Investigate technology-based options to minimise driver distraction from in-vehicle devices.... vehicle technologies that help drivers avoid the harmful consequences of distraction.... investigating the use of new technologies to minimise driver error and automatically monitor driver performance.*” This is especially true as recent technological innovation, such as telematics and Groove, is now proven, readily available and at low cost.

RECOMMENDATION 3

(**TOR Three:** Identify issues and priorities for consideration in development of a post-2020 national road safety strategy and 2018-2020 action plan, focusing on how Australia can recognise and move towards a safe road transport system which minimises harm to all users).

Agree that one of the top, say, 3 priorities to be immediately addressed (if the NRSS is to achieve its objective of reducing Australia’s annual number of road deaths and serious injuries by at least 30% by 2020), is to reduce Distracted Driving, AND that technology-based solutions, especially related to the connected vehicle, are to be encouraged/mandated especially as these solutions are proven, effective and inexpensive to implement and operate.

RECOMMENDATION 4

(**TOR Four:** Advise on arrangements for the management of road safety and the NRSS, looking at best coordination and use of the capacity and contributions of all partners).

Agree that a coordinated approach and joint use of the capacity and contributions of all partners is predicated on Federal and State authorities, road safety groups, and the business sector agreeing to act immediately on Distracted Driving, and implement solutions, like Groove, through a combination of positive business outcomes and the 'mandating *or* encouraging' of the telcos to enable their networks to accommodate such solutions, and the 'mandating *or* encouraging' of P/L platers and repeat offenders to use such solutions.

IN SUMMARY, if the National Road Safety Strategy 2011–2020 is committed to meeting its core target of reducing Australia's annual number of road deaths and serious injuries by at least 30% by 2020, it must tackle one of the prime causes of such accidents, namely Distracted Driving, and (inter alia) opt for technological solutions that will quickly, affordably, and effectively improve vehicle safety and improve driver behaviour.

As road safety stakeholders, we will all be judged by our willingness to act now with proven and effective solutions to reduce the incidence of Distracted Driving - to the benefit of our community and economy.

Thank you for considering our submission.

Sincerely



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