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FCAI Submission to  
NTC:  
Consultation  
Regulation Impact  
Statement -  
In-service safety  
for automated  
vehicles

August 2019

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## EXECUTIVE SUMMARY

The FCAI agrees that automated vehicles have the potential to provide a range of significant benefits to the Australian community. These benefits should be maximized by ensuring that the overseas manufacturers of automated vehicles do not face any impediments to entering the Australian market as soon as possible.

One of the potential impediments is implementing a regulatory regime that imposes additional obligations on manufacturers of automated vehicles and exposes them to additional liability.

It goes without saying that automated vehicles need to be safe and if there was a need to make significant changes to the current regulatory regime in Australia to ensure this, then that would be completely acceptable. There is however, no such need.

There are two aspects to consider when looking at the safety of automated vehicles that, at times gets confused in the RIS. The first, is to ensure that the vehicles, as supplied are safe. The second is to ensure that automated vehicles operate safely - that is, they comply with the Road Rules.

The first is more than adequately covered by the existing Australian Design Rules and the Australian Consumer Law.

The FCAI recognizes that the Road Rules, with their focus on the 'driver', raises issues in the context of automated vehicles. However, the suggested solution - the creation of ADSEs - is flawed and significant further consideration needs to be given to this issue.

The RIS suggests that the ADSE could be a range of people. The reality is that in the vast majority of cases it will be the Australian manufacturer (in the sense that word is used in the ACL).

The RIS proposes 2 new liability risks that a manufacturer of autonomous vehicles will face. The first is the creation of a general safety duty. It is said that this is largely the same as the existing tort of negligence. This is not so. It will be different both in the obligations it imposes and the consequences of failing to comply with the duty. Being negligent is not a crime – not complying with the duty can be.

The second liability risk is faced by the executive officers of the manufacturer. They will face the risk of being personally liable for breaches of the general safety duty by their company. This is completely disproportionate to the risk that is sought to be addressed – the safety of automated vehicles.

The FCAI is in favor of Option 1 – the current approach. At the very least, option 1 is appropriate for the initial stages of commercial deployment, when the automated vehicle market in Australia will be limited in scope.

As a final observation, it seems curious that there is seen to be a need to increase the obligations and liability risks facing a manufacturer of automated vehicles when there is almost universal agreement that they will be significantly safer than non-automated vehicles.

## INTRODUCTION

The Federal Chamber of Automotive Industries (**FCAI**) is the peak industry organisation representing most of the vehicle manufacturers and importers of passenger vehicles, light commercial vehicles and motorcycles in Australia.

It welcomes the opportunity to make a submission to the NTC on the Consultation Regulation Impact Statement relating to the In-service safety for automated vehicles (**RIS**).

The defined terms in the RIS are used in this submission.

The NTC Regulation Impact Statement seeks to feedback on the role and regulation of all parties involved in the safe operation of automated vehicles on Australian roads (In-service). It considers safety duties that should apply to these parties and the institutional and regulatory arrangements to support them. *The NTC believes that existing regulation used for conventional vehicles, cannot be applied to automated vehicles.*

They propose 4 options.

### **Option 1: Baseline**

Existing State and Territory bodies manage risks through current regulatory frameworks.

### **Option 2: General Safety Duty + Prescriptive**

New in-service safety duties enforced by State and Territory regulators based on National model law.

### **Option 3: General Safety Duty - National**

New in-service safety duties enforced by a single National regulator through *Commonwealth law*.

### **Option 4: General Safety Duty + State**

New in-service general safety duties enforced by a single National regulator through *State and Territory Applied law*.

## SIGNIFICANT BENEFITS OF AUTOMATED VEHICLES

1. The FCAI agrees that automated vehicles have the potential to provide a significant range of benefits to Australian society including:
  - Improvements in road safety
  - Improved access and mobility options
  - More efficient traffic flow and potential reductions in congestion
  - Reduction in the costs associated with congestion.
  
2. These benefits should not be underestimated. However, it must also be recognized that:
  - Australia is a very small part of the global market and is a passive taker of products. It has a very limited ability to dictate significant changes to products which are unique to Australia ; and
  - there is a high degree of uncertainty around when automated vehicles will become commercially available to overseas markets, let alone in Australia. Even when they become commercially available, for the foreseeable future automated vehicles will comprise an extremely small proportion of the Australian car parc.
  
3. What this means is that when considering the regulation of automated vehicles, any impediment to their timely introduction should be minimized, as should any disincentive for the manufacturers of automated vehicles to export them to Australia.
  
4. Road and vehicle regulatory standards will gradually develop on the back of the lead from the international market, with regulatory authorities developing the necessary approaches for automated driving over time.

The development of both road and vehicle regulations is well underway at the international level via the United Nations (UN) Working Party 1(WP.1) and Working Party 29 (WP.29) with changes to the Vienna Convention and the UN regulations.

## THE REGULATION OF AUTOMATED VEHICLES SHOULD BE CONSISTENT WITH THE EXISTING REGIME

1. To ensure that Australia is not denied the benefits of automated vehicles, manufacturers<sup>1</sup> of automated vehicles should:
  - face the same requirements at the point of the first supply of their vehicles into the Australian market, as they face in other jurisdictions – that is, the technical requirements and standards should largely be the same. Different requirements in Australia will, at the very least, leading to delays in automated vehicles being available in Australia and, at worst, mean that the Australian market is simply bypassed; and
  - be exposed to the same liability risks as manufacturers of non-automated vehicles are currently exposed to.
2. These 2 principles are subject to the proviso that there is not a good reason for the manufacturers to be treated differently. The fact is that there is no good reason because:
  - automated vehicles do not raise significantly different issues or concerns to non-automated vehicles; and
  - the current regulatory regime can adequately deal with automated vehicles.

### **Automated vehicles do not raise significantly different issues or concerns**

3. As the FCAI understands it, the NTC is largely in agreement with the proposal that manufacturers of automated vehicles should face the same requirements at the point of the first supply of their vehicles into the Australian market, as they face in other jurisdictions.
4. The liability risk issue is the subject of a significant portion of the RIS. In this regard it is important to clearly distinguish between a liability which is in the nature of a fine, or penalty and one which is in the nature of a claim for damages. In the context of automated vehicles, the most relevant example of the first is a failure to comply with the Road Rules. This is a crime, which is enforced by the State. The most relevant example of the second type of liability is a claim that the vehicle has caused damage or is defective. This is a civil claim which is bought by an individual. More is said about this distinction later in the submission.
5. The NTC concludes, on a preliminary basis, that the existing liability regime should be changed in 2 significant ways:
  - An entity should be created – an ADSE; and
  - The ADSE (and its executive officers) should be subject to a general safety duty in regard to the ADS.
6. The NSC says these changes are justified because:
  - Automated vehicles will introduce new in-service safety risks that the market will not eliminate or mitigate<sup>2</sup>; and

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<sup>1</sup> Taking the meaning of 'manufacturer' in the Australian Consumer Law

<sup>2</sup> At page 26. Another problem the NTC notes is that nationally inconsistent approaches to in-service safety and multiple regulators without clearly defined roles could be a regulatory barrier to market entry. The FCAI agrees with this proposition

- there are gaps and inadequacies in the current regulation regime to provide for the in-service safety of automated vehicles<sup>3</sup>.

### **Automated vehicles will not introduce in-service safety risks**

7. The Paper says that the automated vehicles will introduce new in-service safety risks because:
  - automated vehicles are significantly more complex than existing vehicles;
  - market expectations are that automated vehicles will be 100% safe; and
  - the in-service safety of automated vehicles does not fit within the current regulatory framework, because it assumes a human driver.
8. Each of these are discussed briefly below.

### **Complexity**

9. The NTC makes the point that the number of lines of software code in a luxury, non automated vehicle is an order of magnitude more than in a Boeing 787 Dreamliner (100 million v 6.5 million)<sup>4</sup>and it is expected that automated vehicles will have even more lines of code.
10. It may well be the case that automated vehicles will have more lines of code than current vehicles but if the current regulatory regime can adequately deal with non-automated vehicles, which clearly are already very complex, there is no reason to conclude that the regime cannot deal with automated vehicles.

### **Market expectations**

11. The RIS refers to a survey in 2018 which found that 37% of females and 28% of male respondents expect that self-driving vehicles should be 100% safe and never been involved in a collision<sup>5</sup>. The FCAI has two responses:
  - presumably the survey found that approximately 63% of females and 72% of male respondents did not expect that self driving vehicles should be 100% safe and would never be involved in a collision; and
  - perhaps the expectations that an automated vehicle will never be involved in a collision is unrealistic and the expectation itself should be addressed. The more appropriate expectation is that the introduction of automated vehicles will have significant benefits (as described previously) and while there might be a few issues while the vehicles are being introduced, the net benefit will, nonetheless, be significant and will increase over time.

### **Human driver**

12. It is certainly true that there will not be a “human driver”, in the current meaning of those words, when a vehicle is operating at full automation.
13. The FCAI recognizes that a ‘person’ needs to be held accountable for any failure of an automated vehicle to comply with the Road Rules. It also recognizes that a

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<sup>3</sup> Chapter 5

<sup>4</sup> Page 27 and 28.

<sup>5</sup> At page 30

decision has apparently been made that this will be an ADSE. For the reasons explained later, while this might appear to be a convenient solution it raises some significant issues which, in the FCAI's view, requires the question of the liability for breaches of the Road Rules to be examined much more comprehensively.

1. Defects, including safety related defects, are currently dealt with, more than adequately, under the ACL. The FCAI fundamentally disagrees with the proposition put by the NTC (at page 55) that:

*"the consumer guarantee and safety provisions in the Australian Consumer Law appear to have limited application to the in-service safety of automotive vehicles".<sup>6</sup>*

2. The NTC puts forwards some reasons for this assertion which are addressed below.
3. The NTC says that the fact that it is a defence to a safety defect claim that the safety defect did not exist at the time the product was supplied is problematic. This means that the ACL is not suited to an automated vehicle where defects could be introduced through software updates and risks may not manifest themselves for an extended period of time.
4. As noted by the NTC, current non-automated motor vehicles are complex and rely upon significant amounts of software. Defects can already be introduced through software updates and the ACL can adequately deal with this. Likewise, many defects in vehicles currently manifest themselves after an extended period of time. Again, this is routinely dealt with by dealers and manufacturers and, when required, by tribunals and judicial bodies.
5. The NTC says that claims for damage caused by safety defect are limited and, for example do not extend to damage to public infrastructure such as roads, which, if damaged, could also pose a risk to safety. Again, this comment could equally be made for the current non-automated vehicles. Damage to public infrastructure such as roads, presents a risk to safety for non-automated vehicles as much as it does for automated vehicles.
6. The NTC says that it is likely that the consumer guarantees will not apply to automotive vehicles purchased for commercial purposes such as taxis. This is unlikely to be correct. Currently, it is clear that vehicles purchased for commercial purposes, such as taxis, are covered by the ACL. It is difficult to see why this would be any different for automated vehicles.

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<sup>6</sup> At page 55



7. The FCAI agrees with the NTC that:

*'If Australia imposes standards for automated vehicles is inconsistent with international regulation, manufacturers may not make the automated vehicles available in Australia. This would deprive Australians of the benefit of automated vehicles automate these benefits'<sup>7</sup>*

8. The FCAI considered this to be fundamental.
9. The NTC considers that existing regulation places insufficient requirements and incentives on the following parties to ensure in-service safety:
- ADSEs
  - ADSE executive officers
  - Remote drivers
  - Fallback-ready users
  - Repairers.

#### **ADSEs**

10. ADSEs are to be a new category of person. They are:

*'The legal entity that certifies that the automated driving system can safely perform the driving task in place of a human driver. The ADSE will self-nominate by seeking type approval for the automated vehicle under the Motor Vehicle Standards Act 2018<sup>8</sup>.'*

#### **More work is needed**

11. The only rationale for the introduction of ADSEs seems to be that the in-service safety of automated vehicles does not fit within the current regulatory road rules framework, which assumes a human driver<sup>9</sup>. The FCAI agrees that the regulatory framework, with its focus on a 'driver' does need to be considered. It is a complex issue which, with respect to the NTC, has not been comprehensively considered in the RIS. Simply replacing the 'driver' with another entity, while appearing to be a convenient solution does not solve the issue.
12. The implicit assumption seems to be that having one person responsible for breaches of the Road Rules works now, so it will work with automated vehicles – it is just that a new 'person' needs to be identified. This is simply not correct. Currently most breaches of the Road Rules are the sole responsibility of the driver. In the case of automated vehicles, this will often not be the case. The vehicle is interacting with, and depends upon a number of other things – the road and its markings, road signs, telecommunications and data to name a few. A small problem with any of these may well mean that the vehicle fails to comply with a Road Rule but it won't necessarily be because of the ADSE.

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<sup>7</sup> At page 49

<sup>8</sup> Once this Act is passed

<sup>9</sup> as noted on page 30.

13. As explained previously, a failure to comply with a Road Rule is, in effect a crime. A person charged with a crime cannot pass all or some of its liability to another person. So, in a large number of cases the ADSE, which will not be solely liable (and indeed might be the 'least liable' entity) will be forced to accept the penalty or seek to contest it in Court. This seems inherently unjust and will be very burdensome.
14. The FCAI is not in a position to offer a suggested solution at this stage. Its point is that the issue of who is responsible for a failure to comply with the Road Rules by an automated vehicle is complex and requires much more consideration than simply replacing 'driver' with 'ADSE'.

#### ***ADSEs will be the manufacturer***

15. The reality is that the ADSE will invariably, if not exclusively, be the manufacturer of the AV and it is unrealistic to expect any other entity to agree to be the ADSE for a number of reasons including:
  - given the substantial obligations it is proposed to be imposed on ADSEs, there would need to be a very good reason for an entity to agree to assume this role. It is difficult to see what this reason might be. Given the relatively small size of the Australian market, it is unlikely to be because of commercial reasons;
  - the ADS interacts with and is an integral part of the vehicle itself. In many instances it will be very difficult to clearly apportion responsibility for a malfunction between the ADS and the other components of the vehicle; and
  - there might be a requirement to repair an ADS or provide an update which can't be done remotely. Presumably the ADSE would need to engage the manufacturer (or the manufacturers' dealers) to carry out this work, again with attendant liability issues.

#### **ADSE executive officers**

16. The FCAI understands the reason behind suggesting that executive officers of ADSEs should be made personally liable if the ADS's are not safe. There is nothing that focuses the mind of senior executives on the performance of their company, or the products produced by their company, than the threat of them being personally liable for fines or possibly jail sentences. Having said that, this needs to be balanced against the disincentive that potential liabilities such as these provide to people considering becoming directors or executive officers or the introduction of new technologies.
17. The 'piercing of the corporate veil' is a serious matter and should only be done when there is a demonstrated need to focus the minds of senior executives in this way. For the reasons explained in this submission, this need has not been demonstrated.
18. Presumably, the ADSE will have to be based in Australia. It would be logistically (and probably jurisdictionally) impossible to enforce the contemplated obligations against an overseas company. What this means is that, in the vast majority of cases, the Australian based "manufacturer" (as that word is used in the ACL) will be the ADSE. The Australian manufacturer has very little ability to influence the technical or safety characteristics of vehicles it is importing and selling so why would any executive officer of an Australian manufacturer assume personal liability with the possibility of criminal prosecution when he/she has a very limited ability to control the risk they

are facing? If this suggestion was implemented, the FCAI suspects that the ranks of senior executive officers in Australian manufacturers will be very thin indeed.

19. ADS's will make vehicles safer, not less safe. Executive officers of motor vehicle manufacturers are currently not personally liable (except in some extreme situations) for the performance of the vehicles their companies manufacture, nor is there any suggestion that this should be the case. It seems incongruous that personal liability is being considered in the case of automated vehicles where the risk of an incident is significantly less.

#### **Remote drivers and Fallback users**

20. The FCAI agrees that the existing regulatory framework does not adequately address the liability of remote drivers and fallback-ready users. The FCAI suspects that remote drivers will be an exception rather than the norm and as such can be dealt with separately. As the NTC notes<sup>10</sup>, the legal duties of fall-back ready users is a policy decision that has not yet been implemented.
21. Remote drivers and fallback users should not drive any legislative change.

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<sup>10</sup> At page 54

## THE PROPOSED GENERAL SAFETY DUTY

The RIS proposes that ADSEs and their executive officers should be subject to a 'general safety duty'. This is problematic for a number of reasons including those listed below.

### **It will not be equivalent to negligence**

The RIS states that the proposed general duty of safety, '*will largely replicate the duty which would be owed in negligence*'<sup>11</sup> and will '*codify the existing negligence duty*'<sup>12</sup>. This is not so. A general duty of safety, as proposed in the RIS will create a new separate statutory obligation.

The doctrine of negligence is primarily based on case law. It has developed over time, and will continue to develop to take account of changing circumstances. It will simply not be possible to codify this body of law in such a way that it accurately reflects the existing law of negligence while at the same time allowing for further developments to be incorporated.

The concepts embodied in the statutory definition of the general safety duty will over time develop their own jurisprudence but this will not necessarily reflect the parallel developments in the law of negligence. The end result will be a new and distinct basis of liability, which, unlike negligence, will have criminal consequences.

### **The duty can only be assessed in hindsight**

For a person to be 'negligent', another person must have suffered damage. Negligence cannot exist without damage having been caused to someone. The principles of negligence that have been developed over time determine if that damage can be recovered, and if so from whom.

In other words, whether someone has been negligent is always determined after the event.

If the general duty is intended to '*codify the existing negligence duty*', it necessarily means that determining whether or not a person has breached the duty can only occur after damage has been suffered - ie after an accident has occurred. While this might have some deterrent value it is far from ideal. Surely it would be better for a regulator to be able to take action proactively if it saw a problem, rather than having to wait until there is an incident involving an automated vehicle.

### **WHS Laws are not analogous**

The analogy with workplace health and safety law is not helpful and indeed is potentially misleading. Employers (who owe the duty) are completely different to ADSEs (which as previously explained, will in reality be the vehicle manufacturers). Employers have a high degree of control over their workplaces. They can control who interacts in their workplaces and how they do so. In other words, they have a high degree of control over their obligation to provide a safe system of work.

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<sup>11</sup> Page 73

<sup>12</sup> Page 77

This is not the case for vehicle manufacturers. They cannot control who purchases their vehicles, how their vehicles are used and how their vehicles are modified and repaired. Accordingly, their ability to control the risk of the vehicle not being safe is limited. This is not to say that manufacturers should not have any obligations, rather they should not be subject to criminal sanctions, as is the case in the OH&S laws.

### **And not for the life of the vehicle**

The lack of control a manufacturer has over their vehicles is exacerbated when, as is suggested in the RIS, the general safety duty should be owed for the life of the vehicle. This is completely unrealistic. If the manufacturer has virtually no control over the vehicle immediately it is sold, how can the manufacturer be responsible for a vehicle which is, say, 10 years old has been repaired and possibly modified and has been owned by 3 or 4 different owners?

To reinforce the point, this is not to say that manufacturers should not bear some liability but the liability should be proportionate to their ability to control the risk and it should not include criminal sanctions.

### **Appendix C –Illustrative general safety duty.**

The key to the general safety duty is the concept of ‘reasonably practicable’: ie

*‘to eliminate risks to safety as far as is reasonably practicable; or  
..to minimize those risks as far as is reasonably practicable’ .*

‘Reasonably practicable’ is defined in paragraph 4. Given that it is such a pivotal phrase, it is worth looking at the definition in a little more detail. It has a number of components which are briefly discussed below.

- *The likelihood of the hazard or risk occurring*

When this is being considered, the hazard or risk will have eventuated – the likelihood will have become a certainty. Presumably therefore the ‘likelihood’ needs to be assessed before the incident, but without any guidance or some sort of framework, this will be difficult to do. The concept used in negligence in this context is ‘reasonable foreseeability – that is, the loss that was suffered was what a reasonable person in the circumstances could have been expected to foresee.

- *The degree of harm that might result from the hazard or the risk*

Again, this seems to be suggesting that the hazard has not occurred. Perhaps what this is intended to capture is that the harm suffered in the actual accident could have been different (presumably worse) but for some intervening circumstances. If so, this will be difficult to assess, especially given that there are some many other entities that could potentially be responsible, either partially or fully, for an accident involving an automated vehicle.

- *What the person concerned knows, or ought reasonably to know, about:*
  - *the hazard or risk; and*
  - *ways of eliminating or minimising the risk*

Remember that we are considering the Australian manufacturer and its executive officers. They have very little ability to influence the technical aspects of the vehicles that are being imported and sold here so this places a significant burden on them.

- *The availability and suitability of ways to eliminate or minimise the risk:*

Again, Australian manufacturers are not in the position of being able to modify or change autonomous vehicles to any real extent so they have very little ability to control the risk.

- *After assessing the extent of the risk and the available ways of eliminating or minimising the risk, the cost associated with possible ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.*

In many instances involving a motor vehicle accident there will be a risk, however unlikely, that someone will die or be seriously injured. When is the cost 'grossly disproportionate' to the risk of killing or seriously injuring a person?

***Option one has many advantages***

1. The FCAI is of the view that the existing regulatory regime will more than adequately deal with any in-service safety issues posed by the introduction of automated vehicles.
2. As pointed out by the NTC, optional one offers significant advantages. There is no point in repeating them, except to say that of particular relevance is that option one:

*'may potentially act as an incentive for industry to bring automated vehicle technology to Australia.'*<sup>13</sup>

***The disadvantages are overstated***

3. The NTC identifies a number of what it says are key disadvantages of option one. These are addressed below.
4. The NTC says that option one precludes a national approach to the in-service regulation of automated vehicles and that existing regulation does not place sufficient requirements on ADSEs, the executive officers, fallback-ready users, remote drivers and repairers.
5. Firstly, the ACL and the ADRs does provide a national approach to the regulation of automated and non-automated vehicles and it does so more than adequately.
6. Secondly, (as explained above) ADSEs are more than likely to be the manufacturer and accordingly will be adequately regulated through the ACL. There is no need to regulate ADSE executive officers and repairers are also adequately dealt with under the ACL. Fallback-ready users and remote promote drivers can be dealt with separately.
7. The NTC says that another key disadvantage is the potential for known, anticipated and unforeseen in-service safety risks of automated vehicles to go unaddressed. The known risks are already dealt with, as are risks that are anticipated (and therefore presumably known). It is simply not possible to formulate a regulatory response to an unforeseeable safety risk. Better to address such a risk, should it eventuate at the time.
8. At a more general level, most of the disadvantages referred to by the NTC relate in one way or another to the proposition that the current regulatory regime is piecemeal and inconsistent between the various states and territories in Australia. It is true that to a limited extent the regulation of vehicle safety is state-based but to a very large extent it is controlled at a nationally consistent level through the ADR's, the Motor Vehicle Standards Act and the ACL. To the extent to which there are inconsistencies between the States and Territories, the criticism applies equally to non-automated vehicles and should be addressed as a separate matter.

***At the very least - option one for now***

9. At the very least, the FCAI supports the comment made by the NTC that option one could be appropriate for the initial stages of commercial deployment, when the automated vehicle market in Australia will be limited in scope.

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<sup>13</sup> At p 119

**Questions to Stakeholders**

- 1. To what extent has the consultation RIS fully and accurately described the problem to be addressed, including the in-service safety risks? Please provide detailed reasoning for your answer.**

**FCAI response:**

The RIS addresses the vast array of issues associated with the deployment of ADS into the Australian market. New technology that can remove the driver from the loop, needs to be scrutinised fully to ensure there will be no safety risks, either to the vehicle occupants or to other road users. Manufacturers and Brands will be First to market players and will adopt a harmonised position, that will enable technology developments to meet global standards including R & D mitigating safety risks to all road users.

FCAI agrees that nationally inconsistent approaches and multiple regulators will impede the introduction of automated vehicles in Australia. Dealing with multiple regulators, each with a different regulatory requirement, is a significant administrative burden on the industry, and inconsistent and unique regulatory requirements may render the business case for bringing an automated vehicle to Australia negative. However, if multiple regulators are able to introduce and manage a consistent national approach to the regulation of AVs, then this would be similar to the current environment and would not add new costs.

- 2. Have we correctly identified the parties with an influence on the in-service safety of automated vehicles and accurately described their role? If you identify additional parties, please explain what their role is.**

**FCAI response:**

At this stage the RIS appears to cover the range of anticipated parties that could influence in-service safety performance.

From a Design & Development point of view, it is relatively clear who the ADSE is, however as the ADS passes down the line to fleet managers, owners, repairers etc, the capability to address issues from an ADSE responsibility may become problematic. The RIS also does not make it clear who the ASDE is in the case of personal imports, or if the original ADSE ceases to be in business in Australia.

Accordingly, the FCAI does not support the direction to deploy a general safety duty, nor a prescriptive safety duty, on brands that bring AVs to Australia.



**3. Have we accurately assessed each party's influence on the in-service safety of automated vehicles? If not, please provide details.**

**FCAI response:**

The classification of parties into Major, Moderate and Minor requires changing. Road Managers are clearly a major influence particularly signage and marking issues. Vehicle inspectors must also be a major influence as they will need to be able to demonstrate correct AV behaviour.

For the case of a service provider (data / information), greater responsibility is also warranted.

**4. Have we accurately described the regulation that already applies to relevant parties that would help ensure the in-service safety of automated vehicles?**

**FCAI response:**

Yes.

Further incentives may be required to ensure registered owners keep their vehicle's ADS up to date e.g. to comply with road rule changes. This could take the form of an annual re-registration requirement that all safety recalls and updates have been applied.

**5. Do you think there are any new risks posed by second-hand ADS components, after-market modifications or the transfer of ownership of automated vehicles, which may not be adequately addressed by existing regulation designed for conventional vehicles?**

**FCAI response:**

Currently conventional vehicles are covered under the First to Market regime with IPA/CPA being issued accordingly. Responsibilities of each party is well understood due to a wealth of knowledge and experience from both the Brands and Federal and State Administrators. Launching of new technology such as AV's is an extension of a proven robust structure.

There is no such legitimacy in the second-hand marketplace. The anticipated risks may be enormous. The use of genuine parts for ADS repair will become more critical, and the ADSE may need a regulatory permission to acquire the details of a transfer of ownership in order to continue the software update service to ensure ongoing safe operation of the ADS.

Acceptance of responsibility by any and all in the second-hand market for in-service safety may be overwhelming for most.

Incorporation of manufacturers' guidelines into each States' vehicle modification rules or the publication of national guidelines for vehicle modifications may be required. It is expected that these guidelines would cover general advice about maintaining clear views from the sensors and not significantly altering the vehicle's dimensions or components.

**6. Do you think the parties with an influence on in-service safety are sufficiently covered by Australia’s current legal framework?**

**FCAI response:**

Repairers – Yes in the case that they are a brand or authorised repairer.

Modifications – The guidelines will need updating.

Remote Drivers – no, they need to be deemed to be the driver. If they are only instructing the ADS with a new route they would not be deemed to be the driver.

Second-Hand Dealers – transfer or registration documents need to advise the ADSE in addition to the road authority.

Manufacturers – yes, the current regulatory framework is appropriate.

**7. Do you think that a general safety duty to ensure the safe operation of the ADS “so far as reasonably practicable” is appropriate to address the safety risks?**

**FCAI response:**

No.

The ACL and the new RVSA already place a sufficient safety duty on brands prescribing penalties for non-compliance.

Current rules cover 99% of market, seems this path is to address MAAS operators.

The ADSE approach would seem to be relevant for those that are not full volume importers or the heavy vehicle industry.

**8. If a general safety duty were introduced, which parties should it apply to?**

**FCAI response:**

It should apply to the same parties that the ACL applies to. However, this would not make particular sense as the ACL already requires that goods are safe at supply and are fit for purpose.

**9. If a general safety duty were introduced, should it apply on public and private land (such as residential driveways)?**

**FCAI response:**

Yes, in the case of consumer products, like the ACL (which already covers this) it should apply wherever the product is used in accordance with the manufacturer’s instructions.

**10. Should people injured by breaches of the general safety duty have a cause of action, or should the ability to enforce a general safety duty be limited to a regulator?**

**FCAI response:**

People already have this ability under common law and the ACL. There should be no change.

**11. Do you think there should be specific driving rules for ADS's like the Australian Road Rules, or would it be sufficient to simply require them to drive safely?**

**FCAI response:**

It would be sufficient to require the ADS to continue to comply with the road rules in-service and be exempt from the road rules that can only be carried out by a human driver.

Creating a separate set of road rules for automated vehicles risks potential inconsistencies between them and individual State road rules and creates an administrative burden to keep them harmonised. Revising current road rules to separate out the duties that only a human driver can perform may be sufficient.

**12. What approach to regulating the dynamic driving task for ADS's most efficiently achieves safe outcomes? Please provide reasons.**

**FCAI response:**

Revise template road rules to put the duties that only a human driver can perform into a separate section.

DIRDC to enforce the in-service safety using their new powers under the RVSA. There is no need for a separate General Safety Duty (GSD).

**13. What functions and powers does the regulator need to effectively manage in-service safety? Would these differ depending on whether the regulator is enforcing a general safety duty, or only prescriptive duties?**

**FCAI response:**

The new RVSA gives the current vehicle regulator DIRDC the proactive audit powers listed in the RIS to manage in-service safety, and the required enforcement powers listed in the RIS such as enforceable undertakings and recall powers for when more serious actions are deemed necessary or penalties are required.

Having DIRDC perform this function under the new RVSA would be the most cost effective solution for the government and the most practical as the necessary expertise is already in place at DIRDC.

A prescriptive safety duty would potentially require more administrative effort. A GSD would be built on common law principles of "so far as reasonably practicable" and may require external advice from time to time in practice.

No change to the current practise is the most efficient approach.

**14. Have we accurately described the scope of the regulatory task? Please provide data and evidence where possible to support your answer.**

**FCAI response:**

Yes from a technical perspective, but not from a regulatory perspective. It is likely that automated vehicles will initially be deployed in captive fleets as the new technology is proven. Manufacturers also need to ensure that high definition maps of the ODD are

available before automated vehicles can operate in that area. These constraints will slow the deployment of automated vehicles into the market.

**The assumption that the current regulatory environment is not able to perform the regulatory task for AVs is not correct. It can. The introduction of the concept of the ADSE and the ADSE Executive Officer does nothing to solve the minor regulatory gap that may potentially exist where there is not a human driver in control in the event of a failure. This concept needs significantly more exposure and testing and the FCAI would welcome the opportunity to expand on this.**

**15. Have we accurately captured the benefits of the regulator being:**

- **A government body or an independent body?**
- **A national body or state and territory level bodies?**
- **An existing body or a new body?**

**FCAI response:**

FCAI believes that a single national regulator should be used for new vehicle approval, while the in-service regulation of automated vehicles may be performed by the parties involved in the current arrangements. The administrative burden of dealing with multiple regulators is significant however it is built into the existing structure. It would be costly to now separate that out and the success of a full separation is, in our view, quite unlikely.

Separating the regulation of the ADS from the regulation of the vehicle may create jurisdictional uncertainties if the operation of the ADS is affected by the operation of the base vehicle.

**16. What are your initial views on how the regulator should be funded?**

**FCAI response:**

Funding implies some infrastructure input from Government. Is there going to be some financial support to assist the deployment of AV's? If AV's use the same roads as conventional vehicles with no added technology assistance, what would the funding be used for?

Any funding should come from consolidated revenue and not impose an extra tax specifically on automated vehicles.

The current homologation approach is suitable for funding the introduction of the vehicles. There should be no new regulator so funding will not be a new issue.

**17. Have we adequately and accurately captured the key legislative implementation models for in-service safety of automated vehicles?**

**FCAI response:**

No. If there was a need for new regulation FCAI would suggest a national law developed by the Commonwealth and implemented by the current state and territory administrations. In fact, we now have this to a large extent in the requirement for on-going compliance with the ADRs'.

**18. Do you think there are any transitional or constitutional issues that could arise when Australia establishes a national law for automated vehicles? If so, please explain what the issues are, and if they differ depending on the legislative implementation model used.**

**FCAI response:**

This question is better answered by the respective jurisdictions in the view of the FCAI.

**19. Have we accurately described how each option could work, as well as the advantages and disadvantages of each option?**

**FCAI response:**

Yes, although the costings applied are, as acknowledged, estimates. Further, the way the comparison of the various options is undertaken relies on a base case of zero. This is not appropriate, as for that to be the case option 1 would need to be exclusive of AVs being introduced in-service. FCAI is of the view option 1 has the highest potential of AVs being introduced. Alternatively, if a base case of zero is held then the delay costs area negative for the other options considered. This is displayed in the FCAI re-work of the table from the CBA included above.

**20. Which option most effectively addresses the problem statement? Please consider your answer in conjunction with the PwC cost-benefit analysis.**

**FCAI response:**

FCAI believe new legislation is not required to achieve the in-service safety of AVs.

**21. Is there another option, or combination of options, which could more effectively address the problem statement? In particular, please consider whether there is a preferable combination of the elements of each option (governance arrangements, duties, legislative implementation)**

**FCAI response:**

See opening statement under deployment of AV's.

## 4.0 CONCLUSION

The FCAI does not support NTC's recommendation and proposes the following:

- Introduction of an administrative safety assurance system as part of the current regulatory regime with the deployment of ADR90/01. As part of the approval process, a self-certification statement of compliance will need to be submitted for levels 3,4 and 5 automated driving systems that are not covered by the "02" series of UN R79, that will be included in ADR 90/01.
- The statement would be submitted to the Federal Government (DIRDC) as evidence of compliance to ADR 90/01 with the vehicle type approval application and would be included in the vehicle type approval.
- The ADSE is an unnecessary administrative step, but if introduced will be the type approval holder – most likely the manufacturer.
- The existing state transport / traffic legislation (eg: vehicle standards, rules), recall provisions to be introduced with the new Road Vehicles Standards Act (RVSA) and the Australian consumer Law (ACL) provisions all ensure that automated vehicle driving systems will be supported in the marketplace along with owner / operator responsibilities to maintain the vehicles.

Unique Australian requirements may act to limit the availability of these next-generation vehicles in Australia and restrict the uptake of these new technologies by Australian consumers.

The FCAI does not support creation of another "national body" to undertake vehicle certification or manage in-service safety. An additional body will add complexity and administrative cost to the process and may result in evaluation of vehicle technology by people without any expertise in that field.

### **Introduction**

1. The FCAI has considered the Cost-benefit analysis (CBA) report provided with the Regulation Impact Statement (RIS) in respect of the regulatory environment necessary to encourage the introduction of level 5 automated vehicles (AVs). FCAI notes that the CBA prepared by Pricewaterhouse Coopers Consulting (PWC) regularly refers to the paucity of hard data to support the cost-benefit analysis.
2. FCAI also noted that at a recent workshop the NTC indicated that if stakeholders did not agree with the combination of regulatory options considered in the RIS then the NTC would be willing to consider other approaches.
3. In short, as mentioned in our responses Part 1 and Part 2, while there are often benefits with a nationally consistent regulatory approach and a national law, FCAI supports the current regulatory regime remaining as it is more than adequate to encourage and protect the consumer as AVs are introduced. FCAI notes that state and territory regulators are currently adept at regulating in-service safety and this would readily include AVs.

### **CBA Methodology**

4. The fundamental issue that the FCAI has with the CBA is that it is of the view there will be a reluctance to introduce fully automated vehicles under the current regulatory environment. With this base assumption, additional regulatory systems are seen as an encouragement for faster adoption of the technology – FCAI does not believe that this will be the case.
5. In fact, FCAI is of the view that the introduction of personal liability for the ADSE Executive Officers will not only dramatically decrease adoption of the technology but it could exclude anyone offering the technology to the Australian market. This would have an enormous opportunity cost to the Australian economy.
6. Clearly a significant difference in the approach to regulation of AVs by the states and territories would not be a positive outcome. However, the current regulatory environment has many examples of a national approach to regulation albeit applied and managed by the states and territories. FCAI sees no difference to the environment once AVs are introduced.
7. The FCAI members accept that the in-service safety will, in part, be the responsibility of the vehicle manufacturer including aspects of the control of the dynamic driving task. FCAI understands, based on comments from the workshop in Melbourne on 5 August, that the perceived need to create a new entity referred to as the ADSE is driven by the need to regulate those entities that do not have the demonstrated capacity and experience in safety management of new motor vehicles in-service. If that is indeed the driver then the regulatory criteria could be applied to those particular parties, not to full volume importers with demonstrated commitment to in-service safety.

8. FCAI also notes that the CBA suggests that the use of a range of assumptions will allow stakeholders to understand the relative significance of the different issues considered. These assumptions have a material impact on the ranking of the options in the RIS.

9. The below table is from the CBA provided with the RIS:

Option	Direct Cost to Business and Govt.	Safety Impacts	Delay Impacts	Overall Impact	Ranking of options
	\$ million	\$ million	\$ million	\$ million	Rank
1	0.00	0.00	0.00	0.00	5
2a	-493.4	218.6	1046.9	772.1	4
2b	-493.4	437.3	1832.0	1776.0	3
3	-123.8	437.3	2617.2	2930.7	=1
4	-123.8	437.3	2617.2	2930.7	=1

10. FCAI is of the view the table, and thereby the ranking of the options, is not correct. The FCAI is of the view that the table should be as follows:

Option	Direct Cost to Business and Govt.	Safety Impacts	Delay Impacts	Overall Impact	Ranking of options
	\$ million	\$ million	\$ million	\$ million	Rank
1	0.00	437.3	0.00	437.3	1
2a	-493.4	218.6	-1046.9	-1321.7	2
2b	-493.4	437.3	-1832.0	-1888.1	3
3	-123.8	437.3	-2617.2	-2303.7	=4
4	-123.8	437.3	-2617.2	-2303.7	=4

11. While the quantum of benefit FCAI believes would apply under option 1 has simply been taken from the existing benefits table, the true benefits of option 1 would be higher. However, it is not necessary to calculate this detail for the purposes of observing the rankings.

12. The approach taken in the CBA is that a General Safety Duty (GSD) will apply in-service. As far as the FCAI is aware, the Ministers have not made this decision and in fact this RIS is in part an element to further consider that option. FCAI does not support the specification of a GSD for in-service safety of automated vehicles. The FCAI is also of the view that this assumption significantly impacts the CBA and weights against the current environment, Option 1. The new motor vehicle distributors in Australia are already subject to the Australian Consumer Law product guarantees, including in-service safety provisions, and this regulatory environment is sufficient for the purposes of automated vehicles.

13. There is no net benefit to the community or the economy through introduction of the ADSE concept along with the GSD requirements, potentially regulated through a new body.



## **Cost to Business of Regulation**

14. FCAI supports the CBA acknowledgment that international regulatory approaches are a significant driver for any approach to be adopted in Australia.
15. In terms of national consistency, the FCAI does not agree that there should be an administrative compliance cost added in the options considered to cope with potential national inconsistency. This compliance cost already exists, albeit born to some extent on different parties (e.g. national aftermarket repairers as well as authorised dealerships as well as vehicle suppliers). Given the nature of the regulations enforced by the various state and territory agencies, the inclusion or exclusion of responsibility for regulation of in-service safety of automated vehicles will not significantly impact the cost/benefit analysis.

## **Impact of Regulations on safety outcomes**

16. The CBA distinguishes between the options by artificially varying the % of safety benefits that might be realised under different scenarios. The fundamental flaw in this analysis is the assumption that the current regulatory environment will prohibit the realisation of the safety benefits of automated vehicles. This means that a zero benefit has incorrectly been assigned to the base case in the table within the CBA. In fact, the FCAI is of the view that 100% of the benefits will be realised under option 1 as the vehicles to be introduced will have the same attributes as those assumed to be introduced under the alternate scenarios, albeit without the delay caused by new regulation. FCAI is of the view there would be significantly less benefits under the other options with either prescribed or general safety duties. The only limiting factor is the roll out of infrastructure (hard and soft) to support ADS. This consideration impacts each of the options considered within the RIS.
17. FCAI is of the opinion that adoption of the RIS suggestion relating to the liability of ADSE Executive Officers would, if implemented, have the effect of starving the Australian market of the technology to a very large extent. FCAI has provided further comment on this at paragraphs 16 – 19 of Part 1 of this response.
18. The probability is that under an (AV) scenario in the event of an incident there will be more parties potentially liable for that incidence, or at least consideration of their contributing factors towards the incident. FCAI is of the view that the current regulatory environment handles this scenario adequately now. There is no evidence to credibly argue for a new regulatory environment to replicate the current regime. There is no doubt that all the parties that can have an influence on in-service safety might be held to a higher standard, but that does not mean there is a need for new regulation.
19. The RIS in fact acknowledges that existing laws do apply to vehicles in-service, however, there are gaps in the context of the introduction of AVs, giving examples of software updates and cyber-security breaches. FCAI fails to see how these examples are any different to the types of risks that are addressed today through the existing legal environment. For example, the consumer guarantees require that vehicles are (among other things) safe and durable. This demonstrates that the current regulations have an in-service safety requirement.

20. Added to the above, the new motor vehicle industry operates a very comprehensive vehicle recall campaign system to ensure that issues not identified at first supply are rectified in-service. The advent of AVs does nothing to alter this, albeit the rectification may be a little easier from a technician perspective if it is software related.
21. As mentioned the CBA notes in paragraph 3.2.2 that the current laws do provide the protections that are sought for the safety of vehicles in service but the RIS still suggests the creation of the ADSE, a nominal entity invented purely for administrative needs, to potentially provide net benefits “at the margin”<sup>14</sup>. The RIS seems to write off the benefits of the existing regulatory protection, and FCAI struggles to understand why. Why does the introduction of AVs make this system suddenly unworkable? Motor vehicle are very sophisticated now, why do we need new regulation for the next step in that sophistication. In fact, there is no evidence to suggest that the states and territories would take a different approach to in-service safety from that in place now, other than to investigate the appropriate changes (if any) to ensure a body corporate is responsible for the dynamic driving task.
22. The CBA table addresses the safety impacts from the introduction of automated vehicles. Again, zero cost or benefit has been added to option 1.
23. The current regulatory environment is, compared to the options on the table in the RIS, the most encouraging environment in which to introduce the vehicles, and to do so quickly. This introduction will improve safety standards, as all parties agree, and as such a more positive benefit should be included in this option.
24. The options the CBA has considered acknowledge the significant responsibility taken by the current full volume importers to ensure in-service safety. The CBA goes further to say that despite this there will, under the AV scenario, some ADSE’s will not have the same record of accomplishment and experience of ensuring safety in the context of the transport sector and that they therefore pose a safety risk for in-service vehicles<sup>15</sup>. To accommodate these potential new entrants the CBA applies a 95% weighting to the value of the safety benefits that would otherwise be achieved (which we can only assume means if the current full volume importers were responsible for all AV supplied and in service this figure must be 100%).
25. FCAI does not support the notion behind this partial benefit. Clearly it is in the best interests of the wider community that those entities that cannot demonstrate to the degree of assurance demanded by the authorities that they are able to maintain in-service safety should not be allowed past the “first supply” gateway, let alone the in-service environment.
26. In the view of the FCAI the cost in this column should be zero for those that cannot meet the standards demanded as they will not be allowed to offer a vehicle for in-service use.

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<sup>14</sup> CBA page 24

<sup>15</sup> Which is an interesting finding: there is a regulatory environment that works for existing full volume suppliers yet this same regulatory environment will not work, according to this assumption in the CBA, for new entrants. FCAI considers this a failure to enforce, not a failure of the regulations per se.

### **Specific Costs to Vehicle Repairers**

27. The CBA seeks feedback on whether any costs are likely to occur to vehicle repairers with respect to imposing specific duties for automated vehicles. FCAI would only add that the extent of their repair work is potentially more likely to impact fundamental safety systems in a fully (or partly) automated vehicle (e.g. bumper bar replacement or repair). So, the risk profile for automotive repairers, particularly body repairers, may become significantly higher.
28. FCAI does not support the conclusion at the end of S3.2.3 at page 30 of the CBA. There is no “base case of no regulation”. The current regulatory regime provides the foundation for significant safety benefits associated resulting from the introduction of AVs into the Australian market.

### **The Regulatory Approach**

29. Having provided the comment in the last paragraph above FCAI cannot accept the starting premise for this section: “In the previous section we established the need for regulation”.
30. That said and to aid in the overall conceptual approach to the RIS and the CBA, if there is to be an added form of in-service regulation it should be nationally consistent, administered by the current state and territory administrations, following the international lead on the appropriate regulatory environment for AVs.
31. FCAI members already have a requirement to provide product that is fit for purpose, including safety, and no amount of additional regulation is likely to replace that current requirement (nor should it).
32. FCAI notes that the CBA states a GSD is typically preferred where there is an environment of significant uncertainty. Interestingly, we are moving to an environment of increased certainty as fully automated vehicles are in fact an improvement on the current technology.
33. FCAI agrees as noted in the CBA there is a lack of acceptance of the need for a general safety duty. This lack of acceptance is for a very good reason which is covered within Part 1 of the FCAI response to this RIS.
34. FCAI has not re-considered in detail the different approaches to a regulatory environment incorporating the notion of a GSD, whether broad or specific. It is worth noting that the current regulatory environment, which would cater for the matters considered in the RIS, has zero additional cost to government and business. While FCAI has not reworked in detail the cost to business, clearly both a prescriptive and a general safety duty would have an added cost. What that cost is over the current cost to industry is moot, as FCAI is of the view compliance with product standards, including a safety standard, are already built into the Australian market, and a GSD will not improve the behaviours sought to be managed, but will add regulatory cost.

## **Who Should Regulate?**

35. FCAI does not see the benefit in the establishment of a new regulatory body. While the first supply of the vehicles is understandably regulated at the national level, the current in-service regulation is state by state. Assuming an agreed national model law were to be (unnecessarily) developed, then the state by state approach currently adopted would be acceptable. There would in a best case scenario be no added cost to the introduction of AVs as the current regulatory regime can accommodate that technology.
36. The CBA sets the cost of dealing with a national regulator at zero, and assumes additional cost for dealing with state/territory administrations. The fact of the matter is that under our current Federalism approach the state and territories do not disappear with the introduction of a national regulator. In fact, regulation of trailers, caravans and a variety of other non-automated vehicles will still be necessary so either these costs will remain or the delay costs for a national regulator in the CBA are significantly understated from the perspective of the political and legal costs involved in having the state and territory forgo an element of their regulatory roles.

## **Delay Costs**

37. The CBA considers four “key” factors in the roll out of the AVs. FCAI is of the view that a fifth factor, infrastructure and communications, should be added. Particularly in the case of infrastructure it is likely to be the single most influential factor in the successful roll out of the full benefits available from AVs.
38. FCAI appreciates the difficulties in assessing an accurate cost caused by delays in the roll out. FCAI at this stage has no better approach to offer and does not object to the notion of the halving the potential benefit as a safe approach, albeit some of the base numbers seem incredibly high. One comment we would make is that in applying a 5% factor when 5% of the fleet is AVs may underestimate the benefit. Should this in fact be a 10% factor (or 7.5%) assuming that accidents involve more than one vehicle, making one vehicle capable of automatic evasive action may have a doubling effect on the safety factor. FCAI considers that it may be the larger the fleet of AVs the greater the increase in safety for each AV added.
39. Fundamentally, the CBA argument is that regulation will drive the safety outcome. That is not so, automated vehicles will deliver the outcome and the current environment allows the potential safety benefits to be delivered now. Equally, there is no need for a prescriptive or general safety duty for the large majority of organisations looking to introduce vehicles into the Australian market, and for those that don't meet the standard acknowledged in the RIS they should not be authorised to place product in the market.
40. This leads to FCAI rejecting the earlier assumption in the CBA on this matter, that consumer will not purchase AVs without regulation. In fact, FCAI is firmly of the view that the most significant delay in uptake/supply of AVs will be through adoption of the ADSE GSD and accompanying ADSE Executive Officer liability. Added to this FCAI believes that the Government has an important role in encouragement of public enthusiasm for the roll out of AVs. This would provide a significant boost to consumer confidence and minimise and benefit lost due to delay in the introduction of the technology.

41. This section of the CBA goes further to note that regulating a GSD would not require any new actions by current stakeholders supplying vehicles in-service. This simply begs the question as to why it would even be worth considering a new regulatory environment for these parties?

### **Conclusions and Answers to Specific Questions**

42. To the FCAI it seems the CBA and to a large extent the RIS, are trying to determine the regulatory environment for parties that are already entrenched into the vehicle safety standards system. If this is in fact the case, there are two things that come to mind. The first is why would anyone want to introduce an enormous and costly new regulatory environment for already compliant and proactive industry sector fully meeting their safety standards? Secondly, if the Government sees it is necessary to regulate new entrants then regulate them. This could for example be achieved by deeming that the new regulatory environment applies to all parties that are not full-volume importers under the current scenario. At least then the cost falls when the risk is.

43. The underlying concept that regulation will increase uptake of AVs and reduce delays in the introduction is fundamentally challenged. The speediest uptake of AVs will be through the existing regulatory environment and more careful consideration of the relatively small gap identified by the RIS where a variety of participants may need to be considered as the party responsible for compliance with the road rules. The creation of the ADSE does not achieve this outcome and the advice of the FCAI is to carefully reconsider, in conjunction with industry, the appropriate solution.

### **Specific Questions**

*Q1. A) Does the framework described in Chapter 2 identify all of the costs and benefits associated with the options for regulating automated vehicles?*

No. There are considerable costs involved if a general safety duty is introduced. There are potentially extreme consequences if the concept of Executive Officer liability is confirmed.

There are significant benefits with the current regulatory environment which can, in the main, cater for the in-service safety of automated vehicles. Clearly a nationally consistent regulatory framework is preferable, however that does not necessarily mean that it is necessary to establish a national regulator. Given this, FCAI would also suggest a slight variance to the options considered and ask that a system whereby the states and territories are the regulators however the law is developed and adopted in the states and territories as developed by the Commonwealth, without a general safety duty.

This could require a re-casting of the CBA.

FCAI also believes that infrastructure and communications providers may have a significant bearing on all aspects of the introduction of the CBA and could be further considered.

*B) Are there other costs and benefits that we should consider in the CBA?*

The development and installation of the hard and soft infrastructure to allow the maximum benefits from AVs needs to be considered. While these costs do not necessarily impact one or other option differently, they could be the cause of a significant delay cost. FCAI does not

accept that the benefits through introduction of AVs will be increased under a new regulatory environment, when compared with the current environment.

AS mentioned above, the cost of introduction of a specific general safety duty would be significant. The impact would be that the major suppliers would either not supply or have an added insurance risk (assuming insurance is available) to cover any likelihood of a personal liability of the ADSE Executive Officer.

It is also evident that in determining the CBA, Option 1 has been set at the base case and does not include the benefits of early adoption of the benefits of AVs. In the view of the FCAI, the current environment is tested, it is complete and handles the complexity of the current automotive fleet far quite well. The costs and benefits associated with the small gap (potential new entrants), identified in the RIS but which is from clear to the FCAI, is not best resolved by simply passing off all liability to the ADSE and their Executive Officers.

Q2. A) The impact of regulation on safety: are the assumptions about the likely impact of regulation on safety outcomes for automated vehicles reasonable?

No, FCAI has provided commentary on the assumptions in the attached. FCAI is of the view that the maximum benefit will, when considering options 1 thru 4, be achieved under option 1. The CBA does not arrive at this same conclusion. The assumption that only 95% of potential benefits will be achieved under the current environment is misleading, as the introduction of options 2, 3 or 4 would significantly, and if not amended terminally, delay the introduction of AVs.

B) Prescriptive versus general safety duties: are the assumptions about the costs and benefits of the different regulatory approaches reasonable? Can you provide evidence to support any alternative assumptions?

Anecdotally a prescriptive safety duty will be more administratively expensive, and potentially less effective, than a GSD. It should be noted that a GSD is, as per the RIS, generally only considered when moving to an environment of greater uncertainty. Putting aside the fact that there already exists a safety duty for AVs through the ACL, the introduction of AVs is not moving to an environment of greater uncertainty.

C) Business costs: would introducing safety duties on ADSEs, ADSE executive officers or vehicle repairers increase their regulatory costs and if so, how? Would it result in increased safety benefits?

FCAI can only imagine what the insurance premiums would be for directors and officers liability for a company supplying AVs. The mere inclusion of the requirement institutes a sense of uncertainty, and uncertainty equates to risk in this environment which adds cost. Added to this, FCAI members they are already supplying the vehicles into the market and the regulatory cost is currently included. The reality is that the majority of suppliers of AVs will, most likely for the foreseeable future, remain FCAI members. Given this any new regulation will add cost, it is not necessary to determine how much, but simply to point out that the proposed regulation does add cost and achieves nothing over and above the existing regulatory environment.

D) Regulator costs: are the assumptions about the costs of a national regulator versus State and Territory regulators for in-service safety for automated vehicles reasonable? Can you provide evidence on likely operating costs? Would there be additional costs to government to regulate repairers under either a general duty or prescriptive duties?

FCAI notes the calculations used in the CBA to manage the cost of an in-consistent regulatory environment. While the costs determined appear reasonable, the actual benefit of a nationally consistent approach needs to be factored in. FCAI draws attention to the comparative of the ACL, where there is a national approach and there are administrative arrangements in each state and territory. This approach in fact reduces cost as the delivery structure is already in place for a host of other reasons, hence there is no need to re-invent a complete new regulatory body. The same outcome would be achieved with AVs if we have a nationally consistent approach (i.e. model law or the like) and administration through the current state and territory authorities. FCAI cannot advise about costs to Government.

*E) Take-up of automated vehicles: are the assumptions about the take-up of automated vehicles reasonable? Can you provide evidence to support any alternative assumptions?*

FCAI is of the view that the approach adopted is reasonable, however it should be noted that the take up of automated vehicles does not necessarily equate to their safety benefit. The reason for this is that in many locations or circumstances the actual capacity of the vehicle to operate in fully autonomous mode will be limited to their operational design domain. In other words, while full safety benefits will apply in purpose built environments the infrastructure or communications improvements that may be needed in other environments may take time. In suggesting this, FCAI is unaware of the actual type of technology that will be included in vehicles in the next 15+ years and has assumed there will need to be some interface with infrastructure to achieve full benefits.

One point that the FCAI would like to note is that the Government/s have an important role in encouraging the take up. This would include assuring the consumer that the complete operating environment is in place and has been thoroughly assessed through agreed standards. Without this, there may be some hesitation in adoption of such technology.

*F) Delay costs: what is the likelihood that the regulatory approach will delay or bring forward the roll-out of automated vehicles in Australia. How would each of the options be likely to contribute to changes in the roll-out of automated vehicles?*

The likelihood that the suggested regulatory approach (option 3 or option 4) would delay the roll-out is high. Please see our estimate of the delay costs in the table incorporated into our comment on the CBA above. FCAI has not considered in detail the delay cost difference between a prescribed or general safety duty.

FCAI is of the view the table, and thereby the ranking of the options, included in the CBA, is not correct. The FCAI is of the view that the table should be as follows (note that if it is not accepted that the values at option 1 can be other than zero as it is the base case, then the values attributed to delay impacts for options 2 thru 4 should be negative):

Option	Direct Cost to Business and Govt.	Safety Impacts	Delay Impacts	Overall Impact	Ranking of options
	\$ million	\$ million	\$ million	\$ million	Rank
1	0.00	437.3	0.00	437.3	1
2a	-493.4	218.6	-1046.9	-1321.7	2
2b	-493.4	437.3	-1832.0	-1888.1	3
3	-123.8	437.3	-2617.2	-2303.7	=4
4	-123.8	437.3	-2617.2	-2303.7	=4

While the quantum of benefit FCAI believes would apply under option 1 has simply been taken from the existing benefits table that PWC developed, the actual benefits of option 1 would be higher. However, it is not necessary to calculate this detail for the purposes of observing the rankings.

Q3. Does the evidence presented in the analysis support the conclusions made in Chapter 5? If not, what alternative conclusions have you drawn?

No. FCAI is of the view that any new regulation, particularly one that has a requirement for an additional safety duty over and above the ACL requirements (and the initial assessment through homologation) would significantly delay the introduction. When the Executive Officer liability is added to the equation, the cost of the vehicles (to cover this potential personal liability) may prove exorbitant.

FCAI has concluded that option 1 would be most likely to bring the benefits from AV to the Australian market in the most efficient manner.

FCAI notes that if the Government wishes to encourage the introduction of AVs then significantly greater consultation is necessary, particularly with those most affected. This has been missing to date.



## GLOSSARY

Abbreviation	Term	Description
1958 Agreement		Agreement concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the basis of the United Nations Regulations, Revision 3 which entered into force on 14 September 2017
ACL	Australian Consumer Law	
ADR	Australian Design Rule	
ADS	Automated Driving System	<p>NTC Consultation RIS; The hardware and software that are collectively capable of performing the entire dynamic driving task on a sustained basis. It is a type of automation system used in vehicles operating in conditional, high and full automation.</p> <p>SAE J3016; The hardware and software that are collectively capable of performing the entire dynamic driving task (DDT) on a sustained basis, regardless of whether it is limited to a specific operational design domain (ODD); this term is used specifically to describe a level 3, 4 or 5 driving automation system.</p>
ADSE	Automated Driving System Entity (NTC Consultation RIS)	The legal entity responsible for the ADS.
DDT	Dynamic driving task (SAE J3016)	<p>All of the real-time operational and tactical functions required to operate a vehicle in on-road traffic, excluding the strategic functions such as trip scheduling and selection of destinations and waypoints, and including without limitation:</p> <ul style="list-style-type: none"> <li>• Lateral vehicle motion control via steering (operational);</li> <li>• Longitudinal vehicle motion control via acceleration and deceleration (operational);</li> <li>• Monitoring the driving environment via object and event detection, recognition, classification, and response preparation (operational and tactical);</li> </ul>

		<ul style="list-style-type: none"> <li>• Object and event response execution (operational and tactical);</li> <li>• Manoeuvre planning (tactical); and</li> <li>• Enhancing conspicuity via lighting, signaling and gesturing, etc. (tactical).</li> </ul>
DDT fallback	Dynamic driving task (DDT) fallback (SAE J3016)	The response by the <i>user</i> to either perform the <i>DDT</i> or achieve a <i>minimal risk condition</i> after occurrence of a <i>DDT performance-relevant system failure(s)</i> or upon <i>operational design domain (ODD)</i> exit, or the response by an <i>ADS</i> to achieve <i>minimal risk condition</i> , given the same circumstances.
DIRDC	Federal Government Department of Infrastructure, Regional Development and Cities	Responsible for administering the vehicle certification type approval system under Motor Vehicle Standards Act (to be replaced by the Road Vehicle Standards Act).
HMI	Human machine interface	
IWVTA	International Whole of Vehicle Type Approval	
ODD	Operational design domain	SAE J3016; Operating conditions under which a given <i>driving automation system</i> or <i>feature</i> thereof is specifically designed to function, including, but not limited to, environmental, geographical, and time-of-day restrictions, and/or the requisite presence or absence of certain traffic or roadway characteristics.
OICA	Organisation Internationale des Constructeurs d'Automobiles	International organisation of motor vehicle manufacturers and represents the industry at international forums such as WP. 29.
RVSA	Road Vehicle Standards Act	
SAE	Society of Automotive Engineers	
SAE J3016		SAE Surface Vehicle Recommended Practice, Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles, J3016, June 2018.
SAS	Safety Assurance System	
UN R	United Nations Regulation	UN Regulations contain provisions (for vehicles, their systems, parts and equipment) related to safety and environmental aspects. They include performance-oriented test requirements, as well as administrative procedures.

WP. 1		The UNECE Global Forum for Road Traffic Safety
WP. 29		The UNECE World Forum for Harmonization of Vehicle Regulations