

## Pathway to Driverless Cars: proposals to support advanced driver assistance systems and automated vehicle technologies

This document is in response to the call for evidence in relation to the legislative and regulatory framework for developing and testing driverless cars issued by the Department for Transport in July 2016 and titled “Pathway to Driverless Cars: Proposals to support advanced driver assistance systems and automated vehicle technologies” (the “Consultation Document”).

Mills & Reeve is a national UK law firm with 117 partners and a total strength of around 900 staff operating from 6 offices including London, Manchester, Birmingham and Cambridge. Mills & Reeve was named as one of the top five UK law firms in the latest edition of industry "bible", *Chambers UK*. This year more than 60 per cent of our service areas are ranked in Band 1, the highest percentage of any top law firm.

Mills & Reeve acts for a range of clients who have an interest in the development of driverless cars including automotive manufacturers and suppliers to automotive manufacturers and insurers. We advise a range of clients on issues relating to driverless cars and therefore have a vested interest in seeing that a robust legal and regulatory framework is put in place.

For the purpose of this response, we have quoted relevant headings from the Consultation Document and have also repeated the questions asked.

## WHAT ARE WE PROPOSING

**Question 1A: Do you agree with the proposal to review the regulatory framework to enable the use of advanced driver assistance systems and advanced vehicle technologies as they come to market in the UK?**

Yes.

### Why?

We agree with the principle of responding to technological changes as they come to market. However, we consider that there are risks involved with the approach outlined in the consultation document “Pathway to Driverless Cars: Proposals to support advanced driver assistance systems and automated vehicle technologies”.

With increasing degrees of automation drivers will increasingly come to rely on the technology within the vehicle to deal with both normal driving tasks and emergency situations. A gradual transition towards greater autonomy may lead drivers to place unwarranted reliance on vehicle systems with the result that they are not in reality “in-the-loop” when required to take action. Manufacturer instructions to drivers to maintain focus and be ready to take back control of the vehicle when required may be effective in some instances, but the following issues arise:

- Reduced reaction time at low workloads and a resulting inability to regain sufficient control within a sufficiently short time period
- Distraction while the vehicle is in autonomous mode
- Loss of driving skills
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As we explained in our response to the consultation carried out in August and September 2014, “Review of the legislative and regulatory framework for testing driverless cars” (copy attached), we consider that the best way forward is to require the inclusion of **autonomous critical event control** systems within vehicles having more than a minimal degree of autonomous function.

Google is reported to have introduced a driverless vehicle without a steering wheel or pedals after having allowed its own employees to use test vehicles. Despite repeated warnings, after an initial period of monitoring, car users would relax and let the system take over. They would then become distracted and no longer actively monitor the vehicle. Google is then reported to have concluded that it was too risky to create a system relying on drivers to take back control in an emergency. We understand that Google concluded that it was safer not to let the human drivers retake control in an emergency situation.

[https://www.washingtonpost.com/local/trafficandcommuting/self-driving-cars-reach-a-fork-in-the-road-and-automakers-take-different-routes/2016/08/24/5cdeaba8-63d9-11e6-8b27-bb8ba39497a2\\_story.html](https://www.washingtonpost.com/local/trafficandcommuting/self-driving-cars-reach-a-fork-in-the-road-and-automakers-take-different-routes/2016/08/24/5cdeaba8-63d9-11e6-8b27-bb8ba39497a2_story.html)

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In our view, as increasing levels of automated driver assistance features are introduced, the autonomous emergency systems become increasingly critical such that they should be mandated in vehicles with increasing levels of automated driver assistance. For example, if a highway assist function is available on a vehicle, there should be a complementary autonomous emergency braking system which is capable of operating at all times and speeds that the highway assist function is in operation. Any limitations to the AEB system (for example if it only operates at speeds up to 110kph), should mean that the highway assist function is similarly limited (ie is only capable of functioning at speeds up to 110kph). Such an approach ensures that the increased risks identified above of the advanced driver assist functions are mitigated by the requirement to include complementary **autonomous critical event control** systems.

## **Question 1B: Do you agree that we should follow a rolling programme of regulatory reviews?**

Yes.

### **Why?**

We agree that a rolling programme of regulatory review makes sense given the uncertainty of the direction which this rapidly advancing technology may take. However, we reiterate the caution outlined in our response to 1A. As automation develops, plans to address **autonomous critical event control** should also be developed. Leaving this aspect to some future date brings an undue level of risk which could, in the event of a serious accident or number of accidents, seriously damage consumer acceptance of driverless technology.

## **Question 1C: In the first wave of regulatory change, with the exception of insurance, should we only consider those advanced driver assistance systems or automated vehicle technologies that are likely to come to the UK market in the next 2-4 years?**

Yes.

### **Why?**

We consider that this is appropriate provided that it takes place alongside an analysis of critical event control as outlined above.

We would point out that the gradual introduction of driver assistance systems, which has been a widely used model to date, may no longer be appropriate if drivers find themselves increasingly “out of the loop”.

Ford, for example, has recently announced its aim to have fully autonomous vehicles in commercial operation within five years. CEO Mark Fields has said:

*“As little as four years ago, our approach was aligned with the thinking of most automakers today, which is taking incremental steps to achieve full autonomy by*

*advancing driver assist technology. This is not how we look at it today. We learned that to achieve full autonomy, we'd have to take a completely different pathway."*

<https://www.linkedin.com/pulse/fords-road-full-autonomy-mark-fields>

Clearly, in the absence of a steering wheel and pedals, the human driver taking back control will no longer be possible. With that prospect in view, we consider it to be appropriate to establish the minimum standards required for an autonomous vehicle when taking emergency or evasive action to be considered now, rather than left to a later date.

**Question 1D: Are you aware of any upcoming advanced driver assistance systems or automated vehicle technologies which this document does not cover?**

Yes.

**Which systems?**

As discussed in our response to 1C, the introduction of full autonomy with no driver supervision is likely to occur sooner than the consultation document anticipates.

## **INSURANCE**

### **A PROPORTIONATE RESPONSE**

**Question 2A: Do you agree with the proposition to amend road vehicle compulsory insurance primary legislation in Part 6 of the Road Traffic Act 1988 to include product liability for automated vehicles?**

Yes. But with reservation.

**Why?**

Currently, injury caused by a product defect in a vehicle is not insured through a driver's insurance policy. This proposal would therefore represent a change to the current structure of motor insurance.

Adjusting the current structure of motor insurance, which has worked well for many years, to react to new technological change would seem something of a knee-jerk reaction to changing technologies. However, overall the proposals look practical and sensible and will feel comfortable to consumers as being an extension of the regime that we already have and are used to.

If a decision is taken to extend current insurance in this way, we would not recommend doing this unless the extension covered vehicle product liability generally. We think trying to distinguish between product liability related to automated features or vehicles as opposed to other vehicle product liability issues (a distinction which is highly likely to become blurred as the technology develops) would be unwise, unclear and would be likely to lead to a

proliferation of litigation with complex investigations of whether or not the default in question related to an autonomous feature or not (and therefore whether it was covered by the compulsory motor insurance or not). Obviously, making a change of this type would require consultation with the insurance industry to ensure that policy pricing would not be seriously affected.

**Question 2B: What, if any, other changes to the insurance framework should be considered to support use of AVT? Why?**

No comment.

## **THE BENEFITS AND IMPACTS OF CHANGING INSURANCE FOR AUTOMATED VEHICLES**

**Question 2C: If you are an insurer, vehicle manufacturer or other organisation directly affected by these changes, what costs do you estimate your organisation will incur as a direct result of these changes?**

No comment.

**Question 2D: Do you anticipate the cost of insurance products for vehicles with AVT to be higher than for conventional vehicles?**

No.

**By how much and why?**

While there is a risk that these proposals may initially make the insurance for automated vehicles more expensive. We anticipate that as autonomous vehicles develop an operational history their improved safety profile will counter this.

**Question 2E: Do you anticipate the introduction of vehicles with AVT to increase insurance premiums for conventional vehicles? Why?**

No comment.

**Question 2F: What do you estimate the costs will be to insurers, vehicle manufacturers, or other parties of providing product liability cover for automated vehicles, and why?**

No comment.

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**Question 2G: Do you anticipate that this cost will be passed on to the consumer? Why, and by how much?**

No comment.

## **FAILURE TO MAINTAIN AUTOMATED VEHICLE TECHNOLOGY, INAPPROPRIATE USE, AND CIRCUMVENTING AUTOMATED VEHICLE TECHNOLOGY**

**Question 2H: Do you agree that where a driver attempts to circumvent the automated vehicle technology, or fails to maintain the automated vehicle technology, the insurer should be able to exclude liability to the driver but not to any third parties who are injured as a result? Why?**

Yes. Although we would expect circumventing the technology to be treated differently to a failure to maintain the technology.

We would expect attempts by the driver to circumvent the technology to amount to criminal conduct and would expect appropriate sanctions or penalties to follow.

We would expect it to be a requirement of the technology's standards that it ceases to operate if not maintained correctly or in accordance with the time scales stipulated by the manufacturer. In this regard, we would expect the system to activate a "safe" mode in which the system would fail to operate if a malfunction is identified, if an upgrade is not made, or if it is not maintained in accordance with the manufacturer's required service intervals.

## **THIRD PARTY HACKING**

**Question 2I: Do you agree that in the event of 3rd party hacking of an automated vehicle, an insurer should not be able to exclude liability, as set out in the Consultation Document?**

Yes.

### **Why?**

Risks arising from hacking should be covered by insurance. The insurers would develop an understanding of the security of each manufacturer's system and would price that risk into its policies (in a similar way to the theft element of insurance policies is priced).

## **PRODUCT LIABILITY AND AUTOMATED VEHICLES**

**Question 2J: Do you agree that the product liability and insurance requirements for automated vehicles should:**

- **follow the normal rules on product liability with different rules depending on whether the injured party was an individual or a company?**

- be limited by the ‘state of the art’ defence, as set out in the Consultation Document?

**Why?**

**Question 2K: Alternatively, should we extend insurance/liability rules specifically for automated vehicles?**

**Why?**

**Response to 2J and 2K.** Altering the liability regime specifically for one product category has the potential to cause confusion and generate disputes as it adds further complexity to an already complex area of law. However, we can see the merits in introducing a specific regime for autonomous vehicles in order to promote public trust and acceptance. This would need to define very clearly what falls within the category.

## **PUBLIC SECTOR VEHICLES**

**Question 2L: Do you agree with the proposal that, with respect to automated vehicles, the public sector can continue to self-insure but, where they choose to self-insure, they would then be required to step into the insurer’s position in respect of product liability damages? Why?**

No comment.

## **AN ALTERNATIVE OPTION: A FIRST PARTY INSURANCE MODEL**

**Question 2M: Do you agree that an alternative first party model option would not be proportionate while automated vehicles represent a small proportion of the fleet?**

**Why?**

No comment.

**Question 2N: What do you anticipate the cost of implementing a first party insurance model would be?**

No comment.

## **NEXT STEPS**

**Question 2O: Do you have data to support your answers on insurance for automated vehicles?**

No comment.

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## HIGHWAY CODE AND CONSTRUCTION AND USE REGULATIONS HIGHWAY CODE ADAS GUIDANCE

**Question 3A: What are your views on amending the text of the Highway Code in a way that would clarify rule:**

- 150, related to use of driver assistance systems and distraction?
- 160, relating to driving with both hands on the wheel?

This issue highlights the problems arising from partial autonomy. Drivers should of course familiarise themselves with and abide by the instructions for the use of autonomous features. However, we consider it to be unrealistic to required full attentiveness in situations where the car is operating in autonomous mode. Driver distraction is, we feel, inevitable in a situation where driver workload is significantly reduced. Our comments above regarding the necessity of complementary **autonomous critical event control** systems are relevant here.

## ENABLING PLATOONING

**Question 3B: Do you agree with the proposition to allow platooning by relaxing Highway Code rule 126 (which recommends a 2 second gap between vehicles)?**

Yes.

### Why?

To achieve the advantages of platooning will require this relaxation. Again, requiring complementary **autonomous critical event control** systems while a vehicle is platooning should be seen as a prerequisite to the operation of a platooning feature or function.

**Question 3C: What, if any, other restrictions should be considered regarding use of platooning technologies, and why?**

No comment.

## FREEING THE DRIVER TO MAKE USE OF THE AUTOMATED VEHICLE

**Question 3D: Do you agree with the proposition that specific and implied driver distraction restrictions are not relaxed at this time?**

Yes. But with reservation.

### Why?

We consider that the rate of progress of the technology is such that it is appropriate to address the **autonomous critical event control** systems that will be required so as to

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enable the relaxation of driver distraction rules. Given the difficulty of ensuring driver attentiveness at all times with even a limited degree of autonomy we consider that it is unrealistic to expect drivers to abide by instructions to remain fully alert and in control once the car is operating without human input for at least some of the time. We feel that this would expose both manufacturers and drivers to liability in situations where it is not realistic to require attentiveness.

## CONSTRUCTION AND USE REGULATIONS REMOTE CONTROL PARKING

**Question 3E: Do you agree with the proposed approach to enable remote control parking by clarifying:**

- **Regulation 104 (the driver should be in a position to be able to control the vehicle)?**

Yes.

- **Regulation 107 (switching off the engine when the vehicle is not attended)?**

Yes.

- **Regulation 110 (not using hand-held mobile phones while driving)?**

Yes.

### **Why?**

We consider these proposals to be sensible.

## MOTORWAY ASSIST

**Question 3F: What are your views on amending Regulation 109 to allow drivers to view TV/display screens displaying information that is not related to the driving task, while driving?**

We consider that the suggestion that the relaxation may be taken further in future should be addressed immediately, as fitting in with the reality of the situation where the vehicle is operating in autonomous mode. However, this would need to be done alongside the development of rules for **autonomous critical event control** as outlined above.

## THE BENEFITS AND IMPACTS OF ADAS

**Question 3G: Do you have any data or evidence of the safety benefits of these advanced driver assistance systems?**

No comment.

**Question 3H: Are there any other, non-safety, impacts (including costs) of ADAS, which we have not covered in this consultation document?**

No comment.

**Question 3I: Please supply any data to support your answers.**

No comment.

Should you require more information on the responses above please contact Stephen Hamilton or Isabel Teare at Mills & Reeve LLP using the details below.



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