Kennedys – Written evidence (AUV0046)

Legal advice in black and white

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Our lawyers provide a range of specialist legal services across many areas such as: aviation, construction and engineering, healthcare, insurance and reinsurance, public sector, rail, real estate, retail, shipping and international trade, sport and travel and tourism. Our expertise in insurance claims includes cyber risks, marine and product liability. In the personal injury claims space, we are leaders in catastrophic injury, employers’ and motor liability, occupational disease and public liability.

We handle a wide range of insurance disputes and litigation with a client base that includes general insurers, global composites, Lloyd’s syndicates, underwriters, self-insured PLCs and self-insuring government bodies.

Preamble

Kennedys shares the Government’s desire to ensure that the UK is at the forefront of emerging automated vehicle technology – both with regard to the improved safety aspects that such technology can bring, as well as the commercial advantages to business. To that end, we agree that investment in this technology should be embraced and championed.

In the midst of domestic and international political upheaval, we are pleased that the UK Government is maintaining momentum with its domestic policy agenda with regard to autonomous vehicles. In doing so, it is demonstrating the UK’s capability for innovation and policy leadership, which is to be encouraged.
The UK has a robust and extensive regulatory system that is agile enough to be able to respond to new innovation and lead the way in providing a suitable regulatory framework. This will support the UK to maintain its position as a global leader – something of particular importance in light of the UK’s impending departure from the EU.

**Regulatory reform**

Regulation should support technological advancement rather than hinder it, whilst maintaining the safety of vehicle users or those who may be affected by a vehicle’s use. Taking a sensible approach to regulatory reform is vital – too much, too soon could be damaging.

We support wholeheartedly the Government’s intention to keep regulatory reform under constant review as the technology evolves. Providing for an ongoing and agile regulatory review means that, as far as is possible, long-term technological change is anticipated. This will ensure that future regulatory change is seamless and occurs only when necessary to reflect a major leap in technological advancement.

While we agree that the UK has the capability to adapt its legal and regulatory framework to accommodate the development of this technology, it is too early to redesign insurance law to take account of driverless vehicles. Amending the Road Traffic Act 1988 to extend compulsory cover to product liability will, in our view, suffice for now.

In time, we have every confidence that highly or fully autonomous vehicles will be considered a different class of vehicle requiring additional compulsory cover. It is most likely that one go-to entity will provide all necessary cover – rather than a set of entities – and that such requirements can be encapsulated in a single piece of legislation. It also recognises the fact that some vehicle users may wish to continue to use more traditional vehicles for the foreseeable future. For those users, the more traditional insurance model will need to continue in parallel with the new insurance regime for highly or full autonomous vehicles.

Input into the process by industry stakeholders is vital and must be ongoing. We, therefore, urge the Government to create an industry-wide group that would advise ministers and civil servants on how the technology is developing to inform their thinking on how regulation needs to change with it. One of the main objectives of such a group should be to reach a consensus on what type of vehicles are likely to arrive on the UK market over, say, the next 10 years. This would greatly assist the government with regulatory planning.

**Legal practice**

Looking at how driverless vehicles might impact defendant legal practice, is an important strand to developing this technology. Such an aim must go hand in hand with causing as little disruption to legal practice and the justice system as possible, not least due to the risk of legal-friction-costs generation – an aim which the current and previous Government has worked so hard to address.
The Government should also be alive to and explore now the discussion point as to whether claims involving autonomous vehicles are suitable to go through the online Claims Portal, which facilitates the process of low value personal injury claims covered by the Ministry of Justice’s pre action protocols.

As the Government is aware, there are costs benefits of claims remaining in the Claims Portal. However, based on the experience to date, and despite best (and ongoing) efforts to achieve a proportionate and fair claims process, we anticipate that claimant solicitors will look to keep automated vehicle road traffic accident (RTA) claims out of the Claims Portal for cost-building purposes. Claimant firms will pursue claims on the basis that they do not contain solely a negligence issue vis a vis the defendant and there could be issues of product liability, allegations of potential defects with the vehicle which would (under the current Rules) render these types of claims as complex and, therefore, not fit for the Claims Portal.

In our view, as a defendant firm, there is no reason why claims involving vehicles that make use of automated vehicle technology cannot remain within the RTA Claims Portal. The defendant’s default positon would be that the Portal should continue to apply to all low value RTA claims (up to £25,000) unless the claimant suggests otherwise i.e. an allegation of defective product.

Product liability cases are notoriously expensive. Typically, expert engineering evidence would be necessary. Therefore, one consideration to highlight now would be to amend the protocol to ensure the claimant’s claim for damages remains in the Claims Portal and the product liability aspect be left out – with a subrogated claim being brought against the relevant manufacturer/producer of the product (similar to the way credit hire claims are currently dealt with). This would not represent a significant amendment. The wider context and objective to continue to seek ways to drive out bad behaviours should, however, remain an integral part of the Government’s ongoing regulatory review and discussion with industry.

**Impacts and benefits**

**Question 1: What are the potential applications for autonomous vehicles?**

Much has been written in the academic space about the potential of autonomous vehicles to significantly improve transportation safety and offer immense social, economic and environmental benefits.

We recognise that potential. From our perspective as an insurance dispute resolution law firm, the UK has a strong car manufacturing expertise to draw on in developing this technology and doing so could boost UK GDP and increase productivity levels.

It is clear that car manufacturers are innovating to stay competitive. Developing autonomous vehicles is already creating a battle between large information technology companies and car manufacturers – the former no doubt having an eye on the significant profit that can be made from developing the operating systems.
The connected road system that will be required to accommodate autonomous vehicles also presents opportunity for the UK construction industry – which will need to work with car manufacturers to ensure infrastructure dovetails with technology in order to create a connected environment. This scenario is likely to have both domestic application as well as overseas where UK expertise is sought in creating a connected environment.

As well as the commercial advantages to business, the other key potential application of emerging automated vehicle technology is with regard to the improved safety aspects that such technology can bring for the consumer.

As driving functions become increasingly automated (and are supported by a suitable connected road system), the shift in responsibility from the human driver to the vehicle itself becomes apparent. Therefore, in the race to develop driverless technology and get it to market, it is vital to pause and analyse the safety and liability concerns.

While the Government and business are both eager to get automated vehicles on the road, insurers have called on Government to amend legislation proportionately and remain agile to make future changes. We agree with that approach. Such consideration should, in our view, be done on an ongoing basis to allow safety and liability regimes to respond to anticipated technological change – thereby allowing innovation to prosper and integration of vehicles to occur within a controlled framework.

Please see question 13 below for further consideration of the liability aspects.

Whilst much of the current debate has centred around vehicles used on the highway network, the Select Committee have rightly identified that autonomous vehicles may have a wider application in a variety of sectors ranging from warehousing to farming; anywhere where a vehicle is used. The possibilities for using robotic technology are infinite. However, the application of such technology in any setting must be after full consideration of the associated safety and liability issues.

**Question 2: What are potential user benefits and disadvantages from the deployment of autonomous vehicles?**

As a leading dispute resolution law firm, we act for motor and other insurers and self-insured organisations.

Looking at the cost of an insurance product for autonomous vehicles, the advantages and disadvantages can be summarised against the following timeline:

**Immediate future:** when the first vehicles with AVT are rolled out on to UK roads, manufacturers will take steps to try and encourage uptake of such vehicles and seek to artificially reduce or subsidise insurance cover at the point of sale.

However, over time and in the shorter term, the cost will be passed onto the consumer.
Short term: whereas motor manufacturers who have invested heavily in this technology may at first try and promote it by discounting at-point-of-purchase insurance, we believe it is most likely that, after the initial launches of autonomous vehicle technology (AVT), cover for autonomous vehicles will be more expensive.

Initially, underwriting risk for such vehicles will be difficult and take several years to form an accurate pricing model based on established levels of first and third party claims, frequency of claims and so forth. Underwriters will need to build up a body of data on which to assess accurately the risk, whilst bearing in mind that the full benefit of AVT vehicles (in terms of accident reduction etc) will not be seen until a significant number of vehicles on the road are deploying such systems.

Medium term: as underwriters’ experience of these products increases, the cost of insurance premiums for AVT vehicles is likely to become roughly equivalent to conventional vehicles.

Long term: as the larger proportion of vehicles on the road become AVT, it is most likely that the cost of insuring conventional vehicles will escalate considerably. Conventional vehicles will not be able to communicate with the connected road systems or other vehicles. When the road system is less mixed (between various levels of manual and AVT) and AVT dominates, conventional vehicles will almost certainly be considered the bigger risk to underwrite, on the sound assumption that AVT vehicles in that environment will be safer to drive and more reliable.

The reality: for the foreseeable future, a vast swathe of the UK will not be able to be part of a connected road system (rural communities in particular) necessitating a multi vehicle types insurance environment. If, as predicted above, insurance for conventional vehicles is significantly higher than vehicles with AVT, we are likely to see resistance in the consumer market.

It will depend on how society’s vehicle use changes over time and indeed how widespread any connected road system becomes with the introduction of autonomous and connected vehicles.

When the larger proportion or a significant proportion of vehicles on the road have AVT, it is likely that conventional vehicles on un-connected (or maybe even more so on connected roads) will cause most crashes.

Question 3: How much is known about the potential impact of deploying autonomous vehicles in different sectors?

Insurance sector

Please see Question 2 above for the broad impact on the consumer with regard to the cost of insurance.

For insurers themselves:
**Shorter term:** difficulties will arise with the application of AVT on the road and there will be a flurry of claims in the first few years. There will be some frictional litigation too.

There will also be some additional costs to our insurer clients, including:

- Re-gearing their insurance products and policy wordings.
- Staffing and resourcing for first and third party claims.
- Training to upskill their claims handling teams in the interpretation of data being supplied from the vehicles in the event of an accident.
- Substantial increase in investment in IT (whether internally or through outsourcing) to be able to cope with additional data that will need to be stored and managed.

**Medium to long term:** increased claim activity and additional costs will abate. When we reach the point where most vehicles on the road have AVT, and most policies are extended to cover AVT, the cost of total cover for AVT will probably be less than for conventional vehicles. Given the sale of AVT extended cover policies is likely to increase slowly over time, the call on insurers’ resources and associated costs should be manageable.

**Legal sector**

As a defendant insurance litigation firm of lawyers, we will need to work with our partners and invest in capabilities to interpret and reference telematics, Enhanced Data Rate (Bluetooth) and Environmental Data Record (EDR) and other AVT-technology data.

We anticipate the need for additional training for our motor lawyers in other areas of insurance litigation – most notably product liability law - in order to upskill to be able to deal with new and potentially complex liability arguments (especially in the short to medium term as the new legal landscape unfolds).

In turn, our bills to clients will contain higher amounts for disbursements for use of engineers and other experts – required to interpret in-car and other data in ascertaining share of liability between driver and vehicle manufacturer and others when collisions or damage occurs.

We anticipate, in time, far fewer lower value third party claim instructions. The focus is likely to shift to a smaller subset of more serious injury road accidents (which will fall in frequency too) and an increase in related litigation between AVT motor manufacturers, software houses and manufacturers of autonomous systems, as well as manufacturers and maintainers of connected road systems and street furniture.

Looking at the lower value end of claims, the government should also be alive to and explore now the discussion point as to whether claims involving autonomous vehicles are suitable to go through the online Claims Portal, which facilitates the process of low value personal injury claims covered by the Ministry of Justice’s pre action protocols.
There are costs benefits of claims remaining in the Claims Portal. However, despite best (and ongoing) efforts to achieve a proportionate and fair claims process, we anticipate that claimant solicitors will look to keep automated vehicle road traffic accident (RTA) claims out of the Claims Portal for cost purposes.

The wider context and objective to continue to seek ways to drive out bad behaviours should remain an integral part of the government’s ongoing regulatory review and discussion with industry.

**Question 4: How much is known about public attitudes to autonomous vehicles?**

No response, save to comment that informal discussion on this topic at some of the insurance conferences considering autonomous vehicles has identified that many are wary of autonomous vehicles and not yet convinced of the benefits. This may be partly down to a lack of knowledge. This is best answered by those in the consumer sector but would probably warrant further study.

**Question 5: What is the scale of the market opportunity for autonomous vehicles?**

Please see Question 1 above.

Globally, manufacturers are rapidly developing advanced driver assistance systems (ADAS) against the expectation that advancement to Stage 5 might be achievable by 2025. While precise timelines for the phased advancement of such technologies vary, the reality is that increasing levels of ADAS are already being integrated into new vehicles.

**Creating an enabling environment**

*Research and development*

**Question 6: Is the scale of current and planned demonstration facilities for autonomous vehicles sufficiently broad and ambitious?**

No response. This is best answered by manufacturers and research centres in vehicle safety technology.

**Question 7: Is the Government doing enough to fund research and development on autonomous vehicles, and to stimulate others to do so? Should it be doing more to coordinate UK actions?**

Input into the process by industry stakeholders is vital and must be ongoing. We have urged the Government to create an industry-wide group that would advise ministers and civil servants on how the technology is developing to inform their thinking on how regulation needs to change with it.

One of the main objectives of such a group should be to reach a consensus on what type of vehicles are likely to arrive on the UK market over the next 10 years (in incremental stages
of, say, two, three, five years and so on). This would greatly assist the government with regulatory planning.

Attendance at recent industry conferences and meetings has allowed us to receive feedback from the larger motor manufacturers, and in particular, those in the engineering and research and development (R&D) sections. The overriding message received is that they need more direction on what will constitute good, non-negligent, driving behaviour of autonomous vehicles. Such guidance is required for every aspect of vehicle use, from executing a good left turn or overtaking manoeuvre through to more complex driver behaviours.

The tone of the comments suggests that this important issue has (as with other jurisdictions) been left in the gift of and to the imagination of the engineers. In the alternative, what is required is an urgent top-down approach from Government and, in particularly, the DfT.

We are aware of the various ongoing research projects in relation to autonomous vehicles, particularly those being run by TRL. If the UK is to continue to lead the way post Brexit, it is imperative that research funding is made available for organisations, such as TRL, who have the expertise to properly review the safety aspects of the technology.

Question 8: How effective are Innovate UK and the CCAV in this area?

No response.

Question 9: Is the environment for small and medium-sized enterprises (SMEs) working in this sector sufficiently enabling?

No response.

Real world operation

Question 10: Will successful deployment of autonomous vehicles require changes to digital or physical infrastructure?

Yes - both.

Please see our answer to Question 1 with regard to creating a connected road system and Question 12 below with regard to cyber vulnerabilities.

Question 11: How might a move from current levels of highly automated vehicles to their extensive deployment best be managed? What do you see as the key milestones?

No response

Question 12: Does the Government have an effective approach on data and cyber security in this sector?

No.
While one question was dedicated to third party hacking in the CCAV consultation, it was couched in terms of such an incident being treated, for insurance purposes, in the same way as an accident caused by a stolen vehicle.

The brevity of the question and the reasoning behind it suggest that the Government does not understand the nature of cyber risk or the best approach to adopt.

The ‘fault’ insurer of a driver (or user) of an AVT or connected vehicle does not have the technology to prevent a vehicle from being hacked. The technology rests with the car manufacturer and the use of that technology and its security rests with the owner of the vehicle.

Therefore, the fault insurer should be able to exclude liability. Moreover, ‘hacking cover’ should not be included as standard cover that motor insurers provide. In the alternative, drivers should have to purchase additional cover for liability arising from hacking.

The fault insurer insures a driver based on the **driving of a vehicle** (supported by factors including age, past driving history and underwriting data). Conversely, cyber security of a vehicle is a risk concerning the **driver's attitude** to cyber security and cyber maintenance and will depend on different factors (such as whether the driver allows other smart devices to be connected to the vehicle’s smart system).

The ‘hackability’ of a vehicle might also depend on whether the driver has ensured that the vehicle’s software updates have been installed and steps taken to prevent others from accessing the vehicles communication network. For instance, diagnostic ports used by mechanics to assess a vehicle’s systems could be a pathway for a hacker.

A fault insurer of the driver of a vehicle does not have access to the data behind such factors that underpin cyber security, which is the underwriting data that allows a full and comprehensive assessment of the cyber security risk.

Given that absence and disparity in underwriting data, should a fault insurer be required to offer hacking cover as standard, it would result in a significant increase in insurance premiums for drivers.

Further, if motor insurers were to have to ‘pick up’ the liability in the first instance for accidents caused by hacking, manufacturers might have cause to be less concerned about their responsibility for ensuring, educating and maintaining the cyber security of these systems.

Therefore, and in the alternative to the proposition, the manufacturer should be responsible for taking steps to ensure that the smart technology installed in autonomous vehicles has the necessary cyber security installed. The manufacturer of a vehicle has the resource and know how to achieve appropriate cyber security to ensure that the data on the vehicles systems are encrypted or otherwise secured.

Indeed, the smart technology in autonomous vehicles needs to be considered as part of the guidance on the vehicle’s operation and maintenance. The manufacturer must also remain
responsible for issuing the appropriate guidance to the vehicle owner about updating the vehicle’s software.

By placing the onus of purchasing additional ‘hacking cover’ on the manufacturer (via the driver), hacking risks can then be underwritten by reference to the:

- Driver’s attitude to and habits in respect of cyber security of their vehicle
- Type of vehicle
- Type of technology used by the vehicle
What systems that technology controls.

**Question 13: Are further revisions needed to insurance, regulation and legislation in the UK to create an enabling environment for autonomous vehicles?**

Yes.

The current UK legal and regulatory framework for vehicles and road safety is extensive. It has evolved over many years, reflecting developments in the UK automotive industry and safety requirements and the UK’s obligations under EU legislation and UN regulation.

As stated above, it is vital to analyse the safety and liability regimes and ensure an ongoing review is in place that allows legislation to be amended proportionately.

The insurance/liability rules specifically for automated vehicles are sufficient for now, but will need to evolve as the technology and its related claims evolve. Overall, establishing fault in accidents involving autonomous vehicles will involve complex questions of liability shared by drivers, car manufacturers and technology designers. The insurance in place will obviously need to reflect this complex paradigm of potential fault and the associated risks.

**Road Traffic Act 1988**

For now, it is sufficient to amend road vehicle compulsory insurance primary legislation in Part 6 of the Road Traffic Act 1988 to include product liability for automated vehicles. To do otherwise would require considerably more primary legislation and be ‘too much, too soon’ against the background of the:

- Intention to encourage innovation and inward investment in this area; and
- Estimated period of 15-20 years before the majority of vehicles on the road in the UK are highly or fully autonomous.

**Insurance**

In time, highly or fully autonomous vehicles will be considered a different class of vehicle requiring additional compulsory cover. It is most likely that a single go-to entity will provide all necessary cover – rather than a set of entities.
The appropriate level of insurance cover for automated vehicle technology (AVT) vehicles (as a new class of vehicle) should be compulsory and governed by one existing statute. This will provide a transparent and straightforward structure to insurance cover and encourage the one entity to arrange the insurance (compulsory motor insurance and extended cover for product liability) – plus any other additional possible liabilities arising from use of highly and fully autonomous vehicles.

Looking forward, insurance cover is likely to focus on the registered keeper/owner and the automated vehicle itself.

To ensure simplicity and to catch all additional liabilities with this extended cover, professional indemnity insurance (for software authors of software in autonomous systems) and business insurance (including cyber risk) should be included with the extended cover that is compulsory for such classes of vehicle.

In terms of drafting the additional compulsory cover requirements within Section 6 of the Road Traffic Act 1988, it may prove easier to extend the cover to all other liabilities and then list exceptions to that.

**First party model**

As and when fully automated vehicles become the dominant choice of road vehicle, a first party model may become more attractive. For now, a first party model applicable to motor insurance as a whole is not appropriate at this stage, especially while the ‘driver’ of an automated vehicle retains an element of control.

To allow otherwise would be a significant change to current insurance practice, and place the UK out of step with the rest of Europe, leading to additional confusion where UK-insured vehicles are involved in an accident in Europe (and vice versa).

**Failure to maintain automated vehicle technology**

Where a driver attempts to circumvent the AVT, 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.

In civil cases in such circumstances, the insurer should be able to exclude liability to the driver, but not to their own insured, if s/he is not the driver. This will encourage good behaviours and use of AVT. In criminal cases, any attempt by either the driver and/or insured to circumvent AVT or to fail to maintain the AVT (resulting in accident) should amount to criminal activity with a very limited number of exceptions or exclusions – for example, to preserve life.

There needs to be clear and strict criteria for how failure to maintain AVT is proven – especially during the transition stage where drivers relinquish more and more driving function to autonomous systems.
**Consumer Protection Act 1987**

The Act removes the need to prove the manufacturer’s negligence and is based specifically on the consumer’s expectations of the safety of the product (the ‘consumer expectation test’). Currently, the Act only applies to property damage where the damaged property is owned by private individuals for personal use. Where a defective product damages a company’s property, the company has to prove that the producer was negligent. We agree that the product liability and insurance requirements for automated vehicles should follow the existing rules – as differentiated by whether the injured party was an individual or a company.

**Consumers**

The application of the consumer expectation test could raise a number of the issues, including:

- An allegation that the claimant did not fully appreciate the active safety devices on the car.
- Unrealistic expectations on behalf of the claimant with regard to the technologies capabilities.

It is inevitable that there will be arguments as to whether the claimant, as a driver, should have intervened with the autonomous driving function or not. Arguably, as the technologies become more familiar to consumers, the risks to autonomous car manufacturers will reduce because it will be easier to comply with the consumer expectation test.

**Companies**

Currently, there is no need to remove the need to prove negligence just because the company car is autonomous. Given that companies effectively manage property damage claims as caused by a range of allegedly defective products, we see no reason why an exception should be made with regard to automated vehicles.

Furthermore, attempting to change the rules which focus specifically around the consumer’s expectation test will be extremely complex and will require a much wider ongoing discussion.

For example, if the company driver connects his personal smart device to the smart system of the company vehicle and causes a security risk for hacking the vehicle that result in an accident, who is responsible? Is it the:

- Company for failing to ensure the driver does not create a security risk on the vehicle’s software?
- Manufacturer for allowing the security risk to exist in the first place or failing to warn about potential security risks?
- Developer of the software?

**‘State of the art’ defence**
The product liability and insurance requirements for automated vehicles should, for now, be limited by the ‘state of the art’ defence.

The state of the art defence may come to the aid of manufacturers in design defect and failure to warn cases. For warning defects, the manufacturer will be judged by what they could have reasonably foreseen based on current technology and scientific knowledge at the time of production. For design defects, the state of the art defence will involve the feasibility of adopting appropriate design measures to reduce or eliminate a risk of which the manufacturer is aware.

A claimant can always argue that better technology would have prevented the accident but the manufacturer may not have a reasonable design alternative even with the latest technology.

**Highway Code**

See comments above. An entirely separate section in the Highway Code for semi-autonomous/driverless cars is required, rather than amending the current applicable Rules to provide a detailed explanation and avoid any confusion. The engineering and R&D side of the larger motor manufactures are evidently already calling for an urgent top-down steer on this from Government.

Specifically:

**Rule 150 (use of driver assistance systems)** will need to be extended to include an explanation of advanced driver assistance systems (ADAS), such as motorway assist or remote control parking. With remote control parking for example, the driver can be outside the vehicle using the remote control and will be relying on the driver assistance system.

Rule 150 will need to be updated further as and when more advanced automated systems are approved and become more widely available.

**Rule 160 (driving with both hands on the wheel)** will need to be amended to cater for situations such as remote control parking where it will be impossible for the driver to have their hands on the steering wheel as they can be outside the vehicle.

**Rule 126 (enabling platooning)** will need to be kept under review. If platooning is to be introduced into the Highway Code (once the technology is ready), it could be introduced as an extension of the Highway Code providing a separate rule for vehicles specifically fitted with ‘vehicle to vehicle’ V2V communication systems.

Relaxing Rule 126 prematurely may lead to drivers of vehicles without V2V system failing to leave enough stopping distances between them and the vehicle in front, thereby causing more accidents.

**Construction and Use Regulations**
Maintaining active monitoring by the driver, together with the ability for the driver to instantly override any autonomous systems, must remain essential safety features. Nevertheless, the following Regulations will need clarifying:

- **Regulation 104 (position to control vehicle)** - the ‘driver’ must be within sight of the vehicle when utilizing any remote control features at all times. As the technology progresses towards providing wholly autonomous parking systems, it may be possible to safely control a vehicle remotely via a hand-held device (via the use of onboard cameras and sensors/monitors), thereby relaxing the requirement.

- **Regulation 107 (switching off engine)** - the driver must be within sight of the vehicle when they switch off the engine. The requirement should remain for the driver to ensure that:

  (a) the handbrake is applied
  (b) the vehicle is out of gear (or in park mode)
  (c) it is safe to start the engine
  (d) the vehicle is not within a garage or similar enclosed area.

  Manufacturing specifications must also require an engine to cut out if a driver has turned on the engine remotely but not taken control within a limited period (two-three minutes).

- **Regulation 110 (use of hand-held mobile devices)** - to ensure full engagement in the driving task, the Regulation should be clear that only the driver can use a single hand-held device and the device must be being used solely for controlling the vehicle remotely.

**Regulation 109 (motorway assist)** - it would be inappropriate to consider relaxation of Regulation 109 at this stage. Research has confirmed that drivers who divide their attention are significantly increasing the risk of a crash. Given the early stages of this technology, it is imperative that drivers remain focused on the task of driving at all times whilst using ADAS and semi-autonomous systems. The suggested requirement for the driver/user to ‘touch wheel’ at regular intervals, such as every three minutes, and the possibility of sudden hand-back of control to the driver should be a minimum requirement.

**Question 14:** What, if any, ethical issues need to be addressed in the substitution of human judgment in the control of vehicles by algorithms and Artificial Intelligence?

No response.

**Wider governance**

**Question 15:** What does the proposed Modern Transport Bill need to deliver?

The Bill (expected early 2017) is intended to encourage investment in driverless cars and ensure insurance is available to users of such vehicles. It is our understanding that the Bill
will include new laws/amend domestic regulation to make the UK ready to pioneer driverless cars by summer 2017, to include:

- Clarification of criminal and civil liabilities in the event of an automated vehicle being in a collision (which would otherwise be dealt with on a case by case basis by the courts).
- Consideration of whether a higher standard of ‘driving’ should be demanded of vehicles operating in an automated mode than would be expected of a conventional driver.
- Possible changes to the MOT test to check that automation technology is maintained correctly.
- Potential revisions to the Highway Code to accommodate the automated vehicle technology.
- Exploration of how the existing regulatory framework may be developed to ensure automated vehicle technologies are protected from cyber threats.

While the Government and business are both eager to get driverless cars on the road (and manufacturers are innovating to stay competitive), insurers have called on Government to amend legislation proportionality. We share that view.

We await the Government’s response to the CCAV consultation (expected by the end of 2016). The members of the House of Lords Committee also need time to consider the responses to this Call for Evidence and put forward their representations to Government.

The Bill must set out a detailed legislative framework against a realistic timetable to ensure that insurers, manufacturers and drivers have sufficient time to adapt and prepare. Careful drafting is key to this developing area, by addressing crucial areas such as insurance cover provision, thereby avoiding unintended consequences of new laws

**Question 16: How effective is the UK’s education system in delivering people with the right skills to support the autonomous vehicles sector?**

No response. This question needs to be addressed by those in relevant sectors.

**Question 17: Is the Government’s strategy and work in this area sufficiently wide-reaching? Does it take into account the opportunities that autonomous vehicles offer in a wide range of areas, not just on the road?**

No response.

**Question 18: What are the implications of exit from the EU for research and development and the autonomous vehicle industry in the UK? Are specific actions from the Government needed to support or protect the autonomous vehicles sector in the short term or after the terms of Brexit have been negotiated?**

With reference to Question 13, the UK Government will need to amend the Road Traffic Act 1988 to extend compulsory motor insurance to include product liability. It aims to do this by summer 2017.
The UK Government will also need to be alive to the dynamics presented by the desire for
global co-operation – something that may be brought into sharp focus by the prospect of
Brexit.

Amending the Vienna Convention on Road Traffic 1968 is a relevant plank to achieving such
co-operation. As the UK signed but did not ratify the Convention, it is not bound by it (seen
as a competitive advantage). However, for those member states that did both sign and
ratify the Convention, it will require approval by the United Nations. The current timescale
for achieving this is not clear. It must also be remembered that the UK is a signatory to and
ratified the Geneva Convention on Road Traffic 1949 (Geneva Convention). The UK is
therefore bound by Article 8 of the Geneva Convention, and similar updating of these
provisions will be essential. Whilst the Vienna Convention has been partly amended to keep
up with current work in this field, similar attempts to apply the same change to the Geneva
Convention failed in March 2016. The contracting parties simply did not respond for reasons
that are not clear.

Given the UK Government’s statement that it would like to see international legislation
amended by the end of 2018, it is imperative that the Government reviews the overarching
international regulatory obligations that exist and considers now the extent to which
domestic legislation will need to reflect any change in the obligations placed on the UK post-
Brexit.

Post Brexit, the UK has the opportunity to play a greater role in the development of
international regulation in this field. The UK has the expertise and should not be afraid to
contribute more widely and directly at the international level, rather than working through
the European Commission.

26 October 2016