



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

Response of the Association of British Insurers and Thattham Research

INTRODUCTION

About the ABI

The Association of British Insurers is the leading trade association for insurers and providers of long term savings. Our 250 members include most household names and specialist providers who contribute £12bn in taxes and manage investments of £1.8trillion.

About Thattham Research

Thattham Research is the motor insurers' automotive research centre. Established by the motor insurance industry in 1969, the centre's mission is to contain or reduce the cost of motor insurance claims whilst increasing safety standards.

Today, Thattham Research still occupies its unique position as the UK's only 'not for profit' insurer funded research centre. Whilst the original aims remain intact, the centre now enjoys a much wider remit at the forefront of the latest vehicle technology research, spanning safety, security and repair.

EXECUTIVE SUMMARY

Supporting the sale and use of autonomous vehicles

The insurance industry welcomes the opportunity to respond to this consultation and agrees with the Government policy objective of providing a supportive regulatory and legal environment for the development of autonomous vehicles. We agree that the development of automated driving technology is likely to have a profound impact on the UK transport system and has the potential to deliver major benefits. We believe that the proposal to review the regulatory framework in advance of these technologies becoming commercially available will be essential to give industry and consumers clarity over what new arrangements will be in place.

It is vital, however, that the clear distinction between **advanced driver assistance systems (ADAS)** and **fully automated driving technology (ADT)** is clearly acknowledged at every stage. Consumers must not be misled about the capability of ADAS (which is already appearing in commercially available cars and is likely to become more advanced) and ADT (which we do not expect to be commercially available until 2021, at the earliest).

The adoption of any changes to the compulsory insurance requirements that are proposed as a result of this consultation exercise should apply only to the cars with full ADT capability (available from 2021 onwards).

Before then, it is possible that cars will be fitted with a combination of different, interlinked ADAS technologies. This has significant potential benefits for road safety, but carries the associated risk that drivers may not fully understand the distinction between ADAS and ADT, and not realise that, while their car is increasingly sophisticated, it is not sophisticated enough



to deal with all driving conditions, and as such they need to stay fully alert at all times. Drivers also need to understand that they will retain legal responsibility for any accidents that occur.

Insurance proposals

When full ADT is commercially available, the insurance industry believes that the proposals put forward as part of this consultation, i.e. to extend the scope of compulsory motor insurance to include a requirement that driving with the automated mode enabled is covered, are broadly appropriate.

The Government should require an extension of the existing motor insurance policy, and associated terms and conditions – maintaining a ‘single policy’ approach – and the Government should also create an associated right of recovery. This response makes proposals for how such a right of recovery could work. This would ensure that automated driving is covered and provide cover for the ‘not at fault’ driver as well as passengers and (external) third parties.

However, the insurance industry does not believe that the appropriate mechanism to achieve this is through product liability insurance. While existing product liability terms are adequate in their current setting, we believe existing practices would need to be significantly altered to deal routinely with road traffic accidents. This response sets out the potential limitations associated with stretching the existing product liability system, and proposes instead that existing motor insurance is expanded to cover automated driving.

To support this, there will need to be collaboration between Government, manufacturers, insurers (and, where appropriate, consumers) to develop a system of classification to identify when the extended cover for automated vehicles is needed. It is vital that there is clarity over what the responsibilities of manufacturers and car owners/users will be in this area.

This system must be underpinned by effective data sharing. While we recognise that the UK Government is actively engaged in international discussions that are intended to settle arrangements for data sharing between connected vehicles, and that it will not therefore be a matter directly resolved by this consultation, it is critical that the Government ensures these questions are settled appropriately before these vehicles are commercially available. If insurers are not confident that they will have access to appropriate data to settle a claim fairly, it will undermine the development of a competitive market for insuring automated driving.

There must be safeguards to protect insurers who have taken responsibility for settling claims involving individual cars with automated driving features from multiple claims related to systemic failures that would otherwise be brought against manufacturers. It would also be inappropriate to make motor insurers responsible for incidents of cyber terrorism or organised crime involving multiple automated vehicles. If these safeguards are not in place, it could significantly disrupt this market and make providing cover for automated driving unviable.

Insurance is an enabling sector, and it is the insurance industry’s intention to underpin consumer confidence in automated driving as the first wave of this technology comes to market. We recognise that the experience with this first wave of the technology will guide how further stages of the envisaged ‘rolling programme’ of regulatory reform will work.

The insurance industry is committed to continued engagement with the Government as these developments happen, and we expect this to include detailed discussions of new insurance



models (including, potentially, the 'First Party' model raised as an alternative in this consultation) as the technology advances.

Highway Code / Construction and Use Regulations

At this stage, a priority will be ensuring that any changes emphasise the distinction between ADAS and ADT, explain the dangers associated with over-reliance on ADAS and reinforce the position on legal liability. This response makes proposals for amendments that could be made to Rules 150 and 160 to achieve this.

The insurance industry does not agree that specific and implied driver distraction restrictions should be relaxed. The technology is not yet sufficiently robust to allow the human driver to be distracted. Therefore, we would recommend tightening rule 109 to make explicit what is permissible, with explicit reference to the distinctions between ADAS and ADT. We recognise that this would then be reviewed as full ADT appears.

On balance, the insurance industry agrees that the proposals on platooning should be adopted. However, this response outlines a number of practical considerations, based on our observations of everyday driving behaviour, which will need to be considered.



RESPONSES TO CONSULTATION QUESTIONS

Q1A: 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?

We not only agree with this proposal but regard it as essential to give industry and consumers clarity over the new arrangements that will be in place for these technological developments.

Insurance is an enabling sector, which supports technological advances which could change the way we live, and it is therefore a critical part of the success of the 'Pathway to Driverless Cars' project. The insurance industry therefore welcomes the Government's consultation and this opportunity to present its views on the Government's proposals to adapt compulsory insurance laws to make sure such vehicles are appropriately insured in future.

The recent and projected (short-term) developments in advanced driver assistance systems (ADAS) offer consumers and other road users a significantly different driving experience to that which has been the norm for decades. As more and more vehicles on the road are equipped with ADAS, a driver's expectations of a vehicle's abilities will change and so, in turn, will driving behaviours. Use of, and reliance by drivers on, ADAS carries both benefits and potential risks. For example, autonomous emergency braking (AEB) is proven to have a significant impact on the number of low-speed crashes, and insurers would strongly support any moves to further incentivise the take-up of this technology. AEB operates only in the moments before an imminent crash and is, therefore, invisible to most drivers, most of the time. Behavioural risks are therefore minimal. However, where technologies such as the emerging 'motorway assist' functions take over large parts of the normal, everyday driving tasks for prolonged periods, driver behaviour can be changed substantially. Where there is a lack of understanding of the limitations of this type of ADAS, or where drivers use this technologically inappropriately, this could lead to accidents of a type not commonly seen to date.

It is important that consumers understand that ADAS functions are designed only to assist a driver and do not replace human control of the vehicle. It is likely that, in the near future, cars will come equipped with a combination of several different forms of ADAS technology. This might mean that several aspects of the routine business of driving can be performed by the car, but this does not mean that the car can be relied upon to react to every conceivable scenario. The driver will need to be alert and monitoring the road - and what the car is doing - at every stage of the journey. A clear message to drivers about what the car is capable of - and what it is not - will ensure that vehicle manufacturers are able to develop, market and sell ADAS that consumers can legally and safely use. Existing regulations and the Highway Code do not appear to give consumers enough clarity about this technology, and therefore must be reviewed and updated.

At the same time it must be clearly understood that the development of fully automated driving technology (ADT) is wholly distinct from ADAS. Fully automated driving will require a much higher degree of technology sophistication and robustness than in even the sophisticated ADAS systems discussed above. However, that technological difference may, in many circumstances, not be obvious to the driver because the basic functions would appear similar. For example, the control of speed, lane position and lane changes during motorway driving that enable fully automated driving may appear similar to the 'motorway assist' functions already available – the distinction being that 'motorway assist' will be underpinned by a reliance on a driver, whereas fully automated driving will allow the driver to be fully 'out of the



loop'. As such, there needs to be a clear distinction made, both in regulation (such as type approval and insurance arrangements) and in how these vehicles are marketed to the public, between vehicles with ADAS technologies and those that are able to take complete control of the driving task¹. We do not anticipate that full ADT technology will be available to consumers until 2021 at the earliest². However, full ADT will create a number of practical, legal and insurance issues. It is welcome that the Government is seeking to address this well in advance in order to give certainty to potential consumers and businesses as they look to invest for the future, even though in reality the appearance on our roads of large numbers of truly ADT equipped vehicles is a medium-to-long-term prospect.

It is essential that the significant difference between ADAS and ADT in terms of capability and driver engagement is reflected in the regulatory framework. It must provide guidance and safeguards for direct consumers and other road users. There is a clear requirement for greater clarity on the issues of legal liability and of insurance obligations on owners and drivers.

At the same time such regulation should enable, not discourage, technological development. The ABI and Thattham Research has been working closely with members of its Automated Driving Insurance Group (or ADIG) to understand the many applications of the driverless cars project and can confirm that insurers do not wish to stand in the way of the development of autonomous vehicles but are pro-actively looking to support progress and innovation within the automotive industry.

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

We agree that a rolling programme of review should be implemented. ADAS and ADT have worldwide applications and the underlying technology will continue to evolve. Changes will require continuous review and the regulatory framework needs to deliver certainty of principle while maintaining sufficient flexibility to be adaptable to changes. A rolling programme will allow regulatory change based on experience and due reflection, particularly bearing in mind the considerable amount of interdependent national and international regulation that has built up.

In that respect, it is vital that, separately from this consultation process but of equal importance, the UK Government is working with its worldwide counterparts to establish:

- a set of universally agreed easily understood, consumer-friendly definitions of advanced *driver assistance* systems and *automated driving* systems; and
- a set of universally agreed minimum and maximum technical requirements for different levels of ADAS and for ADT, binding upon all involved parties.

These are required to create the necessary certainty for future legislative purposes and, even if questions of liability and insurance are addressed now in principle, important questions on

¹ Even if only for defined sections of a journey, such as 'out of the loop' motorway driving

² This timeframe estimate is based on our understanding of the ongoing discussions within the UNECE process. Our understanding is that there are ongoing discussions about updating the 'Universal Provisions Concerning the Approval of Vehicles with Steering Equipment' (Regulation 79), which defines what steering systems are permissible for cars to receive type approval, and that the earliest date cars which do not require any human intervention in steering will be permitted to receive type approval is 2021. Even then, vehicles with full ADT would need to be robustly tested and we are not aware of any manufacturer that has placed a firm date on when they would be available commercially.



vehicle standards and type approval also require urgent resolution if insurers are to be able to underwrite with confidence the potential risks involved.

It is also vital that the UK Government and all affected stakeholders recognise the necessity for a minimum level of data sharing between involved parties should an event occur and (ideally in parallel with ongoing work on vehicle standards) will seek to develop agreements at international level on data sharing. While we recognise that the specific data protocols are not something that will be directly addressed by the legislation proposed in this consultation, ensuring that a minimum level of data is shared in an accessible format will be a fundamental aspect of successful take-up of this technology. If this does not happen, consumers may be adversely affected, as a lack of relevant data may prompt protracted litigation. This will be an issue whenever there is an accident potentially caused by a fault in ADAS or ADT 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?

We agree that the first wave of regulatory change should focus on ADAS technologies that are presumed to be ‘close to market’. However, we have highlighted several issues below that should be taken into consideration – and the Government should be aware of future developments. In the context of drivers being promised that ‘driverless’ cars are coming, particularly given the media attention on this topic, the Government must focus on ensuring that consumers do not have unrealistic expectations about what the ADAS technologies (which may, to uninformed observers, appear very similar to ADT) can do.

It is right to consider the insurance regime separately, and look to address questions that will only be relevant for full ADT technologies. However, any regime that would be set by the reforms proposed in this consultation will only be effective if the issues outlined above (bullet point 3, question 1B) are adequately addressed.

It is important to make a very clear distinction³ between advanced driver assistance systems and automated vehicle technologies, which in the latter case we are specifically referring to as automated driving technology (ADT) which more exactly describes the functionality involved.

It is also important to understand that different time frames apply to these different functionalities. On balance it is considered unlikely that vehicles providing truly automated driving for the general public will be available for use on the UK roads within 4 or even 5 years (2021) whereas driver assistance systems are already on the roads in various forms and will proliferate.

The technologies expected to reach the market in the next 2 to 4 years are all forms of ADAS that will still require the driver to be “in the loop” at all times. These ADAS provide the driver with “assistance”, but do not “control” the driving task. This is expected to contribute to a reduction in incidents, because the increasing sensors and algorithms required to operate systems in normal driving will improve the effectiveness of specific safety features that are active in the pre-crash phase, even during manual driving and on all road types. However, the risk of inappropriate or improper use, or inadequate monitoring, remains. These systems lack the sophistication to safely deal with all conceivable road situations and thus require the driver to remain completely alert and ready to resume control of the vehicle. The insurance industry

³ This critical distinction has already been pointed out in our response to question 1A.



believes that this is a problem that is already with us as there are 'highway pilot' type of ADAS systems on the market (examples include Tesla, Mercedes and Volvo) that are not limited to motorway use and are capable of controlling the vehicle both longitudinally and laterally at speeds up to 130 km/h (81 m.p.h.). Drivers need a clear understanding of what is expected of them and must not be misled into thinking their car can 'drive itself' when it cannot.

Our expectation therefore is that ADAS will continue to develop in sophistication without technically crossing the boundary between truly driving and not driving the vehicle – although it may not be immediately obvious to consumers why they need to monitor what the car is doing. The consumer will also remain legally responsible at all times for driving the vehicle (a point that must be made clear to any driver using the technology). A consumer using ADAS safely may not see a significant immediate difference in their driving experience.

The vehicle activity where functionality can be expected to first move properly from ADAS to ADT will be motorway driving. Other developments may also involve low-speed applications in an urban environment (possibly facilitating 'ride-hailing'). If this is to happen, a significant investment of time and effort will be required to consider the complex requirements and to define appropriate construction regulations. It makes sense to suggest that such consideration should begin as soon as possible, even if actual regulatory change is deferred until the next tranche of the regulatory review.

User activity and non-driving tasks must also be considered; ADAS misunderstood and inappropriately used equates to increased risk (which could, for example, be one contributory cause of the recently reported fatality in a Tesla). Such an increased risk would, if not guarded against, erode many of the benefits of ADAS and undermine public trust in future ADT during the time when this trust needs to be built up.

Drivers and consumers must receive a clear and consistent message distinguishing between ADAS and ADT, whether in a motorway-only context or for other roads. In particular, drivers must understand that ADAS requires continuous supervision by the driver for safety reasons. Given the negative impact on road safety of drivers not understanding the capability of their vehicles, we do not believe that such a message would undermine or dis-incentivise technological development. However, it would address the potential risk that marketing messages 'oversell' the capabilities of a particular vehicle in order to differentiate it within a competitive market.

So, while any regulatory review should primarily focus on the short term and deliver those changes that are immediately required (including insurance) it should not do so in isolation from an understanding of the developments likely to occur *after* 5 years.

It follows from this point that there is a strong need for very clear and distinct definitions between ADAS and ADT which will support technological development, assist with securing type approval and deliver certainty for consumers and insurers alike. Exactly how or where these definitions should be established is a matter for Government to decide but further consultation on the definitions themselves should be pursued urgently as these definitions will set a clear direction for all stakeholders with an interest in this technology.



Q1D: Are you aware of any upcoming advanced driver assistance systems or automated vehicle technologies which this document does not cover?

Yes. We have included a summary of the various ADAS systems we understand to be currently available, and those that we anticipate coming to market within the 2-4 year timeframe covered by this consultation in Appendix Two.

The consultation document also refers to systems developed for motorway use only. It is our understanding that such systems are under active consideration as part of an ongoing review at UNECE level of steering system regulations (Regulation 79), and that this means it is likely they will be able to receive type approval within the 2-4 year timeframe. Although the definitions of these systems are not yet finalised, it is understood that at some will incorporate a lane change assist system (LCAS) that automatically detects a need to change lane and executes it without driver intervention, as long as the function has been switched on by the driver.

However, there are systems already in production (examples include Tesla and Mercedes) that have a slightly less advanced LCAS function that can automatically execute a lane change, if the driver requests it by activating the direction indicators. Currently, these are not restricted to motorway-only use and it is not clear if proposed amendments to the UNECE steering regulations will permit the fully automated lane change functions only on motorways but still allow a slightly less capable 'motorway assist' system on other road classes. This distinction could prove very significant in terms of the risks associated with possible driver misuse.

Under the heading 'Motorway Assist', the consultation document describes the next step as having a similar function but without the need for constant supervision by the driver. The importance of the distinction between technologies that assist the driver and those that take over the driving task is very significant, and as such we would caution against any suggestion that the technologies are closely related. Fully automated motorway driving should be identified as a separate technology under a different heading, so that there is no confusion over the importance of the distinction.

A further issue which the Government could give consideration to is how these different technologies will interact, in particular the relationship between ADAS systems that assist in normal driving and those that assist in pre-crash situations. ADAS that operates during normal driving significantly alters the way the vehicle is driven and (as covered in the answer to Q1C above) may give drivers the impression that the car can drive itself, which creates some safety risks.

In many ways, automation to assist normal driving is more complex and variable than automation to address simple crash situations. Changing lanes safely, while a relatively simple task for an experienced driver, creates more technical complexity to automate than preventing car-to-car-rear crashes or preventing collision with a single pedestrian crossing in front of the vehicle. As such the sophistication required of the ADAS systems operating in the normal driving phase is high. However, these systems can greatly improve driver comfort and convenience and they can be an attractive feature to buy.

Pre-crash systems, however, while offering substantial safety benefits, especially when their effect is aggregated over a large number of vehicles, are largely invisible to individual drivers, which can reduce the willingness of consumers to pay additional costs for having these systems installed. Thus, although some of the normal driving ADAS technologies may carry



some adverse risks, they also enable more sophisticated sensing hardware to be installed on the car. That very same hardware can then be re-used to greatly improve the pre-crash functionality such that it is effective in a much wider range of circumstances.

Crucially, that pre-crash technology remains active even when the car is being driven completely manually. For example, Mercedes' new motorway assist system uses a very comprehensive sensor set that will also enable AEB to respond to cross traffic situations at junctions and will enable an assistive steering function which will, at lower speeds, help drivers swerve to avoid pedestrians. So, while there are risks associated with the introduction of ADAS that takes control of large portions of the driving task (while still requiring the driver to remain in the loop to deal with the situations the technology cannot yet cope with), those risks are likely to be outweighed by the benefits derived from the re-use of the hardware for improved pre-crash ADAS.

Regulations on vehicle construction should only explicitly permit a proposed ADAS for example, a steering system) with appropriate control of any related risks. Similarly, guidelines should ensure that drivers understand how each form of ADAS works, what the technology is (and is not) capable of and how a driver should respond if the system intervenes.



Insurance

Q2A: 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?

We agree that the primary legislation in Part 6 of the Road Traffic Act 1988 (the RTA) should be amended to extend the scope of compulsory insurance.

Despite the predicted safety benefits of automated driving technology, we do not believe there is any evidence to suggest a move away from covering the 'use'⁴ of vehicles on public roads by compulsory insurance would be beneficial. Consumers will expect insurance claims to continue to be handled quickly, even when they involve technological questions, so that victims of road traffic accidents have easy access to appropriate compensation in the event of loss or injury, and also so that there is certainty in the market. We therefore support the Government's stated policy objectives (paragraph 2.9 of the Consultation) of:

- extending the compulsory insurance requirements for automated vehicles;
- providing cover for the "not at fault" driver as well as passengers and (external) third parties; and
- developing a system of classification for identification of automated vehicles which will require the extended cover to be in place.

However, we do not believe that simply including cover for product liability claims (as presently understood) within motor policies is the most appropriate solution.

These goals can best be achieved by requiring the **extension of existing compulsory motor insurance legislation** and terms and conditions (maintaining a "single policy" approach) and by creating associated statutory rights of recovery. This will need to be underpinned by appropriate data sharing arrangements (see answer to Q1B). In this way, all the questions of risk and recovery raised by compensating victims of a road traffic accident involving an automated vehicle are likely to be fully addressed.

The consultation paper notes, at 2.2 "it would be easy to place liability on the manufacturer (i.e. product liability) and let them deal with claims arising from a collision." We do not agree with this statement. In our view, it is too simplistic to stretch the existing product liability insurance model and attempting to do so will create a number of challenges -

First, product liability insurance is merely optional. There is no legal requirement to provide or purchase product liability cover. Therefore manufacturers and suppliers can choose to manage risks as they wish, through insurance or otherwise. In contrast, insurance associated with the use of motor vehicles has long been compulsory in the UK (and across Europe).

Second, the terms of product liability insurance policies are not controlled in the same way as for road traffic policies. By statute, motor insurance cover for personal injuries is required to be unlimited, whereas the cover provided by a product liability policy may have defined limits (such as £5m or £10m). It would be wholly unfair if the level of recovery by an injured victim was to be dictated by the type of insurance in place rather than by the severity of losses he or she sustained. Furthermore, the RTA restricts the effect of insurers' reliance

⁴ 'Use' as understood to mean that the vehicle is under control or supervision by a person.



on policy breaches by the insured and adopts a solution by which (to summarise) the third party is paid in full regardless of any breach. The insurer then has subsidiary rights against the policyholder in breach. This approach is mandated by the sixth European Motor Insurance Directive⁵ (see eg article 13: *Each Member State shall take all appropriate measures to ensure that any statutory provision or any contractual clause contained in an insurance policy issued in accordance with Article 3 shall be deemed to be void in respect of claims by third parties who have been victims of an accident ...*).

Third is that claims can only be made against a product liability policy during the first ten years of a product's lifespan⁶. It is not unreasonable to limit the scope of product liability insurance to take account of an inevitable degradation of quality as a product's lifespan increases (and we would not support a change to a well-established and effective system so as to make product liability legislation fit the demands of the Road Traffic Act). However, we would accept that limiting claims according to the age of the vehicle would not serve the intended outcome of the Road Traffic Act, especially as motorists are under an obligation the ongoing roadworthiness of their vehicles, whatever their age. This demonstrates that simply importing cover typically offered by (voluntary) product liability insurance into the sphere of (compulsory) motor insurance would not deliver the Government's intended outcome.

Fourth, the law underpinning product liability does not cover damage to the product which is caused by the product⁷. If the disengaged driver is regarded as wholly 'innocent' when an aspect of the vehicle or driving system fails (in autonomous mode), then that disengaged driver would presumably wish to also be compensated for losses associated with damage to their own vehicle (even though that damage was in fact caused by the car). It may be a better option for consumers to continue to be able to treat cover for their own vehicle as an optional element (i.e. not part of the compulsory insurance required by road traffic legislation). However, where a driver relies on their vehicle for employment or other essential activities, they may feel unfairly penalised if, by virtue of their car having been in autonomous mode at the time of the accident and thus falling under the scope of product liability, they automatically lose the right to claim. We do not believe damage to a disengaged driver's own vehicle (which is very close to the cover for accidental damage currently provided by a comprehensive motor insurance policy) needs to be included in any new minimum terms under the RTA, as it remains preferable to allow drivers flexibility over the level of cover they need. However, we believe this further demonstrates that an extension to motor insurance cover will be a more suitable way of achieving the Government's intended outcome than stretching the function of product liability into a scenario it was not developed to address.

Fifth, the ongoing uncertainty associated with the Vnuk judgement. The ABI has significant concerns about the negative implications for all road users of this decision from European Court of Justice (EJC)⁸. We support the proposed approach set in the European Commission's recently published Inception Impact Assessment⁹, and believe the preferred outcome set out in this document would address the most significant concerns related to how

⁵ Directive 2009/103/EC of The European Parliament and of The Council of 16 September 2009 relating to insurance against civil liability in respect of the use of motor vehicles, and the enforcement of the obligation to insure against such liability

⁶ An amendment to the Limitation Act 1980 sets this timespan at ten years: "*An action to which this section applies shall not be brought after the expiration of the period of ten years from the relevant time*".

⁷ Section 5(2) of the Consumer Protection Act 1987 - "A person shall not be liable ... in respect of any defect in a product for the loss of or any damage to the product itself or for the loss of or any damage to the whole or any part of any product which has been supplied with the product..."

⁸ C-162/13, *Damijan Vnuk v Zavarovalnica Triglav*

⁹ The European Commission's Inception Impact Assessment is available here: http://ec.europa.eu/smart-regulation/roadmaps/docs/2016_fisma_030_motor_insurance_en.pdf



this ruling could be interpreted (while also recognising that the ongoing process of establishing Britain's status after EU membership may affect this). However, even if the welcome approach recommended by the Commission is adopted, it now appears likely that, while vehicles are on public roads, the scope of compulsory motor insurance set by the Motor Insurance Directives will now cover "any use of a vehicle that is consistent with the normal function of that vehicle". As the "normal function" of a vehicle with ADT would include automated driving, it may therefore be a legal requirement that this falls within the scope of the motor insurance regime. It may therefore cause unnecessary complexity and uncertainty if the periods of time when automated technology is enabled are covered by an insurance regime that meets the obligations set by the Product Liability Directive, while also needing to comply fully with the obligations of the Motor Insurance Directive.

We are strongly of the view third party liability for harm caused by the car, when operating in autonomous mode, has to be included within the extended scope of compulsory motor insurance required by the RTA.

However, as explained above, the current law and insurance practice in relation to "product liability" cover would not directly deliver the Government's stated objectives of continued full protection of external road users and, in addition, protecting the "not at fault" automated vehicle 'disengaged driver'.

For the reasons above, it would be more proportionate to extend the scope of compulsory motor insurance to include autonomous driving than it would be to alter dramatically the current law and practice applying to the product liability insurance market.

An extension of existing compulsory insurance obligations under a single motor policy, rather than devising a system under which a vehicle owner or user has to have in place both motor insurance and product liability insurance, would, in our view, promote relative simplicity of regulation; new product development; distribution and sale to drivers to a far greater extent than the potential complexity of merging motor insurance and product liability insurance¹⁰ law and market practice.

Rights of recovery?

Some options are set out at 2.21 & 2.22 of the paper:

2.21 In order to protect third parties and enable the product liability insurance proposals to function properly, there are certain areas where we will need to consider creating new rights of action directly against an insurer when there would not necessarily be a claim in negligence against the driver who purchased that insurance policy.

2.22 For example, if an accident occurred as a result of a defect with the vehicle we are proposing that both the driver and injured third parties will be given a right to pursue a claim directly against the driver's insurer (even though the manufacturer rather than the driver was at fault). Similarly we are proposing that injured third parties will be given a direct right of action against the insurer where an accident results from a vehicle being hacked. In these circumstances the insurer would be able to then pursue the party at fault, or otherwise liable, to recover the costs of compensating the injured parties.

¹⁰ It should be noted that motor vehicle liability insurance (class 10) and general liability insurance (class 13) are, from a regulatory perspective, mutually exclusive. This is clear in the definitions at schedule 1 of The Financial Services and Markets Act 2000 (Regulated Activities) Order 2001, [SI 2001/544](#)



We agree that third parties, including disengaged drivers, should have a direct right of action against the motor insurer as envisaged at 2.21. However, setting out how such rights may operate in practice will need careful consideration.

One factor that will need to be accounted for is if a ‘disengaged driver’ is injured, and their vehicle is identified as the ‘at-fault party’, but this ‘disengaged driver’ was either uninsured or did not have the appropriate insurance for automated use. In these circumstances, where someone has willingly used the automated mode without having appropriate insurance, it would not be appropriate for that ‘driver’ to receive compensation. In considering circumstances such as these, account will need to be taken of the approach of the Court of Appeal in *Churchill v Wilkinson*¹¹.

If, as envisaged at 2.21, the insurer is to pay claims when there has been no negligence by its policyholder special provision will need to be made. We suggest that a statutory requirement places primary liability on the motor insurer in such circumstances, underpinned by a formal right of recovery so that, having dealt with the claim, an insurer can then recover the costs from the responsible party. Such a provision would allow for a system that ensures individual road users have a straightforward and well-established vehicle to seek redress for any losses they have incurred, but would also guarantee that the ultimate responsibility would fall on the at-fault party. It will be an essential part of the feed-back mechanism that will encourage responsible behaviour from manufacturers that they are ultimately bear the costs of accidents where a car in automated mode is the at-fault party.

Making an arrangement for primary liability and an associated right of recovery into legislation would have several advantages:

- offering clarity that there is a legal obligation on a motor insurer to assume primary liability for an accident where the vehicle was in automated mode
- thus eliminating any argument that payment is voluntary (it is necessary to eliminate this since a voluntary payment of a loss will not provide the payer with any legal rights against the proper negligent party),
- allowing for the insurer to acquire rights to recover from the manufacturer under the Civil Liability (Contribution) Act 1978 section 1(1) because the insurer would, under the new provision, be a person liable in respect of any damage:

“any person liable in respect of any damage suffered by another person may recover contribution from any other person liable in respect of the same damage (whether jointly with him or otherwise).”

- providing, for the avoidance of doubt, the injured disengaged driver (whether or not he or she is the policyholder) with the same direct rights of action as injured third parties have under The European Communities (Rights against Insurers) Regulations 2002¹².
- **Note:** further discussion of recovery rights is addressed in an appendix to this response.

¹¹ <http://www.bailii.org/ew/cases/EWCA/Civ/2012/1166.html>

¹² http://www.legislation.gov.uk/ukxi/2002/3061/pdfs/ukxi_20023061_en.pdf



A system of classification and identification is essential to determine the vehicles to which the additional insurance cover must apply and to enable insurers to price for the risk. Vehicle manufacturers and, where appropriate, traders must ensure that it is clear when automated technology is part of a vehicle's specifications and, where such technology is either an optional fit or an optional use, it must be clear whether or not the technology has been chosen. The consumer must be empowered to obtain that information. However, the onus on making sure such information is provided and is accurate must fall on those manufacturing and selling the vehicles – in particular, because consumers may not always be in a position to understand the distinctions between particular forms of technology and also because the information may not be readily accessible to someone purchasing the vehicle second-hand.

Existing vehicle type approval processes are not, of themselves, sufficient to provide the level of information on what technology is fitted to each individual vehicle to allow for market efficiency and consumer protection. Likewise, while the insurance industry is actively considering how to adapt the 'group rating' process to account for automated driving functions, this process will not cover every issue that will need to be resolved to allow insurers to provide policies to these cars.

Neither 'type approval' nor group rating currently provides for the identification of technologies that are "optional fit" at point of sale or for after-sales upgrades (non-factory-fit).

In order that consumers (and, in turn, insurers and other stakeholders) can be adequately informed about what functionality exists within their vehicle, the answer to four key questions should be readily available to consumers:

- Does the vehicle have XYZ functionality?
- Has that functionality been enabled?
- Was it factory fitted?
- Was it owner-fitted and if so when?

We envisage any changes to the insurance provisions within the Road Traffic Act only applying when the car is in fully automated mode. Existing arrangements for other forms of 'vehicle failure' (such as a defective tyre) remain adequate and would not need to be brought into the scope of any proposed legislative change to deal with automated driving.

Additionally, there must be a safeguard or exception for motor insurers (who are acting in effect as "proxy" insurers for vehicle manufacturers) in respect of multiple/simultaneous claims arising from sudden wholesale system failures or an unsuccessful product recall creating a claims surge. Motor insurers are stepping in to protect victims but need to be able to recover these sums without the risk that they will face years of contested litigation from a manufacturer who can't or won't pay.

Q2B: What, if any, other changes to the insurance framework should be considered to support use of AVT and why?

If we assume that an additional requirement for compulsory insurance is put in place for vehicles with true ADT, additional changes should be considered in these areas:

- Commercial use of ADAS and ADT means there could be non-negligent drivers injured in the course of their employment, which poses some further questions, including:



- a. will it be necessary to disturb current provision under s145(4) and (4A) the RTA, under which the obligation to insure certain persons is excluded by the employer's liability compulsory insurance provisions?
 - b. if not, will it be necessary then also to create a right of recovery for the non-negligent employer or its insurer against the manufacturer or will the Civil Liability (Contribution) Act 1978 be sufficient in that context?
- The Motor Insurers' Bureau will inevitably have to deal with uninsured/untraced driver claims involving ADAS and ADT and will also require additional rights of recovery where defective technology is established as the cause.

Q2C: 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?

We cannot comment on the specific effects on the commercial activity of an individual insurer. However, although no estimates of costs have been supplied, it is clear that additional costs will be incurred in a number of areas. In broad terms these may involve significant changes to core systems, insurance products, internal structures, staffing requirements, data processes, supply chain and claims management processes. This will also be determined by the effectiveness of data sharing, with any increased complexity in exercising the right of recovery against responsible manufacturers likely to have an impact on operational costs.

It is worth noting, however, that many of these costs would be incurred as a result of changes to the market in motor vehicles and the development of automated vehicles, and that the clarity provided by legislating several years before products will be available could allow insurers to invest with greater confidence. It is arguable that the costs incurred as a direct consequence of this proposal would be comparatively limited.

In general terms the question of cost is also probably better addressed by reflecting on the period of time over which changes will occur and the extent to which the inevitable cost of change can be spread so as to be proportionate. A rolling programme of change will assist in that respect, provided there is also sufficient clarity for financial planning purposes. Such additional (or different) costs as become necessary may in fact be offset by the enhanced safety of vehicles and – when accidents do occur – the ability to determine liability much more quickly (by data retrieval), so avoiding costly liability disputes.

Q2D: Do you anticipate the cost of insurance products for vehicles with AVT to be higher than for conventional vehicles? By how much and why?

It is too soon to be able to answer this question with certainty. Logically, the expected lower frequency of accidents for such vehicles suggests the cost of cover could fall, but those accidents that do occur could be more serious and more costly overall.

It is too early to tell whether the costs associated with fewer, but more expensive, claims would be outweighed by the expected reduction in minor claims and associated costs.

A number of factors, on which it is still too early to tell what the exact impact of automated driving technology will be, will determine this. These could include:

- Costs of parts and costs of installing/repairing increasingly sophisticated equipment used for automated driving, and ensuring these are correctly calibrated;



- Availability of parts (especially those unique to a single manufacturer's technology);
- Labour costs and associated costs training/upskilling engineers to repair and upgrade this technology

It is also worth noting that insurance costs reflect the real-life claims experience of insurers. It is likely that, as insurers gather increased evidence on the real-life performance of these vehicles, they will adjust their premiums accordingly.

Individual insurers may also seek to explore other forms of usage-based pricing. It is possible, for example, that insurers may use telematics devices and other technology to monitor and incentivise the use of safety functions – how such models develop will depend on whether individual drivers always opt to use the technology that is available to them.

Q2E: Do you anticipate the introduction of vehicles with AVT to increase insurance premiums for conventional vehicles?

As with the answer to Q2D, it is too early to answer this question with certainty, and ultimately premiums will always reflect the real-life claims experience.

However, the initial assumption of the insurance industry is that, provided the safety performance of full ADT is as predicted, this will reduce the overall frequency of road accidents, and as such will reduce costs overall, including for those vehicles not equipped with the technology.

Furthermore, the likely increase over time in market penetration by vehicles equipped with ADAS suggests to us that, by the time that vehicles equipped with fully automated driving technology are on our roads in significant numbers, the “conventional vehicles” of today will be fewer in number and fully automated vehicles may be interacting largely with sophisticated ADAS equipped vehicles (the next generation of conventional vehicles) more than with “fully manual” ones.

That said, a number of factors will ultimately determine this, including:

- Frequency of incidents where the driver of a ‘manual’ car is the ‘at-fault party’ in an incident involving an automated car, and the impact of the factors listed in the answer to Q2D above on this
- The mix of drivers – were those drivers who continue to use ‘manual’ driving technology be those with less safe driving behaviours and/or worse claims histories, there could be an associated impact on premiums
- The speed of penetration of ADT technology and the ease with which other drivers adapt to how this technology works
- Related to the points made about repair costs in the answer to Q2D, there may be a change in the cost/availability of parts for ‘manual’ vehicles
- As ADT penetration within the market increases, there may be a reduction in the number of engineers who specialise in the skills needed to repair and maintain manual cars

Q2F: 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?

As indicated above we do not consider that a product liability model is the right way forward.



If however a new model of insurance is constructed whereby a motor insurer who has unlimited liability is able to pursue a recovery without limit from a manufacturer of a defective vehicle (or other equipment) then manufacturers and their insurers will have concerns about coverage and the product liability market may itself change, with associated costs. We cannot offer any meaningful estimate of costs at this time for either the motor market or any other.

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

Please see our answers to 2D, 2E and 2F above.

Failure to maintain automated vehicle technology, inappropriate use, and circumventing automated vehicle technology

Q2H: 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?

Yes, we consider this to be broadly the correct approach but there are complexities to be considered.¹³

A clear distinction must be maintained between responsibilities of the owner and the actual driver of an automated vehicle. A “not at fault” driver who was unaware that there had been a failure to maintain by the owner (who may or may not also be in the vehicle, or who might be an employer) should not automatically be deprived of insurance protection.

It should be a requirement that the circumvention or failure to maintain is shown to have been directly contributory to the accident rather than simply a fact in the claim.

Where there has been a deliberate circumvention or failure to maintain in the knowledge that this renders the vehicle uninsured when in its automated mode the insurer must, as proposed in the consultation paper at 2.27, have a right of recovery against the owner or user responsible.

Caution is required concerning the meaning of “maintenance”. Clarity will be needed over whether all vehicles with automated technology should meet a minimum standard through continuous upgrades or whether older technologies remain acceptable provided they are maintained to the level a particular manufacturer provides for. In the event that a manufacturer opts to cease maintaining a particular technology, either for commercial reasons or, potentially, because they no longer have the capacity to provide ongoing maintenance (i.e. if they become insolvent), there will need to be clarity over whether it will still be acceptable to use these vehicles on the road beyond that date.

Related to this, consideration should also be given to whether deliberate circumvention or failure to maintain should be addressed by the creation of specific driving offences. Attention must also be given to ensuring the correct maintenance of ADAS and ADT technology is

¹³ A relevant issue to consider in this context is the recent appeal court ruling in *Howmet Ltd v Economy Devices Ltd & Ors* (2016), which suggests that if an end user continues to use a device after being alerted to its unsafe condition, the manufacturer would not be liable. In this case, it was determined that the cause of the accident was not the malfunction, but the failure of the systems the end user had put in place to rectify the malfunction.



reflected in the MOT and potentially through certifying that windscreens and headlamps have been correctly recalibrated following a repair.

We would welcome further confirmation from the motor manufacturing industry as to how they intend to meet their responsibilities and how they will ensure that consumers understand what will be required to use this technology safely.

Third party hacking

Q2I: 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

The general proposal that insurers should not be able to exclude liability for hacking raises serious concerns about the extent to which they could as a result be at risk - to whom and for what types of loss. There should be express categories of claim that can or cannot be excluded if they are as a consequence of hacking.

On the one hand, as with a stolen vehicle and a straightforward consequential injury, motor insurers may accept, and be able to price for, liability to rest with a single hacked vehicle, and with them in the first instance, provided they also had an automatic right of recovery against either a manufacturer should the hacking be as a result of some identified security defect (which could include a failure to update software in a way that would have prevented the hacking) or directly against an identified hacker if they can be traced.

On the other, the significant challenges for large scale physical or economic damage as a result of simultaneous hacking, either as a result of terrorism or organised crime, of a number of vehicles of the same type or model must be recognised. A systemic security breach of this kind is not something that should automatically be covered by motor insurance, given the significant implications for pricing and solvency requirements. Were motor insurers to be held liable (even with the automatic right of recovery proposed above), this could significantly disrupt the market and may make providing cover for these vehicles unviable.

As a result, we would strongly recommend that consideration be given to alternative provisions if hacked vehicles are used for a terrorist incident.

Product liability and automated vehicles

Q2J: Do you agree that the product liability and insurance requirements for automated vehicles should: (a) follow the normal rules on product liability with different rules depending on whether the injured party was an individual or a company? And (b) be limited by the 'state of the art' defence, as set out in the Consultation Document?

No, as we do not agree with the premise of the question. Please see our answer at 2K below.

For the avoidance of doubt, we do not think it appropriate for a 'state of the art' defence to ever be available for accidents involving autonomous vehicles, whatever regulatory regime might be put in place. Allowing manufacturers to use such a defence would potentially risk providing an incentive to place inadequately tested cars on the road that may cause death or serious injury to third parties.



Q2K: Alternatively, should we extend insurance/liability rules specifically for automated vehicles?

As already indicated in our response to question 2A, we believe the existing compulsory motor insurance framework should be extended to include coverage for automated driving in preference to a “product liability” regime (as it is currently understood and operated).

Public sector vehicles

Q2L: 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?

We agree with this proposal, with the observation (as above) that we do not believe product liability per se is the right solution, meaning that any public sector body self-insuring will itself need to be given in law the right to pursue a recovery where it does not otherwise automatically have one.

An alternative option: a first party insurance model

Q2M: Do you agree that an alternative first party model option would not be proportionate while automated vehicles represent a small proportion of the fleet?

We agree that a first party model is not proportionate or desirable at this stage. Given the lack of robust claims experience, a reform of this magnitude may discourage some insurers from entering this market until they are better able to assess the likely risk. Furthermore, such a system would be very difficult to manage while the majority of cars on the road continue to be driven traditionally and subject to the existing insurance model.

Whether it will be appropriate at some point in the future is uncertain but consideration is best deferred until such time as the market has sufficient claims experience to understand the impact such a significant change might have.

Q2N: What do you anticipate the cost of implementing a first party insurance model would be?

Given that we do not believe a first party model would be appropriate at this stage (see our answer to question Q2M), it is not possible to estimate the costs of such a change at this point.

However, as the Government continues its rolling programme of regulatory reform, insurers would welcome the opportunity to provide appropriate data to ensure public policy adapts to further developments.

Next steps

Q2O: Do you have data to support your answers on insurance for automated vehicles?

We have no specific data we can offer.



Highway Code / ADAS Guidance

Q3A: 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 and Rule 160, relating to driving with both hands on the wheel?

In general terms any amendments or clarifications should emphasise the distinction between ADAS and ADT, explain the danger of over-reliance on ADAS and reinforce the position regarding legal liability.

Rule 150 could be amended to explain that motorway assist systems are intended to help drivers maintain safe headways and lane positioning, but should never be used in a way that amounts to a wholesale transfer of control to the vehicle. This amendment should make it clear that the purpose of the ADAS is to mitigate the risks of minor lapses of attention or judgement that all drivers occasionally suffer from. In particular, they are designed to assist drivers while interacting with legal vehicle systems such as satellite navigation, entertainment system or an integrated hands free mobile phone.

In addition, this amendment could explain that ADAS sensors may not detect all hazards that could occur and they cannot always anticipate the behaviour of other users as effectively as human drivers might. So, these ADAS sensors may react later to a situation than an alert human would. It would also be useful to explain that sensor performance can be degraded in adverse weather including direct sunlight as well as rain, fog etc. As such, over-reliance on these systems could lead to death or serious injury.

Rule 160 should be amended only to allow remote parking and should reinforce the 'motorway assist' message that we have proposed as an amendment to Rule 150 above. That is, drivers are only permitted to drive without their hands on the wheel if they remain alert and ready to intervene when using either an approved park assist/remote parking system operating at speeds of 10 km/h or less.

If driving at speeds in excess of this threshold, the driver should continue to keep both hands on the wheel whenever possible, even if the vehicle is operating in a 'motorway assist' mode.

Motorway assist systems are intended to make driving easier and to mitigate the risks in situations where it is momentarily necessary to remove a hand from the wheel. They are not intended to facilitate hands free driving and they will warn the driver if they detect that hands are not on the wheel. The driver must respond to such warnings immediately and take control of the steering wheel. Most systems will disable the motorway assist mode if these warnings are not heeded.

The practical reality is that if drivers feel encouraged to remove their hands from the wheel it is likely they will also remove their eyes from the road ahead and turn their concentration away too, which is undesirable for their own safety and that of other motorway users, where the consequences of inattention are potentially so much greater.

Proposals could at the same time be set out to show how this advice will change once full "motorway automation" is introduced. At that time, drivers could be permitted to be hands free whenever an approved fully automated driving system is in use.



Enabling platooning

Q3B: Do you agree with the proposition to allow platooning by relaxing Highway Code rule 126 (which recommends a 2 second gap between vehicles)?

We agree that, in relation to commercial applications such as platooning, this will be a necessary relaxation for the desired benefits of automated driving to be achieved. But, consideration must be given to whether generic or targeted relaxation of the requirement is most appropriate (i.e. should it be for all vehicles or only those capable of platooning or permitted to platoon?) and the additional guidance for drivers and other road users that will be necessary both to be directly a part of a platoon and to deal with the presence of platooned vehicles nearby. It seems likely that such a relaxation might therefore impact on a number of other parts of the Highway Code.

Although the question is not directed at this issue, if a generic relaxation is not allowed, there must be consideration of how will that impact on the use of ADAS generally, for example adaptive cruise control (ACC). Currently, ACC systems that allow the driver to set a headway of less than 2 seconds have been given type approval. Therefore, currently, technology has been classed as a safe by the type approval process, but its use is not permitted by the Highway Code.

The two-second rule is based on the perceived reaction time of human drivers. Most human drivers will see and react to a slowing vehicle ahead in less than 2 seconds, such that if following the 2 second rule drivers will have braked before a collision occurs. Provided the following driver matches or exceeds the deceleration of the vehicle ahead then a collision will be avoided.

An automated system will have a reaction time much faster than 2 seconds and will be better at ensuring the correct braking rate and so will have equal crash avoidance potential at much smaller headways.

Some alert and attentive drivers will in fact react to the brake lights of vehicles several positions ahead of them in the queue. This means that when following the 2 second rule they can maintain headway more smoothly with less braking deceleration required. This advantage could be lost in a transition to closer following-vehicle automated braking but the most advanced systems currently on the market use radar systems that can already 'see through' a vehicle ahead to the one in front of that such that the difference in 'anticipation' will be reduced as systems develop.

On balance we agree that the rule should be amended. Our expectation is that the relaxation would apply to the connected vehicles within the platoon, but not necessarily to the lead vehicle. However, finally, we are cautious about this rule becoming technology prescriptive i.e. it should not specifically state that the technology involved must be a vehicle-to-vehicle (V2V) system. The control of the technical standard should be undertaken in separate regulations such as construction and use regulations, allowing the rule to say, for example, that the two second gap can be reduced for commercial vehicles if an approved 'platooning' system is in use or for private cars with approved ACC.



Q3C: What, if any, other restrictions should be considered regarding use of platooning technologies, and why?

We have interpreted this question as directed at the every-day use of the technology, not the development or limitation of platooning technology itself.

If platooning of commercial vehicles is to become a safe and accepted practice for both the drivers of platooned HGVs and those around them there will need to be a high degree of confidence in those having the responsibility of control of the platoon. This will be a question of training and possibly licensing, just as commercial drivers today are required to pass certain tests according to type of vehicle. Possibly there should also be a requirement for regular system checks just as there are maintenance checks, and a clear line of legal responsibility to operators as well as drivers. It is not unreasonable to consider that a technical malfunction could cause a very significant accident and that if the technology has not been maintained or had been tampered with that criminal sanctions could apply.

As indicated above, the Highway Code should give appropriate guidance to both those in the platoon and to the drivers of other vehicles about how both parties should interact at different points, for example at junctions, to ensure that other vehicles can still safely enter and leave a motorway while a platoon of closely spaced HGVs travels past the entry and exit slip roads. There may be a need positively to restrict the actions of other road users at certain points; how will a platoon simply move from one lane to another if it needs to and the motorway is busy? How will safe space for it be created?

Consideration should therefore be given to measures to identify the status of a platoon to other drivers such that they can be advised to avoid interfering in a platoon (i.e. by trying to pull in between two closely following goods vehicles) or advised as to its imminent intentions (i.e. a lane change). This could include signalling on the vehicle and, where necessary, road signs.

These comments are not based on any particular studies on platooning but on practical observation of day to day driving conditions.

Q3D: Do you agree with the proposition that specific and implied driver distraction restrictions are not relaxed at this time?

Yes. The technology is not yet sufficiently robust to allow the human driver to be distracted. While we are aware of some developments that aim to safely allow certain non-driving tasks (for example, checking emails) to be undertaken through the vehicle's infotainment system, these have not yet been sufficiently proven in service. Even if they had, it would remain difficult to indicate to drivers those systems where this was safe as opposed to systems where it was not. As suggested, this should be reviewed as the technology develops and as more information emerges about the effectiveness of such approaches.

Proposals for how these restrictions will be relaxed for full automation in 2021 should be produced ahead of that time as part of a strategy for making the difference between Assisted and Automated driving systems clear.



Construction and Use Regulations / Remote Parking

Q3E: Do you agree with the proposed approach to enable remote control parking by clarifying:

- (i) Regulation 104 (the driver should be in a position to be able to control the vehicle)?**
- (ii) Regulation 107 (switching off the engine when the vehicle is not attended)?**
- (iii) Regulation 110 (not using hand-held mobile phones while driving)?**

Minor accidents while parking account for a substantial proportion of total insurance claims costs, so using systems capable of improving on the impact avoidance capabilities of human drivers in these manoeuvres clearly has substantial potential to benefit road users and reduce claims frequency.

The implicit assumption underlying these proposed amendments to existing regulations is that remote parking systems are consistently reliable and do not present an increased risk, particularly if used in public areas rather than just in private spaces. In short, they must work well and the manner in which they can practically and legally be used must be clearly identified.

On the three proposed regulatory changes, we believe all are acceptable in principle, subject to the following issues being addressed -

- (i) Regulation 104** – in principle, yes. However, the wording should be carefully considered. Having the ability to control the vehicle through a hand held device does not guarantee that this control will be properly used.

Ideally a driver will always meet the requirement of “control” even if not in the driving seat; as long as he/she is exercising continuous control of the vehicle through a hand-held device equipped with a ‘deadman’s handle’ function (i.e. if the phone is dropped the car stops and/or there is no possibility of accidental “in pocket” activation etc). As such, a function like that may more properly be a construction requirement in legislation (i.e. as part of the proposals being discussed at UN ECE level on Reg 79) for an ‘approved’ device.

- (ii) Regulation 107** – in principle yes, but the points made above also apply.
- (iii) Regulation 110** – in principle yes, but caution is necessary as to the numerous circumstances in which a hand held mobile phone might be used while actually driving as opposed to parking and the potential for consumer/operator confusion.

To prevent abuses, some restriction on the exercise of continuous control of the vehicle through a hand held device may also be appropriate – i.e. minimum and maximum distances from the vehicle, continuous visibility, maximum duration of operation etc.,



Motorway Assist

Q3F: 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 would support tightening of this regulation such that it much more clearly and explicitly defined what is a permissible and what is not, by reference to the distinction between ADAS and ADT.

In practice Regulation 109 already appears to allow the display of information that is not related to the driving task while driving (e.g. information about radio channels, music selections, active apps on 4G or Bluetooth-connected iPads and the address books of linked mobile phones) but this activity is - for the most part - limited by the overriding awareness of the need to control the vehicle at all times.

The guiding principle of this clarification should be that the driver should not be able to see or use any information that is not essential to the driving task on TV/display screens at any point while the vehicle is moving in fully manual mode or when using ADAS such as Motorway Assist (in other words whenever the driver remains fully responsible for the safe operation of the vehicle).

In due course, a relaxation of the rules could be permitted when using automated driving technology (such as is expected to arrive in the market from around 2021).

We acknowledge that intermediate technologies are available that allow some additional access to non-critical information during assisted driving. These keep the driver in the loop by communicating critical information (including transition requests, collision warnings etc) to the driver through that same screen (in addition to any other warnings aimed at an alert driver). These are claimed to bring reaction times back to being very close to those of manual driving but there is insufficient evidence, in our view, to prove the effectiveness of such systems. We would not support amending regulations to permit these intermediate technologies, but we are ready to review this opinion if sufficiently strong independent research evidence was presented.

The benefits and impacts of ADAS

Q3G: Do you have any new data or evidence of the safety benefits of these advanced driver assistance systems?

The insurance industry has continued to invest in collecting a growing amount of evidence, and can submit this in due course. It may be more appropriate to do so when responding to future Consultations, as indicated in the current paper by "Next Steps".

Q3H: Are there any other, non-safety, impacts (including costs) of advanced driver assistance systems which you are aware of which we have not covered in this consultation document?

Collection, retention, and control of/access to performance data about the functionality of relevant ADAS and ADT systems in the event of an accident requires consideration. This is a major concern for motor insurers who will be asked to deal in the first instance with all claims arising from an accident involving an ADAS or ADT equipped vehicle. It will be important to



know if ADAS or ADT were engaged and/or functioning correctly, so as to correctly and quickly attribute responsibility for an incident either to a vehicle or a driver.

As there will potentially be impacts on the rights of individuals and their representatives to control the use of such data, a review of data protection legislation may be advisable. Even if the legislation is sufficient, there could be impacts on the costs and processes of storage and retrieval of data that would impede individual access at a crucial time.

In the event of damage and repair to ADAS and ADT, an important issue to ensure that windscreens and radars are repaired and calibrated correctly. There are potential concerns around this process (*set out in Appendix 3*), which if not addressed effectively, could become a more significant concern as this technology develops and becomes more complex.

As with development of a system for identification of vehicles with ADAS or AVT for insurance purposes, so consideration should be given to inclusion of system information in a wider VIN logging system to allow insurers/repairers (and law enforcement agencies and other stakeholders) to better identify what systems are fitted. This will be beneficial to vehicle owners/drivers and to the wider road using public. If insurers are unaware that the technology is available and in use, then incorrect or inappropriate claims processes and procedures may be initiated at the point an insurer is notified of an incident, ultimately leading to delay in dealing with the incident and/or settling the claim.

One further issue that may arise in future is that, as costs for individual parts increases (for example, replacing a calibrated headlamp or windscreen) this may make some older cars uneconomical to repair, where the cost of the repairs significantly outweighs the value of the vehicle.

Q31: Please supply any data to support your answers.

We cannot provide data at this time.



APPENDIX:

Appendix One – Further comments on associated rights of recovery

While in principle product liability law meets the needs of almost all innocent victims of a defective product, the legislation specifically excludes damage to “*the product itself or for the loss of or any damage to the whole or any part of the product ...*” [s5(2) CPA]. In effect there would be no right of recovery for any vehicle damage caused by the vehicle itself, which would leave the “not at fault” driver uncompensated unless he/she also happened to be the original purchaser, in which case there would be a parallel claim under contract law provided the vehicle was shown to be not of satisfactory quality.

Accordingly, if the “not at fault” driver cannot recover in full but their motor insurers are obliged to compensate them in full nonetheless, that would be unfair to motor insurers and might either discourage participation in product development or be a driver for increased premiums or damage exclusions, possibly dis-incentivising consumers.

Where the insured driver is “not at fault”, the motor insurer compensating an injured third party in respect of that party’s product liability rights against a manufacturer does not automatically acquire any right of recovery. The payment would be purely voluntary and would simply extinguish the claim but would not give rise to rights against the manufacturer. The insurer in these circumstances could not be said to be “*liable in respect of any damage suffered by another person*” as is required by the Civil Liability (Contribution) Act 1978 to ground a right of recovery by way of contribution.

In general terms the objective of any regulatory change for insurance provision must not only ensure that innocent victims of road traffic accidents are protected, and are able to claim straightforwardly where ADAS or ADT are the cause, but that the indemnifying insurer is also protected and given the right to a full recovery against a manufacturer of defective technology.

That right will not exist where there is no direct contractual relationship in place (i.e. all parties other than the “not at fault” driver) or where there is no (new) statutory right of action granted. An example of the latter is the right granted to a claimant by the European Communities (Rights Against Insurers) Regulations 2002 to pursue an indemnifying motor insurer directly in respect of the same cause of action as lies against its negligent driver.

Against this background it cannot be assumed – if the law is unchanged - that appropriate risk sharing arrangements between motor insurers and manufacturers will be realised or that if they are that they will achieve a level playing field.

Appendix Two – Range of available and expected ADAS systems

The consultation document refers to a range of systems covered by the ADAS label. Autonomous emergency braking (AEB) and electronic stability control (ESC) are active only in the moments before an imminent crash, or the pre-crash phase and operate in all driving modes (i.e. irrespective of road type, even when the vehicle is manually driven). It is worth noting that AEB can cover a range of sub-types. Most systems currently in vehicles are designed to operate in a car to car rear accident configuration, but some systems in production will now act in frontal collisions with pedestrians or cyclists or when the vehicle is about to reverse into an obstacle. Within the 2-4 year time period being considered in this consultation, we would expect further sub-types to be developed to be active in crashes where vehicles turn at junctions and where vehicles pull out of junctions unsafely.



In addition to this a variety of pre-crash steering functions are in production or development: Emergency Lane Keeping will sharply correct a lane excursion during manual driving if a collision is imminent (e.g. head on collision as a result of one vehicle drifting across centreline). Evasive steering assist will help a driver to achieve the correct avoidance steering when a frontal collision with a pedestrian is imminent and automated emergency steering (AES) will be able to independently swerve to avoid collisions without driver input. All of these would be expected to operate even during manual driving and on any road type.

Adaptive Cruise Control (ACC), Lane Keeping Assist Systems (LKAS), and Park Assist are also mentioned in the document and are collectively covered by the ADAS label but in this case they assist in the normal driving phase. Motorway Assist is described as a combination of ACC, LKAS and AEB that acts to maintain speed, headway and lane position. However, sub-categories of this system could also be considered.

Appendix 3 – Windscreen and Radar repair and calibration

ADAS (and ADT) relies upon instrumentation of vehicles. This currently includes camera and LIDAR in windscreens, and radars in front grilles for example; with the implementation of automated driving the range of sensors is expected to increase.

The addition of ADAS in the current vehicle fleet, while offering associated additional safety benefits, comes with associated increased repair cost, in particular for windscreen replacement. Firstly, when a windscreen is replaced, the manufacturer might specify a need to re-calibrate the ADAS sensor mounted behind the screen. This additional activity may require specialist knowledge, requiring attention at the main dealer. Secondly, a stone chip in the vicinity of the sensor may previously have been repairable, but vehicle manufacturers may now state that a repair would adversely affect the sensor. This could increase the frequency of replacement relative to repair. Thirdly, vehicle manufacturers may also state that the windscreen is now a specialist part with defined optical properties, such that an aftermarket replacement is not acceptable. This could increase the cost of replacement.

Calibration of cameras is often a requirement. This is because cameras are multi-function sensors, that may or may not be used for autonomous braking (AEB) for Car-to-Car Rear, pedestrian, forward collision warning (FCW) lane departure warning (LDW), lane keep assist (LKA), adaptive cruise control (ACC), traffic sign recognition (TSR), adaptive front lighting (AFL) and other functions. On average, each camera supports three functions. Thus, any cost added as a result of repair or re-calibration of a camera sensor should not be attributed directly to any one function in a cost/benefit analysis.

The calibration process also varies between different manufacturers. Typically, each calibration requires a connection to a specific diagnostic system for each manufacture, and in some cases will go beyond this to also requiring some physical alignment with targets and/or alignment of the wheels. In some cases, additional screen replacement costs due to cameras can be quite small. However, in one more extreme example, a cost of £700 per calibration has been quoted, using an expensive tool that is only available from only 7 dealerships in the country.

A long term worst case could be envisaged whereby there was 100% market penetration of ADAS cameras in the windscreen, all requiring a re-calibration at a cost equivalent to the anecdotal report of £700 per calibration. If this were the case, the total windscreen claims cost



would increase from approximately £124 million (in 2014) to approximately £630million (in 2025).

While it is expected that the savings from an anticipated reduction in frequency of collision claims would outweigh any additional costs associated with screen replacements, the worst case scenario would still have a significant impact on costs.

However, in reality, the fitment will remain much less than 100% for a long time to come. This provides an opportunity for action to be taken to ensure the costs associated with re-calibration are kept at lower levels and preferably to drive increased fit of self-calibrating systems.