

## Written evidence submitted by the Association of British Insurers (SDV0051)

### ***The UK insurance and long-term savings market and the ABI***

*The Association of British Insurers is the voice of the UK's world-leading insurance and long-term savings industry. A productive and inclusive sector, our industry supports towns and cities across Britain in building back a balanced and innovative economy, employing over 300,000 individuals in high-skilled, lifelong careers, two-thirds of which are outside of London.*

*The UK insurance and long-term savings industry manages investments of over £1.9 trillion, contributes over £16 billion in taxes to the Government and supports communities across the UK by enabling trade, risk-taking, investment and innovation. We are also a global success story, the largest in Europe and the fourth largest in the world.*

*The ABI represents over 200 member companies, including most household names and specialist providers, giving peace of mind to customers across the UK. Please note we would be happy, and stand ready, to provide further information if this would be helpful to HM Treasury.*

*For the purposes of this response, 'insurers' refers to insurance, reinsurance and long-term savings companies.*

### ***Thatcham Research***

*Thatcham Research was established by the motor insurance industry in 1969, with the specific aim of containing or reducing the cost of motor insurance claims while maintaining safety standards.*

*We remain the UK's only 'not for profit' insurer funded research centre and hold a unique position thanks to our involvement and engagement with vehicle manufacturers, regulators, law enforcement organisations, automotive bodies and insurers to provide a holistic view of the benefits or shortcomings of vehicle technologies. Our research is at the forefront of vehicle safety, security and repair.*

### **Executive Summary**

1. The ABI and Thatcham Research welcome the opportunity to submit evidence to the Transport Select Committee's Inquiry on Self-Driving Vehicles. With the Transport Bill expected to introduce enabling legislation for the regulation of automated vehicles, and the first vehicles equipped with Automated Lane Keeping System (ALKS) technology to be on the UK's roads at the end of 2022 or early 2023, this is a timely inquiry to look at this vital policy area for the future of transport. We look forward to engaging with the committee as the inquiry progresses and would welcome the opportunity for further discussion on the industry's priorities and how we can work together with the Government to ensure the safe roll-out and transition to automated vehicles on the UK's roads.

2. Following the Queen's Speech earlier this year, we welcomed the Transport Bill and the intention to deliver a robust regulatory framework for the use of automated vehicles in the UK. We urge the new Government to maintain its commitment to delivering the Transport Bill and bringing the legislation forward in this parliament. We support the UK's ambition to be a world leader in the development of automated vehicles and the Bill will play an essential part.
  
3. This response does not attempt to comment on every aspect of the committee's inquiry but provides key information on the industry's key asks of the Government including:
  - The need for clear terminology and communication with the public to ensure awareness and understanding of the capabilities and limitations of the vehicles as we transition to more automated vehicles on the road.
  - A defined set of data requirements that must be shared with insurers in order to fulfil obligations under the Automated and Electric Vehicles Act 2018.
  - Standards for access to vehicle data after an incident involving an automated vehicle and the establishment of a third-party neutral server to set the foundation for data sharing for all future automated technologies.
  - Highlighting remaining concerns about Automated Lane Keeping Systems and identifying actions that need to be taken before the technology can be safely adopted.
  - Considerations for infrastructure investment and the protection of infrastructure.
  - Future considerations that may be of concern to the wider automated driving ecosystem.

## **Submission**

### **Introduction**

4. The ABI and Thatcham Research wholeheartedly support the development of automated vehicles, as they have the potential to

significantly reduce the number of traffic collisions precipitated or exacerbated by driver error. The adoption of this technology brings numerous new and exciting possibilities that will improve the lives of people in society, such as giving those who are unable to drive more independence and mobility, cutting emissions and congestion.

5. The UK also has a unique post Brexit opportunity to be a global leader in the development of this technology and capitalise on the benefits. The investment to date by Government, and the work of CCAV has resulted in the UK being a key player in this industry. The industry has the potential to unleash significant economic growth and create highly skilled jobs in many parts of the UK.
6. The insurance industry is proud to play a part in this ecosystem. We have worked closely with Government and other stakeholders in the development of regulation including the Automated and Electric Vehicles Act 2018. Insurers have also played a crucial role in providing confidence when companies are looking to trial and operate various automated driving systems which enables the risk-taking required to advance this technology.
7. However, an increase in technological capability does not necessarily lead to an increase in road safety. While many reports compare the safety advantages of automated vehicles with conventional manually driven vehicles, the results are less certain when they are compared to modern vehicles with various types of Advanced Drivers Assistance Systems (ADAS) which provide many of the safety benefits while still having a driver present and engaged with the driving task. The overall safety of any assisted or automated driving system fundamentally depends on the interactions between the human and the driving system at this stage of development.
8. All vehicles with the automated driving features should ensure the following:

- Vehicles included on the Secretary of State's list of automated vehicles must be as safe as manually driven vehicles supported by the latest assisted driving technology with no increase in the frequency or severity of any collision, injurious or otherwise.
- Manufacturers of automated vehicles must eliminate customer confusion by providing clear information to customers which is not misleading, especially by inferring capabilities beyond the systems intended and safe use.
- Vehicles that offer limited self-driving capabilities and require the user-in-charge to take back control promptly (SAE Level 3)<sup>1</sup> must employ direct driver monitoring technology. Driver Monitoring Systems (DMS) actively monitor the user while the automated driving system is engaged, and it must limit the driver's ability to conduct secondary tasks to those which can be legally performed via the vehicle's built-in infotainment system.
- Automated driving must only be available for the driver to select when the vehicle systems have identified that the required operational design domain (ODD) conditions are met.
- The termination of an automated driving system must be undertaken in a clearly identified manner which enables the user-in-charge adequate time to regain cognitive control of the vehicle. Where a user-in-charge fails to respond, the vehicle must make progressively conspicuous warnings to alert the user-in-charge of the takeover command whilst reducing speed and all the while maintaining full control of the driving task. Where a user continues to be unresponsive, the automated driving system must move the vehicle from a live traffic lane into a safe zone away from moving traffic and enable the e-call function.
- Vehicles must be fitted with collision avoidance technologies at least equal to the current state-of-the-art assisted driving systems. These systems must be robust and resilient enough to maintain full performance for at least ten years from manufacture.
- Vehicles must be designed and maintained to minimise vulnerability to cyber-attack.

## **Terminology**

9. There are still worrying misconceptions about the current state of vehicle technology, and it is essential that consumers know exactly what the limits of technology are if the number of road traffic collisions are not to increase.

10. Insurers see a clear distinction between two levels of technology:

- Assisted driving refers to systems that provide intermittent support to the driver and the driver is required to remain engaged with the driving task
- Automated driving refers to systems that are capable of operating in clearly defined automated mode(s) which can safely drive the vehicle in specified design domains without the need to be controlled or monitored by an individual.

11. While we are very supportive of the Committee's inquiry, we believe that more work needs to be done to elucidate the use of terminology surrounding these technologies. The insurance industry and others in the automotive ecosystem have coalesced around adopting the phrase 'automated' and any divergence from this could result in confusion. We believe and continue to believe that 'automated vehicle' and 'automated driving' are the most accurate and appropriate terms to refer to these technologies and when ancillary terms such as 'technology' or 'system' are added to the end of 'automated vehicle' or 'automated driving', it presents a more accurate definition of capabilities. We understand that the Government has chosen to adopt the term 'self-driving' but implore that it reverts to the use of 'automated vehicle' for alignment and consistency.

12. Moving forward, there needs to be greater clarity over various terms such as 'no user-in-charge' or 'authorised self-driving entity,' especially when communicating these concepts to the public. Furthermore, we have concerns about the liberal use of certain terminologies in the market, for example 'Autopilot,' that may lead drivers to overestimate the capabilities of a vehicle and put themselves in a dangerous position.

13. The insurance industry has been active in supporting the development of

this technology and in helping reduce uncertainty related to terminology – along with Thatcham Research, the ABI jointly published its '[Defining Safe Automated Driving](#)' document in 2019, which clearly outlines the 12 key principles that we feel must be met to ensure a safe transition towards an Automated Driving future. The ABI and Thatcham have both also worked closely with the Centre for Connected and Autonomous Vehicles (CCAV) AV-DRiVE group to help produce a consumer toolkit to educate users on automated vehicles.

### **Data Requirements**

14. The insurance industry continues to have concerns about the capabilities of the Automated Lane Keeping System (ALKS) technology that is already on sale in Germany and that will arrive on UK shores imminently. We believe that ALKS technology is more akin to an advanced assisted technology rather than an automated driving technology because the current ALKS technology is quite limited in capability. We are aware that the United Nations Economic Commission for Europe (UNECE) Special Interest Group is considering increasing the speed limit for ALKS and allowing the system to change lanes – with these advancements, it would be closer to an automated driving system.
15. We recognise that the Government has announced an intention to consider vehicles equipped with ALKS as the first self-driving vehicles.
16. In order for insurers to fulfil their obligations under the Automated and Electric Vehicles Act (AEVA) 2018, we must have access to the data requirements set out below:
  - Data must be GPS-location and event time stamped
  - The time at which the self-driving system was initiated in a year/month/day/hour/second format
  - Transition from manual to automated driving and vice versa must also be time stamped
  - Any driver intervention must be recorded
  - A Minimum Risk Maneuver (MRM) trigger must be recorded
  - Driver seat occupancy must be recorded

- System health and status must be recorded
- In the case of a fault that leads to system inoperability, the system must store a date stamp as to when inoperability occurs

17. The above data items largely parallel what is set out within UNECE Regulation 157 which governs the use of ALKS. The only additional requirement is location data and insurers and the Law Commission have agreed that location data should be included within the data set. Location data in conjunction with the other data items can help establish whether a vehicle's system or a human driver was in control at the time of an incident. However, until the provision of location data is enshrined in UK regulations governing the use of ALKS, vehicle manufacturers will not be required to share this data. If insurers are unable to access this data, the provisions of the Automated and Electric Vehicles Act 2018 will be unworkable in practice and it may be more difficult for insurers to offer coverage for vehicles with automated driving capabilities. We strongly encourage the Government to take the right steps to expedite this process and set out these data principles in UK regulation.

18. The conversation around data requirements also rests on the assumption that the UNECE is able to agree upon a specified definition of 'detectable collision'. This definition should be sufficiently liberal to account for all collisions that may involve an automated vehicle including low-impact collisions.

### **Data Access**

19. The user-in-charge of the vehicle should have a duty following any traffic incident to provide information and report the incident to the police if they are aware of the occurrence. A user-in-charge may not always be aware of a low-impact collision if the automated driving system (ADS) is engaged, and they are occupied with a secondary task. Regardless, the user-in-charge should have an obligation to grant access to vehicle data and camera footage.

20. The UK regulations must establish ways to access relevant data without

accessing personal, protected, or non-related data.

21. Data should be made available to insurers free of charge, without the need to obtain court orders, and stored by a safe and neutral third-party. We urge the Government to work with the insurance industry and vehicle manufacturers to develop a neutral third-party server to enable the effective sharing of collision data. This would require significant public and private sector investment, buy-in, and coordination, however, it would lay the foundation for data sharing for all future automated vehicle technologies which would be an invaluable resource for all stakeholders.
22. The alternative would be for individual insurers to set up a cumbersome process of bi-lateral agreements with vehicle manufacturers to enable data sharing. With ALKS technology on the UK's roads from the end of this year, there is currently no agreement in place for vehicle manufacturers to share location data in the interim period before legislative changes in the Transport Bill are introduced
23. The lack of appropriate location data and corresponding timestamps could also leave room for fraud due to the uncertainty in liability. The associated increase in cost of investigating fraudulent claims will only add to insurer costs which are, of course, reflected in premiums paid by all motorists.

### **Automated Lane Keeping Systems**

24. In addition to the above data requirements, there are several other concerns the insurance industry has about the rollout of ALKS technology.
25. Given that ALKS is considered a self-driving technology, the user-in-charge will be allowed to engage in secondary tasks. Under current regulations, the user-in-charge will only be allowed to conduct secondary tasks on their infotainment system because it can be turned off when the vehicle issues a transition demand. While the regulations specifically ban the use of mobile phones, we believe that the ban should also extend to other forms of media such as e-readers, books, and related items.



26. There is also still a lack of clarity on the GB type approval process. It remains to be seen how the International Vehicle Standards team at the DfT will ensure that ALKS-equipped vehicles can operate safely on GB roads and fulfil country-specific requirements such as the inclusion of location in the data storage system for automated driving (DSSAD). We encourage the creation of a robust GB type approval process that is more rigorous than a checkbox exercise to ensure compliance.

27. After these vehicles are type approved for use in GB, there is also a question about how a record of these vehicles will be kept by the Government. We understand that the vehicle make and model will be listed on the Secretary of State's list of automated vehicles, but, functionally, this is not enough information to practically support the adoption of AVs. It has been suggested that the DVLA would maintain a list with make, model, and variant information. While this extra information is certainly useful, in reality, it still may be difficult to assess if a vehicle is actually capable of automated driving unless VIN-level data is collected. We also have concerns about how quickly and how frequently this information will be updated.

### **Infrastructure and Security**

28. The industry also wants to highlight concerns related to infrastructure. Both physical and network infrastructure will be critical to the safe deployment of automated vehicle technologies. There needs to be greater investment into infrastructure – from proper lane markings and smart overhead gantries to 5G network towers and beacons – that will need to be installed and improved upon to facilitate the use of automated vehicles. There also needs to be considerations on how this infrastructure is distributed so as to not exacerbate the urban-rural divide already apparent in many transport systems.

29. There also needs to be consideration for protecting this infrastructure. Automated vehicle technology, especially in its infancy, is easily fooled, for example, by using traffic cones or altering lane markings. The

communications and network infrastructure are also of strategic national security importance and defense from cyber threats will be imperative to preventing the access and misuse of AV technologies by bad actors.

30. Stringent consequences must be set out in the legislation for wrongful interference or malicious damage to self-driving technology. This interference could range from computer hacking, spraying sensors or standing in-front of such vehicles. These consequences are required to provide the public with confidence and ensure the technology does not become a target for crime.

### **Future Concerns**

31. The first vehicles to reach UK shores will have both the hardware and software installed and be required to go through a whole vehicle type approval process. The insurance industry has significant concerns about the potential for vehicles to have the hardware installed then have automated driving technologies be enabled with over-the-air updates – this would completely change the risk profile of a vehicle with the push of a button. If this technology were to become prevalent, we would encourage the Government to require some form of additional type approval and the ability to regularly update this information onto a neutral third-party server. The entire type approval process itself may also need to be reviewed to account for fast changing vehicle technologies.

32. There has also been a recent trend of increased personalisation of vehicles. For example, there are technologies being considered by the automotive industry that would allow for the creation different user profiles when the vehicle is accessed by different keys. Functionally, this means that one vehicle could have multiple risk profiles making it difficult to accurately underwrite. Real time updating of data could potentially solve some of these issues.

33. As vehicles become increasingly sophisticated, there is an imperative to reassess the practice of periodic technical inspection (PTI). The current

MOT system should be redesigned to account for the multitude of technological features on modern-day vehicles. A new system for periodic technical inspection should assess the functionality of a vehicle's cameras and sensors and the installation of safety critical software updates should be required for a vehicle to pass a safety inspection.

34. Driver training and licensing should also be reviewed so that new drivers understand the capabilities and limits of various automated driving technologies, and this should be periodically updated as new technologies become available.

### **Conclusion**

35. The ABI and Thatcham Research have been vital partners in the development of automated vehicle technologies. We respect the ambitious goals that the Government has set out to bring automated vehicles to our roads, but we need to ensure that safety is prioritised as we strive for technological innovation. We will continue to work with the Government and various stakeholders to address the issues listed in this response.

August 2022

### **Endnote**

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<sup>1</sup> The Society of Automotive Engineers (SAE) defines 6 levels of driving automation ranging from 0 (fully manual) to 5 (fully autonomous); more information about the levels of automation can be found [here](#).