



Response of the Law Society to

Highly Automated Road Passenger Services (HARPS) Consultation



1. The Law Society of England and Wales is the independent professional body that works to support and represent over 190,000 members, promoting the highest professional standards and the rule of law.
2. The Law Society and KPMG estimate that in 2018, the legal services sector contributed £59.93bn of GVA to the UK economy, comprised of:
 - £39.79bn of direct GVA generated through the legal services sector's activities in the UK;
 - £11.87bn of indirect GVA generated through the legal services sector's UK supply chain; and
 - £8.27bn of induced GVA generated through the legal services sector's direct and indirect employees' spending of wages in the UK economy.¹
3. The Law Society welcomes the opportunity to submit its views on the points raised in this Call for Evidence examining Highly Automated Passenger Mobility Services (HARPS).
4. We have not attempted to answer every question in the Call but have responded to those which closely address the fundamental requirements of HARPS. We look forward to engaging further with the Government on these issues when specific proposals are presented.

¹ KPMG, Contribution of UK Legal Services Sector to the Economy: A Report for the Law Society, January 2020.

Key Messages:

- It is clear converging forces are transforming the automotive industry's longstanding structure and dynamics.
- Current national and international regulation and legislation frameworks on automotive use are all built around the assumption of human drivers and, therefore, not sufficient to regulate SAE Levels 1 to 5 of automation.²

Lawyers will play a crucial role:

- Advising clients on the interaction between country specific and international regulations and/or legislation.
 - Advising in relation to urban planning, insurance, product liability, data use, criminal interference or car-hacking cases, which are likely to take on greater importance with the introduction of HARPS,
 - Defining ownership and use of the wealth of data each car will collect (including personal information about the trips its owner makes) to support the adoption of HARPS.
- The UK is a frontrunner in passing legislation that introduces a special compensation system for damage resulting from accidents with autonomous vehicles, through the Automated and Electric Vehicles Act (AEV/The Act) 2018. However, The Act, as it stands will only govern the future landscape of highly advanced automation, SAE Level 4 -5. The Act should not only apply to victims of injury from highly automated vehicles but also to the victims from damage caused by the different stages of automotive capabilities. Victims injured by semi-autonomous vehicles will have no recourse to remedy under the Act and might find it difficult to bring product liability claims using existing and proposed laws, which in our members' view, are not fit for purpose.³ The lack of recourse for those injured by SAE levels 1 – 3 will create complex liability disputes for HARPS passengers.
 - Under AEV, insurers might also be able to avoid paying out on a policy if the insured has installed software updates that it does not allow, or if they have failed to install 'safety critical' updates. However, the Act provides no clarification on where the responsibility lies for alerting vehicle owners to the need to make such updates.

² [For more info on the levels of driving automation, please see the Society of Automotive Engineers description of SAE levels 0 - 5.](#)

³ [For a legal analysis of the Automated and Electric Vehicles Act \(2018\).](#)

- Given one of the proximal problems of HARPs will be multiple forms of vehicle control on shared road systems, the Law Society agrees a single operating license should be made available to those offering HARPS. A single operating license will enable a system which encourages operators to develop a HARPS system of co-operative mobility.
- The Law Society supports the development of a national scheme of basic standards governing HARPS, compliance with which should be evidenced by businesses during the design, development, trialling and deployment of HARPS.
- The government should conduct research into what data sets and databases are generated by the operation of HARPS: considering potential uses and ownership.
- Where personal data (within the meaning of the Data Protection Act 2018 and GDPR) is to be obtained as part of the operation of HARPS, consideration needs to be given to how compliance with the GDPR's data protection principles will be maintained, ensuring these are designed into processes during the design, development, trialling and deployment stages, including the systems and software.

CHAPTER 3: OPERATOR LICENSING – A SINGLE NATIONAL SYSTEM

The Law Society agrees that a single operating license should be made available to those offering HARPS. A single operating license will enable a system which encourages operators to develop a HARPS system of co-operative mobility. Automation and connectivity will only reach their full potential when the cooperative element is included.⁴

Consultation Question 2 (Paragraph 3.86: Do you agree that there should be a national scheme of basic safety standards for operating a HARPS?)

The Law Society supports the development of a national scheme of basic standards operating under HARPS, compliance with which should be evidenced by businesses during the design, development, trialling and deployment of HARPS. However, where different modes of HARPS require different mode-specific safety principles it is recommended that guidance be developed for those HARPS modes of transportation. Safety principles currently being developed by the AV sector and nation states include the following principles:⁵

⁴ Cooperative mobility is hereby defined as the negotiation of manoeuvres between vehicles to enable safer and more efficient interaction among different mobility actors on the road.

⁵ The generic approach of these principles is based on a collection of publications and recommendations from mainly public authorities, consumer associations and industry. These included the working group on intelligent transport systems, Proposal for the Definitions of Automated Driving under WP.29 and the General Principles for Developing a UN Regulation on Automated Vehicles. and Regulating Automated Driving – The UK Insurer View.

Safety principles should include evidence that HARPS operators meet:

1. Safe Operation: HARPS vehicles must be able to operate with the loss, or failure, of any critical software components.
2. Operational Design Domain: HARPS vehicles must assess risks of typical driving situations, i.e. at night.
3. Predictable Behaviour: HARPS behaviour needs to be predictable to other drivers on the road, and it needs to act according to traffic rules.
4. User Responsibility: HARPS vehicle needs to be able to recognise a driver's state of alertness, including the monitoring of tiredness, and communicate to them any tasks for which they are responsible.
5. Effects of Automation: HARPS operators must consider how automation could affect the driver even directly after the period of automated driving is over.
6. Safety Assessment: HARPS operators must provide a consistent way to verify and validate the autonomous vehicle's ability to meet safety goals.
7. Data Recording: Where HARPS vehicles recognise a specific event or incident, it needs to be able to record relevant data in a way that doesn't violate applicable data privacy laws.
8. Safety Layer: HARPS operators and users must know a HARPS own limits and understand when it's safe to return control to the human driver.
9. Security: HARPS vehicles must have protection against security threats, including those which result from cyber threats.
10. Passive Safety: HARPS operators must be prepared for crash scenarios that might be unique to vehicle automation and mitigate them where possible.
11. Vehicle and Driver Initiated Handover: HARPS vehicles must be able to let drivers know when they need to takeover control and make it easy for them to do so.

In order to enforce new concepts of safety standards the current MOT test must consider both the mechanical safety of the car, roadworthiness, exhaust emissions and the analysis of critical components, including software. The conductor of the MOT should have adequate expertise to verify that the autonomous vehicles software has not been bypassed, amended or modified through illegal coding.

CHAPTER 4: OPERATOR LICENSING – SCOPE AND CONTENT Scope of the new scheme Consultation

Exemptions Consultation Question 5 (Paragraph 4.46): We seek views on whether there should be exemptions for community or other services which would otherwise be within the scope of HARPS operator licensing.

UK. Intel, Audi, and Volkswagen, have now adopted these safety principles and subsequently published a whitepaper entitled "[Safety First for Automated Driving.](#)"

HARPS should be designed, developed and deployed in a manner which promotes access to disadvantaged groups or communities. Although the socio-economic duty contained in Equality Act 2010 Section 1 has not been brought into force nationally, it does provide a framework for ensuring government ministers, councils and other public authorities have due regard to 'the desirability of exercising [their functions] in a way that is designed to reduce the inequalities of outcome which result from socio-economic disadvantage'. Any conditions imposed should not operate to restrict or exclude participation from disadvantaged groups and this should be a function of the operating conditions themselves.

Operator requirements Consultation Question 7 (Paragraph 4.72): Do you agree that applicants for a HARPS operator licence should show that they: (1) are of good repute; (2) have appropriate financial standing; (3) have suitable premises, including a stable establishment in Great Britain; and (4) have a suitable transport manager to oversee operations?

The term "stable establishment" has no legal meaning, however in the context of HARPS this term is especially important when securing redress. Stable establishment needs to have a clearer definition - the operator must hold full local legal responsibility and accountability and that should be made clear. We would also recommend that appropriate financial standing includes appropriate insurance cover for HARPS operators.

In addition, cybersecurity standards should be a specific requirement of any applicant for a HARPS license. Cyber security of automated systems should be an essential part of understanding and maintaining vehicles of this type. Safeguarding cyber security is crucial to ensure the UK can harness the benefits of the CAV market, which is estimated to be worth £52 billion to the UK economy by 2035. The Law Society supports the inclusion of data protections requirements for a HARPS operator to show compliance with the UK government's key principles of cyber security for connected and automated vehicles:

- Organisational security is owned, governed and promoted at board level.
- Security risks are assessed and managed appropriately and proportionately, including those specific to the supply chain.
- Organisations need product aftercare and incident response to ensure systems are secure over their lifetime.
- All organisations, including sub-contractors, suppliers and potential 3rd parties, work together to enhance the security of the system.
- Systems are designed using a defence-in-depth approach.
- The security of all software is managed throughout its lifetime.
- The storage and transmission of data is secured and can be controlled.
- The system is designed to be resilient to attacks and respond appropriately when its defences or sensors fail.⁶

⁶ [UK Government, Key Principles of Cyber Security for Connected and Automated Vehicles, 2017.](#)

Consultation Question 8 (Paragraph 4.73): How should a transport manager demonstrate professional competence in running an automated service?

Under the Product Liability Directive of the Council of the European Union, a product is considered defective when “it does not provide the safety which a person is entitled to expect”, including considering “the use to which it could reasonably be expected that the product would be put”.⁷

There is a clear need for HARPS operators to familiarise drivers and users with HARPS interfaces and modalities. The user should be aware of the capabilities and limitations of the system and of the actions to perform when their intervention is required. Additionally, any software updates for HARPS should require further training through simulated scenarios and replays of real-world runs likely impacted by the updating of hardware and software.

Part of illustrating transport manager competence is through the completion of training programs. Therefore, a training program is essential to allow safe interaction and to foster the correct acquisition of the operational skills. The Law Society recommends research be conducted into the application of augmented and virtual reality to transport manager, driver and user training programs.⁸

Consultation Question 28 (Paragraph 6.124): We seek views on whether operators of HARPS should have data reporting requirements regarding usage by older and disabled people, and what type of data may be required.

HARPS operators must have data reporting requirements to allow analysis by protected characteristics (of which age and disability are two of the recommended metrics) to assess equality and accessibility of its products and users.

Dr Natalie Byron, a leader in data analysis of vulnerable person(s), has developed a list of thirteen data points to identify vulnerability: age, disability, employment status/income, english as a foreign language, gender reassignment, highest level of education (proxy for literacy), postcode (permanent address, to identify whether in a care home, homeless, in an area of low internet coverage etc.), pregnancy and maternity, race, religion or belief, sex, sexual orientation, fear or distress connected with the an individual’s context e.g. domestic violence/abuse, in need of a hospital.⁹

However, where there is large-scale processing of special categories of personal data, and/or criminal conviction data, a Data Protection Impact Assessment to identify and assess data protection risks will need to be conducted by operators. As part of the DPIA process, data controllers and processors should seek the views of affected data subjects and their representatives ‘where appropriate’.

⁸ [Daniele Sportillo, Alexis Paljic, Luciano Ojeda. On-Road Evaluation of Autonomous Driving Training. 14th ACM/IEEE International Conference on Human Robot Interaction, Mar 2019, Daegu, South Korea](#)

⁹ [Natalie Byrom, Digital Justice: HMCTS Data Strategy and Delivering Access to Justice, Legal Education Foundation. 2019.](#)

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