

WMG, University of Warwick response to the Law Commission of England and Wales and the Scottish Law Commission joint consultation on Automated Vehicles: Paper 2 on Passenger Services and Public Transport

INTRODUCTION

About you

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About WMG, University of Warwick, UK

The University of Warwick is a world leading university with the highest academic and research standards. The University is consistently ranked in the top 10 universities in the country and in the top 50 internationally. WMG is an academic department at Warwick and is the leading international role model for successful collaboration between academia and the public and private sectors, driving innovation in science, technology and engineering. In the last Research Excellence Framework (2014) which assesses quality and impact, 90% of WMG's research is world leading/internationally excellent. WMG has established relationships with a number of international partners and is has a track record of working with various countries to deliver innovative research and education programmes to address global challenges. The department's annual research income is £60M (2018) which includes a strong programme around digital and immersive technologies.

WMG has a significant portfolio of research (£17M) in Intelligent Vehicles and we are considered the centre of excellence for connected and autonomous vehicle research. Our multidisciplinary approach, including cooperative driving systems, connectivity, human factors and verification and validation, enables a full understanding of the practical applications that will help shape the future of transport mobility.

Are you responding to this consultation in a personal capacity or on behalf of your organisation?

Responding on behalf of organisation

CONSULTATION QUESTIONS

Chapter 3: Operator licensing: a single national system

Consultation Question 1: Do you agree that Highly Automated Road Passenger Services (HARPS) should be subject to a single national system of operator licensing?

Yes, we agree that HARPS should be subject to a single national system of operator licensing. Such a system will enable HARPS operators, manufacturers and other stakeholders (e.g. ADSE) to align and collaborate on the development of the infrastructure required to perform the evaluation for granting licenses.

Additionally, having a uniform framework will ensure UK remains lucrative to international manufacturers / service providers who will need to adhere and develop their products / services to a single set of requirements across the UK (unlike in the US where each state has varying requirements).

However, the national system for operator licensing and the corresponding licensing requirements should be written in regulation in such a manner that they cater to the local and region [REDACTED] on all HARPS operators due to stringent requirements as [REDACTED] ific case in a specific town / city. This could be overcome by making the licensing requirements as a function of the Operational Design Domain (ODD) specified by the HARPS operator.

From a societal perspective, a uniform licensing framework will prevent confusion in public leading to the development of trust in the technology.

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

As safety is paramount and a key motivation for the introduction of automated vehicles, **we agree** that there should be a national scheme of basic safety standards for operating HARPS. As mentioned in response to question one, agreement on minimum safety requirements will give public confidence and trust in HARPS. However, the suite of standards need to include “*process standards*” as well as “*specified requirements*”. This is due to the fact that there will always remain some area specific requirements which need to be captured in the ODD. Therefore, we recommend that the national scheme of basic standards includes a standard which illustrates the role/influence of Operational Design Domain on safety. For example, a HARPS deployed in central London will have some varying requirements as compared to HARPS deployed on a University campus or a business park. While there will be a set of common safety requirements, the national scheme must provide guidance on the specificities associated with respect to the ODD.

[REDACTED]
[REDACTED]

Chapter 4: Operator licensing: scope and content

Consultation Question 3: Do you agree that a HARPS operator licence should be required by any business which:

- (1) carries passengers for hire or reward;***
- (2) using highly automated vehicles;***
- (3) on a road;***
- (4) without the services of a human driver or user-in-charge in the vehicle (or in line of sight of the vehicle)?***

Yes, we agree that a HARPS operator license should be required by any business. However, on the specific cases mentioned, we would recommend the removal of the “road” category and replacing it with a more generic term e.g. “drivable surface”. Many of the HARPS (e.g. pods in Milton Keynes) may not operate on “road”. Please refer to the BSI PAS 1883 or ISO 34503 on Taxonomy for Operational Design Domain for more details.

Moreover, some HARPS may include carrying passengers for hire or reward during daytime and freight during nighttime. While the Law Commission’s terms of reference preclude freight, we don’t see a difference in the safety requirements (apart from accessibility requirements) for HARPS for freight or passengers.

[REDACTED]

Consultation Question 4: Is the concept of "carrying passengers for hire or reward" sufficiently clear?

Yes, the concept of "carrying passengers for hire or reward" is clear. However, HARPS may be carrying passengers during the day and freight during the night. Therefore, we would recommend that the distinction between passengers and freight be removed. One of the key city HARPS applications involves logistics delivery (e.g. Amazon, UPS deliveries).

Consultation Question 5: 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.

We believe that there should be **NO** exemptions to the community for commercial deployment of HARPS. Exemptions can lead to confusion and lower the safety standards. Furthermore, the first accident caused in an application which had received exemptions will have a detrimental impact of public trust on the regulatory framework as well as the technology. Additionally, exemptions will lead to burdening stakeholders like ADSE and HARPS operators to modify their processes which may make such deployments commercially unviable.

However, exemptions may be provided during trial phase of the HARPS. But this will require stringent safety requirements and procedures to be setup to ensure minimum safety performance.

[REDACTED]

Consultation Question 6: We seek views on whether there should be statutory provisions to enable the Secretary of State to exempt specified trials from the needs for a HARPS operator license (or to modify licence provisions for such trials).

Answered in Q5. Additionally, trials should adhere to Department for Transport's Code of Practice for AV Trialing and the Centre for Connected and Autonomous Vehicles' CAV PASS scheme (which is being developed currently).

Consultation Question 7: 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?***

~~In principle, we agree~~ With the four aspects mentioned in the questions. However, we have some concerns with the practical realisation of these. Automated vehicle technology industry is currently being disrupted by both traditional and new stakeholders. Some applications of HARPS may include HARPS operators being new agencies and measuring / establishing good repute might be difficult to judge.

We would recommend a requirement for audit of the organisational processes to enable them to provide the evidence about the quality of their service. Additionally, HARPS industry already has and will continue to have SME and start-ups as HARPS operators / manufacturers. They may not have access to the financial resources compared to established stakeholders. We would recommend further discussion and consultation with potential HARPS operators is undertaken to fix the thresholds, ensuring they are not too onerous.

We agree that HARPS operators need to have suitable premises, including a stable establishment in Great Britain. We envisage this being akin to warehouses / garages for routine inspection.

While we agree with the concept of "suitable transport manager", the judgment of the competence of the person is vague and requires further thought and discussion in the industry. Qualifications may not be the best reflection and experience in transport sector may also not be appropriate due to the disruptive nature of the technology.

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

As mentioned in answer to Q7, we are unclear on the exact role of the person which would then direct the competence required for this role.

Consultation Question 9: Do you agree that HARPS operators should:

- (1) be under a legal obligation to ensure roadworthiness; and**
- (2) demonstrate "adequate facilities or arrangements" for maintaining vehicles and operating systems "in a fit and serviceable condition"?**

Yes, we agree that HARPS operators should be under legal obligation to ensure roadworthiness. However, the concept of "roadworthiness" becomes vague when we speak about HARPS which operate on shared pathways, pedestrian walkways etc. The current definition of "roadworthiness" as used for traditional vehicles will need to be modified/complemented.

Additionally, while HARPS operators may demonstrate roadworthiness on a given day, we need to complement this requirement to cater to changes in the environment. For example, a pod may have been certified as roadworthy for a given Operational Design Domain (ODD). If there are changes to its ODD on a given day which it is incapable of handling, (e.g. road works on the pre-defined route), the pod is no longer roadworthy. Therefore, there is an implicit requirement to monitor the ODD to ensure roadworthiness and safe operation.

Furthermore, while initial roadworthiness checks might be conducted using the full sensor suite installed on the vehicle, it is possible on a given day that one of the sensors malfunctions. Therefore, roadworthiness check (possibly by the ADSE) needs to explicitly state the configurations under which the vehicle is roadworthy.

Consultation Question 10: Do you agree that legislation should be amended to clarify that HARPS operators are "users" for the purposes of insurance and roadworthiness offences?

While we agree (in principal), we would like to highlight the distinction in the responsibilities of the HARPS operators and the ADSE. We believe the ADSE are also "users" for the purposes of insurance and roadworthiness offences. While ADSE should be responsible for the initial evaluation, HARPS operators are responsible during the lifecycle. It is important to make this distinction as ADSE should not allow HARPS which are not roadworthy to be deployed.

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Consultation Question 13: Do you agree that the legislation should set out broad duties, with a power to issue statutory guidance to supplement these obligations?

Yes, we agree.

Consultation Question 14: We invite views on whether the HARPS operator licensing agency should have powers to ensure that operators provide price information about their services.

In particular, should the agency have powers to:

- (1) issue guidance about how to provide clear and comparable price information?**
- (2) withdraw the licence of an operator who failed to give price information?**

No res, [REDACTED]
[REDACTED]

Consultation Question 15: Who should administer the system of HARPS operator licensing?

HARPS operator licensing should be administered by an independent organisation. ADSE may do this role. The role should include review and audit of the safety processes and organisational processes of the HARPS operator. However, in that case we would recommend that ADSE cannot be a HARPS operator.

Consultation Question 16: We welcome observations on how far our provisional proposals may be relevant to transport of freight.

We believe a bulk of the considerations for HARPS for passenger services will remain same for freight as some HARPS may operator for passenger services in daytime and freight services in night time.

[REDACTED]
[REDACTED]

Yes, we agree.

Consultation Question 19: Do you agree that there should be a statutory presumption that the registered keeper is the person who keeps the vehicle?

1) a lessor should be responsible for the obligations listed in Question 18 unless they inform the lessee that the duties have been transferred.

This will depend on the terms and conditions of the ownership model.

(2) a lessor who is registered as the keeper of a passenger-only vehicle should only be able to transfer the obligations to a lessee who is not a HARPS operator if the duties are clearly explained to the lessee and the lessee signs a statement accepting responsibility?

This will depend on the terms and conditions of the ownership model. But we agree, in principal.

Consultation Question 21: Do you agree that for passenger-only vehicles which are not of [REDACTED] tion should include a regulation-making power to require [REDACTED]ers to have in place a contract for supervision and maintenance services with a licensed provider?

No response.

Consultation Question 22: We welcome views on whether peer-to-peer lending and group arrangements relating to highly automated passenger-only vehicles might create any loopholes in our proposed system of regulation.

No response.

Consultation Question 23: We seek views on whether the safety assurance agency proposed in Consultation Paper 1 should be under a duty to ensure that consumers are given the information they need to take informed decisions about the ongoing costs of owning automated vehicles.

It is essential that consumers are given information to make informed decisions. Given the definition for “safety assurance agency” in Consultation 1, we believe the ADSE is better placed to perform this activity. However, this would be an added activity beyond the current ADSE responsibilities as it will need to monitor marketing campaigns by manufacturers.

[REDACTED]
[REDACTED]

Chapter 6: Accessibility

Consultation Question 24: We seek views on how regulation can best promote the accessibility of Highly Automated Road Passenger Services (HARPS)? In particular, we seek views on the key benefits and concerns that regulation should address.

No response.

Consultation Question 25: We provisionally propose that the protections against discrimination and duties to make reasonable adjustments that apply to land transport service providers under section 29 of the Equality Act 2010 should be extended to operators of HARPS. Do you agree?

No response.

Consultation Question 26: We seek views on how regulation could address the challenges posed by the absence of a driver, and the crucial role drivers play in order to deliver [REDACTED]neys. For example, should provision be made for:

- [REDACTED]
- (1) Ensuring passengers can board and alight vehicles?***
 - (2) Requiring reassurance when there is disruption and accessible information?***
 - (3) Expansion of support at designated points of departure and arrival?***

No response.

Consultation Question 27: We seek views on whether national minimum standards of accessibility for HARPS should be developed and what such standards should cover.

No response.

Consultation Question 28: 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.

No response.

[REDACTED]
[REDACTED]

Chapter 7: Regulatory tools to control congestion and cruising

Consultation Question 29: We seek views on whether the law on traffic regulation orders needs specific changes to respond to the challenges of HARPS.

No response.

Consultation Question 30: We welcome views on possible barriers to adapting existing parking provisions and charges to deal with the introduction of HARPS. In particular, should section 112 of the Road Traffic Regulation Act 1984 be amended to expressly allow traffic authorities to take account of a wider range of considerations when setting parking charges for HARPS vehicles?

No response.

Consultation Question 31: We seek views on the appropriate balance between road pricing and parking charges to ensure the successful deployment of HARPS.

No [REDACTED]

Consultation Question 32: Should transport authorities have new statutory powers to establish road pricing schemes specifically for HARPS?

If so, we welcome views on:

- (1) the procedure for establishing such schemes;***
- (2) the permitted purposes of such schemes; and***
- (3) what limits should be placed on how the funds are used.***

The current method of road-pricing places too little incremental cost on single occupancy personal car use and will not recover falling fuel duty revenues, hence an overhaul of the way we pay for use of the roads is urgently needed. This then provides opportunities for different strategies and incentives for public transport.

Consultation Question 33: Do you agree that the agency that licenses HARPS operators should have flexible powers to limit the number of vehicles any given operator can use within a given operational design domain?

No response.

[REDACTED]

Consultation Question 34: Do you agree that there should be no powers to impose quality restrictions on the total number of HARPS operating in a given area?

No response.

Consultation Question 35: Do you agree that a HARPS vehicle should only be subject to bus regulation if it:

- (1) can transport more than eight passengers at a time and charges separate fares?**
- (2) does not fall within an exemption applying to group arrangements, school buses, rail replacement bus services, excursions or community groups?**

No response.

Chapter [REDACTED] WITH PUBLIC TRANSPORT

Consultation Question 36: We welcome views on whether any particular issues would arise from applying bus regulation to any HARPS which transports more than eight passengers, charges separate fares and does not fall within a specific exemption.

No response.

Consultation Question 37: We welcome views on whether a HARPS vehicle should only be treated as a local bus service if it:

- (1) runs a route with at least two fixed points; and/or**
- (2) runs with some degree of regularity.**

No response.

Consultation Question 38: We seek views on a new statutory scheme by which a transport authority that provides facilities for HARPS vehicles could place requirements on operators to participate in joint marketing, ticketing and information platforms.

No response.



OTHER COMMENTS

Is there any other issue within our terms of reference which we should be considering in the course of this review?

We would like to bring to attention the potential misalignment / confusion in terms. While the abbreviation HARPS is suggesting deployment on “roads”, many potential HARPS (like pod services) may not operate on HARPS.

Also, there is a need for alignment in the definition for the terms HARPS operator, user-in-charge (in the consultation) and Driverless Operation Dispatcher (as per ISO/SAE 22736).

In case you would like to have further clarification or information, please do not hesitate to contact me.

Best Regards,

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