

**Response to Law Commissions' second consultation on Automated Vehicles
(Law Commission Consultation Paper 245; Scottish Law Commission Discussion Paper 169)**

Please note that this consultation response has been reproduced from information entered on the Citizen Space online portal.

Any personal email addresses and phone numbers have been excluded from this document.

Unanswered questions have been deleted from this document.

What is your name?

Dr Alexandro Badea-Romero

What is the name of your organisation?

Oxbotica

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

[Respondents chose from the following options: Personal response; Response on behalf of your organisation; Other.]

Responding on behalf of organisation

CHAPTER 3: OPERATOR LICENSING – A SINGLE NATIONAL SYSTEM

A single national scheme

Consultation Question 1 (Paragraph 3.82): Do you agree that Highly Automated Road Passenger Services (HARPS) should be subject to a single national system of operator licensing?

[Respondents chose from the following options: yes; no; other.]

Yes

Having a single national system of operation licensing will help to reduce complexity, costs and bureaucracy. It will set the minimum national standards for safety and quality of the services, and it will also stimulate innovation. The harmonisation of requirements will facilitate the implementation of future technological and operational improvements and will also help to align with initiatives and requirements that take place at international level.

Provisions should be also made for exceptions and progression, at least in the initial phase of deployment of HARPS. A progressive licensing system at national level will help to stimulate the development of new business models, technology and services, and adapt the requirements over time.

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

[Respondents chose from the following options: yes; no; other.]

Yes

Safety is the most important aspect of HARPS and the main enabler for its implementation. A national scheme should set the minimum national standards for safety and quality of the services but it should also stimulate innovation. A holistic approach is recommended to cover safety from design to operation and deployment, but it's also very important that the standards provide clear and simple guidelines and in line with safety regulation.

It is also important to distinguish between production vehicles and prototypes or interim technology, and establish different requirements to allow and promote development.

CHAPTER 4: OPERATOR LICENSING –SCOPE AND CONTENT

Scope of the new scheme

Consultation Question 3 (Paragraph 4.33): 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 a human driver or user-in-charge in the vehicle (or in line of sight of the vehicle)?

[Respondents chose from the following options: yes; no; other.]

Yes

A HARPS operator licence should be required unless the service is offered with a driver or user-in-charge.

However, different levels of requirements should be considered depending on the constraints given by the operational design domain ODD (Level 4 vs Level 5).

Consultation Question 4 (Paragraph 4.34): Is the concept of “carrying passengers for hire or reward” sufficiently clear?

No

The concept is defined as a legal test but the test criteria is not clear enough, is open for interpretation, and therefore leads to litigation. A better definition of the scope should be provided including measurable indicators or metrics to determine when the activity becomes ‘systematic’ or goes beyond mere ‘social kindness’.

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.

In the interest of safety, we believe that all services within the scope of HARPS should apply for full licence.

However, as mentioned in a previous answer (Answer1) provisions should also be made for exceptions, at least in the initial phase of deployment of HARPS. As long as safety is still granted and there is a proven social benefit on not adhering (temporarily) to the the licensing

scheme. It is important that the ODD and its constraints are taken into consideration in the criteria for exceptions.

Consultation Question 6 (Paragraph 4.54): We seek views on whether there should be statutory provisions to enable the Secretary of State to exempt specified trials from the need for a HARPS operator licence (or to modify licence provisions for such trials).

Having provisions to exempt for trials would help to develop and verify new technologies in complex environments. We don't see a need for this responsibility to rest with the Secretary of State. It should be possible for the trialing company to determine with its insurers that compliance with a full HARPS license is not required. The exceptions could be granted for limited periods of time to encourage constant improvement.

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?

[Respondents chose from the following options: yes; no; other.]

Yes

It seems reasonable evidence to show good repute.

We suggest adding: (5) An appropriate safety case for the vehicles, and environment under consideration.

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

Each HARPS operator should have responsibility for maintaining an auditable safety case that includes appropriate records of personnel training to an appropriate level of responsibility. It's clear that a small taxi company will have different requirements to a car hire company.

Adequate arrangements for maintenance

Consultation Question 9 (Paragraph 4.89): 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"?

[Respondents chose from the following options: yes; no; other.]

Yes

It seems reasonable to expect that the HARPS operator is responsible for the road worthiness and maintenance of their vehicles.

Consultation Question 10 (Paragraph 4.90): Do you agree that legislation should be amended to clarify that HARPS operators are "users" for the purposes of insurance and roadworthiness offences?

[Respondents chose from the following options: yes; no; other.]

Yes

HARPS operators should be liable for insurance and roadworthiness offences.

Compliance with the law

Consultation Question 11 (Paragraph 4.124): Do you agree that HARPS operators should have a legal duty to: (1) insure vehicles; (2) supervise vehicles; (3) report accidents; and (4) take reasonable steps to safeguard passengers from assault, abuse or harassment?

[Respondents chose from the following options: yes; no; other.]

Yes

HARPS operators should have a legal duty to safeguard their passengers, including responsibility for ensuring journey completion in the event of breakdown and/or accident.

Consultation Question 12 (Paragraph 4.125): Do you agree that HARPS operators should be subject to additional duties to report untoward events, together with background information about miles travelled (to put these events in context)?

[Respondents chose from the following options: yes; no; other.]

Other

We agree that HARPS operators should report and share data when an incident happens, but we disagree that they should report about miles without untoward. The definition of “untoward event” or “near miss” should be clarified and well established to this purpose. The data could be shared amongst different operators as lessons learnt for prevention.

Consultation Question 13 (Paragraph 4.128): Do you agree that the legislation should set out broad duties, with a power to issue statutory guidance to supplement these obligations?

[Respondents chose from the following options: yes; no; other.]

Yes

Completely agree. We are currently learning from experience so it is really important at this stage to keep legislation flexible and adaptable.

Consultation Question 14 (Paragraph 4.133): 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?

[Respondents chose from the following options: yes; no; other.]

Yes

The agency should issue guidance on how to calculate and compare prices and take actions to ensure operators will not fail to provide accurate information and prevent users from being overcharged.

Information about the carbon footprint of journeys and services should be also included as it is an increasingly important form of comparison.

The information should be simple and accessible for all users.

And/or (2) withdraw the licence of an operator who failed to give price information?

[Respondents chose from the following options: yes; no; other.]

No

Faced with variable and flexible pricing, it might be hard to commit ahead of the point of sale.

Who should administer the system?

Consultation Question 15 (Paragraph 4.138): Who should administer the system of HARPS operator licensing?

It needs to be balanced. Delegation to local levels becomes difficult because of the complexity of ADS. However local nuance of operational environment is a key factor. A new agency national structure with local representation would seem most appropriate.

Freight Transport

Consultation Question 16 (Paragraph 4.140): We welcome observations on how far our provisional proposals may be relevant to transport of freight.

Many of the provisional proposals mentioned in this chapter are also relevant to freight transport. The operational principles are similar and the expectations in terms of safety, roadworthiness, insurance and security are also applicable for goods vehicles and for the safety of other road users.

CHAPTER 5: PRIVATELY-OWNED PASSENGER-ONLY VEHICLES

Setting a boundary between HARPS and private leasing

Consultation Question 17 (Paragraph 5.12): Do you agree that those making “passenger-only” vehicles available to the public should be licensed as HARPS operators unless the arrangement provides a vehicle for exclusive use for an initial period of at least six months?

[Respondents chose from the following options: yes; no; other.]

No

Perhaps a reduced version of the HARPS should be considered for these cases, where the owner of the vehicle will still need to purchase the services from an HARPS operator or ADSE who will retain some of the legal responsibilities related to the operation of the vehicle.

Allocating responsibility for a privately-owned passenger-only vehicle: placing responsibilities on keepers

Consultation Question 18 (Paragraph 5.40): Do you agree that where a passenger-only vehicle is not operated as a HARPS, the person who keeps the vehicle should be responsible for: (1) insuring the vehicle; (2) keeping the vehicle roadworthy; (3) installing safety-critical updates; (4) reporting accidents; and (5) removing the vehicle if it causes an obstruction or is left in a prohibited place?

[Respondents chose from the following options: yes; no; other.]

Other

We don't agree with all of the points:

(3) - The manufacturer should be responsible for ensuring that safety critical updates are always received and executed by the vehicle;

(4) - The system should automatically record and report accidents, and not be a responsibility of the vehicle keeper;

(5) - This requires further clarification. As written now this would imply that the person who keeps the vehicle will have access to it at all times, which might not be the case. Other passengers might act as users on a regular basis and the keeper might not. One option could be that the keeper transfers responsibilities to other frequent users.

Consultation Question 19 (Paragraph 5.41): Do you agree that there should be a statutory presumption that the registered keeper is the person who keeps the vehicle?

Yes

Unless otherwise specified, the statutory presumption should be that the person (or a company via a representative) who keeps the vehicle is the registered keeper.

Consultation Question 20 (Paragraph 5.42): We seek views on whether: (1) a lessor should be responsible for the obligations listed in Question 18 unless they inform the lessee that the duties have been transferred?

As mentioned in our answer to Question 18, we have reservations about some of the obligations: (3), (4) and (5).

(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?

In addition, the lessor might also want to transfer the responsibility to a third party like an ADSE. This option should also be considered.

Will consumers require technical help?

Consultation Question 21 (Paragraph 5.47): Do you agree that for passenger-only vehicles which are not operated as HARPS, the legislation should include a regulation-making power to require registered keepers to have in place a contract for supervision and maintenance services with a licensed provider?

No

It sounds reasonable to have a contract for supervision, but there should be provision to allow flexibility. This could be more a requirement to get insurance than supervision. In some cases the registered keeper might be the sole user of the vehicle and would prefer to retain the supervision of the vehicle. It should also be considered that some keepers might prefer to contract reduced supervision services to cover only for specific circumstances, short periods of time or even specific journeys.

Peer-to-peer lending

Consultation Question 22 (Paragraph 5.53): We welcome views on whether peer-to-peer lending and group arrangements relating to passenger-only vehicles might create any loopholes in our proposed system of regulation.

No

The provisional proposal for peer-to-peer lending and group arrangements are interesting solutions and should not necessarily create loopholes. These types of use could be linked to different types of insurance to encourage correct exploitation. Establishing that the registered keeper will assume responsibility seems a good option but further consideration is needed.

In practical terms it is entirely possible that passenger-only vehicles will be used by non-keepers, and individuals who may be normally uninsurable or permanently/temporarily disabled. As such, the burden on the temporary user needs to be light.

Protecting consumers from high ongoing costs

Consultation Question 23 (Paragraph 5.60): 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.

Constant software updates, maintenance and operational supervision will be crucial for safety throughout the life of the vehicle. Therefore we support the idea that the safety assurance agency proposed in Consultation Paper 1 should also be responsible for ensuring that customers are well informed about the ongoing costs of owning automated vehicles. It's likely that in early years, each OEM will adopt proprietary solutions for hardware and software and that this will create some level of "lock in" for customers that prohibit them replacing parts or software with 3rd party offerings. Especially true if the OEM bears some legal responsibilities. Therefore, consumers should be made aware that there is a degree of technology lock-in that will restrict their choice of replacement parts and repair vendors.

CHAPTER 6: ACCESSIBILITY

What we want to achieve

Consultation Question 24 (Paragraph 6.11): 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.

Increased accessibility for passengers with reduced mobility is very important. However, regulation will not be able to accommodate every level of disability and different variants and types of vehicles. Perhaps lower level standards, guidelines or best practice would be more suitable.

These technical guidelines will need to consider aspects about connectivity, communication, human-machine interface (HMI) and infrastructure for the points of departure and arrival.

Also promote interaction with human assistance, for those cases cases where the technical solutions will not be sufficient for inclusion (removal of physical and social barriers) or even to improve the quality of the journeys with personalised services.

Core obligations under equality legislation

Consultation Question 25 (Paragraph 6.31): 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?

[Respondents chose from the following options: yes; no; other.]

Yes

We completely agree, this should be a minimum requirement. The introduction of HARPS could improve the quality of life of many users with reduced mobility. Therefore the services should be as inclusive as possible and avoid any kind of discrimination.

Specific accessibility outcomes

Consultation Question 26 (Paragraph 6.106): 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 safe and accessible journeys. For example, should provision be made for:

(1) Ensuring passengers can board and alight vehicles?

[Respondents chose from the following options: yes; no; other.]

Other

As mentioned in our answer question 24, regulation would hardly address the changes proposed by the absence of the driver. Perhaps advisory standards, guidance or recommended best practices would be more suitable.

Guidelines on this field are needed to define a criteria to assess accessibility for the entire journey, including point of departure and arrival. They should consider aspects at all levels: the automated vehicle, access points (at departure and arrival), support, information for planning, HMI, communication during the journey, and human assistance when needed.

(2) Requiring reassurance when there is disruption and accessible information?

[Respondents chose from the following options: yes; no; other.]

Other

Yes, but regulation might not necessarily be the right way to achieve this. Perhaps advisory standards, guidance or recommended best practices would be more suitable.

(3) Expansion of support at designated points of departure and arrival?

[Respondents chose from the following options: yes; no; other.]

Other

Perhaps technical standards would be more suitable.

Developing national minimum accessibility standards for HARPS

Consultation Question 27 (Paragraph 6.109): We seek views on whether national minimum standards of accessibility for HARPS should be developed and what such standards should cover.

Minimum safety requirements should be well established in line with international standards. Other aspects like accessibility for the entire journey, ergonomics, connectivity, cyber security and communication could be contemplated as best practice guidelines, attending to the consumer needs.

Enforcement mechanisms and feedback loops

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.

[Respondents chose from the following options: yes; no; other.]

No

We do not believe that the HARPS operator would be able to provide this kind of data. It seems impractical to collect data about the user age or level of disability.

CHAPTER 7: REGULATORY TOOLS TO CONTROL CONGESTION AND CRUISING

Traffic regulation orders

Consultation Question 29 (Paragraph 7.23): We seek views on whether the law on traffic regulation orders needs specific changes to respond to the challenges of HARPS.

The law on TROs will need specific changes to address the absence of a human driver and safety, but also the creation of dedicated roads, lanes, parking spaces and dedicated stopping points with easier access for passengers, especially for those with reduced mobility, and restrict the access of non-autonomous vehicles in some of these areas. The changes should also aim to speed-up the implementation process and reduce the administrative costs and bureaucratic burden on local authorities by using new and more effective technologies and digital platforms. In addition, the changes should also aim to adapt the traffic law at national and international levels, providing input and promoting harmonisation via relevant international forums like the UNECE (SC.1).

Regulating use of the kerbside

Consultation Question 30 (Paragraph 7.59): 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?

[Respondents chose from the following options: yes; no; other.]

Yes

Local traffic authorities should have enough power to make provisions based on wider considerations and adapt parking charges to account for HARPS and their impact on the traffic density and usage of parking spaces. The amendment of section 122 of the Road Traffic Regulation Act 1984 seems a reasonable option to empower Local Authorities and allow a higher level of flexibility.

The adaptations should aim for significant reduction of costs for HARPS whilst promoting an efficient usage of the vehicles, preventing them to be parked on public spaces for long periods of time.

Road pricing

Consultation Question 31 (Paragraph 7.86): We seek views on the appropriate balance between road pricing and parking charges to ensure the successful deployment of HARPS.

In order for HARPS to be deployed successfully, any road pricing scheme should take into consideration the usage of the vehicle, number of passengers that are using the vehicle simultaneously and their impact on traffic density, i.e. number of vehicles/hours/mile, time of the day at which they are used, number of users that adopted this type of transport instead of conventional non-automated passenger cars. The road pricing should also be weighted in favor of reducing or eliminating environmental pollution, including noise. Empty vehicles driving on the roads should incur incremental charges. Road pricing and parking charges should be considered in conjunction to promote an intense and effective use of the vehicles as an alternative to conventional passenger cars.

Consultation Question 32 (Paragraph 7.87): 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.

[Respondents chose from the following options: yes; no; other.]

Yes

A new road pricing scheme should be established at national level to reduce costs and complexity. Therefore a change in the statutory powers would be beneficial to remove some of the restrictions that currently exist to transfer funds and use them in different ways.

A statutory scheme seems a reasonable solution, but should allow local pricing to be set by local authorities (following the national system). The scheme should be introduced as part of the legislation and it should make provision for transfer of funds from one authority to another, shared administrative costs and establish guidelines (rather than restrictions) on how the funds should be spent. A test criteria could be defined to demonstrate that the expenses will generate a tangible improvement on transport and mobility for the local area.

Quantity restrictions

Consultation Question 33 (Paragraph 7.97): 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 for an initial period? If so, how long should the period be?

[Respondents chose from the following options: yes; no; other.]

No

It would be difficult for the licensing agencies to get the balance right, and ensure fair competition to different operators, vehicle manufacturers, ADSE and other providers so all have the same level of access and can benefit from deploying their technology and services on public domain. A particular manufacturer or provider with higher technological capabilities and strong market position could benefit from this cap to the detriment of companies which are smaller or have less developed products.

However the licensing agencies should retain flexible powers to control the impact of HARPS on the transport system, assess the benefit and to understand the potential risks in terms of safety, emission, congestion, mobility and public acceptance.

Consultation Question 34 (Paragraph 7.120): Do you agree that there should be no powers to impose quality restrictions on the total number of HARPS operating in a given area?

[Respondents chose from the following options: yes; no; other.]

Yes

The number of HARPS operating in a given area should be established by local market demand and fair competitiveness.

Note: The question is about 'quantity' restrictions, not 'quality', this is a typo.

CHAPTER 8: INTEGRATING HARPS WITH PUBLIC TRANSPORT

The current system of bus regulation: HARPS as mass transit

Consultation Question 35 (Paragraph 8.92): 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?

[Respondents chose from the following options: yes; no; other.]

Other

We do not have a particular view on this issue.

(2) does not fall within an exemption applying to group arrangements, school buses, rail replacement bus services, excursions or community groups?

[Respondents chose from the following options: yes; no; other.]

Other

Perhaps a provisional exception should be considered for an initial phase of deployment of HARPS until its usage determines which regulation is applicable.

Consultation Question 36 (Paragraph 8.94): 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.

Applying bus regulation to any HARPS will definitely cause some issues related to the use of the vehicle and charges of fares in comparison with conventional buses. It seems more reasonable to consider a provisional exemption followed by an adaptation of current regulation.

Consultation Question 37 (Paragraph 8.95): 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, these two conditions are not sufficient to treat a HARPS as a bus. It is likely that HARPS will have a higher degree of flexibility and therefore further consideration is needed to define if HARPS will fall under one of the current categories of service or it will need its own dedicated category.

Consultation Question 38 (Paragraph 8.109): 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.

Giving HARPS operators the option to opt in or out of such statutory scheme seems a better idea. This would stimulate the creation of better facilities and platforms to be more attractive for HARPS operators to opt in and promote mobility as a service. At the same time, a part of HARPS operators might still prefer to opt out these schemes because they don't find it convenient for the particular kind of service that they intend to provide. A blanket scheme might not be the best solution for everyone. Provisions should be made to allow different options and flexibility.

Consultation Question 39: Is there any other issue within our terms of reference which we should be considering in the course of this review?

4.4 Ln 5. "Our provisional proposals would be compatible with EU law."

Oxbotica's comment: We believe that regardless of the future relationship with the EU, international harmonization is important. The standards that are issued at national level on HARPS should be aligned with international law and regulation on this matter. This will allow us to deploy technologies and services that are equivalent and compatible with those from other markets, with the associated economical benefits like international trading and collaboration.