

Automated Vehicles: Consultation Paper 3 – a regulatory framework for automated vehicles

Consultation Question 1.

2.35 We provisionally propose that:

- (1) a vehicle should not be classified as self-driving if, with the ADS engaged, the user-in-charge needs to monitor the driving environment, the vehicle or the way it drives;**
- (2) it is nevertheless compatible with self-driving to require the user-in-charge to respond to a clear and timely transition demand which:
 - (a) cuts out any non-driving related screen use;**
 - (b) provides clear visual, audio and haptic signals; and**
 - (c) gives sufficient time to gain situational awareness.****
- (3) to be classified as self-driving, the vehicle must be safe enough even if the human user does not intervene in response to any event except a clear and timely transition demand.**

Do you agree?

Yes. We agree that, with the ADS engaged, the user-in-charge should not be expected to continually monitor the driving environment, the vehicle or the way it drives. If required to maintain awareness, the driver would be unable to perform other tasks safely, such as read emails or watch a film as they would be distracted and could easily miss a temporary road sign, for example.

Similarly, if unable to perform activities such as reading safely whilst the vehicle drives, the user-in-charge would have very little else to do and could quickly become bored, drowsy or distracted. Either way, the user cannot be expected to maintain full awareness of the vehicle, driving and road situation.

We also agree that it is reasonable to require the user-in-charge to respond to a clear and timely transition demand and that this demand should utilise visual, audio and haptic signals.

However, even with clear and timely warnings, there is still a danger that users will struggle to respond appropriately and in good time if they have previously been engaged in activities other than monitoring the situation. Furthermore, if they are only called upon to intervene on rare occasions, drivers may become de-skilled and less able to take the required action.

The House of Lords inquiry into CAVs received evidence to suggest that *‘In simulated emergencies, up to a third of drivers of AVs did not recover the situation, whereas almost all drivers of manual cars in the same situation were able to do so.’*

This raises questions as to whether vehicles that still require the user to respond in exceptional circumstances should be avoided altogether given the difficulties associated with stepping in and out of the role of driving.

Consultation Question 2.

2.36 We welcome views on whether self-driving features should be designed to ensure that they can be used by people with hearing loss.

Yes, self-driving features should be designed to ensure that they can be used by people with hearing loss, making the most of haptic signals in particular to enable the user-in-charge to respond in a timely fashion when a transition demand is made. Without a mandatory requirement for haptic signals, a significant section of the population could be excluded from using AVs.

Consultation Question 3.

2.65 We provisionally propose that the decision whether a vehicle is sufficiently safe to “safely drive itself” should be made by the Secretary of State, as informed by advice from a specialist regulator.

Do you agree?

Yes, decisions as to safety standards should be taken at national level, based on advice from a specialist regulator and technical experts. The decision-making process should be transparent and evidence based.

Consultation Question 4.

2.66 We welcome observations on which of the following standards is most appropriate when assessing the safety of automated vehicles:

- (a) as safe as a competent and careful human driver;**
- (b) as safe as a human driver who does not cause a fault accident;**
- (c) overall, safer than the average human driver.**

The potential to improve road safety is one of the most important benefits that AVs could offer over conventional vehicles, and we know that semi-autonomous driving systems in existing vehicles are already improving safety – for example, through automated emergency braking and Intelligent Speed Assistance.

As the consultation paper highlights, whilst option (c) seems, intuitively, to be the right standard to aim for, it is by no means straightforward to measure or implement. Nonetheless, it is true to say that the public will have much higher expectations of AVs compared to what they are willing to live with from conventional vehicles and human drivers.

In the short term, AVs should at least be as safe as a competent and careful human driver. In the longer term, as technology evolves and as vehicles potentially learn and improve, we agree with the PACTS position that ultimately AVs should be required to improve safety, substantially, for all road users – whether inside or outside of the vehicle. They must also feel safe in the way they behave – for example, not passing too close, at speed or braking suddenly, except in an emergency. Option (c) should therefore be the long-term goal.

Consultation Question 5.

2.67 We welcome observations on how automated vehicles can be made as safe as reasonably practicable.

Rigorous testing and ongoing assessment of vehicle performance and behaviour on the road should be carried out. Serious collisions or near-misses should be investigated fully, in the same way as for the air and rail industries, lessons should be learned and modifications made.

In addition to the vehicles themselves, the road environments in which they operate will also need to be considered to enable AVs to operate safely. In urban areas, low speeds, a lack of obstacles and clearly defined spaces are likely to be needed, along with well-maintained road surfaces and signage.

Consultation Question 6.

2.68 We welcome practical suggestions for how AV regulators can fulfil their public sector equality duty.

AV testing and regulation should be designed to ensure that nobody – inside or outside the AV – faces additional risk from the vehicles because of their gender, disability, ethnicity, size or age. Testing should involve a wide variety of scenarios and cover dealings with all possible road users.

Furthermore, equalities groups should be consulted and involved in trials throughout the process of testing and implementation. This should cover the full range of roles and interactions in relation to AVs – as users in charge, as passengers and as other road users encountering AVs (e.g. as a pedestrian).

Consultation Question 7.

3.11 We provisionally propose that:

(1) safety assessment should use a variety of techniques;

(2) manufacturers/developers should submit a safety case to regulators showing why they believe that the automated driving system is safe;

(3) regulators should:

(a) provide guidelines for what is in the safety case;

(b) audit the safety case;

(c) prepare guidance for manufacturers and developers on preferred standards; and

(d) carry out at least some independent tests.

Do you agree?

Yes. We would add that the guidelines for what is in the safety case should be very clear about what the minimum standards are as well as encourage manufacturers/developers to go above and beyond these.

Consultation Question 8.

3.12 We seek views on whether an approval authority that intends to use a scenario database as part of the testing procedure should consult road user groups on the range of scenarios to be included.

Yes, it makes sense to consult with as broad a range of road user groups as possible, drawing upon their expertise and lived experiences.

Consultation Question 9.

3.17 We provisionally propose that:

(1) unauthorised automated driving systems should be prohibited; and

(2) this should be subject to an exemption procedure by which the Secretary of State may authorise unauthorised systems to be used in tests and trials.

Do you agree?

Yes.

Consultation Question 10.

3.22 We provisionally propose that:

(1) the Government should establish a domestic scheme to approve automated driving systems (ADSs) for use on roads in Great Britain (a “national ADS approval scheme”);

(2) manufacturers should have a free choice to apply for approval under either the UNECE system of international type approvals or through the national scheme;

(3) developers should be able to submit an ADS for national approval, even if they are not responsible for manufacturing the whole vehicle.

Do you agree?

The case for a national approval scheme is unclear, given that most developers and manufacturers would probably be unwilling to limit the market for their product by only seeking approval for use in Great Britain.

It also seems unnecessary to duplicate the work of the UNECE which is a well-established, tried-and-tested authority on vehicle safety standards.

Consultation Question 11.

3.23 We provisionally propose that:

(1) an ADS approval scheme should be established through regulation under the Road Traffic Act 1988, without further legislative reform;

(2) an ADS should be defined as a combination of software, hardware and sensors, which can be installed in a “type” of vehicle;

(3) when an ADS is approved, the approval should be accompanied by specifications for:

(a) the type of vehicle in which it can be installed; and

(b) how the ADS is installed within the vehicle;

(4) where an ADS is installed in a pre-registered vehicle, an example vehicle should be submitted to the regulator for approval of the installation.

Do you agree?

See previous answer, the case for a national approval scheme, separate from the UNECE is unclear.

PROPOSE NOT TO ANSWER Q12

Consultation Question 12.

3.24 We invite observations on the appeal process in regulation 19 of the Road Vehicles (Approval) Regulations 2020, including:

(1) how it works in practice; and

(2) how well it is suited to the proposed national ADS approval scheme.

Consultation Question 13.

3.35 We provisionally propose that:

(1) once an ADS has received type approval at either international or domestic level, an Automated Driving System Entity (ADSE) would need to submit the vehicle to the UK safety regulator for categorisation as able to safely drive itself;

(2) the safety regulator should make a recommendation to the Secretary of State for how the vehicle should be classified;

(3) it should be open to the safety regulator to recommend that an ADS-enabled vehicle is classified in one of three ways: as not self-driving but driver assistance; as self-driving only with a user-in-charge; or as self-driving without a user-in-charge;

(4) the safety regulator should only recommend classification as self-driving (either with or without a user-in-charge) if it is satisfied that:

(a) an ADSE is registered as taking responsibility for the system;

(b) the ADSE was closely involved in assessing safety and creating the safety case; and

(c) the ADSE has sufficient funds accessible to the regulator to respond to improvement notices, to pay fines and to organise a recall.

Do you agree?

Yes.

Consultation Question 14.

3.36 We provisionally propose that a new legislative framework should provide regulation-making powers to specify:

(a) who should assess whether a vehicle is capable of self-driving;

(b) the procedure for doing so; and

(c) criteria for doing so.

Do you agree?

Yes, we agree that parliamentary oversight would be beneficial.

Consultation Question 15.

3.37 We seek views on whether the new legislation should include provisions for appeals against a categorisation decision. If so, should these be similar to those in regulation 19 of the Road Vehicles (Approval) Regulations 2020?

Yes.

Consultation Question 16.

3.41 We seek views on whether the regulator that classifies vehicles as self-driving should have power to allow their deployment in limited numbers, so as to gather further data on their safety in real world conditions.

Yes, provided this is done in consultation local transport authorities. Vehicles should, however, have undergone substantial testing prior to real world deployment.

Thought should also be given as to how to manage what could be a lengthy (or indefinite) transition to AVs, where AVs operate alongside conventional vehicles and other road users take time to understand how these vehicles behave and interact with them and the surrounding environment. Gradual, careful deployment in limited numbers could help in managing and understanding the transition. The maintenance of public safety must be the primary consideration in decision-making as to whether to allow deployment.

Consultation Question 17.

4.22 We provisionally propose that legislation should establish a scheme to assure the safety of automated driving systems following deployment, giving scheme regulators enhanced responsibilities and powers.

Do you agree?

Yes, as the consultation points out, we cannot truly understand the performance and safety of AVs until they are out in the real world. It makes sense to continue to assess vehicles once in-service and take steps to ensure that they continue to comply with laws and adapt to changes in the road environment and in road users.

Consultation Question 18.

4.23 We provisionally propose that the enhanced scheme should give regulators the following responsibilities and powers:

(1) scheme regulators should be responsible for comparing the safety of automated and conventional vehicles using a range of measures;

(2) to do this the regulator should have power to collect information on:

(a) leading measures (instances of bad driving which could have led to harm) and

(b) lagging measures (outcomes which led to actual harm);

(3) regulators should have power to require an ADSE:

(a) to update software where an update is needed to ensure safety and continued compliance with the law;

(b) to keep maps up-to-date, where an AV relies on maps to ensure safety and compliance with the law;

(c) to communicate information about an ADS to users in a clear and effective way, including where necessary through training.

Do you agree?

Yes.

Consultation Question 19.

4.24 We welcome views on the following issues:

(1) Should scheme regulators be empowered to approve software updates that apply only within the UK, without requiring the manufacturer to return to the original type approval authority?

(2) Should the scheme should also deal with cybersecurity?

(3) Are other powers needed? (Note that data is discussed in Chapter 17.)

Yes, scheme regulators should be empowered to approve software updates that apply only within the UK.

We would need more information to understand where responsibilities and oversight should lie in respect of cybersecurity. However, breach of cybersecurity is a significant safety risk and must be dealt with appropriately.

Consultation Question 20.

4.30 Should the authority administering the scheme to assure safety while automated vehicles are in use be kept separate from type approval authorities (as is already the case)? Alternatively, should both functions be combined in a single body?

The two-body structure should be maintained.

Consultation Question 21.

4.31 What formal mechanisms could be used to ensure that the regulator administering the scheme is open to external views (such as duties to consult or an advisory committee)?

No view as to the exact mechanism, but it makes sense to draw upon the expertise of road user and safety groups, provided that a range of views are sought and that no single group of road users is allowed to dominate over others.

Consultation Question 22.

4.38 We provisionally propose that a statutory scheme to assure AVs in-use should:

- (1) investigate safety-related traffic infractions (such as exceeding the speed limit; running red lights; or careless or dangerous driving);**
- (2) investigate other traffic infractions, including those subject to penalty charge notices;**
- (3) if fault lies with the ADSE, apply a flexible range of regulatory sanctions.**

Do you agree?

Yes. Regulatory sanctions should be designed to ensure ADSEs address and remedy the cause of the infraction. As noted in the consultation paper, a financial penalty of the same level as one issued to a human driver may not encourage ADSEs to continually improve their product to ensure that infractions are not repeated.

ADSEs and HARPS operators should be required to share information that may help explain, contextualise, identify patterns and prevent future incidents. Local transport authorities should be among the stakeholders with whom information is shared.

Consultation Question 23.

4.42 We provisionally propose that the regulator which assures the safety of AVs in-use should have powers to impose the following sanctions on ADSEs:

- (1) informal and formal warnings;**
- (2) fines;**
- (3) redress orders;**
- (4) compliance orders;**
- (5) suspension of authorisation;**
- (6) withdrawal of authorisation; and**
- (7) recommendation of attendance at a restorative conference.**

Do you agree?

Yes, the regulator should have access to a range of sanctions to be applied depending on the circumstances. Fines should be designed to avoid ADSEs simply being able to buy themselves out of any wrongdoing and should be combined with other measures to ensure infractions do not happen again. For example, in the example given in the consultation paper, if AVs repeatedly misused bus lanes, it is not enough to simply compensate passengers. Doing so would not fix the underlying problem and could undermine the viability of bus services.

Consultation Question 24.

4.43 We provisionally propose that the legislation should provide the regulator with discretion over:

- (1) the amount of any monetary penalty; and**
- (2) the steps which should be taken to prevent re-occurrence of a breach.**

Do you agree?

Yes.

Consultation Question 25.

4.48 We provisionally propose that a specialist collision investigation unit should be established:

- (1) to analyse data on collisions involving automated vehicles;**
- (2) to investigate the most serious, complex or high-profile collisions; and**
- (3) to make recommendations to improve safety without allocating blame.**

Do you agree?

Yes. It is increasingly recognised that road deaths and injuries are not inevitable and should not be accepted as such. A specialist collision investigation unit should be established – not just to investigate AV collisions – but all serious, complex and high-profile road traffic collisions where there is potential for learning that will help to improve safety in the future.

Deaths or injuries as a result of aviation, marine or rail incidents are subject to detailed independent investigation, with lessons learned and improvements made to try to prevent the situation occurring again.

In common with existing Accident Investigation Branches for other industries, investigations should be independent and for the purpose of improving safety, with no blame attributed. Investigations should make use of specialists with inputs from industry and external experts. These principles can be applied to the analysis of individual incidents or to analyse larger datasets encompassing data from multiple collisions and incidents.

ADSEs and HARPS operators should be required to share information that may help explain, identify patterns, contextualise and prevent future incidents. Local transport authorities should be among the stakeholders with whom information is shared.

A new collision investigation unit for roads should be combined with a supporting system which ensures lessons learned are translated into action to ensure things

change (as with the Office for Rail Regulation and the Rail Safety and Standards Board for the rail industry).

Consultation Question 26.

4.53 We provisionally propose that the UK Government should establish a forum for collaboration on the application of road rules to self-driving vehicles.

Do you agree?

Yes, the establishment of a forum would seem sensible given the complex nature of the issue.

Consultation Question 27.

4.54 We welcome views on:

- (1) the issues the forum should consider;**
- (2) the composition of the forum; and**
- (3) its processes for public engagement.**

Any such forum should include representation from local transport authorities given that many of these issues will play out on the roads that they are responsible for and will impact on other road users and transport modes.

Consultation Question 28.

5.5 We provisionally propose that that the user-in-charge:

- (1) should be defined as an individual in a position to operate the controls of a vehicle while an ADS is engaged and who is either in the vehicle or in direct sight of the vehicle; and**
- (2) is not a driver while the ADS is engaged, and would not be liable for any criminal offence or civil penalty (such as a parking ticket) which arises out of dynamic driving.**

Do you agree?

Yes

Consultation Question 29.

5.9 We provisionally propose that following the end of the transition demand period:

- (1) the user-in-charge should re-acquire the legal obligations of a driver, whether or not they have taken control of the vehicle; and**

(2) if, following a failure to respond to a transition demand, the vehicle stops in a manner which constitutes a criminal offence, the user-in-charge should be considered a driver and should therefore be liable for that offence.

Do you agree?

Yes.

Consultation Question 30.

5.14 We seek views on whether a person with a provisional licence should be allowed to act as a user-in-charge, if accompanied by an approved driving instructor in a vehicle with dual controls.

This raises the question of whether both learner and fully qualified drivers need specific training before being allowed to be a user-in-charge of an AV. As the consultation paper notes, responding to a transition demand could be difficult and unfamiliar for novice and experienced drivers alike. Might both groups need additional lessons and a test before being allowed to use an AV? These additional lessons and the test could be taken after the individual has gained their full driving licence.

Consultation Question 31.

5.17 We provisionally propose that legislation should create new offences of:

- (1) using an automated vehicle as an unfit or unqualified user-in-charge; and**
- (2) causing or permitting the use of an automated vehicle by an unfit or unqualified user-in-charge.**

Do you agree?

Yes.

Consultation Question 32.

5.21 We provisionally propose that persons carried without a user-in-charge should be guilty of a criminal offence. Do you agree?

There would be difficulties here in proving that the person knew or ought to have known that a user-in charge was present/required.

Consultation Question 33.

5.22 We seek views on whether the new proposed offence of being carried without a user-in-charge should only apply if the person:

- (1) knew that the vehicle did not have a user-in-charge; and**
- (2) knew or ought to have known that a user-in-charge was required.**

There would be difficulties here in proving that the person knew or ought to have known that a user-in charge was present/required.

Consultation Question 34.

5.27 We provisionally propose that a user-in-charge who takes over control of the vehicle:

- (1) should be considered a driver; but**
- (2) should have a specific defence to a criminal offence if, given the actions of the ADS, a competent and careful driver could not have avoided the offence.**

Do you agree? If not, we welcome views on alternative legal tests.

Yes.

Consultation Question 35.

5.32 We provisionally propose that the user-in-charge should be liable for criminal offences which do not arise from the dynamic driving task, including those related to:

- (1) insurance;**
- (2) maintaining the vehicle in a roadworthy condition (including installing safety critical software updates);**
- (3) parking;**
- (4) duties following accidents to provide information and report accidents to the police; and**
- (5) ensuring child passengers wear seatbelts.**

Do you agree?

Yes.

Consultation Question 36.

5.33 We provisionally propose that the legislation should include a regulation-making power to clarify those roadworthiness failings which are (and those which are not) the responsibility of the user-in-charge.

Do you agree?

Yes.

Consultation Question 37.

6.5 We provisionally propose that:

- (1) where an individual is exercising lateral and longitudinal control (steering and braking) over a vehicle remotely, that should not be regarded as a form of “self-driving”; and**
- (2) where lateral and longitudinal control are exercised by an ADS, all other forms of remote operation should be regulated as “self-driving”.**

Do you agree?

Yes.

6.6 We welcome views on whether the current definition of when a vehicle “drives itself” under the Automated and Electric Vehicles Act 2018 should be amended to deal with some forms of remote operation which may involve a degree of “monitoring”.

Non-user in charge vehicles will require some form of remote monitoring, for example, to prevent them from unnecessarily blocking the road (as in the case of the empty bag example in the consultation paper). This suggests that some kind of amendment to the definition will be needed to accommodate this.

Consultation Question 38.

6.15 We provisionally propose that:

- (1) the regulation of self-driving vehicles should distinguish between an Automated Driving System Entity (which vouches for the design of the system) and an operator (responsible for the operation of individual vehicles);**
- (2) all vehicles authorised for use on roads or other public places with no user-incharge should either:**
 - (a) be operated by a licensed operator; or**
 - (b) be covered by a contract with a licensed operator for supervision and maintenance services;**
- (3) it should be a criminal offence to use a NUIC vehicle on a road or other public place unless it is operated by a licensed operator or is covered by a contract with a licensed operator for supervision and maintenance services.**

Do you agree?

Yes.

Consultation Question 39.

6.18 We welcome views on whether NUIC operators should be required to demonstrate professional competence through a safety management system, as set out in a safety case.

The proposed requirements for HARPS operators should also apply to NUIC operators to avoid 'regulatory shopping'.

Consultation Question 40.

6.21 We provisionally propose that, irrespective of the nature of the vehicle, a licensed operator should be under a duty to:

- (1) supervise the vehicle;**
- (2) maintain the vehicle;**
- (3) insure the vehicle;**
- (4) install safety-critical updates and maintain cybersecurity; and**
- (5) report accidents and untoward events (as defined by the regulator).**

Do you agree?

Yes.

Consultation Question 41.

6.22 We provisionally propose that legislation should include a regulation-making power by which some or all of these duties could be transferred to the registered keeper or owner, if it was shown that it was appropriate to do so.

Do you agree?

Unsure. We would need a clearer understanding of the potential benefits of such an approach before forming an opinion.

Consultation Question 42.

6.27 We welcome views on how accessibility standards for Highly Automated Road Passenger Services (HARPS) might be developed.

6.28 We provisionally propose that:

- (1) an accessibility advisory panel should be formed to include:**
 - (a) the Equalities and Human Rights Commission; and**
 - (b) representative groups for disabled and older persons;**
- (2) the Secretary of State should be obliged to consult with the accessibility advisory panel prior to setting any national minimum standards on HARPS;**

(3) there should be a duty to periodically re-consult the accessibility advisory panel at set intervals to ensure requirements keep pace with developing evidence of technical feasibility and changing needs.

Do you agree?

6.29 We welcome views on what the set interval for periodically re-consulting the accessibility advisory panel should be.

Accessibility standards should cover the vehicles themselves and every stage of a journey, from initial planning to destination. It is also important to set accessibility standards that should apply if journeys are disrupted.

Standards should draw upon and enhance efforts already made in improving the accessibility of taxis and buses. Any standards should allow – and encourage – manufacturers, operators and bodies specifying vehicles to go above and beyond the minimum standard in recognition of the benefits of opening up transport options to the broadest range of customers.

We welcome the proposal to establish an accessibility advisory panel to develop national minimum accessibility standards for HARPS. UTG member Transport for Greater Manchester has successfully used this approach to ensure that disabled people are placed at the heart of the design and testing of TfGM's transport services.

We agree that it is important that standards are informed by lived experiences.

We suggest that membership of the panel should also include other groups who have frequently been excluded from consideration in the past, including women, children, people from black and minority ethnic backgrounds and people on low incomes. Many people who fall into these categories are less likely to drive and it is therefore important that HARPS meet their needs.

To be effective, the panel should not only be invited to discuss accessibility standards, they should also have the opportunity to test their effectiveness in practice before standards are finalised and before vehicles and services are launched.

Feedback from the panel should be acted upon to ensure consultation is meaningful and makes a difference. It is not enough for the Secretary of State to consult – there must also be an obligation to have due regard to the views expressed and to take action where necessary.

We agree that there should be a duty to re-consult at regular intervals.

Consultation Question 43.

6.33 We welcome views on who should administer the operator licensing scheme

HARPS should be subject to a national system of consistent safety and security standards. However, we believe that local transport authorities are best placed to determine licensing of HARPS to ensure they serve local needs and objectives.

In our view the concept of HARPs which the Law Commission mainly concerns itself with is essentially still a form of taxi / PHV. Any licensing regime should not allow smaller, less efficient vehicle formats (like taxis and PHVs) to crowd-out public transport, walking and cycling. Public transport, walking and cycling represent the most efficient use of road space, cut congestion and bring benefits to health, the environment, society and the economy.

Local transport authorities have long made the case (and indeed do have) considerable local discretion within wider national regulatory frameworks for existing mobility options – including taxis, PHVs and Buses. This is to ensure that the service provided is relevant to local circumstances (that vary widely from busy urban centres to deep rural environments) and in line with local democratic mandates. Examples of this discretion include the regulatory environment for buses (where the 2017 Bus Services Act rightly gives local transport authorities the responsibility for determining the format for bus provision) and the licencing regime for PHVs and taxis. In an era where the Government has pledged itself to further devolution, there is a danger here of re-centralising local transport provision as well as giving new mobility options an entirely different regulatory basis from existing mobility options.

Even if they remain unused, local transport authorities need powers to be able to limit the numbers – and ensure the quality – of smaller vehicles providing passenger services in their local areas. At present, local councils have the power to grant licenses to taxis and PHVs. Outside London, councils can also limit the number of taxis licensed in their area (but not the number of PHVs). Transport for London have no powers to limit numbers of taxis or PHVs.

Given the rapid growth in private hire numbers in recent years, and the challenges this has generated – particularly around congestion – local transport authorities and Transport for London need the power to limit the number of licenses granted to passenger service vehicles capable of carrying up to eight people. These decisions are best made locally in the context of the particular transport mix and priorities of the area.

Already much needed, the importance of these powers will only increase with the advent of HARPS. There is no guarantee that passengers will be willing to share smaller HARPS vehicles and their comfort and convenience could make HARPS highly attractive for exclusive-use journeys. Without the power to limit numbers of these smaller format HARPS, cities could face being inundated with smaller vehicles which do not represent the most efficient means of transporting people from A to B; undermine mass transit, cycling and walking; contribute to congestion; and make for an unpleasant urban realm.

Allowing local transport authorities to place limits on numbers could also mitigate the risk of 'regulatory shopping' as there would be limits to the extent to which an operator could exploit any given regulatory system.

PROPOSE NOT TO ANSWER Q44-45

Consultation Question 44.

7.19 We provisionally propose that:

- (1) it should be a criminal offence for an ADSE to omit safety-relevant information or include misleading information when putting a vehicle forward for classification as self-driving or responding to information requests from the regulator;**
- (2) the offence should apply to senior managers (where it was attributable to the manager's consent, connivance or neglect);**
- (3) the offence should not apply to more junior employees;**
- (4) the offence should carry a higher sentence if it is associated with a death or serious injury;**
- (5) the offence should be prosecuted in England and Wales by either the regulator or the Crown Prosecution Service and in Scotland by the Procurator Fiscal.**

Do you agree?

Consultation Question 45.

7.20 We seek views on the following proposed offences.

Offence A: non-disclosure and misleading information in the safety case

When putting forward a vehicle for classification as self-driving, it would be a criminal offence for the ADSE to

- (1) fail to provide information to the regulator; or**
- (2) provide information to the regulator that is false or misleading in a material particular where that information is relevant to the evaluation of the safety of the ADS or the vehicle.**

The ADSE would have a defence if it could show that it took reasonable precautions and exercised all due diligence to prevent the wrongdoing.

The penalty would be an unlimited fine.

Offence B: non-disclosure and misleading information in responding to requests

When a regulator requests specific information from an ADSE (whether before or after deployment), it would be a criminal offence for the ADSE to

- (1) fail to provide information to the regulator; or**
- (2) provide information to the regulator that is false or misleading in a material particular where that information is relevant to the evaluation of the safety of the ADS or the vehicle.**

The ADSE would have a defence if it could show that it took reasonable precautions and exercised all due diligence to prevent the wrongdoing.

The penalty would be an unlimited fine.

Offence C: offences by senior management

Where offence A and/or offence B committed by a body corporate is proved—

- (1) to have been committed with the consent or connivance of an officer of the body corporate; or**
- (2) to be attributable to neglect on the part of an officer of the body corporate, then that officer is guilty of the offence.**

An officer includes any director, manager, secretary or other similar officer or any person who was purporting to act in any such capacity.

We see this as equivalent to offences under the Human Medicines Regulations 2012 and General Product Safety Regulations 2005, which carry a penalty of a fine and/or a maximum two years' imprisonment.

Offence D: aggravated offences in the event of death or serious injury following non-disclosure or provision of misleading information to the AV safety regulator

Where a corporation or person commits Offences A to C, that offence is aggravated where the misrepresentation or non-disclosure:

- (1) related to an increased risk of a type of adverse incident; and**
- (2) an adverse incident of that type occurred; and**
- (3) the adverse incident caused a death or serious injury.**

We see this as equivalent to the offence of causing death by dangerous driving, which carries a penalty of an unlimited fine and/or a maximum of 14 years' imprisonment.

Consultation Question 46.

7.21 We welcome views on whether an ADSE should be under a duty to present information in a clear and accessible form, in which safety-critical information is indexed and signposted.

We agree that clarity and accessibility of information should be encouraged.

Consultation Question 47.

8.5 We provisionally propose that legislative amendment should clarify that the tampering offence in section 25 of the Road Traffic Act 1988 applies to anything that is physically part of a vehicle and any software installed within it.

Do you agree?

Yes.

Consultation Question 48.

8.6 We welcome views on whether the tampering offence should apply to external infrastructure required for the operation of the AV.

Yes. AVs will require road markings, signals and signs to be maintained to a high standard to help ensure safe and smooth operation. Even very subtle graffiti or stickers on road signs (that a human driver might not even notice) have been found to result in cameras used in self-driving vehicles misidentifying the sign in the majority of cases.

Keeping infrastructure up to the required standards could present a major challenge given that council budgets for road maintenance are already under considerable strain. The application of the tampering offence to external infrastructure could therefore be a useful deterrent.

PROPOSE NOT TO ANSWER Q49-52

Consultation Question 49.

8.10 We provisionally propose that there should be an aggravated offence of wrongfully interfering with an AV, the road, or traffic equipment contrary to section 22A of the Road Traffic Act 1988, where the interference results in an AV causing death or serious injury, in:

(1) England and Wales; and

(2) Scotland.

Do you agree?

Consultation Question 50.

8.11 We provisionally propose that the appropriate mental element for the aggravated offence is intent to interfere with a vehicle, the road or traffic equipment.

Do you agree?

Consultation Question 51.

8.12 We seek views on whether an approved work defence for repair or maintenance operations authorised by a vehicle manufacturer or Automated Driving System Entity is desirable.

Consultation Question 52.

9.5 We provisionally propose that the way the Automated and Electric Vehicles Act 2018 deals with contributory negligence and causation is:

- (1) adequate at this stage; and**
- (2) should be reviewed by the UK Government in the light of practical experience.**

Do you agree?

Consultation Question 53.

9.9 We provisionally propose that measures should be put in place to compensate the victims of accidents caused by uninsured AVs.

Do you agree?

Yes.

PROPOSE NOT TO ANSWER Q54

Consultation Question 54

We provisionally propose that:

- (1) product liability law should be reviewed to take account of the challenges of emerging technologies;**
- (2) any review should cover product liability as a whole, rather than be confined to automated vehicles; it should not, therefore, form part of this project on automated vehicles.**

Do you agree?

Consultation Question 55.

10.17 We provisionally propose that:

- (1) for a vehicle to be classified as self-driving, it needs to record the location as well as the time at which the ADS is activated and deactivated;**
- (2) the Government should work within the UNECE to ensure data storage systems for automated driving record these data; and**
- (3) any national system to approve an ADS should require these data to be collected, subject to safeguards.**

Do you agree?

Yes.

Consultation Question 56.

10.19 We provisionally propose that legislation should impose a duty on those controlling AV data to disclose data to insurers, where the data is necessary to decide claims fairly and accurately.

Do you agree?

Yes.

Consultation Question 57.

10.23 We provisionally propose that:

(1) initially, DSSAD data from self-driving vehicles should be stored for three years; and

(2) the issue should be reviewed in the light of experience.

Do you agree?

Three years seems a sensible starting point, but we agree that it is important that this be reviewed (and potentially extended) in the light of experience. The availability of longer time series data could be very valuable in building up a picture which identifies patterns of incidents and risks over time and could be used to improve safety.

Consultation Question 58.

10.26 We provisionally propose that:

(1) when an ADSE applies for categorisation of its vehicle types as self-driving, it should present the regulator with details on how data will be recorded, stored, accessed and protected;

(2) the regulator should only categorise a system as self-driving if it is satisfied that that the ADSE has systems to abide by its obligations under the GDPR.

Do you agree?

Yes.