Response to Law Commissions' third consultation on Automated Vehicles (Law Commission Consultation Paper 252; Scottish Law Commission Discussion Paper 171)

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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?

Xinyi Wu

What is the name of your organisation?

The University of Edinburgh

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

Personal response

CHAPTER 4: SELF-DRIVING AND HUMAN INTERVENTION

Consultation Question 1 (Paragraph 4.114)

We provisionally propose that:

- (1) a vehicle should not be classified as self-driving if, with the ADS engaged, the user-incharge 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?

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

Yes

Consultation Question 2 (Paragraph 4.115)

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

Special lights should be set as a supplement

CHAPTER 5: HOW SAFE IS SAFE ENOUGH?

Consultation Question 3 (Paragraph 5.118)

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?

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

Yes

Consultation Question 4 (Paragraph 5.119)

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.

[Respondents chose from the following options: as safe as a competent and careful human driver; as safe as a human driver who does not cause a fault accident; overall, safer than the average human driver; none of the above.]

Overall, safer than the average human driver

'The average human driver' should be highlighted as a bottom line

Consultation Question 5 (Paragraph 5.120)

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

More trials and tests under extreme conditions

Consultation Question 6 (Paragraph 5.121)

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

Invite different social groups to an AV equality panel, make their anonymous views count for the AV rollout

CHAPTER 7: ASSESSING SAFETY PRE-DEPLOYMENT

Consultation Question 7 (Paragraph 7.99)

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?

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

Yes

I doubt if one single safety case is sufficient

Consultation Question 8 (Paragraph 7.100)

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.

Ethically yes,

But practically, it might affect the authenticity of the tests

CHAPTER 8: INITIAL APPROVALS AND CATEGORISATION - PROPOSALS

Consultation Question 9 (Paragraph 8.17)

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?

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

Consultation Question 10 (Paragraph 8.25)

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?

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

No

Regarding question 10 (2): disagree. UK national ADS approval as a necessity while UNECE as optional for developers (the developers with UNECE only is not legal in the UK)

Consultation Question 11 (Paragraph 8.43)

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?

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

Nο

The Road Traffic Act 1988 was a milestone but the context has been largely changing regarding 11 (3-b) disagree. Very sensitive for commercial organizations

Consultation Question 13 (Paragraph 8.71)

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?

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

Yes

Consultation Question 14 (Paragraph 8.77)

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?

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

Yes

Maybe also provide a formal channel for complaints/reports

Consultation Question 16 (Paragraph 8.83)

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.

The regulator who classifies vehicles only proposes to reduce the numbers while a third party decides whether to implement it or not (in a blind view process).

CHAPTER 10: ASSURING SAFETY IN USE

Consultation Question 17 (Paragraph 10.82)

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?

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

Other

Not sure about enhancing regulators' responsibilities and powers by how much

Consultation Question 19 (Paragraph 10.84)

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, if the vehicle only runs on the UK roads,

Yes.

I feel we can hardly exhaust the powers needed at the moment due to technical uncertainty. so it's important to leave space for re-negotiation

Consultation Question 20 (Paragraph 10.100)

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?

[Respondents chose from the following options: single body; separate bodies; other.]

Other

A single body that hires two separate expert panels- blind evaluation processes from two teams

Consultation Question 21 (Paragraph 10.101)

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)?

-form multiple (agile) regulatory teams within a single body, raise 'competition' among them;

-use an audit team from the third party;

CHAPTER 11: INVESTIGATING TRAFFIC INFRACTIONS AND COLLISIONS

Consultation Question 22 (Paragraph 11.24)

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?

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

Yes

Consultation Question 23 (Paragraph 11.53)

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?

[Respondents chose from the following options: informal and formal warnings; fines; redress orders; compliance orders; suspension of authorisation; withdrawal of authorisation; recommendation of attendance at a restorative conference.]

Informal and formal warnings, Fines, Redress orders, Compliance orders, Suspension of authorisation, Withdrawal of authorisation, Recommendation of attendance at a restorative conference

Consultation Question 24 (Paragraph 11.54)

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?

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

Other

Agree, but there needs to be an open range of the monetary penalty

Consultation Question 25 (Paragraph 11.69)

We provisionally propose that a specialist incident 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?

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

No

Blame should be allocated

Consultation Question 26 (Paragraph 11.82)

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?

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

Yes

Consultation Question 27 (Paragraph 11.83)

We welcome views on:

- (1) the issues the forum should consider;
- (2) the composition of the forum; and
- (3) its processes for public engagement.
- 1. extreme situations
- 2. technicians, policymakers, police, OEMs, ethicists, researchers
- 3. scenario simulation, co-design, and trial engagement

CHAPTER 12: THE USER-IN-CHARGE

Consultation Question 28 (Paragraph 12.24)

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

- (1) should be defined as an individual in 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?

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

Yes

Consultation Question 29 (Paragraph 12.37)

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?

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

Other

Not sure. I feel there's a lot more to discuss here. I believe the user-in-charge should take certain responsibilities when they are monitoring the vehicle. However, the user-in-charge can easier become a scapegoat if not carefully dealt with.

In the previous session, the '10-second' transition for the user-in-charge to take over seems too rigid. It contains risks, for instance, the ADAS systems couldn't deal with certain situations and decide to hand it over to the user-in-charge at the last minute (too late to prevent an incident anyway). The use-in-charge is, therefore, forced to shoulder responsibilities when mistakes were previously made by the system.

Consultation Question 30 (Paragraph 12.45)

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.

Yes, but it's important to identify/track who is in control.

Consultation Question 31 (Paragraph 12.53)

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-incharge.

Do you agree?

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

Yes

Consultation Question 32 (Paragraph 12.59)

We provisionally propose that persons carried without a user-in-charge should be guilty of a criminal offence.

Do you agree?

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

No

Consultation Question 34 (Paragraph 12.66)

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.

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

Other

Comment on 34.1:

A user-in-charge should not be considered a traditional driver in the first place (not on law papers), despite some common grounds.

Agree with 34.2.

Consultation Question 36 (Paragraph 12.95)

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?

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

Yes

CHAPTER 13: REMOTE OPERATION: NO USER-IN-CHARGE VEHICLES

Consultation Question 37 (Paragraph 13.67)

We provisionally propose that:

- (1) where an individual is exercising latitudinal 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?

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

Yes

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".

'Drives itself' is inaccurate when there's a human party monitoring the system and this expression sounds dangerous for detaching the human element

Consultation Question 38 (Paragraph 13.86)

We provisionally propose that:

- (4) 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);
- (5) all vehicles authorised for use on roads or other public places with no user-in charge 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;
- (6) 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?

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

Consultation Question 39 (Paragraph 13.92)

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.

Yes, they should understand traffic rules and have basic knowledge of driving/handling road situations.

Consultation Question 40 (Paragraph 13.108)

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?

[Respondents chose from the following options: yes, a licensed operator should be subject to all the listed duties; a licensed operator should be subject to some but not all of the listed duties; no, a licensed operator should not be subject to any of the listed duties; other.]

Yes, a licensed operator should be subject to all the listed duties

Consultation Question 41 (Paragraph 13.109)

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?

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

Yes

Consultation Question 43 (Paragraph 13.133)

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

DfT

CHAPTER 14: CRIMINAL OFFENCES BY ADSES AND THEIR SENIOR MANAGERS

Consultation Question 44 (Paragraph 14.107)

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?

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

Yes

Consultation Question 45 (Paragraph 14.108)

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—

- (3) to have been committed with the consent or connivance of an officer of the body corporate; or
- (4) 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 nondisclosure 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:

- (5) related to an increased risk of a type of adverse incident; and
- (6) an adverse incident of that type occurred; and
- (7) 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.

Agree that it is equivalent to the offence of causing death by dangerous driving, a penalty of a max 14 years' imprisonment sounds reasonable

Consultation Question 46 (Paragraph 14.109)

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.

Yes, it should.

CHAPTER 15: NEW WRONGFUL INTERFERENCE OFFENCES

Consultation Question 49 (Paragraph 15.53)

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?

[Respondents chose from the following options: yes, in both England and Wales and Scotland; in neither jurisdiction.]

Yes, in both England and Wales and Scotland

Consultation Question 50 (Paragraph 15.55)

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?

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

Yes

CHAPTER 16: CIVIL LIABILITY

Consultation Question 52 (Paragraph 16.24)

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?

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

Yes

Consultation Question 53 (Paragraph 16.32)

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

Do you agree?

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

Consultation Question 54 (Paragraph 16.47)

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?

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

Yes

CHAPTER 17: ACCESS TO DATA

Consultation Question 55 (Paragraph 17.65)

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?

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

Yes

Consultation Question 56 (Paragraph 17.71)

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?

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

Consultation Question 57 (Paragraph 17.81)

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?

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

No

Consultation Question 58 (Paragraph 17.95)

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?

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