Centre for Connected & Autonomous Vehicles
Code of Practice: Automated Vehicle Trialling
Response from AXA UK

About AXA UK

1. AXA UK (AXA) is part of the AXA Group, a worldwide leader in financial services. AXA Group operates in 61 countries with over 170,000 employees and 105 million customers. AXA has around 11 million customers in the UK and operates through specific operating companies – AXA Insurance and AXA PPP healthcare.

2. AXA has been involved in the automated vehicles space since 2014, recognising the positive societal impact this new technology could have and since then we have joined a number of government-backed projects and given evidence to the Public Bill Committee for the Automated and Electric Vehicles Act. The company is involved in five government backed projects – VENTURER, FLOURISH, UK Autodrive, Capri and Robopilot.

Executive Summary:

3. AXA wants to lead the insurance industry in being an enabler of automated vehicle technology and to make certain it is rolled out safely – not blocking beneficial changes for society.

4. As a partner of five automated vehicles projects, we welcome the detail contained in the updated Code of Practice guidance for conducting safe and responsible trials. The additions to the Code allow for greater insight into relevant components of AV projects and ensure greater levels of safety guidance and transparency during the testing and trial process.

5. AXA would be supportive of further clarity and guidance on a number of items outlined in the new Code of Practice, including the vehicle categorisation of a POD, guidelines for police forces when attending an incident involving an automated vehicle and trial scenarios involving passengers.

CHAPTER 2: General Requirements

Legal Requirements

6. AXA are supportive of the Code's expansion on the General Requirements set by the 2015 Code. The legal requirements 2.2 and 2.3. provide clarity, and AXA will endeavour to support any operator to develop projects in line with this guidance.

7. The challenge of implementing these requirements continue to be interpreting the roadworthiness of vehicles and ensuring each trial has insurance cover that is appropriate. Both roadworthiness and insurance cover for trials will continue to develop as expertise and knowledge grows.

8. Insurers are an integral part of the trialling of automated vehicles and ultimately, their safe deployment on UK roads. Guidance provided from the Government must stress that the appropriate provision of insurance is seen as an essential component of trials.

Insurance

9. AXA welcome the added detail contained in point 2.4, however, we would be supportive of greater clarity in defining a POD. The current category of a POD is M, a trolley vehicle: from our experience of being involved with the trialling of automated vehicles, we believe this categorisation to be outdated considering the development of POD technology in recent years. It would be useful to ensure that the current categorisation reflects the technology either through changing the vehicle category or establishing a new category that clearly covers a PODs use and control.

Advanced Trials

10. To facilitate advanced trialling of automated vehicles on public roads it is fundamental that the Department for Transport's motoring agencies prioritise the development of a process that supports safe trials being conducted but allows trialling organisations the flexibility required to ensure those trials are meaningful for the development of the technology. AXA therefore support a process which maintains a safe working environment but prevents trialling organisations being unnecessarily constrained by current UK Road Traffic legislation.

Safety Cases

11. The outlining of further detail on safety cases is welcome especially those outlined by organised such as the British Standard Institution. The detail ensures that safety is core to trial activity, however, implementing such standards for the safety case of advanced trials does present more challenges. A feature of new trials is that stakeholders are experiencing scenarios for the first time and therefore, are making decisions that have not been made before. The controls that need to be put in place and the detailed minimum standards of autonomous vehicles and the trialling environment will evolve over time. Therefore, the processes discussed in point 2.6 regarding support for trialling organisations will be necessary to ensure that safety cases are not only robust, but legal.

Data Access

12. Access to data is fundamental for a number of reasons including establishing liability and accurate risk modelling. The type of data being collected, and its uses should be transparent. AXA believe that this should include greater focus on the data and connected element of automated vehicles. The issue is two-fold, first, cyber security and second, how data is shared and used in this new ecosystem. These vehicles will be the most sophisticated, complex and advanced technology to date that the general public will encounter, and therefore, the risk of cyber-attack is high. On data usage and sharing, to ensure data is protected but does not inhibit the functioning of the system (e.g. insurers' having sufficient access to standardised accident data), we recommend that government and industry collaborate to structure a 'data map' to identify who needs to access data, what type of data and when.

13. Considering point 2.11 and 2.12, AXA would be supportive of a new set of guidelines for police forces when attending an incident involving an automated vehicle. This would facilitate greater understanding of the procedures police investigators will need to follow and the data they require. Trialling organisations can, as a result, plan their trial activity appropriately to cooperate fully with police requirements.

Data Protection

14. Data protection guidelines 2.14-2.16 are welcome, the protection of data is fundamental for the safe trialling of autonomous vehicles. AXA would be supportive of requirements that all projects should be registered with the Information Commissioner's Office. With the extended use of privacy impact assessments, which should be used by all trialling organisations, personal data should be safeguarded in a robust and consistent manner.

Contingency Planning

15. The contingency planning guidelines in point 2.19 are integral for a robust safety case, which would include briefings for any agency involved in an incident. AXA will endeavour to support trialling organisations to agree contingency measures in accordance to these guidelines.

CHAPTER 3: Engagement

Minimum Engagement

16. AXA regard the guidelines 3.1-3.7 to be welcome guidance in formulating effective strategies for engagement with relevant bodies, authorities and the public at the earliest opportunity and throughout the running of trials. Minimum engagement planning is integral to the overall project brief and a rigorous safety case. It should be emphasised that all relevant agencies do need to have systems in place and be ready to receive, interpret and comment on this information, then confirm agreement or otherwise with the statements and procedures contained within the project documentation.

Public Communications

17. AXA firmly support that, for the safe implementation of automated vehicles, consumer education of the technology, road and safety rules and legal responsibilities are paramount. Consumer awareness and education can be increased through trialling organisations developing a strong public relations and communications strategy. In the projects we are partners of, we play an integral role in developing approaches to ensure the work of public trials and the benefits of automated technology are being communicated effectively in an engaging way. Examples of this include yearly reports on insurance implications of AVs, consumer research and consumer education infographics on topics such as SAE Levels.

18. AXA believe that well-timed public communication campaigns by relevant government departments will also be fundamental during the trialling of automated vehicles and for their safe deployment in the UK.

Publishing Safety Cases

19. AXA are supportive of guideline 3.10, the emphasis placed on increasing the amount of transparent information provided by trialling organisations, the more opportunity trials will have at generating greater levels of public trust. To ensure the benefits of automated vehicles can be harnessed, we are firm supporters of an approach that provides awareness, education and clarity for road users and the wider public. It is fundamental that they are given every opportunity to embrace this new method of transport.

Reporting

20. Guideline 3.11 is important for transparency, accountability and public education of automated vehicles trials. AXA support making this guideline standard operating procedure within both the project and a public safety case.

CHAPTER 4: Safety Driver and Operator Requirements

Requirements to oversee trials

21. The requirements to oversee trials (guidelines 4.2-4.7) are integral for conducting safe trials.

22. There are various types of software, operating equipment and methods of control which are not currently covered by current drivers or operators' standards and qualifications. AXA therefore would be supportive of a public authority compiling or including to current requirements a separate set of rules outlining the responsibilities and requirements of a safety driver or operator such as minimum qualifications and health requirements.

Licence Requirements

23. As discussed elsewhere in this response, the category of the POD is a necessary requirement to comply fully with guideline 4.8 and 4.9. Rather than rely on equivalent conventional categories of licence it may therefore be required that a new category of vehicle is created for PODs that correctly reflects the use and control of the technology.

CHAPTER 5: Vehicle Requirements

General Vehicle Requirements

24. The general vehicle requirements 5.2-5.4 can largely be controlled by current regulations such as regulations for lights, tyres and other mechanically operated controls. However, AXA are supportive of further clarity in the legal requirements unique to automated vehicles such as regulations related to windscreens, wipers, mirrors and whether users will be required to wear seat belts. Currently omitted legal requirements need to be included to ensure trials can be deemed as legal.

Remote-controlled Operation

25. AXA believes that the guidelines associated with remote-controlled operation (5.8-5.11) are welcome additions to the 2015 Code of Practice. Delivering the same level of safety through remote-controlled operation as having a driver present is vital to ensure trials are meaningful and can push the boundaries of the technology.

26. There are a number of challenges associated with remote-controlled operation. The primary challenge is replicating the control an operator or driver would have if they were inside the vehicle. AXA would therefore urge further focus from appropriate technology providers, trialling organisations and government on remote-controlled operation to move towards improving these areas.

Data Recording

27. AXA believe that further work is required to ensure the sufficient storage and sharing of data from automated vehicles, along with how this can be shared with the authorities, insurers and others with a valid need for such information. This should include, but not be limited to, all relevant crash data, and information on the effective operation or otherwise of all systems, as well as records of associated human intervention. Considering our support for further work on data storage, access and sharing, we welcome guidelines that result in trial data being responsibly and securely stored with the correct channels in place for relevant authorities to be provided access to any relevant data they require. We would also welcome emphasis being placed by trialling organisations on establishing a strategy for managing data that is agreed upon at the beginning of the trial process.

28. More broadly, AXA believe, as recommended in our Year 2 FLOURISH report, that government and Parliament should now look next to the connected element of Connected and Automated Vehicle (CAVs). This is critical to the proper functioning of the CAV ecosystem and also to consumer trust in this new technology. The issue to focus on is two-fold, firstly security against cyber-attack and secondly, how data is shared and used in this ecosystem. Related to the former, AXA are supportive of the guidance put forward by the Government in its *Key Principles on Cyber Security for Connected and Autonomous Vehicles.*

29. Access to data needs to be thoroughly discussed with regard to the connective ecosystem of automated vehicles. To ensure data is protected but also does not inhibit the functioning of the system, we recommend government looks to create a data map of the new ecosystem. Not only will this aid the functioning of the system, allowing decisions to be made regarding who has access and how data is stored, this will also help to create trust with consumers about how their data is used and who it is shared with.

Transition between automated and manual modes

30. AXA are supportive of the clarity provided by the inclusion of guidelines related to the transition between automated and manual modes (guidelines 5.17-5.21), especially with regard to ensuring a process is in place to ensure there is a minimum risk condition for vehicles in absence of a response from a safety driver.

31. Moreover, AXA would welcome further guidance on scenarios in which passengers are involved in the trial of an automated vehicle. In certain cases, passengers may feel compelled to intervene whilst the vehicle is in automated mode such as if they perceived an accident to be imminent. Therefore, analysis and assessment should take place on whether passenger intervention would be allowed in a given scenario and if so, agencies must outline clearly the trial scenarios where this would be acceptable and the responsibilities of all stakeholders.

Failure Warning

32. AXA are supportive of guideline 5.22 and 5.23, every option that is practical should be made available to a safety driver in the event of an intervention being required that is out of standard practise. AXA recommends that a minimum standard is agreed upon, initially by the appropriate government department, but then reflecting any emerging standards from the UNECE or other relevant bodies, for the provision of failure warning technology and the type of technology that should be used. This would ensure a rigorous safety standard is maintained across all automated vehicles trials.

33. All vehicles should be designed to at least SAE Level 4 to be considered autonomous, and as such in the event of failure the vehicle should be designed to achieve a minimal risk condition, which may include manoeuvring to a safe(r) location.

If you need to get in touch regarding the information in this submission, please get in touch with Public Affairs Executive, Jonathon Murphy, at jonathon.murphy@axa-uk.co.uk or on 07866032309.