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## Risk control

# Autonomous Vehicles: Ethical Decisions and the Impact on Insurance Claims



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# Risk Control

## Autonomous Vehicles: Ethical Decisions and the Impact on Insurance Claims

### Introduction

Recent changes to UK law have brought the prospect of autonomous vehicles to the roads one step closer. The Automated Vehicles Act 2024<sup>1</sup> has endeavoured to add further clarity to the previous Automated and Electric Vehicles Act 2018<sup>2</sup> by providing a framework and space for regulations in the future.

One of the principles from the 2018 Act was the introduction of compulsory 'single insurer' insurance, whereby both the driver and any victim of an accident involving and caused by a specific Autonomous Vehicle (AV) will have recourse from an insurer in the first instance. Resolving the legal issues in connection with autonomous driving has proven to be problematic and complex. The Automated and Electric Vehicles Act 2018 states that the insurance company is liable if the self-driving vehicle crashes when 'driving itself'. These costs may be then recovered from the manufacturer, operator or software provider.

A number of safety principles have been established in the 2024 Act including '*that authorised automated vehicles will achieve a level of safety equivalent to, or higher than, that of careful and competent human drivers*', along with a requirement for the Secretary of State to consult organisations that appear to them to represent the interests of AV manufacturers, road users, and road safety<sup>3</sup>.

The 2024 Act, covering England, Wales and Scotland only, has seven parts with principles for a regulatory scheme, circumstances for criminal liability and powers for policing and investigation. It sets out the understanding that should a vehicle be in self-driving mode the driver would not be held accountable. Instead, insurance providers, software creators and vehicle manufacturers will take on this responsibility. It is important to note that the 2024 Act applies to vehicles that would be considered at Levels 3 – 5 under the Society of Automotive Engineers Scale of Automation<sup>3</sup>.

The 2024 Act makes an important liability distinction between those considered a 'user-in-charge' and 'no-user-in-charge'. The former is where the user is available to take control of the vehicle but may not have done so, whereby when there is 'no user' then the manufacturer will have responsibility for any issues that subsequently arise on the journey.

<sup>1</sup> <https://www.legislation.gov.uk/ukpga/2024/10/contents/enacted>

<sup>2</sup> <https://www.legislation.gov.uk/ukpga/2018/18/contents>

<sup>3</sup> <https://www.sae.org/blog/sae-j3016-update>

<sup>4</sup> <https://yougov.co.uk/travel/articles/35562-car-manufacturers-still-some-way-convincing-brits->

### What is Safe?

Whilst we all require an autonomous vehicle to be safe, to the level a careful and competent human, previous studies have shown that the public still trust a human driver more. A YouGov study found that 72% would trust a human to make better decisions in a high-risk situation<sup>4</sup>. Any researcher would be diving deeper to establish if the data really confirms this or is it a case of poor marketing and fear of the unknown. What are the driving conditions such as the weather, type of vehicle, crash severity, geographical considerations, billion miles covered, or comparable safety systems? It illustrates that there is some way still to go as human error accounts for approximately 88% of road collisions<sup>5</sup>.

It is anticipated that the UK will be well positioned to have self-driving cars on the roads by 2026, although the reality maybe somewhat further on from that.

### Privacy and Information Security

Cyber security issues must be addressed before vehicles are launched on our roads with resilience to cyber-attacks. Information could come from other vehicles, infrastructure, the internet, and traffic management centres so industry bodies must work together to develop best practices. The UK has an excellent reputation in this area where vehicle security is concerned. Direct attacks would be serious as hackers could gain access to the Vehicle Processing Unit (VPU) which may affect speed, acceleration, braking, steering and deceleration. There could also be indirect attacks whereby hackers could manipulate the signals sent from those sources or indeed GPS. Such incidents are possible and could send the vehicle in a different direction or to an alternative destination so manufacturer collaboration will be key in winning public trust.

### Ethical Considerations

If the autonomous vehicle is forced to make a safety critical decision, how will it decide? Should the AV hit 5 people or swerve and hit one which is referred to as 'The Trolley problem'<sup>6</sup>? This is simply not acceptable as it involves adding value to people through age, gender, contribution to society, health, criminal record and so it goes on. An ethical framework has been proposed, with a German report<sup>7</sup> recommending that individuals take precedence over

<sup>5</sup> <https://www.gov.uk/government/news/self-driving-vehicles-set-to-be-on-roads-by-2026-as-automated-vehicles-act-becomes-law>

<sup>6</sup> P Koopman. How Safe is Safe Enough? Measuring and Predicting Autonomous Vehicle Safety. Carnegie Mellon University p309

<sup>7</sup> Luetge-GermanEthicsCodeAutomated-PhilTech.pdf (Ethical Guidance 7)

property and animals provided we are sure the vehicle is recognising that it is looking at a pedestrian in the first place. The question is then that if the option to hit a tree is preferable, the vehicle passengers may not agree as they prioritise their own safety over others despite the safety systems.

As a result of this moral maze, could the answer be to ensure vehicles are so risk averse that they cannot get into difficulty, after all this is what the Safe Systems Approach<sup>8</sup> in part is trying to achieve through the pillars of Safe Speeds, and Safe Roads.

But what about more practical questions? At present in our personal vehicles, we have the option to lock ourselves in and travel alone giving us control over our safety. It provides a certain degree of physical protection against threats we may encounter. We can choose not to share the vehicle with a stranger, which in the new AV world may not be the case with taxis or ride sharing vehicles. The industry should consider single occupancy autonomous vehicles to extend this existing safety benefit.

Personal safety is especially important to certain sectors of society considered more vulnerable; women travelling alone; elderly; children; minority groups perhaps prone to abuse due to race, gender, ethnicity, and religion. Personal safety in mass transit vehicles will be an obvious concern such as buses and trains where conductors would not be present. But rather than having numerous individual type vehicles maybe we should have a conductor to add an additional layer of deterrent of surveillance despite the cost.

In any automated system there may be times when an occupant wishes to leave the vehicle earlier than planned and override the system<sup>9</sup>. Reasons may include being unwell, claustrophobia, wanting to get away from another passenger due to security and safety issues or even needing to escape a vehicle fire. A child in a parentally programmed vehicle on their way to school may decide they have a better plan and wish to get out before they arrive so should not be permitted to leave.

Alternatively, a passenger may want to force a stopped vehicle to move away – perhaps for personal safety at traffic lights. The occupants could want the vehicle to continue moving as they believe the police vehicle is not genuine but a criminal and wish to move until legitimacy can be verified.

The autonomous vehicle may be pre-programmed to not drive through heavy smoke, but the occupants could be fleeing wildfires so it could be necessary and may wish to take their chances as its better than staying put. So human drivers should have the authority to deal with these

situations and more if they are willing to take responsibility for their actions. So, issues that must be answered include 'I want to get out now' or 'I need this vehicle to move now'.

Generating a full list of reasons could be difficult but there will none the less be times where the need must be honoured. The vehicle should ensure it has stopped in a safe location first and not in the middle of a lane.

Should passengers be able to unlock the doors and exits? For AV's to be rolled out en-masse the industry must consider how much authority is given to override the vehicle behaviour and whether emergency manual controls should be fitted. Children travelling alone may not have the capacity to make that decision but if the alternative is to have a responsible person on board it goes against the point of an AV where it is more accessible for all, including those who would otherwise not be driving perhaps by virtue of disability, age or intoxication. It should be observed that many of these questions are still being decided by the AV companies who may not make the right ethical decision but instead one that is right financially due to pressure for roll out. There are likely to be large gains for those who become the leaders in this space, but we must be ready. There will be no perfect policy but there must at least be one!

## Insurance Implications

The House of Commons has consulted widely with representatives from the automotive industry and insurance sector on the implications brought about by the original Act. The Government has stated that it will create a new compulsory insurance framework which protects motorists when they are driving and when they have 'legitimately' handed over control to the vehicle itself<sup>10</sup>.

Consumers will be able to purchase insurance in the same way they do now and will continue to have quick and fair access to compensation in the event of an accident.

Insurers will pay out to victims and, where they can, will then recover costs from the liable party using common and product law.

In time, motor premiums should greatly reduce as accidents caused by human error are reduced and potentially eliminated entirely. The way in which premiums are calculated would then turn to reliance upon real world data surrounding the likelihood of autonomous vehicles being involved in a collision as opposed to considering the risk posed by any one driver.

<sup>8</sup> <https://www.pacts.org.uk/safe-system/>

<sup>9</sup> P Koopman. How Safe is Safe Enough? Measuring and Predicting Autonomous Vehicle Safety. Carnegie Mellon University p330

<sup>10</sup> <https://www.insurancebusinessmag.com/uk/news/auto-motor/transport-minister-new-insurance-framework-for-selfdriving-cars-84103.aspx>

There are insurance claim considerations also. The exchange and availability of data held by the manufactures is critical in assessing liability, whether data requests made by insurers at a pre-litigation stage will be forthcoming or whether expensive and time consuming pre-action disclosure requests will need to be made is an area that will need consideration.

A world with only autonomous vehicles may be easier for insurers than what will be a relatively long transitional period where autonomous vehicles share the road with conventional vehicles. It is this transitional stage that poses the biggest challenges surrounding assessing liability not only in respect of mechanical or software failure or malfunction but also the human error side posed by the conventional vehicle involved.

Would the claims landscape change to one where collisions are indeed less frequent but the ratio of severity increases? The cost of repair and provision of replacement vehicles will not be insignificant and current supply chain models would need to reflect this. We have seen such challenges and cost increases in the growth of electric vehicles on the road, with the potential for the costs associated with fully autonomous vehicles likely to be even greater.

The landscape of the motor insurance sector will most certainly dramatically change, and this change poses many challenges for insurers from premium pricing through to the assessment of liability following a collision and managing claim spend accordingly.

## Further information

For access to further RMP Resources you may find helpful in reducing your organisation's cost of risk, please access the RMP Resources or RMP Articles pages on our website. To join the debate follow us on our LinkedIn page.

## Get in touch

For more information, please contact your broker, RMP risk control consultant or account director.

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