



Informing Progress - Shaping the Future

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Aviation Autonomy and Autonomous Vehicles - The New Frameworks: A Comparison

The Law Commission's recent consultation on aviation autonomy marks a significant step towards modernising the legal framework governing autonomous aircraft operations in the UK. This initiative aims to address the challenges and opportunities arising from the rapid advancement of autonomous technologies in the aviation sector. Concurrently, the UK has been grappling with the legal implications of autonomous vehicles on roads, presenting an intriguing parallel between these two domains of autonomy.

Similarities in Approach

Both the aviation autonomy consultation and the existing legal framework for autonomous vehicles in the UK share a common goal: ensuring the safe and responsible integration of autonomous technologies while fostering innovation. The Law Commission's approach in both cases emphasises the need for a comprehensive review of existing legislation to identify gaps, uncertainties, and potential barriers to the adoption of these emerging technologies.

One notable similarity is the recognition of the need for clear attribution of liability in the event of incidents or accidents involving autonomous systems. In the context of autonomous vehicles, the Automated and Electric Vehicles Act 2018 introduced provisions for apportioning liability between insurers, manufacturers, and users. Similarly, the aviation autonomy consultation explores mechanisms for attributing criminal and civil liability when incidents occur with autonomous or remotely piloted aircraft.

Another shared aspect is the emphasis on maintaining high safety standards. Just as the UK's regulatory framework for autonomous vehicles prioritises safety, the Law Commission's aviation autonomy project aims to ensure that the legal framework for autonomous flight upholds the aviation industry's rigorous safety standards.

Differences in Approach

While the overarching goals are similar, the specific challenges and considerations in the aviation and automotive domains differ significantly. The aviation autonomy consultation grapples with unique issues such as compliance with the rules of the air, which traditionally assume a human pilot on board. However, it's important to note that unmanned drones and automation in many situations such as autopilot systems etc are not new concepts in aviation. What is novel is the potential for unmanned aircraft to be used for transporting human passengers. In fact, autonomy in the airspace is, in many ways, much more developed than in the realm of motor vehicles.

The consultation explores whether autonomous aircraft should be granted the same flexibility as human pilots to deviate from rules in the interest of safety.

Additionally, the aviation sector faces challenges related to airworthiness certification and the integration of autonomous systems into air traffic management and navigation services. These aspects are unique to the aviation domain and require tailored legal and regulatory solutions.

Another key difference lies in the operational environments. Autonomous vehicles operate on roads and interact with other road users, pedestrians, and infrastructure. In contrast, autonomous aircraft operate in the airspace, which presents distinct challenges in terms of airspace management, air traffic control, and potential conflicts with manned aircraft.

Impact on the UK Legal and Insurance Sectors

The Law Commission's initiatives in both the aviation and automotive domains will have far-reaching implications for the UK legal and insurance sectors.

In the legal realm, the proposed reforms will necessitate updates to existing legislation and the introduction of new laws to address the unique challenges posed by autonomous systems. This will require extensive collaboration between policymakers, legal experts, and industry stakeholders to ensure a comprehensive and coherent legal framework.

For the insurance sector, the advent of autonomous technologies will necessitate the development of new insurance products and risk assessment models. Insurers will need to adapt their underwriting practices and policy wordings to account for the unique risks associated with autonomous systems, such as cyber threats, software vulnerabilities, and liability attribution.

Moreover, the insurance industry will play a crucial role in incentivising the adoption of robust safety measures and promoting responsible innovation. By offering favourable insurance rates to manufacturers and operators that prioritise safety and adhere to best practices, insurers can drive positive change and foster a culture of accountability.

Conclusion

The Law Commission's consultation on aviation autonomy and the existing legal framework for autonomous vehicles in the UK represent parallel efforts to navigate the complexities of emerging

autonomous technologies. While the specific challenges and considerations differ between the aviation and automotive domains, the overarching goals of ensuring safety, fostering innovation, and establishing clear liability mechanisms remain consistent.

As these initiatives progress, close collaboration between policymakers, legal experts, industry stakeholders, and the insurance sector will be crucial to developing a comprehensive and harmonised legal and regulatory framework. By addressing the unique challenges posed by autonomous systems in both the aviation and automotive realms, the UK can position itself as a leader in the responsible adoption of these transformative technologies, while safeguarding public safety and promoting innovation.

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