

4.1.1 – Identifying applicable rules and regulations

Practical guidance – automotive

Authors: Youcef Gheraibia, Liam Kilvington, Rob Alexander

Introduction

This provides guidance regarding the rules and regulations that apply to the use of autonomous vehicles. It provides an overview of the types of issues that are likely to arise to inform approaches that should be adopted regarding testing and trialling autonomous vehicles (AVs) with a focus on Europe.

There are a number of key considerations. These include the existing body of regulations that apply, especially considering that the relevant legal frameworks within this industry are still rather underdeveloped. First, the more general bodies of regulations that are very likely to apply will be set out. Beyond that, relevant safety standards, which includes requirements for the testing of AVs will be outlined, before moving on to discuss the current position with respect to liability in this context.

Relevant legal framework(s)

The development of AV technology, its testing, and the inevitable push for its use on public roads at some point in the future, necessitates that existing legal frameworks will need to develop in order to best facilitate and regulate it.

General

The Vienna Convention on Road Traffic, of which all EU Member States are signatories except Cyprus, Ireland and Malta, requires that ‘every moving vehicle or combination of vehicles shall have a driver’ [1] and a driver is defined as ‘any person who drives a motor vehicle or other vehicle (including a cycle), or who guides cattle, singly or in herds, or flocks, or draught, pack or saddle animals on a road’ [2]. This indicates that a human needs to be the driver of a vehicle to conform to the Convention and an artificial agent would not suffice. Clearly this would prove problematic for AVs. However, the facilitation of the development and testing of this technology is an objective within the RIMA domain [3]. Clearly this is a major limitation within the legislation. Inevitably this will mean that the legal requirement for a human driver will be removed/bypassed in certain instances in order for testing to take place.

Safety

Regarding general safety requirements, ISO 26262 provides an international voluntary standard for road vehicles [4]. This standard has been highlighted as one that should be adhered to in order for AVs to operate. In addition, as of September 2020, vehicles that are certified as safe in one Member State do not need to undergo additional certification in order to operate within other EU Member States [5][24].

Testing

Parties trialling autonomous vehicles must fulfil a number of requirements. They must purchase appropriate insurance [6]. They must also ensure that the vehicle is roadworthy by

first testing on closed roads, and, aside from some potential exceptions, involve a human driver inside or outside the vehicle who can remotely take control at any moment [7].

Notably, there is currently little by way of harmonised standards across the EU with respect to the development and testing of AVs. This applies to any framework for liability rules, or insurance requirements for the vehicles. This is despite the need for a harmonised system being highlighted in 2018 [8]. As a result, this has led to some divergent approaches that have been adopted across those Member States that have been more forward thinking in this regard.

For example, Member States including Austria [9], Belgium [10], the Czech Republic [11], Germany [12], Poland [13], the Netherlands [14], and Hungary [15][25], have sought to put in place regulations to deal with the testing of AVs. As a further illustration, the UK has also put a system in place [16][26]. It must be said though, that these are varying in terms of detail and scope.

An issue of note is the need for an onboard driver to be present in order to take control where necessary. While this is currently a requirement in Austria, Belgium, the Czech Republic, Germany, Poland, and the UK, Holland took steps in 2018 to facilitate testing without the presence of a human driver [17]. For example, in Belgium a May 2018 Royal Decree allowed for time limited exemptions to the provision mandating a human driver inside the vehicle subject to approval by the Ministry of Mobility and the remote monitoring of the vehicle order for testing to take place.

Next, whether testing can occur on public roads is also an important consideration with Member States such as Austria, Germany, Poland (subject to the provision of clear signage on the test site), Hungary and the UK (both of which require initial testing to take place on a closed road or test site) looking to facilitate this.

The issue of liability

Simply put, liability means being legally responsible for something. While some European jurisdictions (both EU Member States, and non-Member States) such as Germany [18] and the UK [19] are more advanced in terms of accommodating AVs within their liability regimes, many others have not made such adaptations.

In a general sense, the assumption is that product liability type approaches that place liability upon the manufacturer will apply in the absence of a specific approach for a highly automated driving system where no driver is present [20][27][24]. However, as this is only applicable where the technology in question causes damage, or is likely to cause damage to 'consumers' [21], it is less likely to be applicable where it is used for inspection and maintenance purposes. There is also a need for third party insurance that extends across EU Member States in order for motor vehicles to be used [22]. However, beyond this there is currently little by way of harmonised standards across the EU. This applies to any framework for liability rules, or specific insurance requirements for AVs This is despite the need for a harmonised system being highlighted in 2018 [23]. This has led to a variety of approaches to be adopted across Member States regarding the testing of AVs.

For example, in Belgium the position is that the driver may be liable for accidents even if the conduct was performed by the automated system, as Article 8.3 of the Belgian Highway Code requires the driver to have control of the vehicle at all times. This seems likely to apply

where there is no onboard driver due to the need to provide remote monitoring. Another example come from Germany where in 2017 the Road Traffic Act (StVG) was amended to account for the operation of highly and fully automated vehicles, preserving the existing liability and insurance framework which involves a mix of strict liability (which does not require negligence or intent to cause harm) for the vehicle owner, and a fault-based element (requiring negligence or intent) which applies to the human driver. It is the case that a human driver must be present during testing in order to take over control. As such, they must be attentive and have insurance cover as they would be liable for accidents while the vehicle is under their control.

Summary of applicable guidance/actions regarding testing

- ISO 26262 Safety Certification must be acquired. This will allow vehicles to operate across Member States.
- Insurance must be acquired before any testing can take place. This is outlined in the EU Motor Insurance Directive 2009.
- The nation in which testing is to take place is key. This impacts the level of regulation that is in place and there is a clear system that will allow for testing. This could include application processes, as well as site requirements. For example, Poland requires clear signage for testing on public roads, while Hungary and the UK require initial testing on a closed road or test site.
- The nation that is chosen will impact the way liability is dealt with in the event that an autonomous vehicle causes an accident or damage. The Belgian approach, where the driver is liable irrespective of whether they are at fault, is a prime example of this.

References

[1] The Vienna Convention on Road Traffic 1968, Article 8.

[2] The Vienna Convention on Road Traffic 1968, Article 1(v).

[3] Declaration of Amsterdam: Cooperation in the Field of Connected and Automated Driving 2016. [4] ISO 26262, "Road vehicles – Functional safety" (2011).

[5] REGULATION (EU) 2018/858 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 May 2018 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC

[6] The EU Motor Insurance Directive 2009.

[7] Code of Practice: Automated Vehicle Trialling 2019 (UK). This was an update to the The Pathway to Driverless Cars: A Code of Practice for Testing 2015 (UK) by the Department of Transport.

[8] European Added Value Assessment, A common EU approach to liability rules and insurance for connected and autonomous vehicles, February 2018, [http://www.europarl.europa.eu/RegData/etudes/STUD/2018/615635/EPRS_STU\(2018\)615635_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2018/615635/EPRS_STU(2018)615635_EN.pdf)

- [9] Austrian Motor Vehicles Amendment Act 2016; The Automatic Driving Regulation 2016 (Austria)
- [10] Belgian Ministry of Mobility Code of Good Practice 2016; The Belgian Highway Code
- [11] Czech Electronic Communications Act 2005
- [12] The German Road Traffic Act (StVG)
- [13] Polish Road Traffic Act 1997; Polish Act on Electromobility and Alternative Fuels 2018
- [14] Dutch Road Traffic Act 1994
- [15] Hungarian Ministerial Decree K6HEM No. 5/1990 of 12 April 1990 on the technical inspection of road vehicles
- [16] The Pathway to Driverless Cars: A Code of Practice for Testing 2015 (UK)
- [17] 2018 amendment to the Dutch Road Traffic Act 1994
- [18] The German Road Traffic Act (StVG).
- [19] The Automated and Electric Vehicles Act 2018 (not yet in force) (UK).
- [20] General Product Safety Directive 2001/95/EC
- [21] The Product Liability Directive 85/374/EEC
- [22] Directive 2009/103/EC of the European Parliament and of the Council of 16 September 2009 relating to insurance against civil liability in respect of the use of motor vehicles, and the enforcement of the obligation to insure against such liability.
- [23] European Added Value Assessment, A common EU approach to liability rules and insurance for connected and autonomous vehicles, February 2018
[http://www.europarl.europa.eu/RegData/etudes/STUD/2018/615635/EPRS_STU\(2018\)615635_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2018/615635/EPRS_STU(2018)615635_EN.pdf)
- [24] Morgan, P., Kao, M.B., Kilvington, L., Alexander, R. and Gheraibia, Y., 2020. Review of Legal Frameworks, Standards and Best Practices in Verification and Assurance for Infrastructure Inspection Robotics. Standards and Best Practices in Verification and Assurance for Infrastructure Inspection Robotics (July 8, 2020).
- [25] Hungarian Ministerial Decree K6HtM No. 6/1990 of 12 April 1990 on the technical conditions for placing and keeping road vehicles in circulation
- [26] Automated and Electric Vehicles Act 2018; Code of Practice: Automated Vehicle Trialling 2019 (UK)
- [27] The Product Liability Directive 85/374/EEC