

Position Paper on:

# Policy and regulatory needs, European harmonisation



## Summary

In order to protect the society from unsafe and less environmental friendly motorized vehicles, vehicle registration authorities apply vehicle approval standards. Vehicle manufacturers have to proof that their vehicles are in compliance with those standards. Currently, non-existent, incomplete or different national legislative approaches still form a major obstacle on the path to the market introduction of automated and especially autonomous vehicles. Therefore, the goal of the legislatures should be the creation of a regulatory framework as unified as possible.

The harmonization of the various rules is in the best interests of a functioning European internal market. The right conditions should be put in place so that vehicles can assume tasks that today only the vehicle's driver is allowed and able to perform. For automated vehicles, Level 2 and higher, these standards need to be developed.

For Europe, digitization of public and private transport and the speed of development of automated driving represents an opportunity to become the worldwide leader in the field. Speed and expertise in development leads to landmark innovation and fast solutions. Regulators need to make basic policy decisions soon so motorists can benefit the most from this technology.

## Latest Developments and Current Regulatory Status

The “Vienna Convention” of 1968 states that the driver must be in control of their vehicle at all times. According to the amendment by UNECE (the United Nations Economic Commission for Europe) in March 2014, highly automated systems that continue to have a driver ready to take over the driving functions, and who can override the system and switch it on and off, will in the future be in accordance with the “Vienna Convention”. However, this still presupposes that every vehicle must have a driver. UNECE WP.1 has affirmed already that the 1949 and 1968 Conventions apply to all driving situations except in situations where the vehicle is moved by vehicle systems without any role of the driver – see UNECE WP.1 report of its 75th session, ECE/TRANS/WP.1/159, page 6.

Currently UNECE WP.1 is working on a Draft resolution on the deployment of highly and fully automated vehicles in road traffic which includes recommendations to Contracting Parties of the 1949/ 1968 Conventions on how to safely deploy this new technology.

There are **two perspectives on regulatory requirements** to be distinguished:

- Firstly, it would be expedient to amend the Member States’ traffic rules for highly automated driving functions in order to make the driver’s role and obligations more specific and to legitimize secondary and tertiary tasks like phone calls, reading a newspaper or chatting with someone in the back seat as well as using on-board infotainment systems during highly automated journeys, and in general for transferring driving tasks to systems. This should be supported by a European approach that is as unified as possible so that autonomous vehicles driving across (historical) Inner-European borders do not need to adapt to different limits for what they are allowed to do. Also, if there are still driving-related duties for a driver, these duties may not change across Inner-European borders.
- Secondly, legislation and motor vehicle registration have to be adapted so that OEMs, suppliers as well as all other stakeholders in the automotive industry can align their technology development focus on explicit and stable requirements of automated vehicles.

The **current regulatory status** on automated driving is best divided into three sectors which on the one hand include EU, Japan and many other states (UN-Regulation), and on the other hand entail policy and regulatory needs in the U.S., the contracting party of the 1949 convention, and China:

**EU, JP, RoW** (UN-Regulation):

- A first concrete regulatory framework is currently being developed; highly automated driving (HAD) with speeds of up to 130 km/h is estimated to be approved in about 2019.
- Simultaneous extensive lobbying activities from both established market players and new entrants aiming towards the expansion and acceleration of fully automated driving (FAD).
- Key points are: UNECE WP.1 has affirmed already that the 1949 and 1968 Conventions apply to all driving situations except in situations where the vehicle is moved by vehicle systems without any role of the driver – see UNECE WP.1 report of its 75th session, ECE/TRANS/WP.1/159, page 6.
- Currently UNECE WP.1 is working on a Draft resolution on the deployment of highly and fully automated vehicles in road traffic which includes recommendations to Contracting Parties of the 1949/ 1968 Conventions on how to safely deploy this new technology.
- Amendment of traffic road regulations is in place in order to enable HAD and FAD with security driver. The next evolutionary step will represent a further regulatory improvement by 2020 which includes a proposal for the distribution of responsibility between driver and vehicle.

**US:** The new “Automated Vehicles Policy” and the “AV start act” show a wide range of demands on development and safety verification. The present drafts are expected to be unified to one legal framework in the first half of 2018, and afterwards being signed by the president to become law and thereby foundation for the development of new Federal Motor Vehicle Safety Standards (FMVSS) by the National Highway Transport Safety Agency (NHTSA). The drafts do not show any unsolvable demands.

**CN:** China plans to adopt the UN Regulations (technical requirements will be similar to those developed in the Geneva UN working groups), additionally China is preparing extensive new regulations (30 new standards until 2020, 100 new standards until 2025). Up to now, it is unclear, what the outcome of these regulations will mean to the industry.

## Challenges

The five main challenges in the area of policy and regulatory needs as well as in European harmonization have been defined as follows:

- **Challenge 1:** Today, the work of the Industry and the discussions with national and EU stakeholders (governments and their agencies) concentrate on research, testing and type approval. First activities which are focussing on the development of traffic rules have started in some countries. What is the total scope of affected policy and regulation?
- **Challenge 2:** On research and testing: How to bundle and coordinate EU research activities to speed up and not loose in the world-wide competition?
- **Challenge 3:** On type approval regulation: Level 2 is still under strong discussion, Level 3 has not really started yet, for Level 4 and 5 there is no clear view on how to proceed. How can the type-approval approach evolve? How to set up the regulation quick enough to be in place when the technology will be ready? How to develop regulation and technology in parallel in a harmonised way without creating a chicken-and-egg dilemma? How to deal with software updates?
- **Challenge 4:** How and to which extent adapt and harmonize traffic rules for a quick introduction of higher automation levels?
- **Challenge 5:** What liability framework needs to be in place to facilitate market penetration from a legal/liability perspective?