Industry views on a future legal instrument on the use of automated vehicles in traffic

Group of Experts GE.3 of the Global Forum for Road Traffic Safety, 16 May 2022

Introduction Regulatory Framework ADS

A legal system governing **the use/operation of the ADS equipped vehicles** and a legal system governing **certification of these vehicles/systems** are complementary. Such compilation makes a consolidated legal mechanism that ensures legal certainty for all stakeholders (e.g. user, fleet operators, manufacturers, etc.)"

$\Rightarrow$ **Traffic laws (behavioural law) are currently not harmonized**

- differ from state to state
- typically written in a way to address humans: drivers and road users
- subject to amendment to legalize or clarify ADS operation

| Vehicle Certification Law | **+** | Traffic Law | ➡ **Manufacturers responsibility !** |
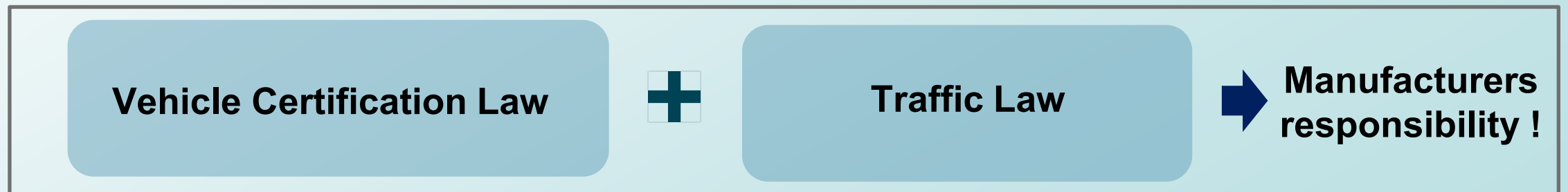
$\Rightarrow$ **Paradigm shift:** Manufacturers must translate human-oriented driving rules in technical algorithms of the ADS

ADS Certification Challenges

Overview of key issues that have guided the work of WP.29 since 2019:

System Safety

Operational Design Domain (ODD)

Object and Event Detection and Reponse (OEDR)

| e.g. vehicles, pedestrians, bicyclists | Emergency vehicle, police or others directing traffic, etc. |

Failsafe Response

| Failure handling | Minimum Risk Maneuver |

Validation

| Simulation | Testtrack | Onroad |

HMI

| Transition Scenario | Mode Awareness | Driver availability/ monitoring |

Cyber Security

| Design Process | Monitoring Reporting Sharing | Incident Mgmt. and response |

Data Recording

| Driving Mode | Data Elements for event reconstruction |

Consumer Education and Training

| Education and training program | Continuous evaluation of effectiveness |

⇒ **Duplication of activities at WP.1 GE.3 should be avoided (information exchange essential!)**

Road Traffic Challenges for ADS

WP.1/GE.3 and a future legal instrument could help facilitating the following challenges that are essential for a safe and smooth operation of ADS:

Harmonization of traffic laws to facilitate cross-boarder traffic

Reduce ambiguity / conflicts of driving rules to support system programming

e.g. data storage duration and deletion periods

Determine int. commonalities of traffic rules, or at least the principles governing these rules

Identify obligations in 1949 and 1968 Convention that are difficult to be transferred to a machine

e.g. securing the scene of an accident, communication with law enforcement agents

Develop guidance for acceptable alternative means of compliance

Administrative and procedural aspects

Strive to ensure that a unique regulatory body determines about ADS safety and operation

Operating domains: Mutual recognition of certified/licensed use of ADS (incl. compliance with traffic rules)

Aim of automobile Industry:
⇒Avoid fragmentation and customizing of ADS driving behaviour rules to the possible extend (specific national/ local items likely will remain)
⇒Support recognition factor for other road users in cross-border traffic