



## 1. Traffic safety is the number one priority for everyone involved!

Autonomous driving will have to fulfil many requirements. Topics such as economic and technical progress, well-being, comfort, ecology, and safety compete to take the top position in the stakeholders' plans. However, highest priority should be given to the safety of the system and therewith the reduction of fatalities and injuries. Next to drivers and passengers non-automated road users such as pedestrians and cyclists should be considered. Therefore, if in doubt due to competing parameters preference should be given to traffic safety, even at the expense of other factors.

## 2. Revolutionary rather than evolutionary development of autonomous driving gives us the necessary testing time for the systems – therefore SAE Level 3 must be skipped!

Any phase of the development where the driver can transfer driving tasks to the system yet must be able to take them over again if the system requires it, must be skipped. Studies have shown that a takeover can take up to 15 seconds. Such tasks should only be conducted in approved testing environments. At the production stage however, they should enter the market only as fully automated systems, where a transfer between driver and machine is no longer necessary.

## 3. The responsibility during automated driving must be dedicated!

During each phase of the development of autonomous driving, each level of automation, even during every single drive there must be a clear dedication of responsibility of the driver, manufacturer, retailer, distributor, importer or any other party to the entire process. It must be ensured that no third parties are subject of a legal vacuum. Prior to any new development, process or automation level a clear definition and dedication of any responsibility must ensue at a regulatory level.

## 4. Technical algorithms must be predictable and must be in line with our values!

All technical processes ultimately underlie human decisions. How machines can act in extreme situations is determined by humans. For all conceivable situations there must be technical algorithms, which operate in line with our values. From simple situations to extremely complex dilemmas there must be justifiable, comprehensible and predictable programming.

**5. It must be determined when human decision-making ends and when safe automation becomes a priority!**

At each step along the way to autonomous driving there must be a clear acknowledgement of the significance of human freedom of choice. The question whether reliably safe automations could be switched off in favour of human driving pleasure and ability, must be answered. The pleasure of driving, determined by the sense of independence, stands in a very serious tense proportion to increases in risk presented by human behaviour as opposed to well-engineered technical solutions. In the course of this the level of automation must also be considered.

**6. Existing data privacy standards must remain unchanged!**

Autonomous driving and particularly connected driving will create a true data flood. For this to be seen as a positive development, current principles for data protection are to be safeguarded during the development of autonomous driving. A silent, factual erosion of data privacy principles would lead to a pushback by those affected, causing a delay and restriction of the development. Those affected must therefore be always given the choice over the provision of relevant data. The positive feeling towards a safe and fair use of their personal data should accompany those affected during the entire process of development.

**7. Data security is the prerequisite for market entry of any systems and components**

Autonomous and connected driving could also be described as digital driving. Thus, digital risks – “Cybercrime” – also infringe on this field. Unrestricted intrusions in automated car trips or the necessary infrastructure must be impeded. Systems and components must therefore provide evidence of their data security ahead of their readiness for start of production to prevent cyber-attacks superseding road accidents. Data security must hence become an obligation of the developer to prevent the build-up of any dangerous security gaps, which have to be subsequently closed.

**8. Anonymous data should be made available to anyone who can ensure the most social benefit**

Autonomous driving will produce a variety of data which can be collected and made use of on a regular basis. This should not be seen and used as a threat, but as a chance for comprehensive improvement. With full respect to data-protection principles completely anonymous data should not become an enormous mountain of data trash, but rather be made available to those, who can use it for social well-being and development (for instance accident researchers). Such stakeholders must act responsible and transparent. These actions are harmless when clear rules for data protection, anonymisation and data use are established.

**9. The revolutionary changes of motorised mobility can only be successfully overcome together with the users!**

Transparency and comprehensibility are going to be the success factors for an accomplished process towards autonomous driving. Without the user’s basic understanding and acceptance of the advantages of autonomous driving there won’t be any sensibility for the challenges of this innovative technology. Slowed down progress and frictional loss can occur. Therefore, awareness building and participation should become permanent companions of the development.

**10. Training and testing systems must be continuously adapted to the new developments!**

Driver training and further education, training of multipliers (driving examiners, driving instructors, etc.), but also new professions (test drivers, control room employees, etc.) need new curriculum, examination catalogues, contents and methods. Rather than oil changes, software updates must be taught, instead of parking – how to calibrate the assistance system. An appropriate and well-designed education can become a catalyst for the high expectations towards autonomous driving. Therefore, publishers, psychologists, educators, etc. are an integral part of the extensive team which is pioneering autonomous driving.