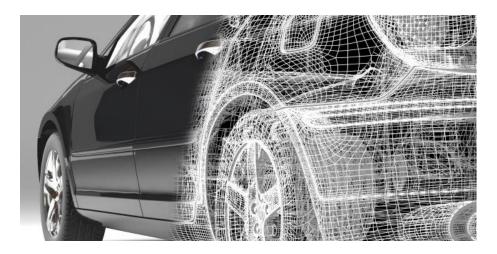# SGS HOMOLOGATION & FUNCTIONAL SAFETY

SGS TÜV Saar offers homologation and functional safety services around the globe, with offices in North America, Europe and Asia. With accreditation based on ISO 17020 and 17025 and designations from various other authorities, SGS is equipped to help you get your product certified or approved no matter where you are. We can help you plan an effective certification plan that will maximize your testing efforts and get you to market quickly and efficiently.

HOMOLOGATION CHALLENGES

- Autonomous driving is not yet legalized in Europe
- Legal requirements for autonomous driving are still in the development phase
- Testing of autonomous driving functions in public traffic is possible under certain boundary conditions

WORLDWIDE EU & ECE HOMOLOGATION SERVICES FOR ALL VEHICLE CATEGORIES

SGS, an industry leader in certification, inspection, testing and verification services, is active in several expert committees and supports manufacturers as they explore the development of autonomous vehicle technology. We use our expertise to help our customers in all aspects of homologation and functional safety.

- Our team will investigate certification requirements and provide an initial assessment
- You'll receive an information folder with everything you need to know regarding your certification process
- We can evaluate your testing program whether you are utilizing our network of testing facilities, your own or another third party
- SGS supports virtual testing
- We can provide consultation and training services relating to a number of topics
  - Test standards for EU, ECE and StVZO as well as interpretations
  - Test standards for Non-EC including FMVSS, China and Brazil
  - Laboratory standards for ISO/IEC 17025
  - Homologation training, both in-house or public training services are available

CONTACT US

To speak to someone about our homologation and functional safety services, send an email to us.transportation@sgs.com.

FUNCTIONAL SAFETY & CYBER SECURITY

SGS is a world leading accredited body for automotive functional safety with a global network of functional safety experts ready to assist you.

- We are a member of a number of standardization committees, including ISO 26262
- SGS is an accredited body for functional safety and IT security according to ISO/IEC 17025 and 17020
- Our team of experts can support you in the selection and use of new technologies and components for autonomous driving concepts
- SGS is a development member of AUTOSAR

SGS

UNDERSTANDING FUNCTIONAL SAFETY

SGS is member of national and international working groups focused on the development and improvement of ISO 26262, the standard for functional safety of automotive electronics that delivers a guide in safe development processes as well as a safe design of technical solutions. With a deep understanding of these regulations and many others, SGS provides combined expertise for IT security and functional safety. Let us support you in the selection and use of new technologies and components for autonomous driving concepts.

FUNCTIONAL SAFETY & CYBER SECURITY CHALLENGES

- Availability becomes a safety concern with failure-tolerant in-vehicle systems and the driving behavior of the vehicle

- Security becomes a safety concern as external open vehicle communication is introduced

- The role of humans in automated driving will remain a safety concern

- Legal basics have to be adapted

- These challenges will create a need for safe and secure technical solutions, validation and assessment of safety and security as well as common criteria for acceptability

THE ROLE OF FUNCTIONAL SAFETY & CYBER SECURITY

- Hazards caused by malfunctioning behavior, or the loss of functional safety, of driving systems have to be avoided or controlled in any case

- Forced malfunctions may have a big impact on autonomous driving systems, due drivers who may attempt to employ countermeasures

- IT security also has to be considered in the context of functional safety

- SAE J3061 is the first automotive-specific standard for IT security, serving as a starting point within the automotive industry

AVAILABLE FUNCTIONAL SAFETY & CYBER SECURITY SERVICES

- Training and personal qualification programs

- Evaluation and certification regarding SAE J3061 relating to automotive cyber security

- Auditing and certification regarding ISO 27001, covering information security management systems

- Evaluation and certification according to the standard series IEC 62443 for industrial communication networks as well as network and system security

- Planning of assessment activities with respect to functional safety requirements

- Functional safety assessments covering vehicle and system concepts for autonomous driving

- Certification of components used in autonomous driving architectures

- Review of safety assessment reports delivered by suppliers of systems and components

- Final functional safety assessment reports covering all safety relevant items

WHEN YOU NEED TO BE SURE

SGS