Many new motor vehicles have driver-assisting technologies that help drivers identify safety risks and make roads safer. Eventually, fully autonomous cars and trucks will become the norm. Self-driving vehicles will integrate onto U.S. roadways through six levels of assistance technology advancements in the coming years. As stated on the National Highway Traffic Safety Administration’s website, “NHTSA is dedicated to advancing the lifesaving potential of vehicle technologies.” NHTSA and the U.S. Department of Transportation have been taking a proactive approach to the development of advanced driver assistance technologies, including developing guidance documents that encourage best practices and prioritize safety.

To this end, NHTSA has developed a policy governing the development of automated driving systems (ADS) in the United States. NHTSA has designated its policy, “Automated Driving Systems 2.0: A Vision for Safety,” as nonregulatory, enabling companies to focus more on innovation than on passing bureaucratic hurdles. This voluntary guidance provides recommendations and suggestions for industry to consider and discuss, and has no compliance requirements or enforcement mechanisms. NHTSA will continue to regulate ADS through its existing regulatory tools, including interpretations, exemptions, notice-and-comment rulemaking and enforcement authority.

NHTSA’s policy has two primary sections: “Voluntary Guidance for ADS” and “Technical Assistance to States.”

In the first section, NHTSA provides support for the automotive industry and other key stakeholders by outlining 12 priority safety design elements as a consideration to implement best practices. NHTSA indicates that these elements represent consensus across the industry, and are generally considered to be the most salient design aspects to address when developing, testing and deploying ADS on public roadways. The 12 safety design elements apply to both ADS original equipment and to replacement equipment or updates to ADS. These elements are as follows:

- system safety
- operational design domain
- object and event detection and response
- fallback (minimal risk condition)
- validation methods
- human machine interface
- vehicle cybersecurity
- crashworthiness
- post-crash ADS behavior
- data recording
- consumer education and training
- federal, state and local laws

NHTSA further encourages entities that engage in testing and deployment to publicly disclose “voluntary safety self-assessments” to demonstrate how they address these safety elements and to foster public trust and confidence in these technologies. Entities are not required to submit a voluntary safety self-assessment, and there is no mechanism to compel entities to do so. Although these assessments are encouraged before testing and deployment, NHTSA does not require that entities delay testing or deployment to allow for these assessments to occur.

In the second section of its policy, NHTSA provides guidance to state legislatures by presenting common safety-related components and significant elements regarding ADS that states should consider incorporating into legislation. NHTSA further encourages states to review others states’ draft ADS policies and legislation for consistency purposes, and to promote innovation and the “swift, widespread, safe integration of ADS.” Additionally, NHTSA has guidelines for states to follow when developing their procedures and conditions for safe operation of ADS on public roadways.

It is critical that industry players and states follow NHTSA’s evolving policies and guidance surrounding ADS, and continue to participate in active, coordinated dialogue amongst themselves. Such collaboration will undoubtedly help ensure the development — and most importantly the safety — of these innovative technologies.

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