

We are stepping into a new era of transportation for roadway vehicles. Technology in road transportation is evolving rapidly – particularly with respect to automated vehicles. It is imperative that as the Nation’s vehicle safety experts, we are on the forefront of knowledge about advanced automated vehicle safety technologies and support the safe integration of such designs and systems into the changing mobility environment.

At the Department of Transportation (DOT), safety is paramount and remains both the Department’s and the National Highway Traffic Safety Administration’s (NHTSA) number one priority. NHTSA’s mission is to save lives, prevent injuries, and reduce economic costs due to road traffic crashes, through education, research, safety standards and enforcement activity. DOT and NHTSA want to help ensure that automated vehicle technologies reach their full potential and deliver on their safety promise. We believe technology and safety go hand in hand. In fact, NHTSA has always pursued technology solutions as a tool to reduce the societal impact of crashes as we look to reach our goal of Zero roadway fatalities.

While we have made great progress in roadway and motor vehicle safety, the current trend of roadway fatalities is a reminder that much work remains. After seeing fatalities decrease for decades, we’ve seen an alarming increase in fatalities over the past few years. At 35,092 fatalities in 2015, the nation experienced a 7% increase in motor vehicle traffic fatalities from the previous year. Similarly, for the first 9 months of 2016, estimates show an 8% increase over the first 9 months of 2015. The trend of increasing fatalities must be reversed as each life is precious.

With data showing 94% of crashes associated with human error, vehicle automation and driver assistance safety technologies can support the driver and prevent or mitigate crashes. This is possible through systems that correct human mistakes or technology that assumes full driving responsibility for the driving task. We’re seeing examples of this even today with technology such as automatic emergency braking. This automated technology can mitigate or completely avoid a rear-end crash if a human driver fails to engage the brakes fully or at all given a pending collision. Automated vehicles could offer even more potential for reducing crashes and saving lives when used in conjunction with other revolutionary technologies such as V2V or V2I, also known as connected vehicle technologies.

But even beyond the potential safety value, automated vehicles offer additional benefits. They can increase mobility for certain populations and geographic areas. Consider the benefits of automated vehicles for our elderly and disabled communities that may otherwise be restricted in travel due to physical constraints or limitations – able to safely, easily, and comfortably travel to doctors and family and recreational activities. They also offer the potential to substantially reduce or eliminate fatalities and injuries resulting from human error.

Likewise, automated vehicles can ease congestion, promote new private and public ride share options, and reduce emissions.

The U.S. has seen remarkable progress towards implementation of automated vehicles and DOT and NHTSA stand ready to support the innovation. Our first step was the release of the Federal Automated Vehicles Policy (the Policy) on September 20, 2016. The Policy serves as an initial framework and recitation of best practices to guide manufacturers and other entities in the safe design, development, testing, and deployment of vehicle automation. Its development was informed by significant public input gathered through public meetings and collaborative efforts with stakeholders. The Policy is intended to encourage greater coordination with stakeholders, continual input from interested parties, steadied learning about technologies, while also offering current best practices and fine-tuning these practices as we, as a community, learn more about automated vehicles.

An additional goal of the policy is to build and promote public acceptance which is critical if automated systems and vehicles are to succeed. Trust is required between the public and entities looking to test and deploy automated vehicles. Additionally, a thorough understanding of the technology is required for States to implement programs or accommodate automated vehicles on their roadways.

The Policy divides the task of facilitating the safe introduction and deployment of automated vehicles into four sections:

- Vehicle Performance Guidance
- Model State Policy
- NHTSA's Current Regulatory Tools
- Modern Regulatory Tools

The Vehicle Performance Guidance for Automated Vehicles section outlines best practices for testing and deployment of automated vehicles. At the heart of the Vehicle Performance Guidance is a 15-point safety assessment letter to aid NHTSA and the public in keeping abreast of automated vehicle activity and also to assist in informing the public about how entities are going to safely test and deploy these vehicles. It is the beginning of the discussion between manufacturers and other entities with NHTSA – a chance to ask questions about safety, cybersecurity, and operating design domain, to name but a few of the areas to be covered in the Safety Assessment Letter.

These Safety Assessment Letters, while voluntary, are the mechanism NHTSA is utilizing to build public trust and confidence in Agency safety oversight efforts of the technology, while exercising “regulatory humility” in the spirit of pro-innovation. To date, NHTSA has received

clearance from the White House's Office of Management and Budget to collect data from entities through the Safety Assessment Letter and has released templates to offer guidance to entities on the format and type of information we are looking to receive.

The second section, Model State Policy, discusses the roles of the federal versus State Governments. This section sets forth the goal of establishing a consistent national framework rather than a patchwork of incompatible laws. It clearly delineates the division of regulatory responsibility for motor vehicle operations, with States maintaining their traditional responsibilities for licensing and registration, traffic laws and enforcement, and motor vehicle insurance and liability, while NHTSA responsibilities remain setting Federal Motor Vehicle Safety Standards and ensuring their enforcement and compliance.

The Model State Policy was a collaborative effort with many stakeholders including the American Association of Motor Vehicle Administrators (AAMVA). NHTSA continues to be engaged with AAMVA in discussions and activities. The Agency appreciates the involvement of the States in this manner to increase the purpose and scope of federal and State activity, while also coordinating to ensure sufficient consistency of laws and policies to not impede innovation and support the expeditious and widespread distribution of safety enhancing automated vehicle technologies.

The third section outlines how manufacturers and other entities could better use NHTSA's current regulatory tools to support the deployment of new technologies. It also outlines for the public NHTSA's enforcement authority. Under current regulations for motor vehicles, some entities may request interpretations or exemptions from compliance under certain circumstances. These requests are beneficial to both the entities in search of clarification or increased testing opportunities, as well as NHTSA in identifying regulatory language that may serve as an obstacle for advanced and innovated technology solutions.

Likewise, this section details NHTSA's current processes for evaluating and responding to interpretations, exemptions, and rulemaking requests and suggested means to streamline and increase the speed at which NHTSA responds to requests regarding automated vehicles. An additional tool we can currently utilize is the defects and enforcement authority, which was emphasized concurrently with the release of the Policy in NHTSA Enforcement Guidance Bulletin 2016-02: Safety-Related Defects and Automated Safety Technologies. Together, these tools provide increased assurance to the public and help to hold the entities accountable for the safety of the automated vehicles and equipment they are testing or deploying.

The last section of the Policy is a catalyst to begin conversation – offering up new tools and authorities to account for the changing environment and development of automated vehicles. For example, the manner in which automated vehicle functions can be updated is different –

capable of updating over the air rather than at a brick and mortar business, thus taking the need for human interaction out of the loop. These updates alter the vehicle after manufacture and initial certification, but could involve highly automated functions that have subsequent impacts. NHTSA looks forward to engaging with stakeholders, academia, advocacy groups, and judicial experts to further discuss these options.

So why is NHTSA part of today's discussion? Various States have been looking to the Agency to further define their roles, searching for more clarity with respect to specific legislative activity. With that in mind, we would like to reiterate the activities that States can and should begin working on now: reviewing legislation to determine what regulatory barriers might preclude testing and deployment in that State; setting up committees and lead agencies to be involved in the considerations for testing requirements not related to the design of the vehicle, and; developing processes for applications for testing and determining jurisdictional permission.

We emphasize the need for the regulatory environment to remain flexible and nimble as automated technologies evolve –and for States to understand the need to remove regulatory barriers that may exist while not, albeit unintentionally, creating new barriers by too quickly enacting legislation regarding testing and deployment.

We strongly encourage States to allow NHTSA alone to regulate the performance of automated technology and vehicles. If a State does pursue automated vehicle performance-related regulations, that State should consult with NHTSA and base its efforts on the Vehicle Performance Guidance provided in the Policy. NHTSA is prepared to assist with challenges that States face with regard to automated vehicles both now and in the future. States are also encouraged to work with their municipalities to help them address their unique challenges and concerns. Both are encouraged to review their traffic safety regulations for any impediments to technology innovation.

The DOT Federal Automated Vehicles Policy is guidance to foster the evolution of innovation. It was released to help prepare the Nation for the transportation systems of the future by considering new technologies and the modernization and rebuild of our infrastructure. It does not regulate out of the gate – thus slowing innovation, stifling creativity, and hence limiting its life-saving potential and the mobility options it presents.

However, NHTSA remains a data-driven agency. The effort to develop and release a thorough and inclusive Policy for automated vehicles was a first step, but not the final word. The next iteration of the Policy will build upon new knowledge of automated safety systems and the safety of such systems on our roadways.

We look forward to continued engagement with all stakeholders, including our State partners to enhance our guidance in the future. We also welcome the opportunity to use any

information we gather from the implementation of the Policy to inform and educate the public about automated vehicles. The Agency is currently evaluating public comments from the docket, along with feedback received from the various public meetings already held and will be discussing with Secretary Chao to incorporate her guidance into NHTSA's next steps.