

**Before the  
DEPARTMENT OF TRANSPORTATION  
National Highway Traffic Safety Administration**

In the Matter of )  
 )  
Automated Driving Systems: A Vision for Safety ) Docket No. NHTSA-2017-0082  
 )

**COMMENTS OF THE U.S. CHAMBER OF  
COMMERCE TECHNOLOGY ENGAGEMENT  
CENTER**

Automated Driving Systems (“ADSs”) have tremendous potential to make our roads safer, enhance worker productivity, increase transportation efficiency, reduce air pollution, provide true mobility for all, improve our economy, create new jobs, and deliver numerous other societal benefits. With such deep automobile manufacturing experience and world-leading technology companies, the United States has the potential to define and lead this new life-saving innovation and economic opportunity. The National Highway Traffic Safety Administration’s (“NHTSA”) recently issued Notice and Request for Comments on Automated Driving Systems: A Vision for Safety (the “Voluntary Guidance”) advances the dialogue on the appropriate national framework to facilitate the investment and innovation necessary for U.S. companies to claim a leadership role in this new era of transportation. The U.S. Chamber of Commerce’s Technology Engagement Center (“C\_TEC”) welcomes the opportunity to provide input to NHTSA on this important topic. The Chamber established C\_TEC to be the face of technology in the economy and to advocate for rational policy solutions that drive economic growth, spur innovation, and create jobs through the backing of a leading national and global business organization.

Last year, nearly 40,000 traffic accident fatalities occurred in the U.S.<sup>1</sup> NHTSA estimates that automated vehicles could prevent or mitigate 19 out of every 20 traffic accidents.<sup>2</sup> Thus, having federal guidance in place that encourages the safe development, testing, and deployment of automated vehicles is vitally important because it will (1) enable innovative ADS technology to be deployed that can drastically reduce traffic accident fatalities, (2) reassure the public that measures are being taken to ensure that only the safest and most secure technology gets deployed, thus increasing public confidence in, and acceptance of this life-saving technology, and (3) increase the chances that the U.S. will remain a global leader in the automated vehicle space.

C\_TEC appreciates that NHTSA thoughtfully considered feedback it received regarding the 2016 Federal Automated Vehicles Policy (“FAVP”) to produce this Voluntary Guidance which supports innovation and market competition, encourages new entrants in the space, fosters new ideas that deliver safer vehicles, and promotes a federal framework and consistent laws across states. With ADS guidance like this in place now, the Department of Transportation’s (“DOT”) public pledge to continuously update and change the guidance as ADS technology evolves, C\_TEC believes the future is bright for the automated vehicle industry in the U.S.

## **I. The Voluntary Guidance Makes Safety the Number One Priority for the ADS Industry**

In a time of transformational technological change in the automotive sector, it is more important than ever to be mindful of safety. To that end, C\_TEC was pleased to see that the

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<sup>1</sup> “USDOT Releases 2016 Fatal Traffic Crash Data”, October 6, 2017 National Highway Traffic Safety Administration Press Release, *available at* <https://www.nhtsa.gov/press-releases/usdot-releases-2016-fatal-traffic-crash-data> (last visited November 9, 2017).

<sup>2</sup> July 20, 2016 remarks of Mark R. Rosekind, Ph.D., Administrator, National Highway Traffic Safety Administration, *available at* <https://www.nhtsa.gov/speeches-presentations/remarks-automated-vehicles-symposium-2016> (last visited November 9, 2017).

overarching goal of the Voluntary Guidance is to enable the safe development, testing, and deployment of ADS technology, either through industry standards or best practices, individual company policies, or other novel methods that companies have employed to increase safety in automated vehicles. C\_TEC appreciates that NHTSA is encouraging novel approaches to safety that will deliver safer vehicles. It is important that new models are embraced, and that NHTSA develops a comprehensive understanding of these safety models so as to be able to appropriately carry out their duties of ensuring safe vehicles on our roadways.

**II. By Not Requiring Pre-Market Approval, the Voluntary Guidance will Enable Life-Saving ADS Technology to be more Rapidly Deployed**

In discussing potential new regulatory tools that NHTSA could utilize in the FAVP, NHTSA indicated that it was considering a pre-market approval system. This was despite the fact that the Vehicle Safety Act currently relies on self-certification by manufacturers of the compliance of their vehicles and equipment with the Federal Motor Vehicle Safety Standards, and has for years. In our comment on the FAVP, C\_TEC pointed out that a pre-market approval system could (1) delay life-saving ADS technology from being deployed, and (2) negatively impact the United States automated vehicle industry's competitiveness vis a vis the rest of the world. Because C\_TEC believed that the proposal to move forward with a pre-market approval system reflected a misguided policy and a radical departure from current practice, we are pleased that the proposal did not progress past the preliminary stage of discussion, and is not included in the Voluntary Guidance.

**III. NHTSA's Nonregulatory and Flexible Approach to Automated Vehicle Technology Safety will Enable Innovation in the Automated Vehicle Space**

Automated driving technology is life-saving technology, and thus it is important that rules and guidance enable the technology to develop and grow. For the U.S. to be competitive in the global automated vehicle market, NHTSA must strike the critical balance between innovation

and safety when developing automated vehicle guidelines. By taking a nonregulatory and flexible approach to automated vehicle technology safety, NHTSA is creating an environment that encourages the safe development, testing, and deployment of automated vehicles by traditional vehicle manufacturers, equipment suppliers, and new entrants – one where unnecessarily prescriptive rules will not impede the development of a technology that has the potential to save tens of thousands of lives each year in the U.S.

#### **IV. It is Critical that NHTSA’s Automated Vehicle Guidance Evolves with the Development of ADS Technology**

Because of the rapid pace at which ADS technology is evolving, it is imperative that the NHTSA guidance similarly evolves to keep pace. Thus, C\_TEC was pleased to see that NHTSA was quick to release its Voluntary Guidance, just one year after it had released the FAVP. C\_TEC was also pleased to hear that as ADS technology continues to evolve, so will NHTSA’s guidance, as Secretary Chao publicly stated that NHTSA is already working on a third version of its automated vehicle guidance to be released in 2018.

#### **V. It is Sound Policy for the Voluntary Guidance to Focus on SAE Levels 3 - 5**

The Voluntary Guidance focuses on vehicles that incorporate Society of Automotive Engineers (“SAE”) Automation Levels 3 through 5 ADS. C\_TEC believes that this is the proper scope for the Voluntary Guidance for a couple of reasons. First, C\_TEC believed that some of the safety elements outlined in the FAVP were not applicable to Level 2 advanced driver assistance systems (“ADAS”). Second, ADAS are currently in the marketplace and have already proven to be effective in helping consumers avoid accidents, and are currently regulated by NHTSA through its existing investigation and defect authority. We encourage NHTSA and other agencies within DOT to further promote and incentivize the adoption of these ADAS technologies, and agree that they are not within the scope of this guidance.

**VI. It is Vitaly Important that all Entities Developing ADSs be Permitted to Test and Deploy Automated Vehicles on Public Roadways in the United States**

C\_TEC is in favor of the safest and most secure ADSs being utilized by the public. We commend NHTSA for creating Voluntary Guidance that supports *all* entities developing this technology, and all ideas that will ultimately lead to safer vehicles on public roads. As noted in the Voluntary Guidance, ADSs are currently being developed by both companies in the traditional automotive sector, as well as technology companies, equipment suppliers, and new entrants in the space. C\_TEC believes that innovation, competition, and collaboration among diverse entities in the space will lead to (1) the highest quality and thus safest automated vehicles for the end user public, and (2) lower prices for utilizing this life-saving technology, allowing greater access for a broad range of consumers.

**VII. NHTSA’s Flexible Approach to Voluntary Safety Self-Assessments will Increase Public Confidence in Automated Vehicles**

Public confidence is essential to the successful adoption and rapid rollout of ADS technology. Recent surveys suggest, however, that much of the driving public is skeptical of this life-saving technology. In a recent study conducted by MIT, nearly half of respondents stated that they would never purchase a car that completely drives itself.<sup>3</sup> Respondents stated that they do not (1) trust the technology, (2) feel that the technology is robust enough to be relied upon exclusively, and (3) feel that autonomous vehicles are safe.<sup>4</sup> An American Automobile Association study found that three out of four U.S. drivers felt “afraid” to ride in self-driving cars, and only one in five said they would actually trust a driverless vehicle to drive itself with them inside it.<sup>5</sup> It will be more difficult to reduce traffic fatalities if the public

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<sup>3</sup> “Consumer Interest in Automation: Preliminary Observations Exploring a Year’s Change”, MIT AgeLab (February 2017), available at <http://agelab.mit.edu/sites/default/files/MIT%20-%20NEMPA%20White%20Paper%20FINAL.pdf> (last visited November 9, 2017).

<sup>4</sup> *Id.*

<sup>5</sup> “Three-Quarters of Americans ‘Afraid’ to Ride in a Self-Driving Vehicle”, AAA NewsRoom (March 1, 2016),

lacks confidence in ADS technology and decides not to utilize automated vehicles. These survey results suggest that attention to public safety concerns and confidence in the technology must be addressed.

C\_TEC believes that the Voluntary Safety Self-Assessment (VSSA) can build public trust, acceptance, and confidence in ADS technology by providing transparency and insight to NHTSA and the public about the steps companies are taking to ensure that ADS technology is deployed in the safest and most secure way possible.

C\_TEC also appreciates the flexible VSSA procedure laid out in the Voluntary Guidance and the latitude NHTSA has provided companies regarding how VSSAs are to be crafted. Companies will be able to effectively demonstrate how they address – via industry best practices, their own best practices, or other appropriate methods – the safety elements contained in the Voluntary Guidance at a level of detail they deem most appropriate, and in a format they believe will be most comprehensible to a broad audience. C\_TEC agrees with NHTSA’s policy that the VSSAs be concise, and importantly, that they not contain any confidential business information.

Finally, C-TEC appreciates that NHTSA’s approval of a VSSA is not required before the testing or deployment of automated vehicles, as that would create a de facto pre-market approval process that could ultimately delay the testing and deployment of this life-saving technology.

#### **VIII. The Voluntary Guidance Clearly Distinguishes the Respective Roles of NHTSA and the States in Regulating Automated Vehicles**

C\_TEC appreciates that the Voluntary Guidance clarifies and delineates the federal and state roles in the regulation of automated vehicles. The Voluntary Guidance makes clear that

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available at <http://newsroom.aaa.com/2016/03/three-quarters-of-americans-afraid-to-ride-in-a-self-driving-vehicle/> (last visited November 9, 2017).

NHTSA remains responsible for regulating the safety, design, and performance aspects of motor vehicles and motor vehicle equipment, and states continue to be responsible for regulating the human driver (including insurance) and vehicle operations. C\_TEC strongly endorses this approach, as it agrees that NHTSA alone should regulate the safety design and performance aspects of ADSs. This approach will also allow manufacturers to avoid conflicting federal and state laws and regulations that could confuse industry and delay the deployment of this life-saving technology – thus harming America’s ability to lead in this competitive sector.

**IX. Consistency in State Law is Necessary for the Deployment of Life-Saving ADS Technology**

C\_TEC was pleased to see that the Voluntary Guidance contained a section covering technical assistance to states, with the stated goal of assisting states in developing automated vehicle laws, if they so choose, and creating consistency in automated vehicle regulation across the country. C\_TEC is strongly in favor of uniformity across all 50 states, especially as it pertains to reporting and communications methods for public safety officials, ADS safety driver and ADS vehicle operation licensing and registration, and applications for entities to test on public roads. C\_TEC believes that divergent state laws in the aforementioned areas are likely to delay the deployment of this life-saving technology for U.S. consumers.

**X. It is Sound Policy for the Voluntary Guidance to Apply to the Design Aspects of All Motor Vehicles and Motor Vehicle Equipment Under NHTSA’s Jurisdiction**

C\_TEC believes that automated vehicle technology is lifesaving technology, regardless of if it is deployed on a passenger vehicle or a commercial vehicle. Thus, C\_TEC believes it is imperative that all types of automated vehicles be deployed on public roads, and uniform rules and guidance must be in place for the development, testing, and deployment of all automated vehicles.

In 2015, traffic accidents involving commercial trucks killed over 4,000 people and injured an

estimated 116,000 people.<sup>6</sup> Despite this fact, the automated vehicle bills in both the House and Senate currently exclude vehicles above 10,000 lbs. C\_TEC believes that limiting the deployment of, or having different rules or guidelines for, vehicles that all share the same public roads is unsound policy, and thus was pleased that NHTSA's Voluntary Guidelines pertain to the design aspects of all motor vehicles and motor vehicle equipment under NHTSA's jurisdiction, including commercial vehicles.

## **XI. Comments on Select ADS Safety Elements in the Voluntary Guidance**

### *A. System Safety*

The section on System Safety states: "The design and validation process should also consider including a hazard analysis and safety risk assessment...for the overall vehicle design into which it is being integrated..." Because only a certain subset of entities developing ADS technology have access or input into "overall vehicle design," C\_TEC recommends that the Voluntary Guidance be refined such that the system safety design and validation process would anticipate a hazard analysis and safety risk assessment on just the ADS for those entities – including non-Tier 1 equipment suppliers, technology companies, and new entrants – that do not have access to the overall vehicle design. More broadly, C\_TEC encourages NHTSA to clarify this for any of the 12 safety design elements where an entity testing ADSs and/or automated vehicles does not have access to overall vehicle design.

The section on System Safety also states: "All design decisions should be tested, validated, and verified as individual subsystems and as part of the entire vehicle architecture. Entities are encouraged to document the entire process..." C\_TEC would appreciate if NHTSA would clarify that documenting "the entire process" means an internal documentation of technical details, as a good portion of those details may contain confidential business information. It is C\_TEC's hope that, for the purposes of the public-facing VSSA, concise documentation – not including any confidential business information – will suffice. Indeed, this would be consistent with NHTSA's statement that "Entities should ensure that Voluntary Safety Self-Assessments do not contain confidential business information (CBI), as it would be information available

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<sup>6</sup> "Traffic Safety Facts", NHTSA (February 2017), *available at* [file:///C:/Users/eskatz/Downloads/2015%20Large%20Trucks%20Traffic%20Safety%20Fact%20Sheet%20\(1\).pdf](file:///C:/Users/eskatz/Downloads/2015%20Large%20Trucks%20Traffic%20Safety%20Fact%20Sheet%20(1).pdf) (last visited November 9, 2017).



to the public.”<sup>7</sup>

### *B. Validation Methods*

C\_TEC appreciates that the Voluntary Guidance encourages entities to develop validation methods which mitigate the safety risks associated with their specific ADS approach, as approaches will differ. In moving forward, to the extent that NHTSA would like to see uniform validation methods, C\_TEC believes it is vital for the industry to take the lead in developing those methods, given the industry’s experience in developing ADS technology.

### *C. Vehicle Cybersecurity*

The section on Vehicle Cybersecurity states: “NHTSA encourages entities to document how they incorporated vehicle cybersecurity considerations into ADSs, including all actions, changes, design choices, analyses, and associated testing, and ensure that data is traceable within a robust document version control environment.” C\_TEC recognizes the fluid and dynamic nature of potential cyber threats and would appreciate if NHTSA would clarify that it is not expecting entities to provide any details regarding cybersecurity processes that may contain confidential business information in the public-facing VSSA. C\_TEC further recommends that any vehicle cybersecurity guidance be consistent with SAE J3061 (also referenced by the ISO 26262 standard), which encourages entities to focus product development execution in four critical security areas: Common Engineering Process that unifies functional safety and security; Secure Engineering Framework; Continuous Security Improvement model; and Supply Chain Security process.

### *D. Consumer Education And Training*

C\_TEC agrees with NHTSA that consumer education and training are imperative to enable the safe deployment of automated vehicles, and is pleased to see that NHTSA is encouraging entities to develop their own individualized programs. C\_TEC believes such individualized programs are the best, and really only viable approach, given that companies in the space will be deploying unique offerings. To the extent

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<sup>7</sup> “Automated Driving Systems: A Vision for Safety” at page 16, U.S. Department of Transportation and National Highway Traffic Safety Administration (Sept. 2017), *available at* [https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13069a-ads2.0\\_090617\\_v9a\\_tag.pdf](https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13069a-ads2.0_090617_v9a_tag.pdf) (last visited on November 9, 2017).

that NHTSA encourages uniform models to achieve these goals in moving forward, C\_TEC would recommend that industry – the companies with the experience creating this technology – take the lead in developing those models.

*E. Federal, State, And Local Laws*

The Section on Federal, State, and Local Laws states: “Entities are also encouraged to document how they intend to account for all applicable Federal, State, and local laws in the design of their vehicles and ADSs.”<sup>8</sup> As discussed above, because only a certain subset of entities have access to the overall designs of their vehicles, C\_TEC recommends that the Voluntary Guidance only ask that entities document how they intend to account for the above with regard to ADSs for those entities including non-Tier 1 equipment suppliers, technology companies, and new entrants.

**XII. Conclusion**

Automated vehicles have the power to change our economy and society in positive ways that we cannot conceive of now, potentially creating benefits both for consumers and American industry. This technology will only be able to flourish to its fullest extent if industry is allowed to safely develop, test, and deploy without being slowed by burdensome regulation. We commend NHTSA for utilizing a flexible and rational guidance approach that aligns with the realities of the innovation, development, and testing process, so that America may lead the world in this highly competitive, life-saving automotive evolution.

Respectfully submitted,

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<sup>8</sup> *Id.* At 15.