



Good morning. My name is Jason Levine and I am the Executive Director of the Center for Auto Safety. We appreciate the Department of Transportation hosting this meeting, and thank the National Highway Traffic Safety Administration for conducting this listening session today. The Center for Auto Safety is the nation's leading independent, non-profit organization advocating for auto safety, quality, and fuel economy and has been located in Washington, DC since our founding in 1970. On behalf of the Center's staff and our thousands of members and supporters across the country we are pleased to be able to provide input on NHTSA's recently released voluntary guidance for self-driving cars and light trucks: "Automated Driving Systems 2.0: A Vision for Safety."

We understand that Secretary Chao has said an updated version of this policy is already being written for release in 2018. The Center for Auto Safety recommends that if the agency is interested in seeing its guidance be implemented, NHTSA exercise its authority under the Federal Motor Vehicle Safety Act and mandate its vision for safety and Automated Driving Systems.

Accordingly, the Center has three main areas we would like to recommend regarding how the safety concepts expressed in ADS 2.0 could be implemented as well as some changes that should be incorporated into ADS 3.0.

There may never be a more critical moment in the development of self-driving car technology in terms of consumer acceptance. Proponents refer to its potential in almost mythical terms as if introduction of these vehicles will magically make 37,000 yearly deaths disappear overnight. The public however, is incredibly skeptical – as many as 78% of Americans surveyed are afraid to ride in a driverless car<sup>1</sup> – fears seemingly confirmed by last year's death in Florida involving a semi-autonomous Tesla. One more incident could set back the cause of these vehicles a decade or more in terms of public acceptance.

### **1. Mandate Safety Assessment Letters**

It would be in the best interest of all stakeholders to make sure that NHTSA, researchers, and the public have access to all the necessary data to assure the vehicles are performing as promised – and when there are problems – providing enough information for everyone to understand what happened. This includes making the type of information that is listed in the "Voluntary Safety Self-Assessment Template" on

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<sup>1</sup> <https://www.usatoday.com/story/money/cars/2017/03/08/poll-reveals-fear-travel-self-driving-cars/98881656/>

crashworthiness mandatory – and making the same true of the other 11 priority safety design elements. Currently, ADS 2.0 states that Safety Assessment letters are neither required nor is there any mechanism to compel entities to submit them – this must change.

## **2. Require Available AV Safety Features On Cars Today**

Next, everyone needs to slow down on when Level 5 cars will be here and make effective safety features, such as automatic emergency braking, mandatory immediately. While it is fun for CEOs and market analysts to see announcements about new testing plans for robot cars in New York City and San Francisco - the technology is not ready to operate on its own yet. Accordingly, what the National Highway Traffic Safety Administration should be focused on are areas where existing safety technology can save lives, not in 2048, but in 2018. In fact, NHTSA's website currently says: "Automated vehicle features already help keep drivers safe"<sup>2</sup> – but this is only true when vehicles are equipped with available safety technology.

Additionally, the vehicle-to-vehicle communication rule needs to be brought out of moth balls and made final. Direct Short-Range Communications, if placed on enough vehicles, will save lives by allowing vital safety information to be communicated from one vehicle to another. However, the potential benefits of this rule are now delayed due to profit concerns involving available spectrum and infotainment systems. It is unconscionable to have a safety rule stall because some entities are interested in making money on the spectrum instead of allowing this bandwidth to be devoted to safety as Congress mandated in 1999.

The further advantage of mandating these sorts of safety technologies today is that it will allow for an iterative process which will provide not only safety but data on how this technology works over large sample sizes when interacting with vehicles that do not have it yet.

## **3. Prohibit Validation Testing of Level 4 and 5 AVs on Public Roads Until More and Better Simulated and Controlled Environment Testing Has Been Accomplished**

Finally, there is a substantial concern about the safety of Level 3 Vehicles and conditional automation, which hinges on the ability of drivers to take control of vehicles when necessary. Some researchers, including those at Waymo, have concluded that Level 3 technology is simply too dangerous, even 'scary'<sup>3</sup> due to driver inability to resume control of the vehicles when required. NHTSA's guidance remains essentially silent on this problem, while many researchers are suggesting that Level 3 should be skipped entirely

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<sup>2</sup> <https://www.nhtsa.gov/technology-innovation/automated-vehicles-safety>

<sup>3</sup> <https://cleantechnica.com/2017/11/01/googlewaymo-stopped-testing-level-3-self-driving-tech-testers-literally-fell-asleep-using-switched-full-autonomy/>

due to these concerns, and that Level 4 and 5 vehicles, after extensive simulation testing, offer the most effective long-term approach to ensure the safe adoption of autonomous vehicle technology.

Even using existing technology, research by the University of Michigan<sup>4</sup> and RAND<sup>5</sup> suggest vehicles should be going through potentially trillions of miles of simulated testing. If the ADS 2.0 is to meaningfully protect human beings while simultaneously encouraging the development of robot-cars, section 5, “Validation Methods” must be amended to explicitly prohibit the testing of Level 4 and 5 vehicles on public roads, in non-controlled environments, unless and until these vehicles have undergone far more simulation testing – both in terms of miles and sophistication.

In closing, ADS 2.0 has the right title, A Vision for Safety – and the Center for Auto Safety stands ready to help in making that vision a reality. Thank you for your time.

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<sup>4</sup> [https://mcity.umich.edu/wp-content/uploads/2017/05/Mcity-White-Paper\\_Accelerated-AV-Testing.pdf](https://mcity.umich.edu/wp-content/uploads/2017/05/Mcity-White-Paper_Accelerated-AV-Testing.pdf)

<sup>5</sup> [https://www.rand.org/pubs/research\\_reports/RR1478..html](https://www.rand.org/pubs/research_reports/RR1478..html);  
<https://www.rand.org/content/dam/rand/pubs/infographics/IG100/IG128/test-driving-autonomous-vehicles-1000.png>