National Safety Council

March 31, 2021

Docket Management Facility, M-30
U.S. Department of Transportation
West Building, Ground Floor, Room W12-140
1200 New Jersey Avenue SE
Washington, DC 20590

RE: Docket No. NHTSA-2020-0106

Dear Docket Officer:

Thank you for allowing the National Safety Council (NSC) to comment on the National Highway Traffic Safety Administration (NHTSA) request for comments on the development of a framework for Automated Driving System (ADS) safety.

NSC is America's leading nonprofit safety advocate and has been for over 100 years. As a mission-based organization, we work to eliminate the leading causes of preventable death and injury, focusing our efforts on the workplace, roadway and impairment. We create a culture of safety to keep people safer at work and beyond so they can live their fullest lives. Our more than 15,500 member companies represent 7 million employees at nearly 50,000 U.S. worksites.

Preliminary estimates from NSC showed that 42,060 people died in motor vehicle crashes in 2020,[1] and all of these deaths were preventable. NSC believes advanced vehicle technology, up to and including fully automated vehicles, can provide many benefits to society. Most importantly, advanced vehicle technology has the potential to significantly reduce the number of fatal crashes on our roadways. However, the manner in which this technology is deployed and regulated is critical to ensuring a consistent level of safety across the U.S.

The NHTSA request for comments outlines three manners in which the eventual framework can be administered – guidance, consumer information, and regulation.

1. NSC believes all three of these frameworks are critical.
2. NSC urges NHTSA to focus on advanced driver assistance systems (ADAS), which are available now and offer safety benefits to all roadway users, and not to let ADS efforts come at the expense of ADAS.
3. Vehicle technology takes decades to realize meaningful representation among the vehicle fleet.
4. Transparency should be key to support adoption and understanding of ADS and ADAS technology.

[1] https://www.nsc.org/newsroom/motor-vehicle-deaths-2020-estimated-to-be-highest

5. Performance data of ADS and ADAS technology is critical to ensure understanding of how they operate and effectiveness to provide data for implementation.

As NSC stated in our response to AV 4.0, federal leadership on motor vehicle safety is required to achieve safety benefits and ensure a consistent level of safety across the U.S. Consumers need to be confident in their vehicle safety regardless of where they reside. Manufacturers need certainty in order to invest in design and production. The focus of NHTSA should be to ensure the highest level of safety possible. To reach that goal, federal oversight is necessary, especially with the emerging ADS technologies.

As NTHSA considers how to implement the framework, NSC encourages a focus on easing consumer understanding of the benefits and limitations of ADS. With ADAS available in today's market, 93% of new vehicles offer at least one technology, and the terminology used by manufacturers often seems to prioritize marketing over clarity.[2] In 2019, in order to help clear up some of this confusion, NSC, AAA, Consumer Reports, and J.D. Power released "Clearing the Confusion: Recommended Common Naming for Advanced Driver Assistance Technologies."[3] The four organizations agreed on standardized naming that is simple, specific and based on system functionality in an effort to reduce consumer confusion. Safety features may change over time as software and hardware updates in turn modify the operational parameters for vehicle systems. The language does not necessarily have to change.

The U.S. Department of Transportation (DOT) endorsed the "Clearing the Confusion" recommendations, and we urge this administration to continue the commitment to use them and call on other safety organizations, automakers, journalists, researchers, and policymakers to join us in adopting these terms.[4] Given the support from DOT, NSC urges NHTSA to use these terms in ADAS and ADS documents moving forward to ease understanding.

Consumer education is aided and supported by federal standards, and NSC believes NHTSA should set these performance-based standards for ADS and ADAS. Without federal leadership, states have already considered legislation to implement their own standards. A state-by-state approach on vehicle safety could lead to a fragmented patchwork of regulations.

States do not possess the expertise or resources to replicate design, testing and reporting programs. Further, a patchwork of requirements will result in confusion for consumers and an increase in cost for manufacturers and operators. Finally, the absence of safe, workable standards will drive development, testing and deployment overseas, resulting in the flight of innovation and the jobs that accompany it to locations outside the U.S.

[2] https://www.aaa.com/AAA/common/AAR/files/ADAS-Technology-Names-Research-Report.pdf
[3] https://www.nsc.org/Portals/0/Documents/NewsDocuments/2019/ADAS%20Common%20Naming%20One-pager.pdf?ver=2019-11-20-094231-643
[4] https://www.transportation.gov/briefing-room/us-transportation-secretary-elaine-l-chao-announces-new-initiatives-improve-safety

Additionally, federal Motor Vehicle Safety Standards (FMVSS) save lives. A report by NHTSA estimates the FMVSS implemented from 1960-2012 have saved 613,501 lives.[5] Because of the FMVSS evaluated in the study, the risk of fatality in crashes in 2012 fell by 56% from 1960.[6] However, data show us meaningful fleet penetration of FMVSS takes years after being required to be standard features on vehicles, with people keeping their cars for an average of 11.6 years.[7] According to the Highway Loss Data Institute (HLDI), electronic stability control (ESC), a required technology since 2011, will not reach an implementation level of 95% of registered vehicles until 2032, at the earliest.[8]

Understanding that federal standards take years to develop, voluntary agreements may be able to drive safety technology deployment faster. The voluntary agreement that was reached with most vehicle manufacturers to include automatic emergency braking technology in all new passenger vehicles by 2022 should drive the incorporation of this technology into vehicles quicker than without it. NHTSA should consider voluntary agreements for safety technology in tandem with FMVSS to encourage their adoption and deployment throughout the fleet, especially with ADAS safety technology that is available today.

As NHTSA has stated, ADAS technology, if available fleet-wide and fully adopted, could save 11,800 lives each year.[9] Additional technologies to allow for vehicle-to-vehicle communication and prevent alcohol-impaired driving that are available today would bring crash occurrences lower still. While ADS is exciting to consider, NSC urges NHTSA to focus more on technologies available today to be widely deployed for more meaningful impact to reduce fatal crashes. Every effort should be made to encourage the inclusion and adoption of these technologies in base models of vehicles and not as options requiring additional cost. Additionally, NHTSA should maintain and redouble its commitment to supporting tried and true safety technologies, like increasing seatbelt use in all seating positions. The U.S. could reduce fatalities involving unbelted passengers if rear seat belt reminders were installed in all cars sold in the U.S. NHTSA has a pending rulemaking regarding this technology.

As NHTSA looks to understand what aspects of ADS and ADAS performance are suitable for potential safety performance standard setting, data transparency regarding the implementation of this technology is crucial. NSC believes NHTSA should require AV developers to clearly report on the following safety metrics: crashworthiness, human-machine interface data, post-crash behavior, capabilities and limitations of the vehicle, operational design domain (ODD) and consumer education efforts. The 2016, DOT AV Policy Guidance referred to this information as a "Safety Assessment Letter," and NSC hopes this type of reporting will be renewed.[10] More safety metrics should be added to this list as needed.

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[5] Kahane, C.J., Lives Saved by vehicle Safety Technologies and Associated Federal Motor Vehicle Safety Standards, 1960 to 2012, NHTSA, DOT HS 812 069, January 2015.
[6] Ibid.
[7] Walsworth, Jack, "Average age of vehicles on road hist 11.6 years," Automotive News, November 22, 2016.
[8] https://www.iihs.org/news/detail/life-saving-benefits-of-esc-continue-to-accrue
[9] https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/final_safe_fria_web_version_200330.pdf
[10] https://www.transportation.gov/AV/federal-automated-vehicles-policy-september-2016

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Data is constantly produced by AVs. Two important data collection devices include electronic logging devices (ELDs) and electronic data recorders (EDRs), which provide a window into the human-machine interface with advanced vehicles. The knowledge gained from these devices allows manufacturers to make adjustments in nearly real time to improve safety based on what is actually occurring in operation, rather than making changes based on assumptions and estimations that must be accommodated in a later model year.

NSC is pleased to see a formal agreement for the Partnership for Analytics Research in Traffic Safety (PARTS) to proceed. This technology sharing has been recommended by NSC for years. We hope all vehicle manufacturers will join in PARTS and benefit from the information shared to improve vehicle safety in a proactive manner. Acquiring an understanding of what happens when systems perform as intended, fail as expected, or fail in unexpected ways yields valuable information for manufacturers – some of whom have common suppliers. Further, in-service data, near miss and post-crash information sharing can help civil engineers and planners design better and safer roadways. It will also help safety and health professionals design better interventions to discourage risky driving or affect the behaviors of roadway users.

NSC supports adding an ADS competency evaluation to the New Car Assessment Program (NCAP). NCAP has operated for nearly 40 years with a goal of testing vehicle safety systems and educating consumers about them. NCAP has created a mechanism to allow consumers to evaluate vehicles on safety systems. NSC also supports NCAP and expanding its role in evaluating ADAS safety. NCAP is a widely understood and accepted framework to evaluate safety of vehicles by consumers. However, adding ADS competency should not be done in lieu of setting ADS or ADAS performance standards.

NSC is pleased NHTSA is looking to develop a framework for ADS safety, and we look forward to working with you to ensure this technology is deployed the best manner to eliminate preventable deaths on our roadways.

Sincerely,

Lorraine M. Martin
President and CEO