



April 1, 2021

National Highway Traffic and Safety Administration
1200 New Jersey Avenue, SE
Washington, DC 20590

RE: Advanced Notice of Proposed Rulemaking on a “Framework for Automated Driving System Safety” [Docket No. NHTSA-2020-0106]

To Whom It May Concern:

The American Association for Justice (AAJ), formerly known as the Association of Trial Lawyers of America (ATLA), hereby submits comments in response to the National Highway Traffic and Safety Administration’s (NHTSA) notice of proposed rulemaking on a “Framework for Automated Driving System Safety.”

AAJ, with members in United States, Canada, and abroad, works to preserve the constitutional right to trial by jury and to make sure people have a fair chance to receive justice through the legal system when they are injured by the negligence of others or defective products. AAJ members represent individuals who have been injured by the negligent operation of a motor vehicle as well as defective motor vehicle design, manufacturer, or performance and see the effect regulations have on reducing safety defects.

We welcome the opportunity to provide input on NHTSA’s approach to an Automated Driving System (ADS) safety framework. As close observers of this automated vehicle (AV) industry over the past decade, we have watched the pendulum swing on depictions of AVs from the magical to the terrifying and all points in between. Ultimately, AAJ and its members sincerely share the hope that AVs can significantly reduce collisions by eliminating common causes of crashes today. But, this is only possible if ADS manufactures are held fully accountable for the driving behavior of their ADS.

Regulatory oversight of ADS deployment is necessary to ensure motor vehicle safety and public acceptance. While we recognize that premature or overly prescriptive FMVSS rulemaking could lock in inferior approaches or technologies that ultimately inhibit the safety capacity of automated vehicles, there are many steps that NHTSA can take *today* that will put ADS deployment on a safety reinforcing pathway.

The key to promoting the safe and equitable development of safe ADS equipped vehicles is accountability. Permeating all of NHTSAs proposed regulatory approaches outlined in the ANPRM is a common theme: the ADS manufacturer must be held accountable for the

performance of the ADS. Upon the bedrock principle of accountability, an efficient and effective regulatory framework can be built.

Such a framework should incorporate, at a minimum, the following aspects:

- 1) **The ADS manufacturer must take *accountability* for safely driving an ADS equipped vehicle.** NHTSA must identify the ADS manufacturer as the entity responsible for the safe operation of an automated vehicle when their ADS is engaged.
- 2) **NHTSA must begin gathering information on ADS equipped vehicles and make such information publicly available.** Prior to more formal rulemaking, NHTSA must mandate the registration of ADS manufacturers and build a database of each vehicle equipped with that manufacturer's ADS.
- 3) **NHTSA must scrupulously avoid preempting state tort law holding drivers and manufacturers accountable.** State tort law has always played a critical role in driving safety and will continue to play an outsized role in pushing automated vehicle safety forward into the future.

This comment seeks to address the questions put forward by the ANPRM holistically, rather than point by point, with these aspects of an initial federal ADS safety framework in mind. In addition to these specific points, we would encourage NHTSA to develop and maintain an active interest and competency in ADS technologies going forward.

The ADS manufacturer must take *accountability* for safely driving an ADS equipped vehicle.

When conceptualizing an ADS safety framework, it is useful to begin with a big picture question at the heart of this issue – what distinguishes an automated vehicle from a human driven one?

It isn't hardware. Tesla, Mobileye, and other manufacturers claim they can achieve automated driving with the existing hardware being installed on vehicles today.

It isn't software either. As anyone can pull up on YouTube, there are dozens of videos posted daily of vehicles staying within their lane and following the traffic in front of them appropriately, while individuals sleep or do other, inappropriate, behaviors.¹ These vehicles are being driven by a software program, yet we still *rightfully* consider this human driving.

The difference between an automated vehicle and a human driven vehicle is a promise—a promise from the ADS manufacturer that the system installed in the vehicle can *drive safely* without the need for human oversight.² A vehicle can have the exact same hardware

¹ For example, see Mr. Hub, "Sleeping in my Tesla," YouTube. Posted Nov. 14, 2020. Last Accessed Jan. 22, 2021. Available at <https://www.youtube.com/watch?v=VS5zQKXHdpM&feature=youtu.be>

² Under Section 5 (page 24) of the SAE J3106 "Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles", the "manufacturer of a *driving automation system* determines that system's requirements, operational design domain (ODD), and operating characteristics, *including the level of driving automation*.... The manufacturer also defines the proper use of that system."

and software installed on it, but without this promise it would require a human operator and not be considered an automated vehicle. This promise from the ADS manufacturer that the ADS will *drive safely* within a certain domain (and that it will not operate outside of that domain) must be at the heart of the Framework for Automated Driving System Safety.

The companies developing this technology know just how important this promise to drive safely is. This promise from the manufacturer that “*we are the driver*” is at the heart of each company’s marketing message around this technology. Waymo is “building The World’s Most Experienced DriverTM” and they are calling it the “Waymo Driver.”³ Cruise’s CEO and founder promises that “...at the end of the day, you’re not being driven by a robot. You’re being driven by us.”⁴ Ford acknowledges that “part of earning the public’s trust is to drive the vehicle in ways that other motorists, cyclists and pedestrians expect.”⁵ Every single company developing an ADS has made this promise in one form or another.

NHTSA must hold ADS manufacturers *accountable* to the promise that *they are the driver* when they deploy an ADS. Any Framework for Automated Driving System Safety must begin with a rule mandating that the ADS manufacturer take responsibility for the *safe operation* of any vehicle when their ADS is engaged. Such a rule should mandate that the ADS comply with applicable state and local traffic safety laws.

While regulating the *operation* of a vehicle is, traditionally, a role for states (as human drivers are generally regulated by state law), states have apparently become confused in whether—and how—to regulate such operation when the vehicle is equipped with an ADS. While it is very clear that ADS manufacturers are building a *driver*, states have been (rightly or wrongly) heeding the DOT position articulated in *Automated Driving Systems 2.0: A Vision for Safety*, that NHTSA is responsible for regulating the safety performance aspects of an ADS. This position has left states pondering if, and how, to incorporate ADS manufacturers into the existing multistate framework used to identify, license, and regulate drivers.

NHTSA should clarify, nationally, that the ADS manufacturer is responsible for safely operating the motor vehicle when its ADS is engaged to provide guidance to these states regarding who is responsible for the safe operation of a motor vehicle in this emerging technology. Doing so will alleviate a needless point of confusion for states struggling to understand how ADS work and *who* is responsible for their proper function.

More importantly, doing so will prevent dangerous product designs meant to shift or obscure operational responsibility for an automated vehicle. In her groundbreaking paper *Moral Crumple Zones: Cautionary Tales in Human-Robot Interaction*, Professor M. C. Elish identifies how responsibility for a crash may be misattributed to a human actor who had limited control over the behavior of an automated or autonomous system.⁶ In these systems, human actors serve

³ <https://waymo.com>

⁴ <https://medium.com/cruise/why-our-people-matter-most-8d17e24c19d>

⁵ https://media.ford.com/content/dam/fordmedia/pdf/Ford_AV_LLC_FINAL_HR_2.pdf

⁶ Elish, Madeleine Clare, *Moral Crumple Zones: Cautionary Tales in Human-Robot Interaction* (pre-print) (March 1, 2019). *Engaging Science, Technology, and Society* (pre-print), Available at SSRN: <https://ssrn.com/abstract=2757236> or <http://dx.doi.org/10.2139/ssrn.2757236>

as a “crumple zone” absorbing the moral and legal responsibilities for a system when it malfunctions.

This concept of a moral or human crumple zone was vividly illustrated in the Uber ATG crash in Tempe, Arizona. According to the NTSB Report on the collision, Uber ATG engineers had disconnected the Volvo automated braking system and introduced a 1-second delay before initiating a hard-braking maneuver in their own ADS.⁷ Uber ATG made an executive decision to rely *solely* on a human backup driver to avoid crashes that would require emergency braking maneuver—and *forgot to tell those human backup drivers*. Worse still, Uber ATG had recently removed a co-pilot from their test vehicles and failed to install a driver monitoring system, despite being fully aware of the research on automation complacency. Uber ATG effectively set their backup drivers up to fail if an emergency braking maneuver was required to avoid a collision—as it was in the crash on March 18, 2018.

And yet, the NTSB report itself cited the vehicle operator’s failure to monitor the driving environment as the probable cause of the crash, demoting Uber ATG’s numerous failings to “contributing” factors in the crash. Uber ATG was cleared of any criminal liability by local prosecutors who subsequently charged the vehicle operator with negligent homicide. While there is no doubt that the vehicle operators’ actions were clearly negligent under these circumstances, in no way should that minimize or distract from the role that Uber ATG played in deploying a clearly dangerous ADS without adequate safeguards.

NHTSA must act now to prevent ADS manufacturers from taking advantage of this human tendency to blame humans for crashes caused by automated systems. Machine learning based automated systems are inherently unpredictable, unexplainable, and subject to catastrophic failure.⁸ NHTSA must head off a “risk management” informed deployment of ADS that seeks to utilize a human crumple zone at every opportunity rather than focus on deploying a *safe driver*.

For example, it is easy to imagine that an ADS is designed to mirror today’s adaptive cruise control or advanced level 2 driving automation systems that allow users to choose the speed, following distance, or aggressive driving elements of the vehicles performance. By forcing the user to make choices about how the system will operate, the ADS manufacturer introduces an element of “human control” that will be misattributed undue significance when an automated vehicle crashes. A recent study by the Insurance Institute for Highway Safety found that people were significantly more likely to speed, and speed faster, while using adaptive cruise control.⁹ We should expect this tendency to push the boundaries of safety will only be exacerbated if the user is allowed to choose the speed or any other driving feature in a vehicle operated by an ADS.

⁷ NTSB Report on Collision Between Vehicle Controlled by Developmental Automated Driving System and Pedestrian (Nov. 19, 2019). Available at <https://www.nts.gov/investigations/AccidentReports/Pages/HAR1903.aspx>

⁸ See, e.g., Will Knight, “The Dark Secret at the Heart of AI,” MIT Technology Review, April 11, 2017. Available at <https://www.technologyreview.com/2017/04/11/5113/the-dark-secret-at-the-heart-of-ai/>

⁹ Monfortt et al., “Speeding behavior while using adaptive cruise control and lane centering,” Insurance Institute for Highway Safety, March 2020. Available at <https://www.iihs.org/api/datastoredocument/bibliography/2222>

NHTSA must act now to head off these dangerous design choices by making it clear that the ADS manufacturer is responsible for the safe operation of the automated vehicle when their ADS is engaged. This clarity will promote accountability, as *all* ADS manufacturers will be forced to abandon dangerous designs meant to shift safety related choices toward third party users of the ADS. To promote a reasonable level of safety, NHTSA must require the ADS manufacturer to stand behind their system and have their skin in the game.

Finally, NHTSA must require the ADS manufacturer to maintain safe driving performance over the lifecycle of the ADS by constantly monitoring and updating their system to adapt to changing road conditions. This is a departure from the historic approach NHTSA has taken to motor vehicle safety. Traditionally, NHTSA has sought to ensure the safety of the vehicle at a moment in time—the point of sale. But *driving* responsibilities cannot be ensured at the point of sale—most obviously because the rules of driving can and do change, but also because the *context* of driving changes as well. For example, systems designed in 2016 would be unlikely to account for swarms of electric scooters littering the roadways, yet today drivers must grapple with them in every major city around the world.

This need for constant adaption demands a flexibility that we believe NHTSA should also help facilitate. ADS manufacturers should not be reliant on unassuming users or owners to “update” their systems. If the ADS manufacturer has a safety critical update that, if not adopted, could cause a collision, then they should be *required* to modify their ADS to prevent the potential collision as quickly as possible. ADS manufacturers should not be allowed to scapegoat users when an out-of-date system causes a preventable crash. NHTSA should take early steps to empower ADS manufacturers to perform such updates on a timely basis.

NHTSA must begin gathering information on ADS equipped vehicles and make such information publicly available

To ensure that each ADS manufacturer takes its role in promoting automated driving safety, NHTSA should begin gathering a database of *who* is developing an ADS and *into which vehicles that ADS is being installed and operated on public roads*. Currently, vehicles are being equipped with ADS and tested on the public roads without any awareness from any level of government or the public. These companies are running an experiment on the general public—using unassuming pedestrians, bicyclists, and other vulnerable users as data to inform their system design—without *any* oversight in many jurisdictions. From a purely public safety perspective, it is *essential* for NHTSA to get a handle on exactly who is working on this technology and which vehicles they have equipped with such systems.

In coordination with such a database, it would be appropriate for NHTSA to follow the NTSB recommendation of gathering safety self-assessment information from each entity operating on public roads. While the voluntary safety self-assessments currently gathered by NHTSA are of limited value, tying a more specific assessment checklist—potentially one developed based on UL 4600 or other process approaches to safety—with a specific ADS installed on a vehicle as identified by its VIN or other identifying information would be extremely useful both today and as this technology proliferates. Having this information gathered

into a single, federal source provides a critical resource and necessary information about this technology that is currently lacking.

Building a database of vehicles equipped with an ADS that is tied with such safety assessment will obviously provide NHTSA with a comprehensive understanding of the scope of each ADS manufacturer's operations. Unlike human drivers, who can only drive one car at a time, each vehicle equipped with a manufacturer's ADS will, presumably, share certain core aspects of the ADS software at the same time. Having a database of every vehicle equipped with an ADS and stored with certain core information about each vehicle will allow NHTSA to understand the potential scope of a recognized defect so that it may act appropriately to protect the public. Further, such a database will provide a readily available source for storing information gathered about the ADS system—such as crashes involving an engaged ADS—that can be mined by NHTSA to spot troubling patterns, intervene quickly once a defect is recognized, and help ensure the public's confidence in this potentially lifesaving technology.

Besides the obvious safety benefits of such a system, there are numerous additional benefits to the public that such a database would generate. When law enforcement pulls over a vehicle, they need to be able to ascertain if that vehicle is capable of being operated by an ADS—especially if it is empty of passengers. When first responders approach a crashed vehicle, they need to know whose ADS may be installed on it and how to deactivate it to avoid injury. When crash reconstruction experts—for the state, insurers, or the attorney for a victim in a crash—seek information on a vehicle they need to know whose ADS was installed on it at the time of the crash.

So far, all states have chosen to exclude ADS manufacturers from their existing system meant to identify, license, and regulate drivers on the explicit recommendation to leave motor vehicle performance regulation to NHTSA. Only a handful have created an alternative based on vehicle registration that obviously misses whole classes of ADS equipped vehicles—such as vehicles registered out of state. Without a way of tracking ADS equipped vehicles sorted by ADS manufacturer, identifying and remedying systematic defects in ADS systems will be difficult for state or federal authorities to address.

A federal database of ADS equipped vehicles that could be accessed to provide critical information about the vehicle's system would remedy this issue and should be a central component to a federal Framework for Automated Driving System Safety. Such a database would give law enforcement the information they need to identify an ADS equipped vehicle, even if the vehicle is registered out of state. It would give first responders a single source to consult to understand an ADS' capabilities (and how to deactivate them, if there is an issue). It would facilitate the interstate operation of ADS equipped vehicles as states would have a ready source of the information they need to know about each *driver* on their road if they needed to access it.

Finally, the database could house data on crashes involving ADS equipped vehicles. Having a public, verifiable understanding of ADS performance will be critical in instilling public confidence in the technology by giving all sides a set of *facts* gathered by a reliable federal

regulator. Independently gathered crash data from local law enforcement and other sources would be critical to understanding the relative safety of competing approaches to developing an ADS and inform future NHTSA rulemaking. Finally, this will give ADS manufacturers an independent source to point to as a way to verify their safety records and provide a tremendous source of confidence to the public and wary authorities about an ADS manufacturer's safety record.

Any rulemaking in this space must avoid preemption.

The NPRM also raises the specter of regulatory preemption, which must be avoided to encourage safe AV operations. NHTSA has asked for comment on the “rule based and statistical methods” best for assessing the extent to which ADS meet the core functions of ADS performance. When evaluating these recommendations, it is important for the agency to focus on the core policy at the heart of the Vehicle Safety Act—improving vehicle safety by establishing *minimum* federal motor vehicle standards. NHTSA's role is to ensure vehicles that do not meet such minimum standards are prohibited from operating on our nation's highways. Congress explicitly left questions regarding *liability* to state tort law.

The issues with preemption in the context of AVs are multiplied beyond product liability into state tort rules governing *driving performance*. Driving performance is generally regulated by traffic safety rules of the road and an overarching injunction to act with reasonable care toward other road users. This duty of reasonable care is particularly important and a highly context dependent duty that each ADS manufacturer will need to address, in one way or another, when developing their ADS. Unfortunately, it is unclear if any of the “rule based” or “statistical” approaches put forward thus far will, in fact, ensure safety. It appears that many are specifically designed to replace the flexible, adaptive duty of care to other road users with a more rigid, statistical approach to driving performance tailored to computer reasoning. For example, Mobileye's RSS approach has been criticized as an attempt to avoid *liability* for causing a crash, rather than the more important overall goal of avoiding collisions. While it is likely that individual ADS designs may include such statistical approaches regardless of NHTSA's actions, NHTSA should not mandate such approaches as a replacement for the standard of care every driver is held to under state common law.

First, replacing common law rules undermines safety. Tort law serves as a strong deterrent against dangerous ADS design and performance. The common law rule around safe driving recognizes the inherent variability and uncertainty in driving—for example, a reasonably safe following distance is *different* when the road is (potentially) covered in ice. While we recognize the inherent tension in *testing* or *verifying* an ADS ability to meet the “reasonable and prudent driver” safety standard, such difficulty exists with testing or verifying human drivers will meet this standard too! ADS manufacturers should be held to *at least* the same standards that human drivers are held to.

If the standards should be adjusted for automated driving in any way, it should be to make them *tougher* to meet, not easier. The *explicit promise* of automated driving at the heart of every manufacturer's pitch is that automated vehicles will be **100x to 1000x safer** than human

driving.¹⁰ There is no world where such safety promises will be achieved if the current legal standards for safe driving are reduced, eliminated, or replaced. Common law safe driving standards *in no way* present a barrier to achieving the remarkable safety gains promised by ADS manufacturers. While there have been calls to hold ADS manufacturers accountable for *all* crashes involving a vehicle being operated by an ADS, tort law does not demand such collision free driving and we have not advocated for such a position (at this point). If anything, current legal standards will simply become irrelevant if ADS manufacturers live up to their promises.

These promises of ADS safety have led many to believe that ADS is, itself, a safety technology—this is not true. Automated driving is a service with a potentially addressable market of \$7 trillion dollars, making it one of the most lucrative potential markets in the world. If ADS manufacturers are not required to pay for the harm that they cause, then profitability will be in direct tension with safety. ADS are not inherently safe, nor inevitably safe. They are potentially safe.

To properly incentivize safety investment, ADS manufacturers must pay for the harm that they cause by driving negligently or putting out a defective product. Stripping victims of their constitutional rights through federal preemption would ensure underinvestment in ADS safety. It would be cruel to users and the public forced to interact with such systems. Not only would the victim be forced to endure the pain caused by the negligent operation of a vehicle by an ADS, but also they or their family would be forced to pay the medical damages, lost wages, and other harms *caused by the ADS manufacturer*. There is no justification for forcing victims to pay for harms caused by ADS manufacturers. Such an inequitable and unjust betrayal of the victims of automated driving must be scrupulously avoided in any rulemaking proceeding.

Finally, removing common law remedies stifles the fact finding and expert investigations that these claims bring to NHTSA and the public's attention. If victims who have suffered personal injuries cannot be represented because the law has "deemed" some activity to be safe when they are not, then such activities will not be investigated. Civil litigation was a primary factor in the passage of the Vehicle Safety Act, it has spurred numerous rulemakings to improve motor vehicle safety over the past five decades, and it will continue to play a critical role in ensuring ADS manufacturers are accountable for the safety promises they have made. In the near term, it may be the *only* reliable mechanism for ensuring appropriate investment in ADS safety.

Recommendations for Reformulating the Core ADS Safety Functions

To effectively develop a safety framework governing the functioning of an ADS, NHTSA must also expand its understanding of the Core ADS Safety Functions beyond the constituent parts of sensing, perception, planning, and control to see the bigger picture. ADS manufactures are building a driver. Drivers are not amalgamations of constituent parts, but an

¹⁰ See, e.g., Kyle Vogt, President & CTO at Cruise, Twitter, January 19, 2021, "Cars are driven by humans. Humans improved safety by ~2x in ~50x years. We suck. Robots are likely to improve this by 100x or more in 3-5 years...." <https://twitter.com/kvogt/status/1351530848701435906?s=20>. See also Intel, Implementing the RSS Model on NHTSA Pre-Crash Scenarios, "We believe these AVs would be responsible for accidents at a rate 1000x better than human-driven vehicles." https://static.mobileye.com/website/corporate/rss/rss_on_nhtsa.pdf

integrated whole. Drivers are required to operate vehicles with a duty of care to other road users. In seeking to replace the human driver with an ADS, the ADS manufacturer is *assuming the role of the driver* and must be recognized and regulated as such.

NHTSA's understanding of its regulatory role would benefit tremendously from recognizing the implications of this fact. Sensing is not simply the "eyes" of a vehicle but must replace *all* of the senses a driver uses and fulfil the other elements of a driver's role. Tire pressure, alignment, braking function and other *internal* features of the vehicle must be accounted for by a driver prior to the safe operation of a vehicle and this duty must be carried over to the ADS as well. Similarly, perception is not simply interpreting the information about its environment, it is also integrating that information into a coherent picture that recognizes what is *not* immediately perceptible and accounting for the unknown. Planning involves not just the "route," but the speed, aggression, and defensiveness of the vehicles path among many other factors. Further, the goal of the "planning" function is not simply to reach the destination safely, but also to do so smoothly, quickly, cheaply, or while achieving a myriad of other goals.

This extends to the "other aspects" of safe driving as well identified in the NPRM. All drivers must be aware of their own ability to drive at a particular time, in a particular environment, or on a particular road. All drivers must respond to first responders. All drivers must check the vehicle's ability to operate safely prior to beginning a trip. All drivers are charged with being aware of the rules of the road and operating within them as well. With the exception of cybersecurity risks and system redundancies, which are specific to an ADS, each of these aspects are required for all drivers—human and ADS—to operate a vehicle safely and reliably.

That the ADS manufacturer will not be able to address each of these issues in the same way a human driver would is not a justification for relieving them of that responsibility. As mentioned above, **ADS manufacturers must not be allowed to design their system to rely upon human crumple zones.** This guiding principle should permeate throughout NHTSA's approach to an ADS Safety Framework. While it is perfectly reasonable to design systems to *share* responsibility for certain tasks to human users or the vehicle owner when it is impossible for the system to fulfill that obligation autonomously—such as filling the tires when pressure becomes low—accountability for operating a motor vehicle dangerously must continue to rest with the *driver* of the vehicle.

Along this line, despite the fact that human and ADS drivers share the same tasks, NHTSA must resist anthropomorphizing the ADS. Just as birds and airplanes both "fly," humans and ADS will "drive" using different approaches that do not neatly overlap. An ADS does not have "eyes" or "ears," the ADS planning and perception are not executed by a "brain," and ADS control is not the same as manipulating "arms and legs." An ADS is a computer, connected to a vehicle, that does *exactly* what its manufacturer tells it to do.¹¹ This truism of computer logic makes it fundamentally *different* than human reasoning.

¹¹ As the IT aphorism goes: "The good news about computers is that they do what you tell them to do. The bad news is that they do what you tell them to do."

Consequently, we can expect that ADS driving, ADS driving errors, will be fundamentally *different* than human driving as well. Specifically, ADS driving errors are expected to be unpredictable, unexplainable, and often catastrophic failures of the system. They can only be controlled by proper management by the ADS manufacturer. This was well illustrated by the Uber ATG crash in Tempe, Arizona.

In the Uber ATG collision, the Uber ADS failed to recognize and respond appropriately to Ms. Elaine Hertzberg walking her bike across the pedestrian crossing outside a crosswalk.¹² The NTSB's investigation placed the blame for these specific failures on Uber ATG's failure to anticipate the safety risk of its ADS. This failure to *predict* the circumstances of the crash was caused, in part, by Uber ATG's inability to *explain* a feature of the ADS that was giving it trouble—specifically, the ADS tendency to engage in “phantom braking” or a hard emergency braking maneuver when it was unwarranted by the driving situation. Rather than address this fundamental flaw in its system, Uber ATG put a 1-second delay on hard braking. This delay, when coupled with Uber ATG's other failings, led the ADS to *catastrophically* failing to engage in *any* collision avoidance maneuver prior to driving the Uber ATG vehicle into Ms. Herzberg at a fatal speed.

Every ADS manufacturer will have to navigate such unpredictability, unexplainably, and the potential for catastrophic failure in its ADS. Process measures—such as UL 4600, SOTIF, and Functional Safety—will be critically important measures that will enhance the safety of an ADS. This is why ADS manufacturers must maintain *control* over the ADS functionality by *constantly* updating such systems to maintain their safety as errors and issues are uncovered. This is why *accountability* is the most important aspect to an efficient and effective regulatory framework—it pushes companies to look around the corner, explain their systems function, and address the inevitable catastrophic failure of those systems *before* they cause harm.

Finally, ADS manufacturers should not be able to force the systems user, owner, or other third party to take responsibility for the *inevitable* catastrophic failure of their system. Uber ATG was “training” a “developmental ADS” using a single “vehicle operator” who was responsible for *both* driving-monitoring and “event tagging” tasks. Yet, it was the “vehicle operator”—not Uber ATG—who was identified as the “probable cause” of the crash by NTSB and charged by the Maricopa County prosecutor with negligent homicide. While Uber ATG quickly settled a civil claim against it over the crash, the settlement covered both liability for the ADS *and liability as the employer of the vehicle operator*, leaving open the question whether it could have avoided civil liability if the operator was a truly independent third party. Protecting the public against an ADS manufacturer designing their systems to rely on a human crumple zone must be a top priority that NHTSA should consider at every level when developing its ADS Safety Framework.

¹² NTSB Accident Report, “Collision Between Vehicle Controlled by Developmental Automated Driving System and Pedestrian, Tempe, Arizona, March 18, 2018” Available at <https://www.nts.gov/investigations/AccidentReports/Reports/HAR1903.pdf>

Conclusion

AAJ recognizes the importance and potential of ADS to improve highway safety if ADS manufacturers are held accountable through the civil justice system for the safety promises they have made. We urge NHTSA to recognize the ADS manufacturer as the driver when their ADS is engaged, develop a comprehensive database of each vehicle equipped with a manufacturers ADS coupled with other critical information, require the ADS manufacturer to maintain the safety of their ADS over the life cycle of the system, and to preserve common law causes of action through any rulemaking activity. If you have any questions or comments, please contact Sarah Rooney at Sarah.Rooney@justice.org or Daniel Hinkle at Daniel.Hinkle@justice.org.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tobias L. Milrood', written in a cursive style.

Tobias L. Milrood
President
American Association for Justice