

Laying a Foundation for Advanced Transportation Technology

Panel Remarks at Transportation Research Board Annual Meeting | James Owens, Acting Administrator

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AS PREPARED FOR DELIVERY

NHTSA is, first and foremost, a safety agency. As the nation's vehicle safety agency, everything we do is focused on protecting the people on our roads, whether they are in a car, on foot, on a bicycle, or using another form of transportation.

This is an exciting time in transportation, and particularly so with motor vehicles. We are witnessing a revolution in technologies that promise to make our cars safer than ever.

First, let's start with the facts. In 2018, we saw a 2.4% decline in fatalities on our nation's roadways, the second consecutive year of declines. Our early estimates for 2019 suggest the trend is continuing, and that is a very good thing. But that still translates into 36,560 lives lost in 2018. Every fatality is a tragedy, and every fatality means that families have lost loved ones, friends and colleagues have lost companions, and we have all lost the amazing potential that every life promises. It is simply unacceptable that we lose so many lives on our roadways, and under Secretary Chao's leadership, NHTSA is focused on what we can do to save lives and bring those numbers down.

Put simply, fatal crashes have two basic roots – behavior and technology. We know that most serious crashes are caused by human error, and far too many lives are lost because of drug or alcohol impairment, driving without seat belts, speeding, and driving while distracted.

On the other hand, technology has made new vehicles safer than before. Newer vehicles are safer vehicles, and our studies indicate that the proportion of occupants who are seriously injured increases with a vehicle's age. The proportion is higher among occupants of older vehicles as compared to the occupants of newer vehicles.

New vehicles are safer than before, but we believe that new technologies can and will make them even safer in the future. And not only are the technologies making our vehicles more crashworthy, they are now helping us avoid or mitigate crashes in the first place.

Today, developers are investing billions of dollars in advanced technologies that are helping drivers avoid crashes, or reduce the severity of crashes that do occur. This innovation is leading to growing levels of automation that can address some of the unsafe driving behaviors that cause most serious crashes.

The United States leads the world in advanced vehicle technologies because innovators are able to develop safety-enhancing technologies here. Under the leadership of Secretary Chao, NHTSA is facilitating the safe testing and deployment of advanced vehicle technologies, such as Automated Driving Systems (ADS).

NHTSA exercises careful oversight over these developing technologies by closely communicating with developers, conducting research into emerging technologies and human factors, investigating incidents and complaints, and when necessary and appropriate, exercising our broad enforcement authority.

And when the time is right—when the technology is proven—our history shows that we will adopt performance-based standards for automated technologies.

Today, many manufacturers are developing and rolling out new advanced driver assistance systems (ADAS) such as automatic emergency braking and lane keeping assistance, which can help drivers avoid crashes or help reduce the severity of crashes that do occur.

We expect that these and other developing technologies will help reduce fatalities on our roads, including among pedestrians and other vulnerable road users, and the early data on the efficacy of these technologies are promising.

It is critical that the public understands a vital fact about current technologies: all vehicles sold to the public today require a driver to be fully attentive and cognitively engaged in the driving task at all times. This is true even if the car is equipped with any of the ADAS technologies currently on the market. While these ADAS technologies are improving and enhancing safety, they are not self-driving.

Misusing driver assistance systems by failing to maintain control of the operation of the vehicle at all times can result in serious and even deadly crashes. Consumer education is an important tool in ensuring that ADAS technologies are used in a way that enhances safety.

In addition to driver assistance technologies, we are seeing significant investments in more advanced Automated Driving Systems that might one day allow vehicles to drive themselves and thereby have the potential to greatly reduce the number of fatal crashes involving human error or poor choices.

ADS technologies may also enhance mobility for underserved communities and reduce congestion on our crowded highways.

These technologies are being developed today by many different innovators, and NHTSA is actively participating by maintaining a close dialogue with developers to ensure that our safety concerns, including concerns about cybersecurity as well as the efficacy of these technologies, are incorporated into the product development process.

Some of NHTSA's existing policies and regulations will require updating to address the innovative vehicle designs being introduced by ADS developers. Currently, NHTSA is working on numerous regulatory initiatives related to future governance of ADS technologies.

In fact, we are working on about 10 separate rulemakings that address regulatory issues with these advanced technologies.

Some of these initiatives seek comment on requirements that may not serve any safety purpose if applied to ADS-equipped vehicles and thus may unnecessarily increase their cost. Other initiatives address test procedure challenges introduced by some ADS-equipped vehicles.

Existing Federal Motor Vehicle Safety Standards may present unintended and unnecessary barriers for future ADS vehicles without drivers, and we are working on several rulemakings to address these issues.

Historically, FMVSS have been based on the concept of a human driver operating the vehicle. With the introduction of ADS, the driving tasks will increasingly shift from humans to the system.

The agency is gathering information to support decisions about potential adaptation of regulations to address unnecessary barriers to innovative designs while ensuring that these vehicles would have equivalent levels of safety and performance to systems and components covered by existing safety standards. NHTSA issued an Advance Notice of Proposed Rulemaking last year on existing motor vehicle ADS regulatory barriers, and we are reviewing those comments.

We are also working on an NPRM on a rule that would address FMVSS requirements in high-level ADS vehicles, ensuring occupant protection in vehicles without conventional driver controls such as steering wheels.

High-level ADS vehicles may also convey information to drivers in a novel fashion. The rulemaking team is currently drafting an ANPRM to amend FMVSS to address safety messaging, including telltales, indicators and warnings, in vehicles without conventional driver controls.

We are also undertaking several actions to streamline the existing exemption process from regulatory requirements.

By proposing improvements to the current exemption processes, we hope to facilitate testing and enhanced safety oversight by allowing a wider variety of entities to request exemptions to operate nonconforming vehicles on public roads for purposes of research and demonstrations. One such rulemaking underway would create a new exemption for domestic manufacturers to operate nonconforming vehicles, thus helping to level the playing field.

Finally, our other rulemakings in process would identify future regulatory frameworks for ADS-equipped vehicles.

Our ADS safety principles rulemaking, currently in the draft stage, would discuss creation of a safety framework for objectively and transparently assessing and validating the success of each ADS vehicle. We are also crafting rulemakings that would address specialized ADS vehicles, like low-speed shuttles, and occupant-less ADS vehicles, like delivery vehicles.

All new vehicles, including ADS-equipped vehicles, are subject to NHTSA's broad and powerful safety defect authority. That means that defective vehicles and equipment must be recalled and repaired when the manufacturer or the agency determines that the vehicles or equipment present an unreasonable risk to safety.

The agency's broad defect authority serves as an important safety backstop to our standards. So long as a vehicle complies with our safety regulations, then developers may move ahead with new designs, but they will still be subject to NHTSA's defect authority if the vehicle or equipment presents an unreasonable risk to safety.

As manufacturers develop and test advanced vehicle technologies, NHTSA will continue to engage in ongoing dialogue with innovators to ensure that our safety concerns are incorporated in product development, and we will also remain vigilant to ensure these innovative technologies do not pose an unreasonable risk to safety.

As ever, the agency will not hesitate to use its enforcement authorities when it is necessary and appropriate to protect the safety of the traveling public.

In closing, innovation is advancing rapidly in the automotive sector, and the development of these technologies promises to save lives and reduce injuries on our nation's roads. NHTSA will continue to engage stakeholders as we draft automated vehicle policies and regulations that position the United States as the world's leader in automated vehicle technology while fulfilling NHTSA's vital safety mission.

Thank you.