Statement of

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On behalf of:

AMERICAN TRUCKING ASSOCIATIONS, INC. (ATA)

BEFORE THE SENATE COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION

Transportation Innovation: Automated Trucks And our Nations Highways

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TESTIMONY FOR SENATE COMMERCE HEARING ON TRANSPORTATION INNOVATION: AUTOMATED TRUCKS AND OUR NATION'S HIGHWAYS

Introduction

Chairman Thune, Ranking Member Nelson, and distinguished members of the committee, thank you for the opportunity to testify in today's hearing on Transportation Innovation: Automated Trucks and Our Nation's Highways. My name is Chris Spear, and I am the President and CEO of the American Trucking Associations (ATA). Founded in 1933, ATA is the nation's preeminent organization representing the interests of the U.S. trucking industry. Directly and through its affiliated organizations, ATA encompasses more than 30,000 companies and every type and class of motor carrier operation.

The trucking industry is an integral component of our nation's economy, and a significant contributor to the highway trust fund. Despite being less than 13 per cent of the vehicles on the road, trucking pays nearly half of the money that goes into the highway trust fund[1] each year. That's more than $18 billion that goes toward the construction, operation and maintenance of the roads that all vehicles share. Trucking transports more than 70% of our nation's freight tonnage and employs 7.4 million workers in trucking-related jobs across many sectors of the economy, including over 3.5 million commercial drivers[2]. These drivers are on the road every single day moving the economy. Approximately 80% of all U.S. communities depend solely on trucks to deliver and supply their essential commodities.[3]

Today's hearing coincides with National Truck Driver Appreciation Week, when America takes the time to honor all professional truck drivers for their hard work and commitment in tackling one of our economy's most demanding and important jobs. These 3.5 million professional men and women not only deliver our goods safely, securely and on time, they also keep our highways safe and serve as role models in their communities. During this hurricane season, we should also recognize these drivers for overcoming the challenges of roadways and communities devastated by natural disasters to bring in critical goods to aid in the recovery efforts. We know there are concerns about the elimination of drivers or a change in their role from automation. We continue to believe that the automated technologies being developed today will assist drivers, improving safety and productivity, and that the job of truck driver will be with us for the foreseeable future. However, we do not dismiss the importance of considering the potential impacts on the workforce and the need to develop programs that will help prepare workers with the skills needed for the jobs of the future.

The trucking industry has a substantial stake in the success of safe automated and connected vehicle technology. The roads are the workplace of the truck driver, and safety is of paramount importance. There were 33.8 million commercial trucks of all classes (including 3.63 million

[1] Highway Statistics 2015, Federal Highway Administration, U.S. Department of Transportation, and American Trucking Associations, Trucking Trends 2017 (August 2017)

[2] American Trucking Associations, American Trucking Trends 2017 (August 2017)

[3] ATA staff, developed the 80% figure by using the Rand McNally Commercial & Marketing Guide (2001) numbers for rail service to communities and calculating the inverse, ultimately deriving the number of communities serviced by truck.

Class 8 trucks) registered in the U.S. in 2015[4]. That same year, medium and heavy duty trucks accounted for 7.9% of the vehicle miles traveled[5]. Safety gains achievable by removing human error, which is a factor in 87% of large truck crashes[6] and 94% of all vehicle crashes[7], and the additional economic and societal benefits, are very enticing to an industry that already spends over $9 billion annually on safety, including technology enhancements, to help ensure that drivers and passengers of all vehicles make it safely to their destination.[8] Additionally, the preponderance of research studies find that car drivers are principally at fault in approximately three-quarters (70-75%) of fatal car-truck crashes[9]. Connectivity and automated technology can work together to reduce or eliminate these crashes. With these technologies, we can not only improve safety, but lower fuel burn and emissions, and help reduce traffic congestion, which costs the trucking industry $63.4 billion a year – the time lost to traffic is equivalent to having 362,000 drivers sitting idle for an entire year.[10]

Automated driving technology is the next step in the evolution of the safety technology currently available, and it is critical that federal policies developed for this new technology include all vehicles that operate on our nations roadways. While self-driving vehicle demonstrations are exciting to watch, automated technology comes in many levels that will assist the driver and in some cases, handle the driving task. Some may predict the elimination of all driving jobs, including both drivers of passenger vehicles and commercial vehicles, but that future, if it exists at all, is too far into the future to see. Realistically, what we are talking about now is fostering the development of all levels of automated technology, so that those levels of technology which provide improved safety and productivity can be tested, proven, and deployed to benefit all road users. We need to think about how this innovation can solve problems like crashes, congestion, and emissions, and let that guide policy and drive outcomes. In short, this innovation and its benefits, centers on solutions in which their remains a role for drivers, rather than a driverless approach.

As you well know, passenger cars and commercial vehicles operate on the same roads, making it critically important that both benefit from innovation in safety technology. While there are differences between passenger and commercial vehicles, it makes sense to provide protections and incentives for innovation in commercial vehicles as well as passenger vehicles – things like federal preemption to ensure that state and federal regulations do not conflict or impede interstate commerce, and the ability to receive exemptions from existing federal regulations so that new technology can be developed and tested – these should apply to both commercial and non-commercial vehicles.

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[4] American Trucking Associations, Trucking Trends 2017 (August 2017)

[5] Federal Highway Administration, Highway Statistics, 2015, Table VM-1, accessed online at https://www.fhwa.dot.gov/policyinformation/statistics/2015/pdf/vm1.pdf.

[6] Large Truck Crash Causation Study, Federal Highway Administration, July 2007

[7] Singh, S. (2015, February). Critical reasons for crashes investigated in the National Motor Vehicle Crash Causation Survey. (Traffic Safety Facts Crash Stats. Report No. DOT HS 812 115). Washington, DC: National Highway Traffic Safety Administration

[8] American Trucking Associations, (2016, June 26). Trucking Industry Spends $9.5 Billion In Safety Annually. Retrieved from: http://www.trucking.org/ATA%20Docs/News%20and%20Information/Reports%20Trends%20and%20Statistics/06%2028%2016%20-%20Trucking%20Industry%20Invests%20$9%205%20Billion%20in%20Safety%20Annually.pdf

[9] Relative Contribution/Fault in Car-Truck Crashes, February 2013, http://www.trucking.org/

[10] *Cost of Congestion to the Trucking Industry: 2017 Update*, American Transportation Research Institute, Arlington, VA, May 2017

Automated Technology in Trucking

Automated vehicle technologies have the potential to dramatically impact nearly all aspects of the trucking industry. These technologies can bring benefits in the areas of safety, environment, productivity, efficiency, and driver health and wellness. Although some people use the terms "autonomous" and "driverless" interchangeably, ATA believes that the driver will retain an important role in trucking, even with automated trucks. In addition to monitoring the automated driving systems and manually driving in the cityscape and at loading docks, drivers will retain their current responsibilities for securing the cargo, particularly hazardous cargo, as well as for customer interaction with the shipper and receiver.

In the trucking industry, you have a business-to-business relationship between the fleets purchasing the vehicles and the companies offering the technology. How individual carriers choose to incorporate automated technologies in their fleets will likely not be a 'one size fits all' application, but rather will depend on each carrier's operations and anticipated return on investment for the technology. Trucking companies will want to see convincing data before they invest in changing their operations to incorporate the new technology. Trucking is also a highly regulated industry. Regulations from the Federal Motor Carrier Safety Administration (FMCSA) and the National Highway Traffic Safety Administration (NHTSA), as well as the Federal Communications Commission (FCC), Environmental Protection Agency (EPA), Department of Homeland Security (DHS) and others affect both the vehicle technology and the driver's responsibilities, which will also have an impact on a company's decision on whether and how to deploy automated technology.

The bottom line is that the trucking industry is vitally interested in automated vehicle technologies and the safety and efficiency promise they hold. The safety gains achievable by removing human error, a factor in 94% of all vehicle crashes[11], could be transformative in reducing fatalities and injuries on our roadways, as well as in preventing even minor crashes, which would reduce traffic congestion and pollution, providing additional economic and societal benefits.

Automated Driving Technology and Jobs

The development of automated technology for vehicles does not mean that all vehicles will become "driverless vehicles" and that every kind of driving job will be eliminated. The reality is much more complex. While there may be applications where an automated system can take over the driving task, this is unlikely to replace commercial vehicle drivers altogether, just as in the airline industry pilots are still in the cockpit and responsible for the safe operation of their vehicle. As with any technology that increases productivity, there is a likelihood that there will be a decrease in the number of people needed to do the same amount of work. Right now, we are facing a shortage of drivers, particularly for long-distance drivers, around 50,000. If these trends continue, the shortage could hit over 150,000 in a decade. And as the shortage becomes more acute, it will begin to affect the ability of goods to be delivered on time, which is becoming more important in today's on-demand economy. Projections are that we'll need to

[11] Singh, S. (2015, February). Critical reasons for crashes investigated in the National Motor Vehicle Crash Causation Survey. (Traffic Safety Facts Crash Stats. Report No. DOT HS 812 115). Washington, DC: National Highway Traffic Safety Administration

hire about 890,000 truck drivers over the next 10 years.[12] The American Transportation Research Institute, the not-for-profit research arm of the trucking industry, recently released a report on how autonomous technologies will impact the trucking industry. That assessment found that highly automated trucks will likely draw new, younger drivers into the trucking industry by better meeting the job expectations of millennial workers.[13] Making our drivers more productive may also be an important element in addressing this shortage and avoiding shipping delays. Additionally, as we have seen with other new technologies, there are new jobs created as well, which in the case of automated trucks could include new categories of maintenance technicians and new jobs that will develop along with business models that take advantage of the new capabilities this technology brings.

As the automated technology is still developing, it is difficult to make any projections on how driving jobs will ultimately be affected without gathering more data. As I pointed out earlier, there is a business-to-business relationship between the fleets purchasing the vehicles and the companies offering the technology in the trucking industry. Fleet owners will want information on what the new technology can do and what it will cost before they can make decisions on how it would impact their operations. For example, will it operate only on open highway or only in traffic jams? Will it operate under all weather conditions? Can the technology operate when it gets off the main roads and navigate to a customer's delivery location, which may involve driving on private roads? Will the system need frequent calibration or have other special maintenance requirements? With this type of information, companies can then determine how the role of the driver would change. This information may help inform future regulatory policy as well. However, in order to answer these and other questions, there will need to be more data gathered in real-world testing and demonstration projects, which could be stalled if companies have to work through a maze of disparate state regulations or are unable to put sufficient vehicles on the road to collect the necessary data.

While no one can predict the distant future – I still haven't seen the Jetson's flying car on the road or in the air yet – I can tell you this: Trucking companies rely on good, safe drivers. As an industry, we are working hard to recruit new drivers and retain the excellent drivers we have now. Automated technology has the promise of keeping these drivers safer on the roads, and making them more productive. As automated technology changes the role of the driver, trucking companies will work to retrain drivers as needed to operate with the new technology. We need to embrace this innovation and shape policies that are sensible for all vehicles that share the road, while reflecting the unique aspects of the trucking industry's role in our economy that allows businesses and private citizens to confidently ship goods across state lines and throughout America. Right now, trucks move more than 10 billion tons of freight – nearly 71% of all U.S. domestic freight tonnage – and those figures are only expected to grow as our economy and population also grow.[14] We will continue to need human beings in the cabs of our trucks for some time. In addition to the anticipated safety benefits, what these technologies may do is make those drivers more efficient, make driving a more attractive career choice, and attract new people to our industry.

Cybersecurity

[12] American Trucking Associations, Truck Driver Shortage Analysis (October 2015)

[13] *Identifying Autonomous Vehicle Technology Impacts on the Trucking Industry*, American Transportation Research Institute, Arlington, VA, November 2016.

[14] U.S. Freight Transportation Forecast to…2028, produced by IHS Global Insight, Inc. for American Trucking Associations.

As with passenger vehicles, cybersecurity is an important consideration for commercial vehicles. ATA has taken steps to help ensure a robust cybersecurity environment for motor carriers. ATA is developing a motor carrier-based program for sharing information about emerging cyber threats and attacks. This program will focus on the unique threats to truck fleets, and will coordinate with the Auto-ISAC, which has recently opened its membership to truck manufacturers and equipment suppliers. ATA has also been working with the Federal Bureau of Investigation (FBI), DHS, and intelligence sharing and analysis groups including the National Motor Freight Traffic Association Heavy Vehicle Cybersecurity Working Group, and the U.S. Department of Transportation (DOT) Volpe Center Commercial Truck Cyber Working Group. ATA also has a seat on the U.S. Chamber of Commerce Cyber Leadership Council. ATA's Technical Advisory Group and Technology & Engineering Policy Committee have been working with our members to provide industry thought leadership and to raise awareness of motor carrier and supply chain risk and cybercrime prevention.

In June, the U.S. Army's Tank Automotive Research, Development & Engineering Center (TARDEC) held a CyberTruck Challenge where truck OEM engineers and university students attempted to hack into trucks to identify potential vulnerabilities. Later this month, ATA's Technology & Maintenance Council will host its first CyberTech challenge at our National Technician Skills Competition which will help technicians diagnose and detect cyber attacks.

All of these initiatives are working to keep trucking safe as it moves toward connected and automated driving.

Policy Recommendations to Support Safety Innovations

The trucking industry relies on an interstate highway system that facilitates the free flow of goods between the states. As automated truck technology is developed, tested, and commercialized, it is critical that federal, state and local laws do not create disparities that limit commerce and obstruct the successful adoption of these potentially safety- and productivity-boosting technologies. The regulation of performance and technical specifications of automated and connected truck technology should be solely the responsibility of the federal government. States should maintain their existing responsibilities that do not interfere with the flow of interstate commerce. In the absence of federal regulation, states should support operations of commercial motor vehicle automated and connected technologies within their rights of intrastate jurisdiction. However, conflicting requirements among Federal and State agencies will create roadblocks to deployment of automated technology, delaying the safety benefits, fuel savings, emissions reductions, and potential efficiency improvements to our country's transportation system. The federal government must take a clear leadership role and, where necessary, exercise federal preemption to ensure that there is no conflict between federal and state regulations. It is critically important to provide certainty to the developers of automated technology for all vehicles that there will not be a disparate set of state laws, now or in the future, that unnecessarily impede the ability of a company to test and operate vehicles with their technology across state lines and in interstate commerce. Without this certainty, innovation will be slowed as companies divert resources to addressing a patchwork of state policies, or find that the vehicles they developed in Nevada cannot be operated in California and they need to make changes to their designs.

As automated vehicle technology is rapidly developing, it is important that government policy and regulations support innovation and do not inhibit the flexibility of carriers to choose automated technologies best suited to their individual needs. Federal agencies and state

governments should be fully committed to encouraging innovation in both commercial and passenger vehicles to bring safety and other benefits to all road users. Exemptions from existing federal regulations that will allow new technology to be developed and tested is one way to help support innovation while also gathering data that could inform future standards and policies. NHTSA already has authority in this area, but exemptions are now limited to 2,500 vehicles per manufacturer per year, with each exemption lasting for a period of two years. Expanding the number and duration of exemptions from standards that prevent new safety technology from being put on the road will allow more real-world data to be collected more quickly, which will lead to improved system design and better information for making both regulatory and business decisions. To be clear, the exemption process does not automatically provide a manufacturer with the ability to avoid any or all safety standards. It is a rigorous process which requires a manufacturer to apply for the exemption and provide information that will allow NHTSA to make its determination based on, among other things, equivalent or better safety levels and the overall public interest. Increasing the number and duration of the exemptions would not relax safety, but rather provide a faster path to achieving higher levels of safety and updated regulations.

It is important to note, too, that the federal preemption and exemption changes we are recommending support not only innovation of fully automated vehicles, but also the levels of partial automation that will bring safety benefits as well.

Coordination among federal agencies is another way to remove barriers and more fully realize benefits that can come from automation. ATA sees great potential for vehicle connectivity using the 5.9 GHz Safety Spectrum to improve the performance of automated vehicles. Vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communication using the Safety Spectrum can save lives and reduce traffic congestion and vehicle emissions. The benefits of V2V/V2I technology will grow when coupled with automated vehicle technology, and vice versa. As the Federal Communications Commission (FCC) considers action that would allow other uses of the 5.9 GHz spectrum that was allocated for V2V and V2I communication, we believe it is important that any decisions over sharing the Safety Spectrum should be driven first and foremost by public safety, preserving all 7 channels of spectrum for safety. The FCC should take no action that could jeopardize the vehicle safety initiatives that the DOT is pursuing with this spectrum.

Federal agencies should also begin the work of evaluating the benefits of connected and automated technology on public safety and the economy, considering both passenger and commercial vehicles. A better understanding of how these technologies may benefit the public along with consideration of how regulations can be changed to take advantage of the capabilities that this new technology provides will lead to better policy decisions and the development of a regulatory framework that help to realize these benefits. For example, in the commercial sector, FMCSA should begin to review Federal Motor Carrier Safety Regulations and see what might be changed to account for the new driving environment with automated technology where the driver may be in the seat but not operating the controls. Perhaps there can be changes made in hours of service that would improve productivity without reducing safety? How should speeds be managed with connected and automated technology? What will be the impact of connected and automated technology on CSA scores, liability, and insurance? These are questions that should be considered by DOT along with an examination of the impact on interstate commerce of conflicting state laws and the importance of preserving a seamless set of safety standards to minimize disruptions to the economy and the national supply chain. A thorough examination of these issues will help insure that the future regulatory framework is correct, not flawed.

Conclusion

ATA supports the development of automated vehicle technology for all vehicle types. This technology has the potential for improving safety, the environment, reducing congestion, and saving fuel. While there are concerns about the impact automated technologies will have on the future of work, affected stakeholders should embrace this coming innovation and work together to prepare the workforce to operate with the new technology. Some may see a driverless future, but with the complexity and diversity of the trucking industry, we expect the driver will retain an important role in trucking for a long time to come, with automated truck technology that will improve safety and productivity.

To prepare for the future, federal agencies should begin the work of evaluating the benefits of connected and automated technology on public safety and the economy, and reviewing regulations to see what changes could be made to take advantage of the capabilities that this new technology provides. Preserving a seamless set of safety standards across the country will help to minimize disruptions to the economy and the national supply chain, and support the development of new technology.

Trucking plays a critical role in our economy – keeping the shelves of our local supermarkets fully stocked; delivering life-saving medical supplies to hospitals and clinics; and delivering goods at every stage of production from raw materials to the store shelf – and it should not be left out of any legislation that supports innovation in automated vehicle technology.