Testimony of Gary Shapiro, President and CEO, Consumer Technology Association
House Energy and Commerce Subcommittee on Consumer Protection and Commerce
Hearing on Autonomous Vehicles: Promises and Challenges of Evolving Automotive Technologies
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Chair Schakowsky, Ranking Member McMorris Rodgers, and members of the Subcommittee, thank you for the opportunity to testify today. I am Gary Shapiro, president and CEO of the Consumer Technology Association (CTA)®.

The Consumer Technology Association represents the $422 billion U.S. consumer technology industry, which supports more than 18 million U.S. jobs. CTA's membership is over 2000 American companies – 80% of which are small businesses and startups. We also own and produce CES® – the largest and most influential business event in the world. I am fortunate to have a front row seat each day as our members develop and introduce innovative and life-changing products and services, create jobs and grow the economy. At CTA, we work to advance public policy that fosters innovation, advances competitiveness and promotes job and business creation.

Technology is changing our lives for the better, including innovations that can save thousands of lives every year in the U.S. More than 36,000 people died on U.S. roads in 2018 – that's more than 100 traffic deaths per day – and 94% of serious crashes are due to human error, according to the National Highway Traffic Safety Administration.[1]

As this Committee well knows, technology continues to improve vehicle safety and provide options for consumers. U.S. traffic deaths dropped 3.4% in the first half of 2019[2] – despite a .8% increase in miles traveled – thanks in large part to safety technology in vehicles such as automatic braking. While many technologies are already in our cars today, others including self-driving technology are advancing rapidly.

CTA represents innovators in the diverse vehicle transportation ecosystem who are developing an array of highly automated and self-driving technologies. Self-driving vehicles (SDVs) will lead to an enormous reduction in – and perhaps eliminate entirely – roadway fatalities. SDVs cannot become distracted, fatigued or impaired and have a 360-degree view around the vehicle. By avoiding a myriad of traffic violations that cause so many accidents, self-driving technology has the power to save thousands of lives a year.

This technology will also provide undreamed of independence and mobility for seniors and people with disabilities. A report from the Ruderman Family Foundation estimates that self-driving cars could open two million employment opportunities for people with disabilities.[3] But the positive impact this technology will have on the quality of life for people with disabilities cannot be captured by a number. SDVs will enable seniors to maintain their independence for

[1] https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812749
[2] https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812824
[3] https://rudermanfoundation.org/white_papers/self-driving-cars-the-impact-on-people-with-disabilities/

longer—no more waiting for a family member to drive to a doctor's appointment or run important errands.

The positive economic benefits of self-driving vehicles for our country are enormous—up to $796 billion by 2050 according to a study by Securing Americas Future Energy.[4] Full adoption of SDVs in the U.S. could cut insurance premiums by 40%.[5] As they reduce vehicle injuries, SDVs will cut medical costs and productivity losses—now estimated to be $63 billion annually in the U.S. for driving related injuries.[6]

We will see increases in productivity as people waste less time in traffic and spend their commutes working rather than driving. We will need fewer parking structures, opening new areas for green space and development. Consumers want these benefits. CTA research shows consumers want these safety improvements, better mobility and less time wasted in traffic. Almost two-thirds of those surveyed are interested in replacing their current cars with self-driving vehicles.[7]

SDVs are quickly being developed. Almost 1500 self-driving vehicles are being tested by 80 companies across 36 states including California, Arizona, Pennsylvania, Florida, Texas and Michigan.[8] Our member companies Aptiv and Lyft launched a pilot SDV project in Las Vegas at CES 2018—after more than 50,000 rides, 92% of riders felt very safe or extremely safe, and the average ride rating was 4.97 out of five stars.[9] Just last week, CTA member Nuro received the first-ever exemption for an autonomous vehicle by NHTSA for its R2 delivery vehicle, after a three-year process.[10] Nuro will begin public road testing in Houston soon.

The road to fully self-driving vehicles is a global competition, and we expect every developed nation to confront tough issues. Self-driving accidents will happen —although in minuscule numbers compared to the number of accidents human drivers cause each year. Some argue SDVs should not be deployed until the systems are perfect. This is a dangerous road, as perfection may be an unreachable goal. Human drivers make many preventable errors while behind the wheel. Delaying SDVs by insisting upon an impossible-to-achieve standard for perfection will cost thousands of lives each year on American roads. A Rand report found that deploying cars that are just 10% safer than the average human driver will save more lives than waiting until those cars are 75% or 90% better.[11] We will be able to save millions of lives in the

[4] https://avworkforce.secureenergy.org/wp-content/uploads/2018/06/Americas-Workforce-and-the-Self-Driving-Future_Realizing-Productivity-Gains-and-Spurring-Economic-Growth.pdf
[5] https://www.bloomberg.com/news/articles/2016-09-11/self-driving-cars-to-cut-u-s-insurance-premiums-40-aon-says
[6] https://www.cdc.gov/motorvehiclesafety/costs/index.html
[7] Self-Driving Vehicles: Consumer Sentiments 2018
[8] https://techcrunch.com/2019/06/11/over-1400-self-driving-vehicles-are-now-in-testing-by-80-companies-across-the-u-s/
[9] https://www.lyft.com/blog/posts/one-year-in-50000-self-driving-rides-later
[10] https://medium.com/nuro/introducing-r2-nuros-next-generation-self-driving-vehicle-a9974ff6c2e0
[11] https://www.rand.org/pubs/research_reports/RR2150.html

future, but only if we are willing to continue moving forward. The perfect must not be the enemy of the great.

We don't have to wait for fully self-driving vehicles to start reducing roadway deaths. Driver-assist technology is already saving lives, avoiding accidents and paving the way for completely self-driving innovations still to come. Advanced Driver Assistance Systems (ADAS) can prevent nearly 30% of all crashes.[12] Lane-departure warning lowers rates of certain crashes by 11% and lowers the rates of injury from crashes by 21%.[13] At least one ADAS feature was available on 92.7% of new vehicles available in the U.S. as of May 2018.[14] We should promote technologies that help drowsy or inattentive drivers stay focused or provide specific responses such as automatic braking and lane-drift avoidance—all of which are now increasingly available in newer model vehicles. The aftermarket industry provides a valuable service in allowing consumers to add life-saving technologies to vehicles they already own. The average age of vehicles on the road today is more than 11 years, and aftermarket solutions will continue to play a critical role in increasing the use of vehicle safety technologies.

This Committee knows the benefits and opportunities advanced vehicle technology and self-driving vehicles can provide. In the 115th Congress, you led a bipartisan effort to advance legislation on self-driving vehicles. CTA strongly supported the SELF-DRIVE Act, which passed both this Committee and the House unanimously. While politics got in the way of getting it across the finish line, we are encouraged by the continued efforts of the Department of Transportation and members on both sides of the aisle to move our country forward and advance this life-saving technology.

We applaud the Committee for building upon that bipartisan effort to move legislation addressing SDVs in this Congress. But for self-driving vehicles to save lives and deliver new freedoms to seniors and people with disabilities, we must have the right laws.

Challenges remain on the road to SDVs. Today's vehicle safety standards and regulations need to be updated. Consumers need to be informed on how the technology saves lives and empowers everyone. Insurance and liability laws need to adapt. While there is much work to be done, we must keep working together to make the goal of zero road fatalities a reality.

One challenge facing American progress on these technologies is the growing patchwork of laws and regulations across the country. Thirty-seven states and the District of Columbia have enacted laws or issued executive orders relating to SDVs.[15] Federal and state governments have different roles in the deployment of SDVs – and the expanding patchwork of local rules across the country will only delay SDV testing and hinder America's global leadership. We need a

[12] https://www.mema.org/sites/default/files/MEMA%20BCG%20ADAS%20Report.pdf
[13] https://www.automotive-fleet.com/141839/lane-departure-warning-drops-crash-rates-study-shows
[14] https://www.aaa.com/AAA/common/AAR/files/ADAS-Technology-Names-Research-Report.pdf
[15] https://www.ghsa.org/state-laws/issues/autonomous%20vehicles

'technology-neutral' approach to SDV rules to allow new innovators to enter the SDV sector, develop safer technologies, and provide greater efficiencies.

CTA recommends the Committee address the following issues in a self-driving vehicles bill:

Rulemakings, including updating existing standards and setting new standards;

- The Federal Motor Vehicle Safety Standards (FMVSS) were created when the driving task was assumed to be performed by a human driver and, as a result, are typically drafted in a way that directly or indirectly refer to vehicle controls being operated by a human. Current FMVSS limit the ability to make significant changes to vehicle design, which can preclude truly innovative approaches to fully self-driving vehicles. NHTSA needs to evaluate the FMVSS and update outdated standards before SDVs can be deployed widely. We must retain flexibility for NHTSA to update existing FMVSS to allow for self-driving vehicles, create new FMVSS, or a combination of both options. Additionally, NHTSA will need to update its test procedures for certifying compliance in a world where humans are not always the direct operators. A timeline from NHTSA detailing what steps the industry will take when will be important for long term planning.

Federal, State and Local Roles and access to courts;

- The federal government's responsibility is vehicle safety and performance standards (FMVSS), recalls and issuing guidance for manufacturers to follow. State responsibilities are regulating insurance and liability, vehicle safety inspection, vehicle registration, human driver licensing requirements and enacting and enforcing traffic laws. Any legislation should follow this division of responsibility and ensure the federal government is solely responsible for regulating vehicle safety and performance standards.
- CTA opposes limiting the use of arbitration, a legal mechanism used to reduce the cost of litigation for both companies and consumers and provide more timely remedies for everyone involved in a dispute. There is no clear public policy reason to narrow it in the context of SDVs, and we should not make changes to the Federal Arbitration Act.

Testing Expansion;

- Expand eligibility of the FMVSS testing exemption created in the FAST Act (40 USC 30112) to provide parity among automobile manufacturers (OEMs), suppliers, manufacturers of ADS components, and developers of automated driving vehicles and automated driving systems (ADS).

Exemptions;

- NHTSA can exempt vehicles from existing FMVSS to allow for testing of new vehicle designs and safety features, and for the limited sale of such vehicles. Exemptions are now available to vehicle manufacturers on only a temporary basis, typically two-to-three years, and only a small number (2500) of exemptions are available. Expanding NHTSA's exemption authority would allow manufacturers and other entities to gather

the data they need to improve safety and performance, while preserving the agency's oversight authority through the terms and conditions of individual exemptions. The exemption process must be available to all petitioners (e.g., traditional OEMs, suppliers, tech companies, and new entrants) on a level playing field.

Global Competitiveness.

- Congress should emphasize the need for federal legislation to remain competitive with other countries and maintain our leadership position in automotive innovation and safety. Every two years, CTA releases an International Innovation Scorecard—a report evaluating more than 60 countries and the European Union on how well their policies support innovation. According to our latest Scorecard, countries including China are moving quickly to promote self-driving vehicle testing and deployment. Regulations rolled out in 2018 by the Chinese Industry Innovation Alliance for Intelligent and Connected Vehicles set consistent rules for SDV development throughout the country.[16] In 2018, China declared the Regulations on the Administration of Road Testing of Autonomous Vehicles to advance the transformation, upgrading and innovation of transportation, and regulate the administration of road testing of autonomous vehicles.[17] Japan has continued its development efforts to design fleets of SDVs by the 2020 Olympics, efforts that include a government review of transport laws to update them to include provisions for SDVs.[18]

Self-driving vehicle technology will revolutionize how we travel. From increasing mobility options for seniors and the disabled community to ending traffic deaths caused by human drivers, self-driving vehicles are the future. CTA appreciates the opportunity to testify before the Committee and highlight the need for legislation addressing self-driving technology. We look forward to working with you to advance legislation enabling the development and use of vehicles that will make our roads safer.

[16] https://www.cta.tech/Advocacy/Innovation-Scorecard/International-Scorecard/Map/
[17] https://www.dentons.com/en/insights/guides-reports-and-whitepapers/2020/january/29/global-guide-to-autonomous-vehicles-2020
[18] https://www.cta.tech/Advocacy/Innovation-Scorecard/International-Scorecard/Map/