AUTO ALLIANCE
DRIVING INNOVATION®

STATEMENT

OF

THE ALLIANCE OF AUTOMOBILE MANUFACTURERS

BEFORE THE:

SENATE COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION

JUNE 14, 2017

PRESENTED BY:

Mitch Bainwol
President and CEO

Chairman Thune, Ranking Member Nelson, and Members of the Commerce Committee. Thank you for inviting me to testify today on pathways to deployment of self-driving vehicles and related technologies. I am here on behalf of twelve iconic manufacturers who produced 80% of the cars now on American roads and are investing billions of dollars annually on R&D to improve fuel efficiency and enhance safety. Self-driving technologies have the potential to do both. I would like to say from the outset that the Alliance and its members are deeply appreciative that this Committee, and its House counterpart, have invested so much time and focus on the various issues implicated by self-driving cars. We are grateful for your interest in our views and want to continue being collaborative partners in the process.

Although the automotive sector is highly competitive, we are unified in recognizing the transformative impact that self-driving technologies will have on society and the importance of federal leadership in removing barriers to their safe development and deployment.

Unfortunately, we are all familiar with government statistics regarding highway fatalities: 35,092 people died in traffic crashes in 2015[1] an increase over 2014. Preliminary results for 2016 show another increase. This is a disturbing trend.

The 2015 increase in fatalities is a 7 percent increase from the prior year. The National Highway Traffic Safety Administration's (NHTSA) early estimates for calendar year 2016 suggest a possible 10 percent increase. These numbers are concerning and warrant attention, especially since 94 percent of car crashes are attributable to human behavior or error (see attached charts).

[1] NHTSA 2015 Quick Facts

These figures are particularly relevant to today's hearing and the role that self-driving technologies can play in possibly reducing overall crashes and fatalities.

I would like to make five broad points to frame the issue and then close with three recommendations for the Committee to consider as it works to craft bipartisan legislation to help spur additional technological and safety advances.

Point 1 – Four trends are merging to dramatically reshape mobility as we know it: increasing automation, connectivity, ride sharing and electrification. These trends are mutually reinforcing but not mutually dependent. The move toward **autonomy** during this past decade has accelerated significantly – with advanced driver assist systems that offer important features – like adaptive cruise control and active lane keeping. Effectively, these technologies have a multiplier impact: the more consumers experience driver assist systems, the more excited they become about the prospect of self-driving technologies.

The Alliance has conducted several public opinion surveys that show the generational shift that is emerging with acceptance of these technologies. A sample is provided below:

What best describes your view about so-called autonomous vehicles that drive for you?

	All	M	W	GOP	Dem	18-29	30-39	40-49	50-64	65+	Assists: 0	1	2
Can't wait for this awesome technology	13	16	11	12	15	23	23	9	7	5	10	14	31
Not sure, but keeping an open mind	33	34	31	30	36	39	34	29	30	30	33	32	32
Not sure, but wary of the technology	27	24	31	29	25	19	21	30	35	32	28	29	22
It's a terrible idea	24	24	24	27	21	14	18	30	27	31	26	24	13
Not sure	3												
	-11	-8	-13	-15	-6	+9				-26	-16	-10	+18

Almost two-thirds (62 percent) of those under 29 years of age are open to self-driving technology, including 23 percent who view the technology as "awesome." Only 5 percent of people over 65 years of age think the technology is "awesome," and almost a third believe self-driving technologies are a "terrible idea" – three times higher than the views of those under 29 years of age. But, importantly, experience with driver assists has a profound impact on attitudes. Drivers who have cars with at least two driver assists are dramatically more favorable (63-35) about autonomy than those who have none (43-54). Thus, as these technologies make their way into the national fleet, consumer acceptance will grow materially.

Trend two is **connectivity** – characterized by growing technological capabilities that improve the driving experience, vehicle performance and safety. Trend three is **ride sharing** – and while we think of companies like Uber, Lyft, Car2Go, Chariot, Maven and ReachNow to name a few, there are a huge number of new entrants in this space, all predicated on the idea that in certain instances car sharing and ride hailing is a more efficient use of a high cost asset versus personal ownership. Finally, trend four is **electrification**. Adoption of electrification has been slower

than some predicted and other experts hoped – including in California. However, we expect that as range increases and battery costs fall, EV powertrains will become more competitive with internal combustion engines. Other coming market forces, like self-driving ride share fleets, may further spur electric vehicle deployment. We will see a tipping point – we just do not know when this will occur.

Point 2 – For self-driving technologies, the future is here but will take a while to be fully realized. Few debate where we are headed. However, there is significant debate about the length and even nature of this journey. Keep in mind, even small introductions of self-driving technologies can reduce fatalities and traffic congestion. The first driving automation systems – so called SAE Levels 1 and 2 - are on sale today. Introduction of Levels 3, 4, and 5 self-driving technologies, or Highly Automated Vehicles (HAVs), has yet to begin. Level 3 features, such as automated driving in freeway traffic jams, are expected to be introduced soon, perhaps within a year. Level 4 geo-fenced self-driving vehicles that can only be operated by an Automated Driving System will probably begin around 2021. But, retail sales to consumers of so-called Level 5 vehicles that can operate anywhere a person can drive a conventional vehicle today is unlikely to happen until around 2025 or after. Given how much vehicles cost and how long they last – more than 20 percent of cars on the road today were produced before 2000[2] – vehicles equipped with Level 5 systems will likely not be a majority of the fleet for three more decades. Ubiquity is not projected to occur for at least four decades largely due to the fact that over 260 million light duty vehicles are registered in the U.S. It is also difficult to predict the percentage of vehicle miles

[2] IHS data compiled by the Auto Alliance

traveled in personally owned cars versus ride hailing services. But we do know this: change is coming – and it is coming rapidly.

Point 3 – Self-driving vehicles will usher in a mobility era that offers profound social benefits. Self-driving technologies will potentially save thousands of American lives annually, addressing a large portion of roadway fatalities and crashes associated with human error. Cars with self-driving features also offer huge quality of life benefits – access for the disabled and elderly; time saved by being driven rather than driving so the commuting time can be spent on more productive activities; and the increased freedom that comes from quicker trips due to less congestion. Moreover, these technologies offer massive economic benefits – less congestion, fewer injuries and medical claims, lower fuel costs, increased personal productivity, and better land use. The impact on cities may well be enormous. New communities and municipalities are eager to modernize their mobility patterns and hunger to learn where new mobility options are headed so they can begin the infrastructure build-out that could take a decade to complete. They want to prepare for tomorrow, today. The Commerce, Science and Transportation Committee has a long history of understanding the need for and benefits related to uniformity as a building block for innovation – just look at the railroad, aviation, telecommunication sectors and the Internet – all of which have spurred tremendous innovation, social benefits and U.S. leadership.

Point 4 – The rate of technology is faster than the rate of regulation and also confuses traditional regulatory responsibilities. Self-driving vehicle technologies will generate disruptions and challenges; no transition is ever easy. However, this is a transition government and this Committee in particular should seek to accelerate, because the greater societal good is clear.

The last NHTSA Administrator, Mark Rosekind, was fond of saying that government must be nimble and flexible because it is difficult for the regulatory process to keep up with the rapid pace of innovation. Furthermore, not enough data is in hand to initiate the rulemaking process to create new standards for self-driving vehicles. If NHTSA were to prematurely set rules today, it would stifle innovation. The foundation of the Federal Automated Vehicle Policy (FAVP) that the Department of Transportation released last September is sound – relying on overarching guidance rather than rigid rules and seeking to clarify the division of responsibilities between states and the federal government. Nevertheless, additional federal leadership is required here.

With conventional vehicles, the states regulate the driver and the federal government regulates the vehicle. This division of responsibility still generally makes sense today for self-driving vehicle technologies, especially since a patchwork of differing safety and performance standards or other impediments from state to state, and even city to city, is a recipe for delayed deployment and realization of the safety and mobility benefits these technologies offer. Take for instance the fact that so far this year, there have been 70 different legislative proposals in 30 states that address self-driving vehicles. As we meet today, the U.S. lacks a critical uniform national framework to advance these technologies as was established before in the development of other key innovations.

Federal leadership and clear rules of the road are essential, especially to underscore NHTSA's authority to issue nationwide safety and performance regulations for motor vehicles. America is the true innovation leader in this field. It is in the national interest to protect that advantage. More

importantly, members of the Auto Alliance share the belief that lives could be lost and that safety improvements will be delayed without your help.

Point 5 - The key question this Committee must ask – is how to use public policy to optimize the safe deployment of these vehicles and their promise of social good, while continuing to let innovation spur economic growth?

Here are three recommendations:

Recommendation 1: Pass legislation significantly expanding the number and duration of the Federal Motor Vehicle Safety Standard (FMVSS) exemptions NHTSA can grant under the Safety Act. There are existing safety standards that serve as direct barriers to the deployment of self-driving vehicles. Without providing NHTSA expanded authority to grant exemptions from these standards, developers will not be able to deploy the technology at a scale necessary to collect more robust real-world data to inform future regulatory action.

Recommendation 2: Direct NHTSA to collect the data and information needed to promptly refresh and modernize the FMVSS to facilitate the safe deployment of self-driving vehicles. The Agency should commence such rulemaking without delay after the necessary data is collected. The existing FMVSS for conventional vehicles have served the public well. Because they were intended for vehicles with human drivers, however, they are ill-suited for vehicles with self-driving technologies. Alliance members appreciate

the need for safety standards and also believe the process to modernize them for self-driving vehicles needs to be informed by data generated from increased exemptions.

Recommendation 3: Pass legislation clarifying federal versus state regulatory roles to facilitate innovation and the expeditious deployment of life-saving self-driving technologies. This will provide certainty for all stakeholders in this area and ensure that the United States remains the leader in self-driving innovation.

We support federal clarity that will remove or eliminate impediments to the testing, development, and deployment of self-driving vehicles – particularly any state laws or regulations related to the design or performance of these vehicles. We recognize and continue to support the important role states play in insurance, licensure, and traffic laws and enforcement. However, Congress and this Committee should be aware that state and local laws could still unduly burden or restrict the use of self-driving vehicles in the future.

Providing federal clarity on rules governing automated motor vehicle design, performance and safety does not mean there will be a vacuum in oversight of the development and deployment of the technology for both automakers and new entrants. NHTSA has broad enforcement authority under existing statutes and regulations to address current and emerging automated safety technologies. As evidence, look no further than the Enforcement Bulletin for Emerging Technologies that NHTSA published in concert with the FAVP last September. That document, which is still operative, outlines NHTSA's authorities and how they apply to self-driving technology including software, hardware,

sensors, GPS and vehicle electronics. For example, NHTSA recently used its extensive investigatory authorities with an aftermarket self-driving technology company named − Comma.ai − to ensure it was compliant with regulations before product could be offered for sale.

The fact that we are all here today having this conversation is tremendously encouraging. I would like to reiterate the Alliance's and its members' appreciation of the Committee's work and leadership to date and indicate our eagerness to continue being a collaborative, thoughtful partner. The Alliance and its members look forward to providing constructive feedback on your ideas with a view towards passing bipartisan legislation. We can achieve remarkable public good when we marry the brilliance of innovation with responsible and forward leaning public policy.

Thank you and I look forward to answering your questions.