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Testimony

Chairman Green and members of the Committee, on behalf of the Association of Global Automakers ("Global Automakers"), I thank you for the opportunity to testify before the Committee today.

The Association of Global Automakers represents the U.S. operations of international motor vehicle manufacturers, original equipment suppliers, and other automotive-related trade associations that are making enormous investments in connected and automated vehicles in the United States in order to save lives. We work with industry leaders, legislators, regulators, and other stakeholders in the United States to create public policies that improve motor vehicle safety, encourage technological innovation and addresses environmental needs. Our goal is to foster an open and competitive automotive marketplace that encourages investment, job growth, and development of vehicles that can enhance Americans' quality of life. In the State of Ohio, international automakers have invested nearly $12 billion, and employ over 15,000 people at 22 facilities, including 5 manufacturing plants. International automakers accounted for 50% of new vehicle sales in 2016 and 75% of green vehicle sales in Ohio.

SAFETY BENEFITS OF AUTOMATED TECHNOLOGY

Global Automakers and our members take vehicle safety very seriously and it is our highest priority in the design and production of new vehicles. The automotive industry is making major investments in the research and development of automated vehicle technology in the United States, and Global Automakers thanks the Committee for its interest and proactive approach to vehicle automation. Automated vehicle systems present significant potential to save lives,

enhance mobility, improve transportation efficiency, and reduce fuel consumption. It is important therefore that public policy help spur this innovation, encourage testing, and enable nationwide deployment of vehicles across all levels of automation. It is also critical to acknowledge the role of vehicle-to-vehicle communications in enhancing safer, more efficient transportation.

Automated vehicle technology offers a tremendous opportunity to improve highway and traffic safety. According to the National Highway Traffic Safety Administration (NHTSA), traffic fatalities rose 7.2 percent in 2015 to 35,092. In Ohio, there were 1,110 fatalities in 2015. Unfortunately, this number is going up, despite the fact that vehicles are safer than ever before. We need to work toward a future where cars no longer crash, and zero lives are lost on roads. To get to zero, we need a comprehensive safety approach that involves all road users and transportation providers. Automated and connected vehicle technology is fundamental to this effort.

EVOLUTION OF AUTOMATED VEHICLE TECHNOLOGY

Vehicle automation is much broader than the "self-driving" or "driverless" car. In fact, we use terms such as "autonomous", "automated", "self-driving", "connected vehicle", "driverless" and others interchangeably but each has an important distinction. Today, many makes and models offer other automated systems including: automatic emergency braking, lane keeping assist, adaptive cruise control and parking assist. The evolution of automated vehicle technology, over time, will lead to what is commonly referred to as a "self-driving" car.

TIMEFRAME FOR DEPLOYMENT

One of the themes for today's discussion is "When will it happen?" This question – or others of a similar nature – is frequently asked by elected officials, administrators as well as the public. Automated vehicles have garnered significant media attention. Like any new and transformative technology, the idea of increased vehicle automation brings lots of questions, concerns and curiosity. There is often a mixed reaction ranging from fear, uncertainty, and doubt, to excitement and anticipation for the future of "self-driving". The answer to this question, "When will it happen", truthfully is that vehicle automation is happening now and has been for a long time. It is not a before and after scenario but an ongoing, progressive introduction of new advanced safety features and technology.

Automated ride-sharing and taxis; interstate commercial truck hauling; geo-fenced, closed-loop public transport, as well as the ability to purchase a self-driving car are all viable and anticipated automated vehicle options for the future. What is important to know is that deployment of autonomous vehicles will not be instantaneous or overnight but incremental.

In terms of evolution, advanced automated vehicle technologies will build on some of the advanced driver assistance systems we see on roads today. Other approaches could see the deployment of highly automated vehicles in more limited or controlled operating environments (e.g. city centers, urban corridors, etc.). Consumer acceptance and adoption will have a significant impact on how vehicles are introduced into the marketplace.

The critical question for state and local policymakers is NOT "When will it happen?" BUT "How do we appropriately support the acceleration of automated vehicle technology for today and the future?"

"WHEN WILL IT HAPPEN" IN OHIO

A key component to ensuring the benefits of automation can be realized will be to ensure the policy environment promotes continued testing and deployment of automated vehicles. Ohio is already supporting vehicle automation in a number of important ways. The state supports preserving the "Safety Spectrum", the foundation for Dedicated Short Range Communication (DSRC); cutting-edge technology available right now to securely, reliably and rapidly transmit life-saving communications between vehicles, pedestrians and infrastructure. The city of Columbus was selected as the first "Smart City Challenge" grant recipient, becoming the first fully integrated connected transportation network in the nation. In addition, Governor Kasich has designated a stretch of US-33 as an innovation corridor and committed state resources to accelerate testing. Ohio established the "Smart Belt Coalition," working across state borders to support research and development of automated and connected vehicle technology.

Our members also have a strong presence in Ohio. Honda has made and continues to make significant investment in the state, including manufacturing and research facilities, including the Honda Research Institute at the Ohio State University. NXP Semiconductors is partnering with the City of Columbus in providing solutions as part of the Smart Cities program. These are just a few examples where Ohio is playing a leading role in automated and connected vehicle technology. With so many achievements made and more to come, the logical question state,

county and local policymakers might ask is "What should we be doing to further advance automated vehicle research and deployment?"

PUBLIC POLICY ACTIVITY

In addition to media attention, federal, state and local policymakers have also taken an interest in automated vehicle public policy. Some states have already enacted laws related to the testing and operation of automated vehicles. Each of these states has taken a slightly different approach to the issue. This year alone, more than 70 state legislative proposals were introduced. The federal government has already taken an important step through the Department of Transportation's Federal Automated Vehicle Policy (the "Federal Policy"). The safety assurance approach represented by the Federal Policy sets up a flexible interim framework which ensures that safety is being supervised and protected. The policy allows manufacturers to innovate, while keeping the NHTSA and the public informed about new automated vehicle technologies and how they operate safely.

IMPACT ON THE INDUSTRY

These state laws and legislative proposals include conflicting definition of what constitutes an automated vehicle as well as various vehicle requirements that can dictate the way automakers must design and manufacture systems. This creates significant uncertainty. Our members are in the business to design, build and sell one car for all 50 states, not 50 unique cars available for each state. We have seen several pieces of legislation that would actually prohibit vehicles with automated features that are currently for sale and in use on public roads. Policies addressing

automated technology should not favor certain levels of automation over others and should always seek to promote the technology.

We have been working closely and collaboratively with stakeholders in Ohio to develop automated vehicle public policy that respects the proper regulatory role of the state, focused on registration, licensing and insurance without affecting the performance and design of the vehicle.

THE ROLE OF CITIES AND COUNTIES

Automated vehicles will likely impact how we think about mobility and the movement of goods and services and it is important that the appropriate policies be in place at both the federal and state level. While the federal government focuses on the safe design of Highly Automated Vehicle (HAV) systems, metropolitan communities such as Columbus, along with Cleveland, Cincinnati, Toledo, and Akron will play a critical role in the advancement of automated vehicle technology.

The way people get themselves and goods from "point A to point B" is already changing today. HAVs provide further opportunities to leverage "Transportation as a Service" if there is an increased shift from personally-owned modes of transportation towards mobility-on-demand solutions consumed by the public as a service. Cities will have to think about transportation today and in the future differently. It is about mobility, connectivity and sustainability. What type of infrastructure will cities need? Traffic signals, vehicle-to-vehicle and vehicle-to-infrastructure integrated systems, public transportation routes and evolving traffic patterns, to name a few. It is important that policymakers and planners identify opportunities to integrate

connected and automated vehicle technology as part of the broader transportation system. We believe ensuring the right policies and investments in intelligent infrastructure will help support Ohio's goals of smarter, safer, more sustainable mobility.

The benefits that autonomous vehicles bring are not limited to urban or densely populated areas but also suburban and rural communities. Automated vehicle technology, even where partial or conditional automation is provided, is crucial to reducing vehicle collisions and fatalities in rural or less populated communities due to their potential to help avoid crashes altogether.

JOBS

There is significant debate on the impact of automation on jobs and the economy and not just in the transportation sector. In reality, the prevalence of automated transportation creates significant opportunities for the United States in terms of economic competitiveness, not just from the highly skilled engineers developing automated vehicle systems, but also those working to ensure functioning automated transportation system. Manufacturing, maintenance, servicing, technical support, and management of automated vehicle fleets, other sectors supporting cleaner, sustainable transportation will also see increases in labor demand (e.g. smart grid, telecommunications, etc.). Furthermore, within a mixed fleet environment, there will still be a role for drivers and human operators that will need to be available to provide support for the automated system in certain circumstances.

Ultimately, it is important to recognize that change will not happen overnight and there will be opportunities to identify what new skills may need to be encouraged within the workforce to

address future labor demand. While automation will undoubtedly have an impact on the economy, there are tremendous opportunities to boost economic activity and ensure the U.S. be a leader in this space.

CONCLUSION

Global Automakers thanks the Committee for its interest in promoting innovation and Ohio's leadership in the area of vehicle automation. We look forward to working with the Committee as it considers automated vehicle policies. Establishing a balanced policy will help spur the development and deployment of automated vehicle technologies that will improve motor vehicle safety, enhance personal mobility, and bring new efficiencies to our transportation system.