DriveOhio

Executive Director Jim Barna
DriveOhio
House Transportation and Public Safety Committee
Hearing on "Autonomous and Connected Vehicles Study"

January 31, 2018

Good morning, Chairman Green, Vice Chairman Greenspan, Ranking Member Sheehy, and members of the House Transportation and Public Safety Committee. I'm pleased to appear here today on behalf of the Ohio Department of Transportation (ODOT) to share an update on our efforts related to smart mobility and the creation of DriveOhio.

We are at the beginning of a transformation in mobility and infrastructure we haven't seen since the construction of the interstate system. It began with the ride share companies Uber and Lyft, using technology to disrupt how people get from place to place, and now continues with Autonomous and Connected Vehicle technology. Autonomous and Connected vehicles will change how we travel on our streets and highways as well as how we build the infrastructure for tomorrow.

Transportation management in the 21st century is rapidly changing. We can no longer build our way out of congestion. ODOT is spending over 90% of our capital construction dollars on preserving and maintaining what we already have. Using technology, technology that already exists, we can operate our system more efficiently and achieve better results; results that are measured in terms of allowing high volumes of traffic to move on our current infrastructure with fewer delays. But even more importantly, it's about safety. By taking advantage of technology, we can make our highways safer.

Autonomous technology, which includes driverless cars or cars with advanced driver assist systems, help prevent us from making a bad decision. And with the estimation by the National Highway Transportation Safety Administration (NHTSA) that 94% of all crashes are caused by human error, this technology is game changing. In fact, the Insurance Institute for Highway Safety (IIHS) already is reporting a 35-50% crash reduction with the forward collision warning and smart brake technologies available today.

Connected technology allows cars to talk to each other or the infrastructure and vice versa so as to avoid or prepare for unforeseen conditions [i.e. -work zones, icy road conditions, wrong way drivers, red light runs, upstream crashes, etc.]. Cars will be able to tell each other where there are hazardous conditions that a driver may not be aware of. This data will also assist in active traffic management and in responding to crashes or other emergency situations. Your vehicle will know before you do that a construction zone is coming, or that black ice is on the road ahead.

The Future of Smart Mobility

In response to this rapidly evolving technology, two weeks ago Governor Kasich signed an Executive Order formally establishing DriveOhio (Copy attached). As part of this process, Director Wray has appointed me to serve as the Executive Director.

With autonomous and connected vehicles dominating both the automotive and infrastructure agendas, DriveOhio is being created to become a single point of connection that brings together these two groups and their respective support industries. An idea exchange.

DriveOhio is not adding government, it's not a think tank, and it's not a commission. It's a "one-stop-shop", providing clear and visible accessibility to companies looking to develop, test, and deploy these technologies.

DriveOhio is tasked with bringing this technology and its associated benefits to all of Ohio's citizens and the business community. It will operate in partnership with ODOT, the Ohio Department of Public Safety, Department of Administrative Services, Ohio Turnpike and Infrastructure Commission, Department of Insurance, the Governor's Office of Workforce Transformation, and the Ohio National Guard's Office of the Adjutant General. These public sector partners together with the automotive industry, academia, and Ohio's research and development institutions will ensure Ohio stays on the cutting edge of technological development, standardization, and implementation.

And projects are already underway. Ohio already has four smart roadway projects and two smart city initiatives that are currently ongoing or in the works. Director Cole has already talked to you about the advancements being done at on the Ohio Turnpike. The three other smart roadways are the US-33 Smart mobility Corridor, the I-90 Lake Effect Corridor; and the I-670 Smart Lane. The two smart cities are Smart Columbus and Connected Marysville.

The U.S. 33 Smart Mobility Corridor is the 35-mile stretch between Dublin and East Liberty (through Marysville). It will be one of the longest "connected and autonomous ready" highways in the country. The Ohio Department of Transportation is equipping the four-lane, divided highway with fiber-optic cable and wireless roadside units to allow open-road testing of autonomous vehicles and provide further connectivity to the traffic. This project will also enhance the testing capabilities of the Transportation Research Center (TRC).

The I-90 Lake Effect Corridor is part of I-90 that runs through the Lake Erie's "snow belt," a geographic region that receives significantly more snow than the rest of northeast Ohio. The Ohio Department of Transportation is equipping a 60-mile stretch of the interstate with short-range digital communication units. It's also going to test wireless technologies designed to send and receive data from those units to and from units on public service vehicles. This data, combined with new variable speed limit signs, will help local officials and law enforcement better manage the roadway to reduce crashes and fatalities.

And the I-670 Smart Lane project is the state's first "smart lane," a nine-mile stretch of I-670 between downtown Columbus and the John Glenn Columbus International Airport. The Ohio Department of Transportation is turning the eastbound shoulder into a smart lane that drivers can use during peak congestion. The Smart Lane will also be equipped with high-resolution cameras to monitor conditions from the statewide traffic management center and digital messaging boards to manage traffic speeds and incidents.

Data from these projects will allow us to gain a wealth of knowledge in further advancing these technologies. With our automotive presence, our research facilities like Transportation Research Center and our pilot smart

corridors, Ohio has positioned itself as a pioneer destination for researchers, developers and manufacturers to test, build and deploy advanced technologies that in the end will make our roads safer and less congested.

Beyond these projects, as part of its mission, DriveOhio has a "Smart Mobility RFP" out for bid. The state is seeking private sector partners to guide the development of a statewide plan that will help Ohio make informed decisions about current and future deployments of smart transportation technology for connected and autonomous vehicles. This project will save both state and local partners time and money and will allow for a more rapid deployment of interoperable smart mobility technologies.

Ohio is also preparing to develop a comprehensive system to collect and analyze data from smart vehicles to help state and local governments make better decisions about traffic management and needed roadway improvements and to quickly deploy first responders and maintenance crews to incidents on the roadway. The projects team selected through the RFP will be asked to provide guidance on how best to filter, house and manage data from connected vehicles and infrastructure securely and efficiently.

During my visit to the Detroit Auto show two weeks ago, one takeaway was if we do not market or prepare our state we will fall behind. Normally government is two steps behind the private sector. DriveOhio puts Ohio's government equal and working at the same level.

Thank you for your time and I look forward to working with you through this process. I will be happy to answer any questions the committee might have.