Technology is influencing every aspect of life, and the ability to connect with resources, assets and partners is more critical than ever in the race to stay competitive. The shift to smart mobility and smart cities is dependent on an integrated network of resources that enable future capabilities. But how and where you take it to the next level is often up for discussion. Ohio's collaborative smart network has the solution.



For generations, Ohio has been an automotive powerhouse and now is a leader in smart mobility. With a growing tech industry thriving throughout the state, Ohio's fast pursuit of smart mobility innovation is a natural progression. Ohio has an unparalleled mix of physical assets, research partners, controlled and open-road test facilities, smart city initiatives and funding opportunities that can't be found anywhere else. Years of automotive excellence, a culture of collaboration and a history of innovation have set the stage for a statewide array of connected resources to assist companies with the research, testing and deployment of smart mobility.

## **Getting Started with Research**

As companies prepare to launch their smart mobility initiatives, there are several starting points to consider in Ohio. One of them is the Transportation Research Center (TRC), the largest, most comprehensive independent automotive proving ground in North America with access to expert engineers and R&D organizations as well as the National Highway Transportation Safety Administration's only vehicle research and test center. TRC is home to the Smart Mobility Advanced Research and Test (SMART) Center, a new facility that allows for the simulated testing of emerging smart technologies.

Partner to TRC, is The Ohio State University's (OSU) Center for Automotive Research (CAR), one of OSU's many research resources. CAR serves as a catalyst for automotive technology innovation by connecting academia and industry to drive the future of mobility. Partnering with CAR also opens the door for easy integration with Smart Columbus, a smart technology integration initiative in central Ohio made possible by Columbus winning the U.S. Dept. of Transportation's Smart City Challenge, beating 77 cities nationwide.

Collaboration with these smart mobility resources enables testing and insights for modifications to design in Ohio's living lab. Once the initial design is complete, the vehicles and components are ready for the open road.

## **Open Roads and Real-World Testing**

With the help of smart resources across the state, Ohio is a living lab that is putting research into action and making it possible for companies to access data and participate in smart mobility initiatives.

In January 2018, Ohio Governor John Kasich signed an executive order establishing DriveOhio, a one-stop-shop for manufacturers and researchers to coordinate statewide

assistance in developing driverless vehicles, "smart" roads and other smart technologies. DriveOhio's partners include public, private and government entities.

Near Columbus, the city of Marysville, Connected Marysville, is installing smart traffic signals that will communicate with at least 1,200 personal and government vehicles to manage signal timing and prevent collisions. Marysville will become the first city in the world to have a fully connected community. This complements a Smart Columbus pilot to deploy 1,800 connected vehicles in Franklin County, bringing the total number of connected vehicles in the region to nearly 3,000.

Additionally, Marysville is part of the U.S. 33 Smart Mobility Corridor, which will be a 35-mile limited access highway with 62 roadside units that will connect TRC to Smart Columbus. The U.S. 33 Smart Mobility Corridor is a part of 104 total miles statewide being outfitted with fiber-optic cables and roadside sensors for open-road testing of autonomous and connected vehicles.

Companies can partner with these resources to take their vehicles and technology components on the road for real-world testing across a spectrum of weather and terrain considerations.

## **Ready for Deployment**

JobsOhio, Ohio's privatized economic development corporation, provides assistance to companies investing in Ohio at any step of the process. Whether your smart mobility advancements are in the early stages or ready to hit the market, JobsOhio is your go-to resource for connections and relationships.

Ohio is home to the first U.S. smart city initiative for many reasons. The strength of Ohio's automotive industry has laid the foundation for our success in the creation, testing, deployment and commercialization of innovative technologies that drive smart mobility. We have the automakers, the suppliers, the R&D, the business climate and the automotive, engineering and IT talent. These existing assets make Ohio a logical choice to launch smart mobility initiatives.

Together, Ohio's government, public and private and entities have created a living lab for autonomous and connected vehicles

built on an open platform. The energy this has created is catching on, and as the word spreads, more partners join. We invite you to come along for the ride as we make history in Ohio.





## **Transportation Research Center**

This world-renowned testing facility has 4,500 acres of road courses and a 7.5-mile, high-speed oval test track, making the TRC the best place to test and validate nearly any vehicle in a controlled environment including off-road and multi surface testing.

### **SMART Center**

The state of Ohio, The Ohio State University and JobsOhio invested \$45 million in the first phase of the Smart Mobility Advanced Research and Test (SMART) Center, state-of-the-art hub at TRC. When finished, the 540-acre SMART Center will enable the testing of new technologies and autonomous and connected vehicles in a closed, safe, secure and real-world environment.



CENTER FOR AUTOMOTIVE RESEARCH

### **OSU Center for Automotive Research**

The Ohio State University's Center for Automotive Research (CAR) is a preeminent research center focused on intelligent transportation systems, advanced vehicle safety and sustainable mobility. CAR combines a balance of government and privately sponsored research and education programs targeted to industry professionals.

# **OSU Driving Simulation Laboratory**

The Ohio State University's Driving Simulation Laboratory offers a state-of-the-art facility for measuring driver behavior. The facility provides tools for evaluating in-vehicle systems for infotainment and vehicle guidance to ensure conformance with the National Highway Traffic Safety Administration.











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Winning the "Smart City Challenge," came with a \$40 million grant from the U.S. DOT and a \$10 million grant from Vulcan Inc. to develop, deploy and share lessons learned about smart mobility solutions that improve safety, mobility, access to opportunity and sustainability. Smart Columbus can be partnered with for on-road testing.





The Future of Smart Mobility

#### **DriveOhio**

DriveOhio, the state's new center for smart mobility, brings together all of the public and private entities involved in building the transportation infrastructure in Ohio with those who are developing the advanced mobility technologies needed to create a smart transportation system.



## **Smart Projects for Open-Road Testing**

Across Ohio are rural, suburban and urban roads for testing. Ohio has four smart projects covering 164 miles of roadway: the U.S. 33 Smart Mobility Corridor (35 miles), the I-90 Lake Effect Corridor (60 miles), the Ohio Turnpike (60 miles), and the I-670 Smart Lane (9 miles). There is also a governor's executive order that allows for driverless vehicle testing throughout the state.

#### **Fiber Network**

OARnet, a division of the Ohio Dept. of Education's Ohio Technology Consortium, has created a strong fiber-optic network across Ohio that provides companies direct access to academic resources needed for R&D as well as to powerful computing capabilities needed for simulation and modeling, which includes information sharing through the Ohio Supercomputer Center. Along the U.S. 33 Smart Mobility Corridor is the 33 Corridor Fiber Collaborative, designed to offer companies access to high-speed and redundant fiber-optic service to move large amounts of data across multiple platforms.

JobsOhio.com





# Creating smart cities together: *Make Ohio home*.



The successful shift to smart cars and smart cities depends on an integrated network of resources that inspire innovation. Ohio's unparalleled combination of physical assets, smart city initiatives and automotive test facilities create an ideal environment to research, test and deploy smart technologies. Moreover, Ohio's recent executive order authorizing autonomous vehicle testing will accelerate mobility innovations to improve quality of life for people around the world. We invite you to join us in Ohio as we create a safer, smarter, more connected future.

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