



# BUILDING FOR OHIO'S NEXT GENERATION

BUDGET OF THE STATE OF OHIO • FISCAL YEARS 2018–2019

## **SMART MOBILITY: PUTTING OHIO ON TRACK TO TRANSPORTATION LEADERSHIP**

*Our State's Long History of Transportation Manufacturing, Research and Innovation Place Ohio in a Leadership Position to Benefit from New Technologies and the Jobs of Tomorrow*

For more than a century, Ohio has been at the heart of transportation manufacturing, innovation and research. Those ties grow stronger with each passing year and the innovations developed here will continue to build on our state's historic role as a world leader in transportation technology. The Kasich Administration is committed to embracing the future with new investments and forward-looking policies to ensure that Ohio maintains its leadership position with smart mobility and other emerging technologies – ready to benefit from the business investments and jobs that follow. By being one of the first – and best positioned – states to embrace new technologies for drones, autonomous and connected vehicle technology, data analytics and other industries of the future, Ohio can also be among the first to benefit.

With World-Class Research Capabilities and Highway Infrastructure, Ohio Has a Head Start on Smart Mobility Innovation: In addition to having the world's leading automotive manufacturers and suppliers in Ohio, our state benefits from the research and development resources those companies are bringing here. We also rank high among all the states for the quality and maintenance of our complex highway infrastructure, providing key testing sites across a wide range of terrains and weather conditions. While many states have fallen badly behind in highway repairs, maintenance and improvements, Ohio has invested \$12.5 billion in more than 6,000 bridge and highway projects since 2011 to improve safety and keep people and goods moving.

To Maintain Our Leadership Role, Ohio Has Launched a Smart Mobility Initiative: Ohio's outstanding research assets and well-maintained infrastructure have already attracted some of the world's most advanced transportation research to our state. These resources, supported by investments in Gov. Kasich's new biennial budget, are helping jump-start Ohio's Smart Mobility Initiative – a partnership of researchers at the Ohio Department of Transportation, Ohio Department of Public Safety, the Ohio Turnpike and Infrastructure Commission, and The Ohio State University – to collaborate on development of smart mobility and smart city technologies. In addition, the City of Columbus won a \$40 million federal grant, along with significant third-party co-investment, to develop Ohio's capital city as a hub for intelligent transportation.

Creating Smart Highways As Testing Corridors for New Transportation Technologies: An early example of our state's transportation research collaboration is the U.S. 33 Smart Mobility Corridor, which is being instrumented with fiber technology and sensors. Gov. Kasich's new transportation budget includes funding for two additional smart highway projects – on the Interstate 270 beltway in Columbus and Interstate 90 in northeast Ohio. These smart highways, as well as the Ohio Turnpike, will provide state-of-the-art sites for innovators to test and refine jobs-creating technologies. An expanding network of smart highways will give Ohioans a safer, better driving experience and offer businesses reduced transportation costs, increased operating efficiencies and faster access to markets.

Investing in the Transportation Research Center, America's Foremost Independent Automotive Proving Ground: Funding in Gov. Kasich's budget, along with commitments from other partners, will together invest \$45 million for expanded research capabilities at the Transportation Research Center (TRC) in East Liberty. The TRC is a 4,500-acre independent testing facility – the continent's most advanced – offering the ideal environment for autonomous vehicle and smart highway research, compliance and certification testing for vehicles and components, crash testing, emissions testing, and durability testing. The TRC is also home to the National Highway Traffic Safety Administration's only Vehicle Research and Test Center, another unique advantage for our state.

The Ohio Turnpike Is a Focal Point for Smart Mobility Research: Perhaps the crown jewel of the state's transportation assets for smart mobility is the Ohio Turnpike, six lanes and 241 miles of well-maintained roadway already equipped with a fiber-optic network that is being instrumented for short-range, vehicle-to-infrastructure and vehicle-to-vehicle communications. As this advanced research expands to other states, the Turnpike is poised to become the centerpiece of a contiguous, interstate highway test corridor. Otto, a world leader in self-driving vehicle technology, is already using the Ohio Turnpike and the U.S. 33 Smart Mobility Corridor as sites for testing its latest innovations under real-life traffic conditions.

Ohio is a Leader in Drone Technology, Developing the Nation's First "Sense and Avoid" Test Site: Transportation innovation and cutting-edge research in Ohio are by no means limited to automotive technology. Drone and unmanned aircraft technology is another promising arena where Ohio – "the Birthplace of Aviation" – is embracing the future. The state is currently working on a cooperative \$5 million project with the U.S. Air Force Research Laboratory to develop a ground-based "sense-and avoid-system" for unmanned aircraft to empower drone operators, for the first time anywhere in the nation, to fly unmanned aircraft beyond their line of sight. The governor's budget includes research funds and support to Ohio's Unmanned Aircraft System Center and Test Complex in Springfield to advance research that will give Ohio a major advantage as unmanned aircraft and drones become the basis for new industries and economic growth in ways we cannot yet imagine.

Using New Traffic Management Tools to Help Keep Ohio on the Move: The Ohio Department of Transportation is also introducing new traffic management techniques to enhance traffic flow on state highways and keep traffic moving during rush hour peaks. Recent tests of these practices – variable speed limits and using highway shoulders as an additional driving lane – have shown promising results in other states. Updates to traffic laws, proposed in this budget, would allow the state to safely apply these techniques on appropriate routes across Ohio's highway network.

BOTTOM LINE: One of the most promising areas for Ohio's economic growth is transportation, a field on the verge of historic, life-changing advances with autonomous and connected vehicles, smart highways, sensor technologies and drones. Building on Ohio's long history of transportation innovation and the state's wealth of world-class research, development and manufacturing resources, the Kasich Administration is working on many levels to capitalize on these emerging technologies. By taking full advantage of our ability to lead in developing next-generation industries, Ohio is well positioned to attract major new investments in the research, infrastructure and the jobs that will follow.

