Intelligent State Executive Summary

The designation of Ohio as the world's first Intelligent State marks the start of a journey of discovery. In coming months, the Dublin Institute and ICF will continue to collaborate on the Intelligent State initiative. The partners aim is to develop and test criteria based on this declaration, enabling any state or province to be evaluated as a potential Intelligent State or Province. As the cases described within this document demonstrate, networks of collaboration already extend among state agencies and reach to local governments, universities, research institutions, community colleges, public schools, and the private sector. The state has a huge role in setting policies, launching programs, and steering funding from Federal, state and other sources to benefit localities. Local governments and their many partners — being closest to the problems and opportunities — bring knowledge, energy and commitment to the welfare of their constituents — and their own government-to-government network of relationships.

As technological advances continue to transform the global economy, new opportunities, economic advantages, pitfalls, and community needs are increasingly arising. Communities that embrace this disruption and leverage new applications in an effort to improve through innovation in their economic position, quality of life, connectivity, sustainability, and equity of their residents, continue to position themselves to be at the forefront of technology related economic transformation. As the birthplace of aviation, the State of Ohio and the communities that call it home have worked to be at the forefront of innovation since their inception. Prior to Detroit becoming the dominant force in the automotive industry, Ohio was leading the nation in auto manufacturing. In 1911, Charles F Kettering, an inventor and community member in Dayton, developed the electric starter. His invention would lead to the vast expansion of the automotive market, paving the way for the future of automotive transportation. One hundred years later, Ohio remains not only defined by its expertise in automotive manufacturing and interwoven supply chain network, but also its unique ecosystem of varying levels of governmental partnerships, private business, and educational institutions working together to position the state as an innovative intelligent community.

In many cases, the State of Ohio has set the foundations for successful partnerships with local economic development institutions. In the modern economy, affordable and reliable broadband connectivity has evolved to become the lifeblood of organizations. Government, private business, education, healthcare, and many more sectors rely on telecommunications to conduct daily operations. However, there are major geographic portions of the region that lack access. In an effort to expand broadband connectivity, the State of Ohio created a statewide broadband network serving as a backbone for public buildout efforts.

Currently, OARNET is serving 1,005+ state government sites, 74 local governments, 100 healthcare institutions, 18 research organizations, 630+ K-12 schools, 345 college campuses, and 9 public broadcasting stations. OARnet has saved its clients more than $166 million, while increasing their bandwidth 365 percent. Many of these local institutions have invested to build from this public resource and extend their networks to businesses and community anchors depending on the needs of each individual community.

As technology is increasingly integrated into our daily lives, a growing number of the historic strengths of the American workforce are becoming obsolete, while digital skills become increasingly demanded. Seeing the influence of these trends on economic development, the Ohio Department of Education (ODE) is prioritizing providing the current generation of K-12 students opportunities to develop the skills

necessary to compete in the modern economy. The ODE has been a leader in incorporating technology into the classroom for almost 40 years through its unique network of Information Technology Centers (ITCs) and Educational Service Centers (ESCs). Ohio's ITCs provide members a number of digital administrative platforms, HR solutions, and digital classroom software. Currently, there are 18 ITCs serving more than 1.4 million students across 700 school districts, career centers, community schools, and ESCs. While ITCs provide the enabling resources, ESCs operate as the front-line service providers. Originally established in 1914 as county school districts, ESCs have provided professional development training for teachers, curriculum development, and specialized education for students for more than 100 years. This interworking relationship allows schools to enjoy the joint purchasing power associated with ITC membership, while maintaining local autonomy and programmatic design within their respective community. Throughout Ohio, ITCs and ESCs are assisting in the development of tomorrow's workforce. Just as ITCs and ESCs were at the forefront of past educational transformations, the organizations continue to be instrumental in the development of an innovative knowledge workforce.

While workforce development is a primary focus of Ohio and the various communities that call it home, the State and its partners have been hard at work setting the

conditions for the future of automotive manufacturing and smart city technologies. In January 2018, Governor John Kasich signed an executive order forming DriveOhio, a statewide coalition of stakeholders and programs geared towards building an environment conducive to innovation in the automotive sector, as well as the aviation sector. DriveOhio elevates the status of municipalities vying for business through their Autonomous Vehicle Pilot Program. Participating municipalities register their interest in testing and relevant assets with DriveOhio. DriveOhio then shares registered localities' inventories of testing assets (weather, unique roadway designs, urban,

rural, etc.) with companies looking to test autonomous and connected vehicles in Ohio. Alongside the investment in autonomous deployment, the State of Ohio reports investing $14 billion in infrastructure, proclaiming to have the most "autonomous-ready" highway network in the country with 164 miles of smart mobility projects currently beneath the DriveOhio banner. In partnership with state funding, Ohio's public and private sectors
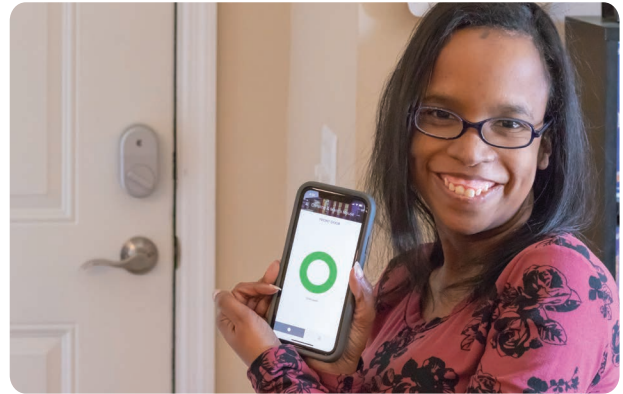
have already invested $500 million in autonomous and connected vehicle technologies. Additionally, state, local, and private organizations have partnered with several higher educational institutions, establishing functioning triple helix public-private partnerships across the several smart mobility corridors scattered throughout the state. These corridors and commitment to testing smart city technologies supports Ohio's position in the global automotive economy.

Communities throughout Ohio are leveraging technology to support the quality of life of its residents through the Department of Developmental Disabilities (DoDD) Technology First initiative. In May 2018, Governor John Kasich signed the Technology First Executive Order to realize the Ohio DoDD's goal of expanding access to technology services. Technology First publicly emphasized the state government's commitment to assistive technology by directing the DoDD and all County Developmental Disabilities Boards to prioritize the use of technology when developing service plans for disabled Ohioans. Assistive technology services enable those living with developmental disabilities to use smart devices in their home to increase independence and reduce reliance on paid caregivers. Examples of assistive technologies include sensors that turn off stoves when left on, devices that monitor water temperatures and alert users of scalding heat to protect from potential burns, smart home devices that remind people of medication times or appointments, and educational mobile apps. From the signing of the executive order to 2019, more than 420 people with disabilities were using remote support services and 480 were using assistive technology

devices. This represented a + 300 percent increase from 2017 in the number of eligible waiver recipients using supportive technologies. By 2022, the number of users is expected to reach 1,000.

In 2014, more than 400,000 Toledo residents were without clean drinking water for several days due to a harmful algal bloom (HAB) in Lake Erie. Copious amounts of phosphorous run-off from agricultural operations in Ohio flow into Lake Erie, the Ohio River, and other waterways, feeding the annual algal blooms. The diminishing health of Lake Erie and other Ohio waterways negatively affects local housing stock, fishing yields, maritime transportation, and tourism, while increasing government spending on cleanup, bringing to question the future economic vitality of the region. Launched in November 2019, H2Ohio is the State of Ohio's water quality initiative that focuses on addressing these issues. Through partnership with the Ohio Department of Agriculture (ODA) and Ohio Environmental Protection Agency (OEDA), H2Ohio invests substantially to help farmers reduce phosphorus runoff from commercial fertilizer and manure. Through intensive scientific and economic studies, H2Ohio identified the 10 most effective and cost-efficient practices that have been proven to reduce agricultural phosphorus runoff. Additionally, H2Ohio is focusing on creating and protecting existing wetlands. With help from the Ohio Department of Natural Resources (ODNR), H2Ohio is working with local partners on 33 wetland projects and has raised $32.7 million to support wetland project implementation, engaged with 13 nonprofit conservation partners, filtered 44,000 acres of watershed by wetland projects, planted 20,000+ trees, and benefit 90 at-risk species dependent on wetlands. ODNR's H2Ohio projects more than doubled the amount of land improved by wetland since the water quality initiative's implementation.

The Dublin Institute for the Study of the Intelligent Community has served as a driving force of the Intelligent Ohio movement for five years. By establishing a network of community stakeholders, the Dublin ICF Institute became a regional hub where interested parties learn the principals of the Intelligent Community and share their experiences with their peers. Intelligent Ohio at its core is defined by the fundamental principles of ICF. The institute foresaw an Ohio defined by a network of cities and counties using the ICF method to drive their economic, social, and cultural development in the digital age. The Dublin Institute's impact on municipalities around the state helped to establish a formal organization of public entities throughout Ohio. In 2021, the Ohio Legislature attempted to ban municipal broadband networks, and blocked municipalities around the state from applying for a round of funding for public networks. At that point, the City of Dublin, through The Dublin Institute, collaborated with other municipalities and formed Broadband Access Ohio. Cities around the state came together to support the organization in an effort to lobby against the municipal broadband ban. Broadband Access Ohio was successful in its efforts and the bill was defeated. Broadband Access Ohio communities are united in using public-private partnerships to oversee the installation of infrastructure where it is. Laying infrastructure for broadband technology, specifically fiber-optic cable, will provide these communities and their residents the ability to choose any private internet service provider — or a municipal ISP — rather than being forced to subscribe to the closest company as the only option. Over thirty Ohio communities host broadband networks such as these, filling vital roles in providing connectivity to our schools, hospitals, and public safety services.