

THE MSU DIGITAL EQUITY CONSORTIUM

Advancing High-Speed Internet Access and Economic Development in Michigan

January 23, 2022

A Partner for Michigan

The MSU Digital Equity Consortium is a collaboration of experts and practitioners from multiple units and colleges. The Consortium was formed in the fall of 2022 to help the State of Michigan in harnessing the tremendous benefits of advanced digital connectivity while mitigating the potential risks of emerging technologies. The Consortium was formed to coordinate the universities capabilities related to advancing high-speed internet access and economic development in Michigan.

Currently, the Consortium comprises MSU Extension, the Quello Center, the Center for Community and Economic Development, K-12 Outreach Education, Michigan 4-H Youth Development, the College of Human Medicine, Remote Sensing and Geographic Information Systems (RS&GIS), MSU Innovations, and experts with expertise in vertical application areas from across the university.

A collaborative leadership structure was created to offer an effective contact gateway to state government and other stakeholders in Michigan. We believe that the Consortium positions MSU well to contribute to the State's efforts to address the challenges of leveraging digital technology to foster economic development and to achieve digital equity and inclusion. Efforts to overcome discrepancies in high-speed Internet access are an integral part of our strategic plan and of the land grant mission of the university.

Advancing Connectivity and Community Development

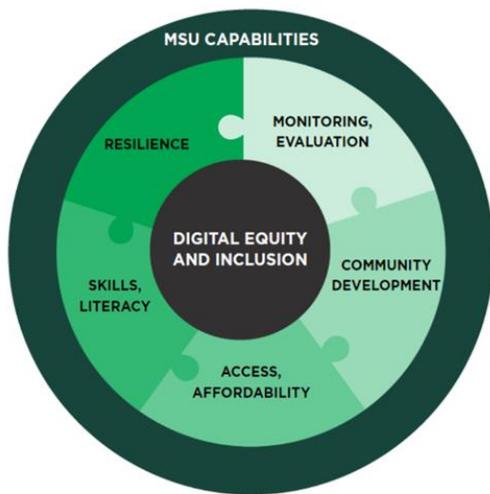


Fig. 1. MSU has experience in areas that are critically important for digital equity and inclusion: access and affordability, digital skills and literacy, community development, evaluation and monitoring, as well as resilience and sustainability.

Ubiquitous high-speed Internet access is necessary for full participation in our increasingly digital economy and society. It is necessary for employment, lifelong learning, access to essential services in health care and from government, and for civic participation. It is increasingly vital to secure future proof jobs and to address the grand challenges faced by society.

As clearly emphasized in the Strategic Plan of the MIHI Office, to secure a strong, digitally enabled future, local and state initiatives must overcome three, interrelated levels of digital divides: access to networks and devices, skills and digital literacy, and capabilities to develop human- and community-centric outcomes. Accelerating change in our digitally mediated life further requires continuous vigilance to adapt to new technologies and services.

Improving high-speed Internet access reduces disadvantages and unleashes many of the benefits of the Internet. However, research and experience show that communities and states will realize significantly higher benefits if they also support the

development of commensurate skills, focus on community development, and create sustainable, resilient solutions. Continuous monitoring and evaluation of the experience are critical in developing such an approach.

The Consortium brings expertise in all these areas to the table. We are ready to work with the Michigan High-Speed Office (MIHI), the Michigan Department of Labor and Economic Opportunity (LEO), and others in the legislative and executive branches to co-create workable, sustainable, and resilient solutions. Specifically, Consortium members could contribute to:

- Design and assessment of measures to advance **access and affordability**, specifically to unserved and underserved communities.
- Improvement of **broadband planning capacity** through state-wide training of community planners.
- Improvement of **digital literacy and digital skills** across all age groups through K-20 and lifelong education.
- Programs for businesses across multiple verticals and to communities to advance **workforce development and upskilling** and to promote digital transformation.
- Programs to assist businesses and individuals to deploy **innovative digital services in verticals**, such as health care, education, transportation, manufacturing, and agriculture.
- Development of a state-wide **trusted data repository** for network access data and independent metrics for network quality and user experience.
- **Monitoring, evaluation, and analysis** of programs and projects to advance high-speed Internet access and the digital economy in Michigan.

Capabilities of Consortium Members

MSU Extension has a presence in all eighty-three counties of the State of Michigan. The **Community, Food & Environment Institute** has long conducted local and regional training for appointed and elected community leaders through our geographically dispersed Government and Community Vitality work team. **Michigan 4-H Youth Development** has a 100+ year history of helping educate communities and families about opportunities and innovations that improve the quality of life. With staff in every county of the state, we are ideally positioned to work with community partners and families to embrace this opportunity and promote action.

The **Center for Community and Economic Development (CCED)** is to advance MSU's land-grant mission by creating, applying, and disseminating valued knowledge through responsive engagement, strategic partnerships, and collaborative learning. CCED works with key partners to develop activities that increase internet access in rural and urban low-income communities and to build the capacity of communities to use these online platforms for civic engagement, employment, commerce, and education.

The **Office of K-12 Outreach** in the College of Education has, for 20+ years, built strong relationships with Michigan's intermediate school districts (ISDs), local districts and schools, and educational associations. It will bring its applied and practical experience related to school and district leadership, strategic planning, instructional leadership, educational coaching, culturally responsive teaching, student voice, and data analysis for educators to the advancement of digital equity and economic development.

The **Office of Health Sciences (OHS)** in the College of Human Medicine is focused on transforming health through new technologies, including digital solutions for remote patient monitoring, management of patients with chronic disease and mental illness. It vets emerging technologies to ensure that they not only provide the intended outcomes and quality, but also validate that there is adoption across various cultures and ethnicities, are accessible for those with disabilities or literacy issues, and work in all regions of the state.

Spartan Innovations is one of the three units of the MSU Innovation Center, which combines innovation, technology transfer, start-up support and a portfolio of dedicated business and community partnerships to bring cutting-edge ideas to the marketplace. Putting knowledge and research discoveries to work to make life better, Spartan Innovations is a critical partner in helping with the digital transformation in important verticals, such as health care, agriculture, and mobility.

The **Institute for Public Policy and Social Research (IPPSR)** applies research to pressing public policy issues and builds problem-solving relationships between the academic and policymaker communities. The Institute promotes and conducts research on issues of public policy, provides survey research services, produces public policy education and training programs, and initiates discussion of society's most pressing needs among diverse audiences.

The **Quello Center** works with local, state, and federal decisionmakers to advance high-speed Internet connectivity and digital equity. With stakeholders on the ground, the Quello Center has developed a digital opportunity compass, that can help guide communities into a sustainable digital future. Center researchers have worked with practitioners in schools and communities to examine the consequences of discrepancies in broadband access for educational outcomes and to map broadband availability more accurately.

Support for MIHI and MI LEO Initiatives

The Consortium is structured in a network of task forces. We have initiated preliminary internal planning work in the areas below. We believe it would be most effective to coordinate with MIHI, MI LEO, communities, and other stakeholders on initiatives to advance broadband. Given the existing outreach infrastructures and capabilities, most projects could be launched in 2023 where needed. This would allow to build capacity in communities prior to funding from BEAD and other federal programs.

Initiatives that could be launched in 2023 and continued as needed during subsequent years:

- **Training programs for community planners.** Development, pilot-testing in selected locations, and implementation of in-person and/or online training programs for planners in economic development regions and counties to improve broadband planning capacity. The MSU team would develop the curriculum in collaboration with MIHI and MI LEO. Expert instructors from MSU and other organizations. MSU lead units: MSU Extension, Center for Community and Economic Development, Institute for Public Policy and Social Research.
- **Information collection from stakeholders.** MSU Extension also has experience in the facilitation of listening sessions and systematic information collection from stakeholders. We could assist MIHI in its digital planning efforts. MSU lead units: MSU Extension, Center for Community and Economic Development, Institute for Public Policy and Social Research.
- **Training programs for decisionmakers in anchor institutions and K-12 education.** Development, pilot-testing in selected locations, and implementation of state-wide training programs for decision-makers in anchor institutions in K-12 education to improve awareness of the opportunities unleashed by high-speed internet. A curriculum would be developed in collaboration with MIHI and MI LEO. Expert instructors from MSU and other organizations. MSU lead units: MSU Extension, Michigan 4-H Youth Development, Office of K-12 Outreach.
- **Training programs for specific verticals.** In-person and online training initiatives to contribute to workforce reskilling and upskilling as well as business and organizational digital transformation. The aim would be to boost Michigan's position and economic development across several verticals that will be vital for the digital economy (e.g., health care, precision agriculture, manufacturing, mobility). A curriculum would be developed in collaboration with MIHI and MI LEO. Expert instructors from MSU and other organizations. MSU lead units: MSU Extension, MSU College of Human Medicine, Health and Risk Communications Center, Spartan Innovations, and other sector experts.
- **Education programs for government agencies** to facilitate cross-agency understanding of the opportunities of high-speed connectivity and the sharing of best practices. A curriculum would be developed in collaboration with MIHI and MI LEO. Expert instructors from MSU and other organizations. MSU could also assist in putting together an annual broadband conference. MSU lead units: MSU Extension, Institute for Public Policy and Social Research, Center for Community and Economic Development, Quello Center.

Members of the Consortium are working on additional initiatives to support the medium and long-term planning and policy development efforts of the state:

- **Monitoring and evaluation of projects and programs.** Monitoring and evaluation of the contribution of programs to improving high-speed Internet access as required by IJA and the NTIA NOFOs. Development

of empirical measurement framework and instruments to measure progress toward digital equity and literacy in Michigan. Development of empirical measurement framework and instruments to analyze the impact of programs and projects on health, jobs, education, and other metrics of individual and community well-being. This family of projects will serve to fulfil the need for evaluation of current and future investments in broadband access and emerging technologies. MSU lead units: Quello Center in collaboration with subject matter experts across the university, including in the Colleges of Education, Social Sciences, Engineering, and Business.

- **Broadband infrastructure quality measurement.** Development and implementation of a robust, scientific measurement infrastructure to assess the quality of connections, a data hub, and supporting visualization and analytical capabilities that will serve as a reliable inventory of the state of broadband (network access, quality, uses, effect) across the State. MSU lead units: Quello Center in collaboration with subject matter experts across the university as well as external collaborators.

Resourcing the Consortium

Sustained Consortium activities will require funding from external resources. We hope to pool contributions from the State, federal programs such as funding generated in the Digital Equity Act, possibly from BEAD, and public and private sector foundations. Total funding needs will depend on the scope of the contributions. Several principal approaches exist to resource the Consortium and individual task forces:

1. Modular approach, with individual programs budgeted separately.
2. Agreement with the State to establish a partnership as a preferred research and service partner. Within this framework, the Consortium would collaborate with State agencies on an ongoing basis. In this model, a recurring base funding would be combined with additional, project-specific appropriations.
3. Lump-sum funding of a broad range of Consortium activities, with additional, project-specific appropriations, modeled after the approach taken by Maricopa County, AZ.

Leadership

The MSU Digital Equity Consortium is governed by a steering committee of leaders from the participating centers and units:

- Melissa Woo, Executive Vice President for Administration
- Johannes M. Bauer, Director, Quello Center
- Keith N. Hampton, Director of Academic Research, Quello Center
- Quentin R. Tyler, Director, MSU Extension
- David Ivan, Director, Community, Food & Environment Institute Director
- Julie Chapin, Director, Children and Youth Institute
- John Melcher, Associate Director, Center for Community and Economic Development
- Bryan Beverly, Director, Office of K-12 Outreach
- Jacqueline Gardener, Director of Data and Evaluation, Office of K-12 Outreach
- Jerry Kooiman, Assistant Dean for Government Relations and Outreach, College of Human Medicine
- Frank A. Urban, Director of Venture Creation - Life Sciences, Spartan Innovations
- Arnold Weinfeld, Associate Director, Institute for Public Policy and Social Research

Contacts

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